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THE ELIMINATION OF
WORST FORMS OF
CHILD LABOUR IN
COCOA (NPECLC)



REPORT ON WEIGHTED DATA ON COCOA LABOUR SURVEY IN
GHANA (SCALE-UP STUDY, 2007/2008)

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ACRONYMS

EA	Enumeration Area
FAL	Forced Adult Labour
GSS	Ghana Statistical Service
HAF	Hazardous Child Labour Activity Framework
ICVB	International Cocoa Verification Board
ILO	International Labour Organisation
MESW	Ministry of Employment and Social Welfare
MMYE	Ministry of Manpower, Youth and Employment
WFCL	Worst Forms of Child Labour

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EXECUTIVE SUMMARY

In recent times, international concerns have been raised about the incidence of child labour in the cocoa sector in Ghana. Efforts aimed at addressing these concerns culminated in the Harkin-Engel Protocol leading to a certification process for the elimination of worst forms of child labour in the cocoa sector. As a requirement of the certification process, Ghana has been able to produce two reports namely: *Labour Practices in Cocoa Production in Ghana, 2006/2007* (Pilot Survey) and *Cocoa Labour Survey in Ghana, 2007/2008* (Scale-up Survey). The Scale-up Survey report was verified independently by the International Cocoa Verification Board (ICVB) and accepted unconditionally. The verifiers recommended weighting of the Scale-up results to make it statistically representative of all cocoa growing areas in Ghana.

Consequently, this report was aimed at achieving the following objectives:

- To derive the weights and apply them to the results of the scale-up study
- To review the implications of the weighting on the final conclusions of the Scale-up Study

As part of the weighting process, indicators for measuring the worst forms of child labour (WFCL) were categorized into the following:

- Labour performed by a child under the minimum age for employment
- Children engaged in hazardous work
- Children in the unconditional worst forms of child labour as defined by ILO Convention 182.

In calculating the weights, the three stages of the sample design were considered. These were:

- Probability of selecting a district
- Probability of selecting an Enumeration Area (EA)
- Probability of selecting a household

The sample weights were derived and refined into brute weights to take into consideration non-response. The overall estimation of children engaged in at least one hazardous activity in all

economic activities in cocoa growing regions in Ghana is 430,595. This represents 23.3 percent of a total of 1,846,126 children. The number of children who are involved in at least one hazardous cocoa-specific activity in the cocoa growing regions was estimated at 430,595 representing 10.1 percent. The Western Region has the highest number of children involved in cocoa and non-cocoa hazardous child labour activities.

This report explains the weighting procedure and the use of the weights to assess the extent of involvement of children in the worst forms of child labour in both cocoa and non-cocoa activities. The report has also shown the enormity of the problem of worst forms of child labour in the cocoa growing regions of Ghana and the need for the involvement of all stakeholders to effectively remedy the situation.

The weighting of the cocoa labour survey data has brought to the fore some implications:

- Children in cocoa households are engaged in both cocoa and non-cocoa hazardous child labour activities and therefore all inclusive remediation efforts anchored on socio-economic development of cocoa growing households should be the key intervention strategy.
- The weighting exercise helped to make projections on the key variables and associated indicators of the worst forms of child labour in the cocoa growing regions.
- It has also revealed that there is significant number of children in hazardous activities in the cocoa growing regions requiring support from Government, the Global Cocoa Industry and all partners to remedy the situation.

SECTION ONE

INTRODUCTION

1.1 Background

International concerns have been heightened, within the last decade over possible use of child labour in cocoa production especially in the West African sub-region. In response, the chocolate and cocoa industry began working with U.S. Senator Tom Harkin (D-IA) and U.S. Representative Eliot Engel (D-NY) to develop an industry-wide solution. This resulted in the Harkin-Engel Protocol which was established to provide a framework to coordinate efforts designed to eliminate the worst forms of child labour and forced adult labour from cocoa production. Certification was one of several key steps called for under the Protocol.

Certification for cocoa farming is a transparent, credible, and continuous process that reports on labour conditions in the West African cocoa farming sector – on a country-by-country basis. It is a continuous improvement process which includes the following key steps: data collection, public reporting, remediation and independent verification. The data collection which is a crucial step in the process involves collecting data at the community and farm levels that provides a statistically representative view of child labour and forced adult labour problems in the cocoa sector.

Ghana, in response to the certification process, produced two cocoa certification reports: (1) the pilot survey report on *Labour Practices in Cocoa Production in Ghana 2006/2007* cocoa season; and (2) the Scale-up report on *Cocoa Labour Survey in Ghana 2007/2008* cocoa season. The scale-up survey covered 15 districts producing up to 60 percent of Ghana's cocoa and included all the 6 cocoa producing regions in Ghana. The result of the scale-up cocoa certification study was published in June 2008 and subsequently subjected to independent verification by the International Cocoa Verification Board (ICVB). The Ghana certification report received unconditional acceptance and approval from the ICVB in December 2008. However, the verifiers recommended that for the findings in the report to be statistically representative of the cocoa growing areas, the results should be weighted.

In view of the above the Ministry of Employment and Social Welfare (MESW), commissioned the Ghana Statistical Service (GSS) to provide weights of the 2007/2008 *Cocoa Labour Survey in Ghana* data. Though the survey report also described labour practices broadly, the key objective was on child labour and forced adult labour. Thus, the emphasis on this weighting exercise is on Child Labour, Worst Forms of Child Labour (WFCL), vulnerable children, and Forced Adult Labour (FAL). It is important to note that child labour is a complex, multifaceted and multi-dimensional concept with definition challenges. Therefore, as part of the weighting process, explaining child labour and its worst forms using multi-indicator system was developed with detailed information in *the Cocoa Labour Survey in Ghana (2007/2008)* study.

1.2 Objectives

The objectives of the weighting exercise are:

- To derive the weights and apply the weights to the results of the scale-up study of labour use in cocoa in Ghana (2007/2008).
- To review the implications of the weighting on the final conclusions of the scaled-up study.

This report on weighted data is therefore presented in five sections. Following section One, section two discusses WFCL in cocoa sector, section three presents indicators for measuring WFCL, section four discusses sampling and sampling weighting, and finally section five presents the results and discussions of weighted data.

