



BITTER SWEETS:

*Prevalence of forced labour & child labour
in the cocoa sectors of Côte d'Ivoire & Ghana*



A photograph showing two men working with large piles of cocoa beans in an outdoor or semi-outdoor warehouse setting. The man on the left is wearing a blue cap and a light-colored shirt with red and blue stripes on the sleeves. The man on the right is wearing a dark shirt with a logo and green shorts. They are both leaning over the beans, which are piled high. The background is bright and slightly hazy, suggesting an outdoor environment. The overall scene is one of manual labor in a cocoa processing facility.

BITTER SWEETS: PREVALENCE OF FORCED LABOUR AND CHILD LABOUR IN THE COCOA SECTORS OF CÔTE D'IVOIRE AND GHANA

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Front Cover

A sack of cocoa beans are placed outside a warehouse in Gagnoa, in southern Cote d'Ivoire. Gagnoa is the chief collecting point for a forest region that sends coffee, cocoa, and timber. Cote d'Ivoire is the world's biggest producer of cocoa beans.

Photo credit, Issouf Sanogo/AFP/Getty Images

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Workers fill sacks with cocoa beans at an agricultural cooperative in Guiglo, Cote d'Ivoire. Production and exports of cocoa from Cote d'Ivoire Coast decreased during the 2015-2016 season compared to the 2014-2015 season, with the 2016-17 season seeing a record harvest. Such fluctuations in harvest can have significant financial impacts on cocoa farmers already struggling with poverty.