SECTION TWO

WORST FORMS OF CHILD LABOUR IN COCOA SECTOR

2.1 What is Worst Forms of Child Labour?

Identifying children involved in child labour and its worst forms is not an easy task. Child labour is a multifaceted and multidimensional concept with potential to harm child's welfare (health, safety, moral, education and development).

The definition of child labour in cocoa can be found in the Ghana Children's Act (Act 560) of 1998, Human Trafficking Act 2005 (Act 694), ILO Convention 182, *Hazardous Child Labour Activity Framework (HAF, MMYE, 2007)* and the *Draft Hazardous List for all Sectors (MMYE, 2007)*. The ILO divides child labour into three categories:

1. *Labour performed by a child under the minimum age for employment*
2. *Children engaged in hazardous work*
3. *Children in the unconditional worst forms of child labor as defined by ILO Convention 182.*

2.1.1 Labour performed by a child under the minimum age for employment

The Ghana Children's Act 1998 (Act 560) prohibits the engagement of a child in economic activity/work before the age of 13 years. Light work is permitted from age 13; and employment in non-hazardous sectors/work from age 15. Employment of a person in any work, including those in the hazardous sectors, is permitted from the age of 18 years. Thus, children involvement in economic activities in age 5-12 years is prohibited and termed child labour. The worst forms include children 5-12 years engaged in economic activities who are not attending or enrolled in school.

2.1.2 Children engaged in hazardous work

Hazardous work is defined in the Ghana Children’s Act 1998 (Act 560) to include engagement in work in the following sectors: fishing on open waters; mining and quarrying; portorage of heavy loads; chemical handling and usage; work at bars/hotels and places of entertainment, and children engaged in night work (8pm-6am).

The Act acknowledges the other worst forms of child labour as described in ILO Convention 182, which was ratified by Ghana in year 2000. The ILO recommends to ratifying countries to develop their own country-specific list of hazardous work, processes and task based on ILO Recommendation 190. Subsequently, the MMYE (now MESW) with ILO support has drafted a list of hazardous work for all sectors in Ghana (Table 2.1). A child 5-17 years found engaged in any of the activities in the list will be defined as engaged in hazardous work.

Table 2.1 Draft Hazardous Activities in all Sectors in Ghana

• Fishing on open waters i.e. sea, rivers or lakes	• Aluminium/lead smelters workers
• Small scale mining, sand winning and quarrying	• Welding and spraying
• Portorage and carting of heavy loads	• Fish mongering
• Agriculture	• Driver’s mate (bus conductor)
• Sawmilling	• Domestic aids
• Grinding mills	• Cattle herd boys
• Garbage dump scavenging	• Working at night (8pm-6am)
• Street hawking	• Chop bar attendants (local restaurant)
• Street beggars’ guide	• Work in bars, hotels and hospitality
• Tie and dye/Batik making	

Source: MMYE Draft Hazardous list, 2007

2.1.3 Hazardous Child Labour in Cocoa Production

The Government of Ghana has developed a Hazardous Child Labour Activity Framework (HAF) which defines hazardous activities in the cocoa sector (Table 2.2). Children engaged in any of these activities will be deemed to be engaged in hazardous work.

Table 2.2 Hazardous activities in Cocoa

- Clearing of forest and /or felling of trees
- Bush burning
- Working with agrochemicals, that is, purchasing, transporting, storage, use (mixing, loading and spraying/applying), washing of containers and spraying machine and disposal.
- Present or working in the vicinity of farm during pesticide application or re-entering a sprayed farm in less than 12 hours
- Using machetes/long cutlass for weeding
- Climbing trees higher than 3 metres to cut mistletoes
- Working with motorized mist blower, knapsack sprayer and chainsaw
- Harvesting overhead cocoa pods with harvesting hook
- Breaking cocoa pods with breaking knife
- Carrying heavy load beyond permissible weight that is above 30% of body weight for more than 3Km.
- Working on the farm for more than 3 hours per day or more than 18 hours per week when not in school.
- For children in school, working more than 2 hours a day on a school day.
- Working without adequate basic foot and body protective clothing (e.g. long sleeves, trousers and ‘Afro Moses’)
- Working on the farm in isolation (that is, beyond visible or audible range of nearest adult)
- Working on farm after 6.00 p.m.
- Going to or returning from the farm alone
- A child withdrawn from school to work on cocoa farm
- Working full time on farm and not attending school (applicable to children under 15years)

Source: HAF, NPECLC 2007

2.1.4 Unconditional Worst Forms of Child Labour

Children in unconditional worst forms of child labour as defined by ILO Convention 182 include the following:

- Slavery and slave-like practices including
 - Trafficking
 - Debt bondage
 - Forced or compulsory labour
 - Forced or compulsory recruitment for use in armed conflict
 - Ritual servitude
- Child prostitution and pornography
- Illicit activities (such as drug use, drug trafficking and sale)

SECTION THREE

INDICATORS FOR MEASURING WORST FORMS OF CHILD LABOUR

The economic activities evaluated among children during the Scale-up Survey 2007/2008 included those listed in Table 3.1. A child engaged in any of the listed activities for at least one hour during the two weeks preceding the survey was defined as currently engaged in an economic activity. However, activities marked with an asterisk (*) were considered hazardous economic activity.

Table 3.1 Economic Activities Evaluated Among Children in the Cocoa-growing Regions in Ghana

<ul style="list-style-type: none"> • Cocoa farm work • Other crop farm work • *Hawking/ street selling • Selling at the market • Livestock rearing • Apprenticeship (below age 14) • *Head portorage 	<ul style="list-style-type: none"> • *Construction • *Chop bar (local restaurant) • *Troto mate (bus conductor) • *Hunting • *Fishing • *Commercial sex /pornographic activity • Artisan work • *Mining/quarrying
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Source: Cocoa Labour Survey in Ghana 2007/2008

* hazardous economic activity

Based on the data collected during the Scale-up survey of cocoa farms during the 2007/2008 cocoa season in Ghana, certain definitions and indicators have been developed to help categorize the various forms of WFCL in the cocoa sector. Table 3.2 presents the indicators for measuring the WFCL which guided the data weighting process.

Table 3.2 Indicators for measuring WFCL in the cocoa growing Regions

<i>VARIABLE</i>	INDICATOR	
Engagement in Economic activity below minimum legal age for economic activity i.e. below 13 yrs	1	*# and % of Children between 5-12 years of age engaged in any non hazardous economic activity
	2	# and % of Children between 5-12 years of age engaged in at least one non hazardous economic activity and who are not in school
Engagement in cocoa farm work below the minimum legal age for economic activity i.e. below 13 yrs	3	*# and % of children between 5-12 who are currently participated in actual cocoa work
	4	# and % of children between 5-12 who currently participated in actual cocoa work but are not in school
Participation in economic activities in defined as hazardous by sectors	5	# and % of children 5-17 yrs working in hazardous sectors defined by the Children's Act (<i>Street hawking, construction, head portorage, chopbar, Hunting, fishing, mining& quarry, 'trotro mate', commercial sex</i>)
High Work intensity of participation in economic activity	6	#and % of children engaged in economic activity for more than 6 hours a day
	7	#and % of children engaged in economic activity for more than 4 hours after school
Night work	8	# and % of Children in any economic activity between 8pm-6am
Participation in hazardous work in cocoa	9	# and % of children engaged in any of the hazardous cocoa work stated in the HAF
Trafficked children	10	# and % of children who have been trafficked
Children working to redeem family or own debt	11	# and % of children whose reason for working is verified to be for redeeming family or own debt
Children who are confined	12	# and % of children who have been confined to work by non parent
Children experience physical abuse	13	# and % of children experiencing excessive physical abuse
**General Hazardous work in the cocoa regions	14	# and % of children involved in at least one of WFCL described above

SECTION FOUR

SAMPLING AND SAMPLE WEIGHTING

4.1 Sample Design of the Scale-up Survey (2007/2008)

As stated in the *Cocoa Labour Survey in Ghana Report (2007/2008)*, the choice of design and methodology for the study was informed by the overall study objectives, namely:

- To identify the main activities in cocoa cultivation and the labour associated with them, including the sources, types, and periods of peak labour needs.
- To document incidence or otherwise of the worst forms of child labour (WFCL) in Ghana's cocoa sector.
- To document incidence or otherwise of forced adult labour (FAL) in Ghana's cocoa sector.

The main focus of the *Cocoa Labour Survey in Ghana (2007/2008)* study was to provide estimates, with acceptable precision, for a variety of indicators on child trafficking, engagement or recruitment of children into hazardous activities and any of the worst forms of child labour, forced and/or bonded labour. This is part of the process towards certification as indicated by the Harkin-Engel Protocol.

The *Cocoa Labour Survey in Ghana (2007/2008)* was a household probability sample survey designed to sustain a variety of analysis at various domains of interest. The major domains distinguished in the tabulation of important characteristics were:

- i. Ghana as a whole
- ii. Each of the six cocoa growing regions of Ghana
- iii. At least 30 percent of the total number of the Administrative Districts which together produce at least 50 percent of Ghana's cocoa.

The universe defined for the *Cocoa Labour Survey in Ghana (2007/2008)* was the population living within individual cocoa farmer households in the six cocoa growing regions of Ghana. A well-defined cluster with identifiable boundaries on maps was used. In order to have manageable

workload within each sampling area and reduce the effect of intra-class correlation within a sample area on the variance of the survey estimate, the size of the clusters was standardized.

The sample used in the *Cocoa Labour Survey in Ghana (2007/2008)* was constructed as a three stage stratified cluster sample, limited geographically to the six cocoa producing regions in Ghana. The first stage of the sampling procedure entailed constructing a frame of districts. A total of 15 out of 46 districts were sampled. The number of districts selected in each region was proportional to the total amount of cocoa produced by that region. The production figure for the selected districts was **396,576 mt** in 2003/2004 and this constituted **54 percent** of Ghana's total cocoa production (736,975 mt) for that year. It must be emphasised here that in determining the number of districts, consideration was given to:

- a. The number of districts which together produced at least 50 percent of Ghana's cocoa;
- b. The number of completed interviews that would permit analysis at the various domains of interest;
- c. Fair representative distribution of selected districts;
- d. Districts which participated in the pilot survey.

The second stage entailed selecting Enumeration Areas (EAs) within each selected district. The number of EAs selected in each district was determined proportionally by the level of cocoa production in that district¹. In each district the EAs were arranged in the order of their codes and selected using systematic sampling method. In all a total of 120 EAs were selected.

The details of the first and second stages of the sampling design are shown in Table 4.1. Due to logistical difficulties, one EA was not enumerated (see section 4.9 of the *Cocoa Labour Survey Report, 2007/2008*).

A listing exercise was undertaken by the Cartography Division of Ghana Statistical Service in the 15 selected EAs. This represents 32.6 percent of the 46 cocoa-growing administrative districts of Ghana.

¹ In the main report it was stated that the allocation of EAs was done proportional to the size of the EA with size being the level of cocoa production in that EA. This was the proposal Statistical Service submitted to the Technical Committee of the NPECLC. However data on cocoa production by EAs was not available and this explains why this allocation method was not followed.

The third stage involved making a list of the households in each selected EA based on the following criteria:

- The household must be producing cocoa;
- The household must have at least a child aged 5-17 years².

Fifteen (15) households were selected in each EA for enumeration with five (5) additional households for replacement in the event of absentee household or relocation of household outside the EA.

4.2 Calculation of sample size

The expected number of children per household was not merely assumed but was based on the outcome of the pilot survey.

The formula for computing the sample size n for the *Cocoa Labour Survey in Ghana (2007/2008)*, was given as:

$$n = \left[\frac{(1 - p)}{p} \right] X \left[\frac{deft}{re(p)} \right]^2$$

Where $re(p)$ is the relative error of p , and $deft$ is the design effect.