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COCOA

IN CÔTE D'IVOIRE & GHANA

SMALLHOLDER



TRADER / GRINDER



MANUFACTURER



RETAILER



CONSUMER



60% of cocoa produced globally is from Côte d'Ivoire & Ghana



Forced Labour in Côte d'Ivoire



Adults **9,600**

4.2/1000 cocoa workers



Children* **2,000**

1.7/1000 cocoa workers

Forced Labour in Ghana



Adults **3,700**

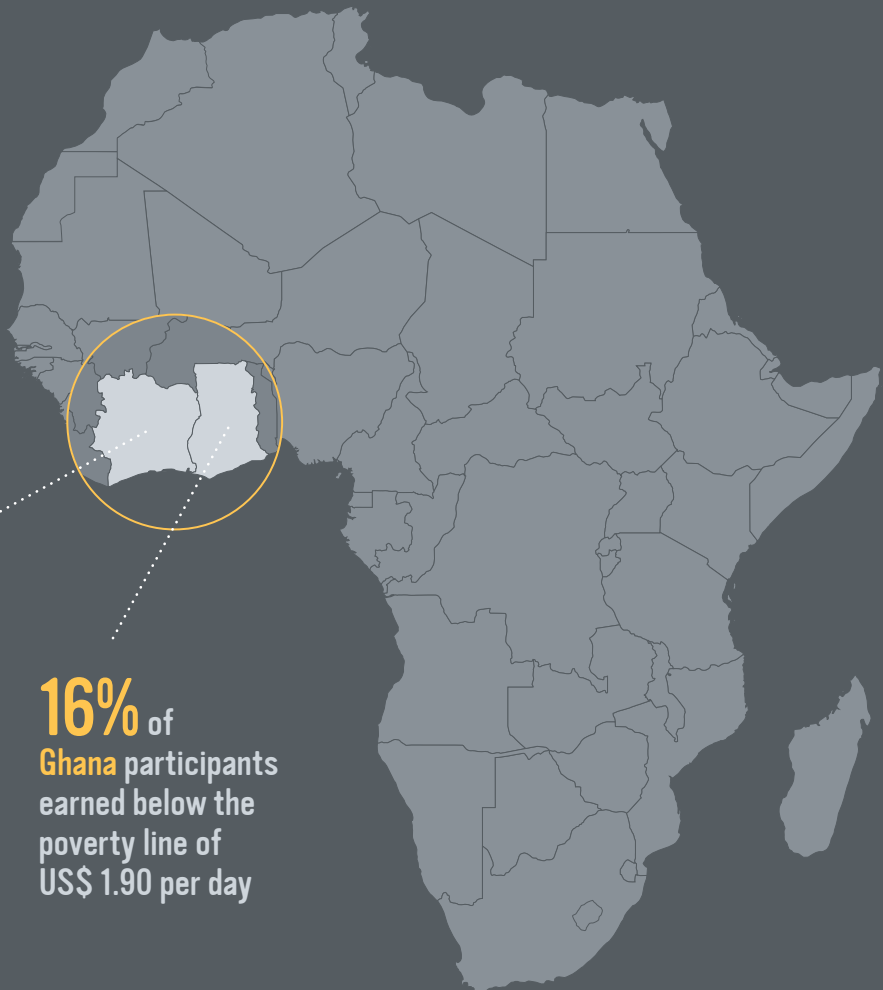
3.3/1000 cocoa workers



Children* **14,000**

20/1000 cocoa workers

*Children between 10 and 17 years old who were forced to work by someone other than their parents



41% of Côte d'Ivoire participants earned below the poverty line of US\$ 1.90 per day

16% of Ghana participants earned below the poverty line of US\$ 1.90 per day

EXECUTIVE SUMMARY

The primary aim of the study was to provide baseline estimates of prevalence of forced labour among children (aged 10 – 17 years) and adults (aged 18 and over) working in the cocoa sector in Ghana and Côte d'Ivoire, as well as updated estimates of the number of children (aged 10 to 17 years) exposed to child labour.

Representative face-to-face surveys of cocoa-growing households were administered in medium and high cocoa-producing areas of Ghana and Côte d'Ivoire between August and November 2017.

In Côte d'Ivoire, the survey results of 920 adult cocoa workers and 664 child cocoa workers were analysed. In Ghana, 907 adult cocoa worker surveys and 715 child cocoa worker surveys were analysed.

An estimated 891,500 children aged 10 to 17 years worked in cocoa production in medium and high cocoa producing areas of Côte d'Ivoire in the year prior to the survey. In Ghana, an estimated 708,400 children aged 10 to 17 years worked in cocoa agriculture in medium and high cocoa-growing areas in the year prior to the survey.

More than 90 percent of working children are exposed to child labour. Among the children aged 10 to 17 years working in cocoa, 93 percent have experienced child labour in the year preceding the survey in Côte d'Ivoire and 94 percent in Ghana.

More than 85 percent of working children are exposed to hazardous work: An estimated 86 percent of all children working in cocoa in the medium and high cocoa producing areas of Côte d'Ivoire and 89 percent of children in Ghana were exposed to hazardous work in the previous year. Working with sharp tools, and lifting heavy loads were the most common forms of hazardous labour reported in cocoa agriculture in the previous year.

Many children working in cocoa are underage and working excessive hours: 26 percent of children in Côte d'Ivoire and 46 percent of children in Ghana working in cocoa agriculture in medium and high cocoa-growing areas worked more than the allowable hours for a child of their age in the week previous to reporting.

Evidence children are forced to work in the cocoa sector by someone other than a parent. An estimated 1.7 children per 1,000 children working in cocoa agriculture in medium and high cocoa producing areas of Côte d'Ivoire were forced to work by someone other than a parent between 2013 and 2017. An estimated 20 children per 1,000 children working in cocoa agriculture in medium and high cocoa producing areas of Ghana were forced to work by someone other than a parent between 2013 and 2017.

Limited evidence of children forced to work by someone outside of the family. The findings support prior research on child labour in West Africa that child labour is predominantly perpetrated by someone in the family (e.g. a sibling, aunt, uncle or grandparent). In Côte d'Ivoire, none of the children surveyed reported being forced to work by someone outside the family between 2013 and 2017. In Ghana, results of the survey suggest that, for every 1,000 children working in cocoa agriculture in areas of medium and high cocoa production between 2013 and 2017, approximately 1.5 were victims of child forced labour at the hands of someone outside the family.

Evidence of forced labour of adults in the cocoa sector: In Côte d'Ivoire, 4.2 adult workers per 1,000 workers in cocoa agriculture were estimated to have experienced forced labour in cocoa agriculture between 2013 and 2017. In Ghana, there were an estimated 3.3 victims per 1,000 cocoa workers in medium and high cocoa-growing areas.

Poverty as a root cause of child labour and forced labour: The reported income by cocoa workers in both countries remains very low. The clear majority of workers do not earn what can be considered a living wage in their countries. Beyond the many stresses and constraints associated with poverty, this leaves cocoa-growing households with very little capacity to hire adult workers.