With a design effect of 1.5 and a relative error of 0.45, the minimum number of children required to measure the national proportion of children in child labour accurately at 5 per cent significant level is 2,291. This is significantly high enough to account for the sampling error due to the use of a more complex and less statistically efficient design. In the pilot survey, it was found that the average number of children (5-17 years) per household was 2.5 (see pilot survey report). It was

² In the main report it was stated that in constructing the frame for the selection of households, only households who produced cocoa and had at least two children aged 5 to 17 years in the households were to be considered in the frame but this was not implemented

therefore not surprising that a sample of 3,452 children (far in excess of the minimum sample size) were interviewed in the survey.

Table 4.1: District allocation of sampled communities

REGIONS/DISTRICTS	Output*	Proportion	ALLOCATIONS OF EAs			
			Initial Allocation	Prop. Allocation	Adjusted Allocation	Final Allocation
Western						
Wassa Amenfi West	25,729	0.065	6	2	2	8
Aowin Suaman	61,104	0.154	6	5	5	11
Bia	68,328	0.172	6	6	6	12
Juabeso	63,759	0.161	6	6	6	12
Bibiani-Anhwiaso-Bekwai	35,523	0.090	6	2	2	8
Sefwi Wiawso	46,423	0.117	6	3	3	9
Eastern						
Birim South	17,543	0.044	6	1	1	7
Kwaebibirem	7,883	0.020	6	1	1	7
Volta						
Hohoe**	1,909	0.005	6	0	0	6
Central						
Asikuma-Odoben-Brakwa	5,782	0.015	6	0	0	6
Brong Ahafo						
Asutifi	5,284	0.013	6	0	0	6
Dormaa	13,945	0.035	6	1	1	7
Ashanti						
Adansi South	25,937	0.065	6	2	2	8
Amansie West	10,601	0.027	6	0	0	6
Ashanti Akim North	6,826	0.017	6	0	1	7
Totals	396,576	1.000	90		30	120

Source: Cocoa Labour Survey in Ghana 2007/2008

* Cocoa outputs have been revised for Bia, Juabeso and Aowin Suaman. There was a repetition of output levels for Bia and Juabeso, which used to be one district. These revisions did not affect the proportional allocation of EAs. However, the total cocoa production area covered under the survey in terms of output reduces from 60 percent in the study report to 54 percent.

** There are five (5) administrative districts in the Volta Region (Hohoe, Kadjebi, Jasikan, Nkwanta and Ho/Kpedzi) that produce cocoa but they are all considered under Hohoe District by COCOBOD as one cocoa district.

4.3 Weighting Procedure

In calculating the weights, the three stages of the design were considered. The first stage consisted of calculating the actual probability of selecting each district. The second stage consisted of calculating the actual probability of selecting an EA within a district, and the third stage involved calculating the probability of selecting a household within each of the selected EAs.

First Stage Probability: *Probability of selecting a district*

This stage did not require adjustment for non-response as all selected districts participated in the survey fully. The probability of selecting a district was defined as:

$$P(\text{district}) = (m_{ar}/M_r) * n_r$$

where,

m_{ar} is cocoa production in the a^{th} district of region r ;

M_r is total cocoa production in region r ;

N_r is number of districts sampled in region r .

Second Stage Probability: *Probability of selecting an EA conditioned on selecting a district*

The second stage consisted of calculating the actual probability of selecting an EA within a district. This represents the universe of the second stage selection probability assigned to a sampled EA. The probability of selecting an EA from the selected district was defined as;

$$P(\text{EA}) = n_a/N_a$$

where,

n_a is the number of selected EAs from the a^{th} district;

N_a is the total number of EAs in the a^{th} district.

Third Stage Probability: Probability of Selecting a Household

The third stage consisted of calculating the probability of selecting a household within each of the selected Enumeration Areas. This represents the universe of the third stage selection probability assigned to a selected household. If a household was replaced its probability was also replaced with probability of the new household. Where replacement list was exhausted, less than 15 households were enumerated and adjustment was made to account for non-response. In general, the probability of selecting a household from the EA within the selected district was defined as:

$$P(hh) = n_b / N_b$$

where,

n_b is number of selected cocoa producing households interviewed in the b^{th} EA from the a^{th} district;

N_b is the total number of listed cocoa producing households in the b^{th} EA from the a^{th} district.

Overall probability

The final probability is given by:

$$P = P(\text{district}) * P(\text{EA}) * P(hh) = (m_{ar} * n_r * n_a * n_b) / (M_r * N_a * N_b)$$

Table 4.2 summarises the formulae adopted at each stage for the weighting of the data.

Table 4.2: Formulae applied for the weighting of the Data

STAGE	SELECTED UNIT	FORMULAE APPLIED
		Probability of Selection
1	District	$P_{(a)} = m_{a,r} n_r / M_r$
2	Enumeration Area	$P(b a) = n_a / N_a$
3	Household	$P(c ab) = n_b / N_b$
Overall Probability		$P(a) * P(b a) * P(c ab)$

Note:

$P(a)=P(\text{district})$ - probability of selection of the a^{th} district from h^{th} region. Districts were selected with probability proportional to size, where size was based on level of cocoa production;

$P(b|a) = P(EA)$ - probability of selection of b^{th} EA among the EAs in the district given that the a^{th} district is selected

$P(c|ab) = P(hh)$ - probability of selection of c^{th} household given that the b^{th} EA within the a^{th} district is selected

m_{ar} - is cocoa production in the a^{th} district of region r ;

M_r - is total cocoa production in region r ;

N_r - is number of districts sampled in region r .

n_a - is the number of selected EAs from the a^{th} district

N_a - is the total number of EAs in the a^{th} district

n_b - is number of selected cocoa producing households interviewed in the b^{th} EA from the a^{th} district;

N_b - is the total number of listed cocoa producing households in the b^{th} EA from the a^{th} district

4.4 Sample weight

The reciprocal of the overall probability of selecting a household ($1/P$) constitutes the design weight per household (D_h). To account for non-response, the Brute weight was computed.