The finding that participants in Ghana and Côte d'Ivoire earn a relatively low wage, impacting their ability to shoulder the price volatility of cocoa, supports the theory that child and forced labour occurs where there is a need to increase demand while reducing costs. Hence, we recommend that the Governments of Ghana and Côte d'Ivoire, as well as the businesses that purchase cocoa from these countries take action to ensure cocoa workers have the ability to earn a living wage, including:

- » Enabling sustainable domestic and international cocoa prices
- » Improving support for cocoa workers
- » Improving farm productivity

Additionally, both business and government should invest in research that increases the evidence base for effective child and forced labour interventions and monitors the progress of existing interventions.



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Workers carrying cocoa bags in Cote d'Ivoire. The adult workforce in the cocoa sector of Cote d'Ivoire is estimated to be over 2.3 million and in Ghana, more than 1.1 million.

Photo credit: Godong/UiG via Getty Images



RESEARCH

PURPOSE AND OBJECTIVES

The purpose of the study was to address the gaps in knowledge on forced labour of adults and children and provide updated prevalence estimates of children exposed to child labour in cocoa-growing households in medium and high cocoa producing areas of Côte d'Ivoire and Ghana.

The objectives of the study were to:

- » Estimate the prevalence of child labour and child forced labour among children aged 10-17 years working in cocoa agriculture.
- » Estimate the prevalence of forced labour among adults aged 18 years and over working in cocoa agriculture.
- » Describe the characteristics of forced labour and child labour in cocoa production in Côte d'Ivoire and Ghana.
- » Describe potential causes and contributing factors to forced labour and child labour in cocoa production in Côte d'Ivoire and Ghana.

▼

A cocoa farmer opens up a cocoa pod with a machete to extract the cocoa beans in a cocoa-producing village in 2015 in Akyekyere, Ghana. The labour practices and working conditions in the cocoa sectors of Côte d'Ivoire, the world's largest cocoa-growing country, and Ghana, the world's second largest cocoa-growing country, have been under scrutiny for more than 15 years.

Photo credit, Melanie Stetson Freeman/The Christian Science Monitor via Getty Images





LIST OF ACRONYMS

EAs	Census Enumeration Areas
ENSEA	Ecole Nationale de Statistique et d'Economie Appliquée
GSS	Ghana Statistical Services
GOG	Government of Ghana
ICI	International Cocoa Initiative
ICLS	International Conference of Labour Statisticians
ILO	International Labour Organization
ISSER	Institute of Statistical, Social and Economic Research
IPEC	International Programme on the Elimination of Child Labour
MMYE	Ministry of Manpower, Youth and Employment
UN	United Nations
USDOL	United States Department of Labour
WACAP	West Africa Cocoa/Commercial Agriculture Program to Combat Hazardous & Exploitative Child Labour
WFCL	Worst Forms of Child Labour

DEFINITIONS

HOUSEHOLD

Using the ILO definition, 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. Members of a household are not necessarily related (by blood or marriage) and not all those related in the same house or compound are necessarily of the same household.”¹

COCOA-GROWING HOUSEHOLD

For this survey, a “cocoa-growing household” is any household with at least one adult member who performed any tasks related to cocoa-agriculture at any time in the previous 12 months. It was not necessary for a cocoa-growing household to own the land that is used to grow cocoa. The adult member who performed tasks related to cocoa-agriculture may have worked either on his/her own farm or somebody else’s farm.

ADULT COCOA WORKER

For the purpose of this research, as “adult worker” was defined as any adult of at least 18 years or older who performed any tasks related to cocoa-agriculture at any time in the last 12 months. An adult worker may have worked on his/her own cocoa farm or somebody else’s farm.

CHILD

For this survey, a “child” was any person between 0-17 years, however, only children between 10-17 years living in a cocoa-growing household were eligible to be interviewed.

WORK

“Work” was defined as any economic activity destined for the market, whether for sale or barter, including all goods or services provided free to individual households, and all production of goods for own use. Production or services for own final consumption within households (e.g., household chores) were not considered as work but agricultural production for own consumption was considered work.

WORKING CHILDREN

Not all children who are working are in child labour (see definition of child labour below). Working children, for this purpose, refers to anyone under the age of 18 involved in work in the cocoa sector, this includes children in child labour.