The Brute weight for h^{th} household (BW_h) calculated on the design weight was defined as:

$$BW_h = (\text{number of selected EAs in a district/number of completed EAs in the district}) \times (\text{number of selected households/number of households interviewed}) \times D_h.$$

All children aged 5-17 years who were in the selected households were interviewed. Thus the probability of selecting a household was the same as that of selecting a child within that household. However, not all eligible children were enumerated (because some children were absent from the household during the time of the interview). To account for this non-response the child Brute weight (BW_c) was computed as:

$$BW_c = (\text{number of selected EAs in a district/number of completed EAs in the district}) \times (\text{number of selected households/number of completed households}) \times (\text{number of eligible children/number of children interviewed}) \times D_h.$$

SECTION FIVE

RESULTS AND DISCUSSION OF WEIGHTED DATA

Table 5.1 shows a summary of the weighted results of the indicators of worst forms of child labour in the cocoa-growing regions.

Table 5.1: Children in hazardous activity in the cocoa-growing regions

<i>VARIABLE</i>	INDICATOR		No of children	Critical P
Engagement in Economic activity below minimum legal age for economic activity i.e. below 13 yrs	1	*# and % of Children between 5-12 years of age engaged in any non hazardous economic activity	454, 978	24.6
	2	# and % of Children between 5-12 years of age engaged in at least one non hazardous economic activity and who are not in school	32, 994	1.8
Engagement in cocoa farm work below the minimum legal age for economic activity i.e. below 13 yrs	3	*# and % of children between 5-12 who are currently participated in actual cocoa work	392, 618	21.3
	4	# and % of children between 5-12 who currently participated in actual cocoa work but are not in school	31, 041	1.7
Participation in economic activities in defined as hazardous by sectors	5	# and % of children 5-17 yrs working in hazardous sectors defined by the Children's Act (<i>Street hawking, construction, head portorage, chopbar, Hunting, fishing, mining& quarry, 'trotro mate', commercial sex</i>)	237, 299	12.9
High Work intensity of participation in economic activity	6	#and % of children engaged in economic activity for more than 6 hours a day	16, 124	0.9
	7	#and % of children engaged in economic activity for more than 4 hours after school	4, 670	0.3
Night work	8	# and % of Children in any economic activity between 8pm-6am	20, 090	1.1
Participation in hazardous work in cocoa	9	# and % of children engaged in any of the hazardous cocoa work stated in the HAF	186, 307	10.1
Trafficked children	10	# and % of children who have been trafficked	--	
Children working to redeem family or own debt	11	# and % of children whose reason for working is verified to be for redeeming family or own debt	--	
Children who are confined	12	# and % of children who have been confined to work by non parent	--	
Children experience physical abuse	13	# and % of children experiencing excessive physical abuse	---	
**General Hazardous work in the cocoa regions	14	# and % of children involved in at least one of WFCL described above	430, 595	23.3

** Calculation of the General Hazardous work excludes variable 1, & 3

Children were found to be engaged in hazardous activities in both cocoa and non-cocoa work. Considering the involvement of children in all economic activities in the cocoa regions, 430,595 children constituting 23.3 percent of the total number of children in the cocoa sector (1,846,126) were found to be engaged in at least one hazardous activity. With regard to cocoa specific activities, 186,307 children (10%) were found to be engaged in at least one hazardous activity (Table 5.1).

The regional distribution of children participating in at least one hazardous work for all sectors is presented in Table 5.2. More than one out of every three children in each of Central and Brong Ahafo regions participated in at least one hazardous activity. Relative to the other cocoa producing regions, the level of cocoa production in the Volta region is the lowest. The Western Region alone recorded 205,354 children constituting 47.7 percent of all children who performed at least one hazardous activity. This may be due to the fact that the region is the hub of primary production activities including agriculture, mining, lumbering and fishing. It also produces more than half of Ghana's cocoa.

Table 5:2 Children who participated in at least one hazardous WFCL by Region

Region	Estimated total of no children	No of children in hazardous work	Percentage of children in hazardous work within region	Relative Percentage of children in hazardous work by region
Western	798177	205354	25.7	47.7
Central	157016	53527	34.1	12.4
Volta	8329	795	9.5	0.2
Eastern	116553	21775	18.7	5.1
Ashanti	611048	95015	15.5	22.1
Brong Ahafo	155003	54130	34.9	12.6
Total	1846126	430596	23.3	100

The participation of children in hazardous activity in all economic activities by age and sex is presented in Tables 5.3 and 5.4 respectively. Relatively more children in the 5-12 age group participated in hazardous activity.

Table 5.3: Children’s Participation in at least one hazardous work in all sectors by Age

Age Group	Estimated total of no children	No of children in hazardous work	Percentage of children in hazardous work within age group	Relative Percentage of children in hazardous work by age group
5-12	1,238,456	228,176	18.4	53.0
13-14	259,847	81,048	31.2	18.8
15-17	347,822	121,371	34.9	28.2
Total	1,846,125	430,595	23.3	100

Table 5.4: Children’s Participation in at least one hazardous activity in all sectors by Sex

Sex	Estimated total of no children	Percentage of children in hazardous work within sex	No of children in hazardous work	Relative Percentage of children in hazardous work by sex
Male	430,595	236,801	24.9	55.0
Female	1,415,530	193,794	21.6	45.0
Total	1846125	430,595	23.3	100

In terms of the numbers, more male children are engaged in at least one hazardous activity (Table 5.4). More results of the analysis of the relationships between children participation in other non-cocoa activities are presented in Tables A.1 to A.9 in the Annex.

5.2 Children participation in cocoa-specific Hazardous Activity

The results of the analysis of the participation of children in cocoa specific hazardous activity are presented in Tables 5.5, 5.6 and 5.7. One-fifth of children in Brong Ahafo region participated in at least one hazardous activity in cocoa production. Relative to the other cocoa producing regions, the level of involvement of children in hazardous activities in cocoa production in the Volta region is the lowest and this corresponds with the low level of activity of cocoa production activities in that region. However, Western region was found to have the highest proportion (48%) of children engaged in cocoa specific hazardous activities.