CHILD LABOUR

The ILO defines children in “child labour” as any persons aged 5 to 17 years who, during a specified time, were engaged in one or more of the following categories of activities: (a) worst forms of child labour, (b) employment below the minimum age, and (c) hazardous unpaid household services.² This study focused on children aged 10-17 years. Children under 10 years of age were not included.

WORST FORMS OF CHILD LABOUR (WFCL)

The WFCL include (a) hazardous work and (b) worst forms of child labour other than hazardous work. Hazardous work is defined as “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.”³ Worst forms of child labour other than hazardous work includes the following: “children trafficked for work; forced and bonded child labour; commercial sexual exploitation of children; use of children for illicit activities and armed conflict.”⁴ This study focuses on hazardous work, the most common WFCL in the cocoa sectors of Côte d’Ivoire and Ghana and on forced labour of both adults and children.

FORCED LABOUR

Any situation whereby an individual is forced to perform an economic activity for which a person has not offered him or herself voluntarily (concept of “involuntariness”) and which is performed under the menace of any penalty (concept of “coercion”) applied by an employer or a third party to the worker. The coercion may take place during the worker’s recruitment process to force him or her to accept the job or, once the person is working, to force him/her to do tasks which were not part of what was agreed at the time of recruitment or to prevent him/her from leaving the job. In the case of this research, the economic activity that was being studied was limited to work in cocoa agriculture.⁵

BACKGROUND

West Africa contributes some 70 percent of global cocoa production, with Côte d'Ivoire and Ghana producing around 60 percent of cocoa globally. In West Africa, cocoa is grown mainly by families on smallholder farms; those that generally produce relatively small outputs from relatively small plots of land that the farming families may not own themselves. While the production of cocoa has increased significantly since the start of the century, this has largely been due to the expansion of cocoa farming land, rather than increased yields, and has brought about large-scale deforestation in Ghana and Côte d'Ivoire.⁶ While available land for continued expansion decreases, barriers to improved yields of existing cocoa farms include the old age of cocoa farms, with depleted soil nutrients and the incidence of pests and diseases which affect the cocoa crops.⁷ Government programs have attempted to address these barriers⁸, however a generally low international market price for cocoa and seasonal price fluctuations as a result of changes in both the supply and demand of cocoa, put financial strain on cocoa workers already struggling with poverty.⁹

In Côte d'Ivoire, cocoa workers reportedly earn an average daily wage of US \$0.78, just 37 percent of the estimated living wage for a cocoa farmer in Côte d'Ivoire of US\$2.51 per day.¹⁰ In Ghana, the average annual wage from cocoa is US \$983-\$2,628 and accounts for two thirds of cocoa workers' household income.¹¹ It is the workers, who contribute only 6.6 percent of the value of cocoa per tonne (and hence receive a small share of the revenue of chocolate), that bear the brunt of drops in price, whereas others in the chocolate supply chain have the means to avoid and even profit from price falls (by hedging on the stock exchange).¹² To make a livable wage in the face of low production and low crop prices, cocoa workers recruit their children to work on the farm in order to boost production and maintain labour costs.¹³

In Ghana, the cocoa sector is governed by the Ghana Cocoa Board (COCOBOD), within the Ministry of Finance. Since 2011, the governing body in Côte d'Ivoire is the Conseil du Café-Cacao (CCC).¹⁴ While the respective governing cocoa bodies set a farm-gate price; a minimum price to be paid to cocoa workers per kilogram of cocoa; annually to ensure workers are protected from price fluctuations throughout the season, the farm-gate price is based on international market pricing, movements of which workers are not shielded from. For instance, the recent fall in cocoa prices experienced in 2016 and 2017

have been attributed to a surplus of cocoa, as a result of the expansion of cocoa farming land into protected forests and a bumper harvest resulting from favourable weather conditions and a rise in efforts to increase farm productivity, while at the same time, a stabilising demand for cocoa and its derivatives.¹⁵ This decline in the market price of cocoa saw a drop by a third of its value, with reports that some workers were producing cocoa at a loss. Yet neither government nor business have taken sufficient measures to address the impacts of these market effects on cocoa workers.¹⁶ Côte d'Ivoire and Ghana differ in their approach to regulation of the cocoa sector, as well as in the size of their economies, level of debt, rate of economic growth, the diversity of exports, among many factors that affect the capacity of the respective governments to support cocoa workers in the face of volatile international prices. For instance, the Ghanaian government currently spend more on subsidies for cocoa producers than the government of Cote d'Ivoire (around US\$400 per tonne more than Cote d'Ivoire) which helped shield Ghanaian cocoa producers from the 2017 loss of market value. However, this level of subsidization has been reportedly unsustainable, with media reports suggesting the government of Ghana is planning alternative strategies to promote a sustainable cocoa sector.¹⁷