Table 5.5: Children’s participation in cocoa-specific hazardous activity by region

Region	Estimated total number of children	Number of children in cocoa specific hazardous work	Percentage of children in cocoa specific hazardous work within region	Relative Percentage of children in cocoa specific hazardous work by region
Western	798,177	89,388	11.2	48.0
Central	157,016	11,637	7.4	6.2
Volta	8,329	172	2.1	0.1
Eastern	116,554	7,744	6.6	4.2
Ashanti	611,048	43,409	7.1	23.3
Brong Ahafo	155,002	33,957	21.9	18.2
Total	1,846,126	186,307	10.1	100.0

The Western region produces more than half of Ghana’s cocoa and this may have resulted in the large number of children involved in at least one cocoa-specific hazardous activity (Table 5.5).

Table 5.6: Children’s participation in cocoa specific hazardous activity by age

Age Group	Estimated total number of children	Number of children in cocoa specific hazardous work	Percentage of children in cocoa specific hazardous activity within age group	Relative Percentage of children in cocoa specific hazardous work by age group
5-12	1,238,457	69,345	5.6	37.2
13-14	259,847	47,012	18.1	25.2
15-17	347,822	69,951	20.1	37.5
Total	1,846,126	186,308	10.1	100.0

With respect to the engagement of children in cocoa specific hazardous activities by age, the pattern is as described for the involvement of children in hazardous activities in both cocoa and non-cocoa sectors.

The sex distribution of the engagement of children in cocoa specific hazardous activities (Table 5.7) shows greater proportion of male involvement.

Table 5.7: Children’s participation in cocoa specific hazardous activity by sex

Sex	Estimated total number of children	Number of children in cocoa specific hazardous activity	Percentage of children in cocoa specific hazardous activity within sex	Relative Percentage of children in cocoa specific hazardous activity by sex
Male	950,939	117,837	12.4	63.2
Female	895,186	68,470	7.6	36.8
Total	1,846,125	186,307	10.1	100.0

Other details of the outcomes of the analysis of the weighted data in relation to children participation in hazardous cocoa work are presented in Tables A.1 to A.10 in the Annex.

6.0 CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

This report provides detailed explanation of the sampling procedure used in the scaled-up study including allocation of number of households, at the region, district and community levels. The report acknowledges that the sampling followed a three-stage procedure. The report has also provided detailed description of the weighting procedure and formulae used.

The outcome of the weighting exercise as applied to the key indicators used in assessing the involvement of children in hazardous activities in cocoa and non-cocoa work are provided in sufficient details. Considering all cocoa and non-cocoa work in the cocoa regions, 430,595 children, representing about a quarter (23.3%) of all children in the cocoa growing regions are involved in at least one of the activities classified as hazardous. The number and percentage of children engaged in at least one hazardous activity in cocoa specific activity are estimated at 186,307 and 10 percent respectively. These figures represent the national estimates of the involvement of children in hazardous activities and will inform further remediation interventions in the cocoa regions.

Children in cocoa growing households are engaged in both cocoa and non-cocoa hazardous activities and therefore all inclusive remediation efforts anchored on socio-economic development of cocoa growing households should be the key intervention strategy. The weighting exercise also helped to make projections on the key variables and associated indicators of the worst forms of child labour in the cocoa growing regions.

6.2 Recommendation

To get these children out of hazardous activities, it is recommended that Government, Global Cocoa Industry, and other partners should commit themselves to providing the required resources to remedy this situation.

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ANNEXES

CHILDREN PARTICIPATION IN HAZARDOUS WORK IN ALL SECTORS

Table A.1: Children participation in Hazardous work in all sectors by Age

Indicator		5-7		8-9		10-12		Total	
		n	%	n	%	n	%	n	%
1	Engagement in Economic activity below minimum age	78,415	17.5	109,,381	35.8	267183	55.0	454,979	36.7
2	Worse form of below minimum age engagement in economic activity	3,710	0.8	11,648	3.8	17636	3.6	3,2994	2.7
3	Engagement in Economic activity below minimum age in coca work	67,391	15.1	93,136	30.5	232091	47.8	392,618	31.7
4	Worse form Engagement in Economic activity below minimum age in cocoa work	3,086	0.7	11,137	3.6	16,818	3.5	31,041	2.5

Indicator		5-12		13-14		15-17		Total	
		n	%	n	%	n	%	n	%
5	Hazardous Sector of current Participation	138222	11.2	42519	16.4	56558	16.3	237299	12.9
6	Participated in economic activity for more than 6 hours	7084	0.6	4658	1.8	4382	1.3	16124	0.9
7	Participated in economic activity for more than 4 hour after schools	3704	0.3	656	0.3	311	0.1	4671	0.3
8	Participated in night work	10358	0.8	5170	2.0	4562	1.3	20090	1.1
9	Participated In Hazardous Cocoa Work	69345	5.6	47012	18.1	69951	20.1	186308	10.1

Table A.2: Children participation in Hazardous work in all sectors by Sex

Hazardous WFCL		Male		Female		Total	
		n	%	n	%	n	%
1	Engagement in Economic activity below minimum age	259,979	27.3	194,999	21.8	454,978	24.6
2	Worse form of below minimum age engagement	21,491	2.3	11,503	1.3	32,994	1.8
3	Engagement in Economic activity below minimum age in coca work	237,476	25.0	155,142	17.3	392,618	21.3
4	Worse form Engagement in Economic activity below minimum age in coca work	20263	2.1	10778	1.2	31041	1.7
5	Current Participation in economic activities defined as hazardous by Sector	115,884	12.2	121,415	13.6	237,299	12.9
6	Participated In economic activity for more than 6 hours	8518	0.9	7607	0.8	16125	0.9
7	Participated In economic activity for more than 4 hour after schools	896	0.1	3774	0.4	4670	0.3
8	Do you perform night work	7354	0.8	12736	1.4	20,090	1.1
9	Participated In Hazardous Cocoa Work	117,837	12.4	68,470	7.6	186,307	10.1