The labour practices and working conditions in the cocoa sectors of Côte d'Ivoire, the world's largest cocoa-growing country, and Ghana, the world's second largest cocoa-growing country, have been under scrutiny for more than 15 years. Media reports¹⁸ have indicated, and subsequent academic research has confirmed widespread child labour as well as other forms of exploitation including forced labour of adults and children.¹⁹ In 2001, under pressure from both consumers and members of the US Congress, the international cocoa industry signed the Harkin-Engel Protocol²⁰, a voluntary agreement designed to address child labour in the West African cocoa sector. Since the signing of the Protocol, child labour has been studied with some regularity. An initial large-scale survey was carried out by the International Institute of Tropical Agriculture (IITA) in 2002 covering Côte d'Ivoire, Ghana and other West African countries.²¹ Subsequently, three rounds of data

Neither government nor business have taken sufficient measures to address the impacts of these market effects on cocoa workers

collection in Côte d'Ivoire and Ghana were undertaken by Tulane University during the 2007/08, 2008/09 and 2013/14 cocoa harvest seasons.²² Results from the most recent of these surveys²³ indicated that in Côte d'Ivoire, of the 1.3 million children between 5 and 17 years working in cocoa production, 1.2 million were in child labour, including 1.15 million in hazardous work. In Ghana, of the almost one million children between 5 and 17 years working in cocoa agriculture, approximately 900 thousand were in child labour, including 880 thousand in hazardous work. Comparisons between Tulane's 2008/09 and 2013/14 surveys identified a 46 percent increase in children in child labour in Côte d'Ivoire. At the same time, Ghana saw a 6 percent decrease in the estimated prevalence of child labour. These trends were attributed to strong growth in cocoa production (increases of more than 40 percent in Côte d'Ivoire and more than 30 percent in Ghana) adding to the challenges associated with the elimination of child labour.²⁴

While the availability of data on child labour has steadily increased over the past decade, data on forced labour in the West African cocoa sector are scarce. That is, situations where persons are forced to work in cocoa agriculture against their will by means of violence, threats, intimidation or some other form of coercion. Research by Tulane in 2008/09²⁵, found that approximately 20 percent of the children working in cocoa in Côte d'Ivoire and around 15 percent of the children working in cocoa in Ghana had been forced to work against their will in any sector (i.e. not only the cocoa sector) in the 12 months prior to data collection.

While the availability of data on child labour has steadily increased over the past decade, data on forced labour in the West African cocoa sector are scarce.

About one third of these children reported they were forced to perform work in cocoa agriculture. For those children reporting forced labour in the cocoa sector, almost all indicated that a parent or other family member had forced them to work.²⁶ The same study also documented a small number of potential cases of forced labour of adults in both countries. In Côte d'Ivoire, five adult workers reported that they had been

forced to work against their will in cocoa agriculture in the previous 12 months, 3.3 percent of all interviewed adult workers. In Ghana, six adult workers reported that they had been forced to work against their will in cocoa agriculture in the same period, equating to 1.4 percent of all interviewed adult workers. Several women reported having been forced to work by their husbands. Other adult participants reported having been forced

to work by their parents. Among men forced to work, one respondent was forced by his brother and another respondent explained that his "master" forced him to work. Two of the adult workers reporting forced labour in Côte d'Ivoire (1.3 percent) and seven of the adult workers reporting forced labour in Ghana (1.6 percent) were forced to perform work by a non-relative.²⁷

Child trafficking for labour in the cocoa sector has also been covered to some degree by previous research. In 2010, Anti-Slavery International published a qualitative study on the experiences of 133 children and young adults from Burkina Faso and Mali, who had been trafficked to work in the cocoa sector in Côte d'Ivoire in the previous five years.²⁸ A 2009 study by Tulane University also addressed the trafficking of children into the West African cocoa sectors.²⁹ This study attempted to both describe and quantify child trafficking from Mali and Burkina Faso to work in cocoa agriculture in Ghana and Côte d'Ivoire. Results from a non-representative snowball sample of children and young adults in Burkina Faso and Mali who had worked in the Ivorian or Ghanaian cocoa sectors indicated that 75 percent of participants in Burkina Faso and 63 percent in Mali were former victims of child trafficking. The participants overwhelmingly worked in Côte d'Ivoire (>95 percent) including all victims of child trafficking. A representative household survey indicated that 16 out of a total of 1,496 children interviewed in Burkina Faso and Mali had work experience in cocoa agriculture and two of these children were identified as former victims of child trafficking, one child in each the Burkinabe and the Malian sample.³⁰

The governments of Côte d'Ivoire and Ghana, the international cocoa industry, the International Labour Organization (ILO), and the United States Department of Labor (USDOL) are among the stakeholders who have collaborated on programs to address child labour in cocoa agriculture. The West Africa Cocoa/Commercial Agriculture Program to Combat Hazardous and Exploitative Child Labour (WACAP), which was implemented by the ILO between 2002 and 2006 was the first in a series of large USDOL-funded projects targeted at reducing the WFCL in the cocoa sector and establishing child labour monitoring systems.³¹ These projects have since continued under grants carried out by the International Cocoa Initiative (ICI) in Côte d'Ivoire and Winrock in Ghana. While each of the grants involves the governments of Côte d'Ivoire and Ghana, they do not provide direct funding and government efforts have long been hampered by the lack of available resources. In 2007/08, the Ivorian and Ghanaian governments implemented certification surveys with financing by the international cocoa/chocolate industry, followed by independent verification and small pilot child labour monitoring systems in both countries. These systems have yet to be scaled up.³²

A key concern among practitioners working towards the elimination of child labour and forced labour in the cocoa sector is the scarcity of evidence of effective strategies. A trend in the past ten years has been towards cocoa certification. Certification, usually carried out by independent certifiers such as Fairtrade International or Rainforest Alliance/UTZ Certified,³³ aims to eliminate child labour, forced labour and other problems from the cocoa supply chain by producing cocoa beans according to strict codes of conduct and production standards.³⁴ UTZ, even before merging with Rainforest Alliance in early 2018, has been drastically increasing the certification of cocoa beans and is today the world's largest certifier of sustainable cocoa with more than 610,000 cocoa workers in the UTZ program in 20 countries.³⁵ However, the efficacy of cocoa farm certification in reducing child labour is yet to be established. Published reports consist mostly of literature reviews and small non-representative surveys. Additionally, research is often financed by the chocolate industry or the certifiers themselves and findings are not always released.

A study commissioned by UTZ and carried out by Lei Wageningen Ur found that in Côte d'Ivoire in 2012/13, UTZ program participants had slightly higher knowledge of child labour (35 percent) than the control group (28 percent).³⁶ This study did not attempt to quantify child labour or forced labour and it did not include any interviews with children. A similar study conducted in Ghana in 2014, also by Lei Wageningen Ur, concluded that fewer children on certified farms under the age of 14 conducted hazardous activities than on farms that had not been certified.³⁷ However, the research also indicated that some certified workers did not comply with the UTZ Code of Conduct regarding child labour. The study in Ghana did not discuss forced labour on cocoa-growing farms, nor did it include interviews with children.

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Two girls stand near a grinding machine as they watch an employee of a chocolatier explain the different stages of processing cocoa into chocolate during the 5th edition of the ice cream and chocolate festival in Abidjan, Cote d'Ivoire in 2018. While the certification of cocoa beans by some certifiers aims to reduce the use of child labour in cocoa agriculture, the efficacy of cocoa farm certification in reducing child labour is yet to be established.