TableA.3: Children participation in Hazardous work in all sectors by Region

Indicator		Western		Central		Volta		Eastern		Ashanti		Brong Ahafo		Total	
		n	%	N	%	n	%	n	%	n	%	n	%	n	%
1	Engagement in Economic activity below minimum age	227098	28.5	68356	43.5	1642	19.7	27480	23.6	77261	12.6	53141	34.3	454978	24.6
2	Worse form of below minimum age engagement	19087	2.4	5050	3.2	35	0.4	2745	2.4	3395	0.6	2683	1.7	32995	1.8
3	Engagement in Economic activity below minimum age in cocoa work	214516	26.9	54631	34.8	763	9.2	26083	22.4	56832	9.3	39794	25.7	392619	21.3
4	Worse form Engagement in Economic activity below minimum age in coca work	17479	2.2	5050	3.2	0	0.0	2745	2.4	3395	0.6	2373	1.5	31042	1.7
5	Participation in economic activities defined as hazardous by sectors	112055	14.0	42075	26.8	427	5.1	11190	9.6	43494	7.1	28058	18.1	237299	12.9
6	Participation In economic activity for more than 6 hours	5785	0.7	4845	3.1	161	1.9	161	0.1	2533	0.4	2639	1.7	16124	0.9
7	Participation In economic activity for more than 4 hour after schools	550	0.1	0	0.0	0	0.0	161	0.1	2533	0.4	1427	0.9	4671	0.3
8	Participation in night work	9939	1.2	0	0.0	0	0.0	190	0.2	9672	1.6	289	0.2	20090	1.1
9	Participation In Hazardous Cocoa Work	89388	11.2	11637	7.4	172	2.1	7744	6.6	43409	7.1	33957	21.9	186307	10.1

HAZARDOUS ACTIVITY IN THE COCOA PRODUCTION

Table A.4: CHILDREN’S PATICIPATION IN HARZADOUS COCOA WORK BY AGE

Hazardous Cocoa Activity		5-12		13-14		15-17		Total	
		n	%	n	%	n	%	n	%
1	Working with Agrochemicals	773	0.1	2480	1.0	4108	1.2	7361	0.4
2	Present in the vicinity during spraying or early re-entry into sprayed farm	12104	1.0	15168	5.8	20215	5.8	47487	2.6
3	Harvesting overheads cocoa pods with pluckers go-to-hell	3248	0.3	4688	1.8	27501	7.9	35437	1.9
4	Carrying / Lifting/ handling heavy weight above 30% of body weight for more than 2 km	6849	0.6	4531	1.7	6875	2.0	18255	1.0
5	Working with noisy and dangerous equipment	1883	0.2	2433	0.9	464	0.1	4780	0.3
6	Working on the farm for more than 6hrs per day	6927	0.6	9332	3.6	5598	1.6	21857	1.2
7	Working without adequate basic protective clothing	50293	4.1	24091	9.3	33992	9.8	108376	5.9
8	Working full time on farm and not attending school/vocational training	1796	0.1	2501	1.0	2657	0.8	6954	0.4
9	Working before 6 a.m. or after 6 p.m.	0	0.0	0	0.0	3422	1.0	3422	0.2
10	Using machet /Long cutlass for weeding	11137	0.9	19528	7.5	42564	12.2	73229	4.0
11	Breaking Cocoa pods with cutlass	5058	0.4	17129	6.6	33783	9.7	55970	3.0
12	Burning bush	0	0.0	7249	2.8	18514	5.3	25763	1.4
13	Climbing and working on trees higher than 9 feet	575	0.0	1970	0.8	11459	3.3	14004	0.8
14	Child working alone in isolation	2996	0.2	3400	1.3	16173	4.6	22569	1.2
15	Clearing of Virgin Forest or thick bush or felling of trees	2275	0.2	5932	2.3	15220	4.4	23427	1.3
16	Participated in at least one of the above	69345	5.6	47012	18.1	69951	20.1	186308	10.1

Table A.5: CHILDREN'S PARTICIPATION IN HAZARDOUS COCOA WORK BY SEX

Cocoa Hazardous Work		Male		Female		Total	
		n	%	n	%	n	%
1	Present in the vicinity during spraying or early re-entry into sprayed farm	32880	3.5	14607	1.6	47487	2.6
2	Clearing of Virgin Forest or thick bush or felling of trees	21358	2.2	2068	0.2	23426	1.3
3	Working with Agrochemicals	6628	0.7	732	0.1	7360	0.4
4	Harvesting overheads cocoa pods with pluckers go-to-hell	33459	3.5	1978	0.2	35437	1.9
5	Carrying / Lifting/ handling heavy weight above 30% of body weight for more than 2 km	11955	1.3	6301	0.7	18256	1.0
6	Working with noisy and dangerous equipment	2671	0.3	2110	0.2	4781	0.3
7	Working on the farm for more than 6hrs per day	15543	1.6	6314	0.7	21857	1.2
8	Working without adequate basic protective clothing	58292	6.1	50084	5.6	108376	5.9
9	Working full time on farm and not attending school/vocational training	3825	0.4	3129	0.3	6954	0.4
10	Working before 6 a.m. or after 6 p.m.	3422	0.4	0	0.0	3422	0.2
11	Using machet /Long cutlass for weeding	60416	6.4	12813	1.4	73229	4.0
12	Breaking Cocoa pods with cutlass	48488	5.1	7483	0.8	55971	3.0
13	Burning bush	25168	2.6	594	0.1	25762	1.4
14	Climbing and working on trees higher than 9 feet	13607	1.4	396	0.0	14003	0.8
15	Child working alone in isolation	20996	2.2	1573	0.2	22569	1.2
16	Participated in least one of the above	117837	12.4	68470	7.6	186307	10.1

TABLE A.6: CHILDREN PARTICIPATION IN HAZARDOUS COCOA WORK BY REGION

Hazardous Cocoa Activity		Western		Central		Volta		Eastern		Ashanti		Brong Ahafo		Total	
		n	%	n	%	n	%	n	%	n	%	n	%	n	%
1	Working with Agrochemicals	3624	0.5	1788	1.1	0	0.0	0	0.0	1150	0.2	797	0.5	7359	0.4
2	Present in the vicinity during spraying or early re-entry into sprayed farm	19945	2.5	4453	2.8	0	0.0	7184	6.2	5719	0.9	10187	6.6	47488	2.6
3	Harvesting overheads cocoa pods with pluckers go-to-hell	13524	1.7	1945	1.2	54	0.6	0	0.0	14677	2.4	5236	3.4	35436	1.9
4	Carrying / Lifting/ handling heavy weight above 30% of body weight for more than 2 km	7409	0.9	0	0.0	0	0.0	1498	1.3	5230	0.9	4118	2.7	18255	1.0
5	Working with noisy and dangerous equipment	3814	0.5	0	0.0	83	1.0	0	0.0	884	0.1	0	0.0	4781	0.3
6	Working on the farm for more than 6hrs per day	18580	2.3	1485	0.9	0	0.0	0	0.0	583	0.1	1209	0.8	21857	1.2
7	Working without adequate basic protective clothing	47037	5.9	3188	2.0	35	0.4	2660	2.3	31769	5.2	23687	15.3	108376	5.9
8	Working full time on farm and not attending school/vocational training	6020	0.8	303	0.2	0	0.0	0	0.0	630	0.1	0	0.0	6953	0.4
9	Working before 6 a.m. or after 6 p.m.	0	0.0	0	0.0	0	0.0	0	0.0	3422	0.6	0	0.0	3422	0.2
10	Using machet /Long cutlass for weeding	35899	4.5	5538	3.5	0	0.0	2684	2.3	21771	3.6	7339	4.7	73231	4.0
11	Breaking Cocoa pods with cutlass	29314	3.7	5938	3.8	0	0.0	2158	1.9	13920	2.3	4641	3.0	55971	3.0
12	Burning bush	13899	1.7	303	0.2	0	0.0	0	0.0	8614	1.4	2946	1.9	25762	1.4
13	Climbing and working on trees higher than 9 feet	4071	0.5	0	0.0	0	0.0	0	0.0	6986	1.1	2946	1.9	14003	0.8
14	Child working alone in isolation	11277	1.4	303	0.2	0	0.0	293	0.3	6280	1.0	4416	2.8	22569	1.2
15	Clearing of Virgin Forest or thick bush or felling of trees	12216	1.5	853	0.5	0	0.0	0	0.0	5077	0.8	5280	3.4	23426	1.3
16	Participated in at least one of the above	89388	11.2	11637	7.4	172	2.1	7744	6.6	43409	7.1	33957	21.9	186307	10.1

**PARTICIPATION IN ECONOMIC ACTIVITIES DEFINED AS HAZARDOUS BY
SECTOR**

Table A.7: Children participation in activities in defined hazardous economic sector by Age

Hazardous Sector Activity		5-12		13-14		15-17		Total	
		n	%	n	%	n	%	n	%
1	Hawking / Street selling	123,618	10.4	35,374	14.2	45,947	13.6	204,939	11.5
2	Construction	3,603	0.3	1726	0.7	4751	1.4	10,080	0.6
3	<i>Trotro (Bus) mate</i>	2,924	0.2	1,326	0.5	1428	0.4	5,678	0.3
4	Head porterage	8,736	0.7	848	0.3	2642	0.8	12,226	0.7
5	Chop bar (catering)	1,299	0.1	0	0.0	550	0.2	1849	0.1
6	Commercial Sex / pornographic activity	0	0.0	390	0.2	680	0.2	1070	0.1
7	Mining / Quarrying	0	0.0	864	0.3	0	0.0	864	0.0
8	Hunting	520	0.0	1,585	0.6	3239	1.0	5344	0.3
9	Fishing	2212	0.2	2,288	0.9	1085	0.3	5585	0.3
10	At least one of the above	138,222	11.2	42,519	16.4	56,558	16.3	237,299	12.9

Table A.8: Children involvement in activities in defined hazardous economic sector by Sex

Hazardous Sector Activity		Male		Female		Total	
		n	%	n	%	n	%
1	Hawking / Street selling	93,898	10.2	111040	12.9	204,938	11.5
2	Construction	6586	0.7	3495	0.4	1,0081	0.6
3	Trotro (Bus) mate	4056	0.4	1622	0.2	5678	0.3
4	Head porterage	5969	0.7	6256	0.7	12,225	0.7
5	Chop bar (catering)	35	0.0	1814	0.2	1849	0.1
6	Commercial Sex / pornographic activity	0	0.0	1069	0.1	1069	0.1
7	Mining / Quarrying	864	0.1	0	0.0	864	0.0
8	Hunting	5345	0.6	0	0.0	5345	0.3
9	Fishing	5585	0.6	0	0.0	5585	0.3
10	At least one of the above	115,884	12.2	121415	13.6	237,299	12.9

Table A.9: Children participation in activities in defined hazardous economic sector by Region

Hazardous Sector Activity		Western		Central		Volta		Eastern		Ashanti		Brong Ahafo		Total	
		n	%	n	%	n	%	n	%	n	%	n	%	n	%
1	Hawking / Street selling	104,080	14.1	29,940	19.1	151	1.8	9,668	8.3	38,541	6.4	22559	14.6	204939	11.5
2	Construction	1192	0.2	6256	4.0	0	0.0	0	0.0	552	0.1	2081	1.3	10081	0.6
3	Trotro (Bus) mate	1255	0.2	3372	2.1	72	0.9	560	0.5	419	0.1	0	0.0	5678	0.3
4	Head portorage	3468	0.5	5088	3.2	169	2.0	454	0.4	1834	0.3	1213	0.8	12226	0.7
5	Chop bar (catering)	941	0.1	0	0.0	35	0.4	509	0.4	365	0.1	0	0.0	1850	0.1
6	Commercial Sex / pornographic activity	1069	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1069	0.1
7	Mining / Quarrying	0	0.0	864	0.6	0	0.0	0	0.0	0	0.0	0	0.0	864	0.0
8	Hunting	1136	0.2	0	0.0	0	0.0	0	0.0	726	0.1	3482	2.3	5344	0.3
9	Fishing	1952	0.3	1254	0.8	0	0.0	0	0.0	1953	0.3	426	0.3	5585	0.3
10	At least one of the above	112055	14.0	42075	26.8	427	5.1	11190	9.6	43494	7.1	28058	18.1	237299	12.9