Photo credit, Sia Kambou/AFP/Getty Images



METHODOLOGY

Representative surveys of cocoa-growing households in medium and high cocoa-growing areas were administered in August and September 2017 in Ghana and in October and November 2017 in Côte d'Ivoire using a multi-stage cluster sampling design. Both adult cocoa workers as well as children between 10 and 17 years were interviewed. The surveys collected information on experiences of forced labour by adult cocoa workers as well as experiences of forced labour, child labour and hazardous work by children in cocoa-growing households in the two countries. The concepts of child labour and hazardous work were operationalized based on ILO definitions and guidelines while considering the relevant local laws and the hazardous activity frameworks of Côte d'Ivoire and Ghana. The survey module assessing forced labour was based on the survey instrument developed by Walk Free Foundation and the ILO to gather data for the Global Estimates of Modern Slavery.³⁸

The research on children pertained only to those aged between 10 and 17 years. Children younger than 10 years of age were not included in the study, due to the potentially distressing nature of the questions being asked and potential issues with reliability of the information obtained through child self-reports. While young children can be reliable in their answers,

the accuracy of child reporting is influenced by the children's age, the interviewing strategy used by the interviewer, the type of event that is being recalled as well as the interest level of the child.³⁹ Older children are more likely to understand complex questions, more accurate in their answers and respond better to structured interview settings.

KEY CONCEPTS AND DEVELOPMENT OF QUESTIONNAIRES

The key concepts addressed by this research include the concept of child labour and two of the WFCL: (a) children in hazardous work and (b) children in forced labour. The research further examined forced labour experienced by adults. The questionnaires also captured information on the demographics of the participants, family and household characteristics, migration and movement, education, training and income, and the type and nature of work they performed. The questionnaires were translated and tested as part of a pilot exercise before being finalized for the survey data collection.



CHILD LABOUR

The measurement of child labour draws on the current ILO Framework for the Statistical Identification of Child Labour.⁴⁰ However, there were some departures from the ILO measurement framework. The criteria for determining child labour in this study differed from that currently used by the ILO in that the present study did not include children aged 5 to 9 years of age and included a threshold of working hours for children below minimum age for employment (15 years of age).

Children were counted as being in child labour if they engaged in hazardous work (defined below) and/or if they worked more than the allowed number of hours for their age group. The following criteria were used to identify underage work and children who are exceeding the maximum number of working hours allowable for their age:

- » Children 10-11 years are in child labour if they work 1 hour or more per week
- » Children 12-14 years are in child labour if they work 14 hours or more per week
- » Children 15-17 years are in child labour if they work 43 hours or more per week

A child's total number of working hours were calculated by combining reported hours worked in cocoa agriculture in the past week with hours worked in other forms of economic activity. To consider the children's total workload is critical in a context in which many children working in cocoa work in other types of agriculture as well and sometimes outside of the farm, adding to their overall burden. In line with ILO definitions, the child's total working hours exclude any hours spent doing housework.

It is known that many children have difficulties with recalling their total working hours in the last seven days. The surveyors were trained to assist the children with this task. While some children may be over-reporting their working hours, it is assumed that under-reporting is more common.

CHILDREN IN HAZARDOUS WORK

The approach to measuring hazardous work was developed by Tulane University in 2012/13 in consultation with USDOL, and the governments of Côte d'Ivoire and Ghana. The objective of these consultations was to arrive at a common, agreed upon methodology that was based on the ILO definitions and guidelines on measuring hazardous work and also consistent with the national laws and hazardous activity frameworks of Côte d'Ivoire⁴¹ and Ghana⁴², which differed between the two countries at the time of research. As a result, the methodology for measuring hazardous work by children in cocoa agriculture focuses on the "common ground" between the Ghanaian and the Ivorian definitions within the broader ILO framework. Hazardous work was thus measured by assessing six variables. Children 10 to 17 years who worked in the cocoa sector in the previous 12 months and reported exposure in that time to at least one of these six variables were considered to be in hazardous work:

- 1) Children working in cocoa involved in land clearing
- 2) Children working in cocoa carrying heavy loads
- 3) Children working in cocoa exposed to agro-chemicals
- 4) Children working in cocoa using sharp tools
- 5) Children working in cocoa exposed to long working hours
- 6) Children working in cocoa exposed to night work

FORCED LABOUR

The approach used to count cases as forced labour was consistent with the approach taken by Walk Free Foundation.⁴³ A respondent was considered to have experienced forced labour if they met all the following criteria:

- 1) They reported they or someone in their immediate family (questions related to experiences of immediate family were administered to adults only) had been forced to work
- 2) They reported a form of coercion
- 3) The forced labour occurred in the five years preceding the survey^{*}

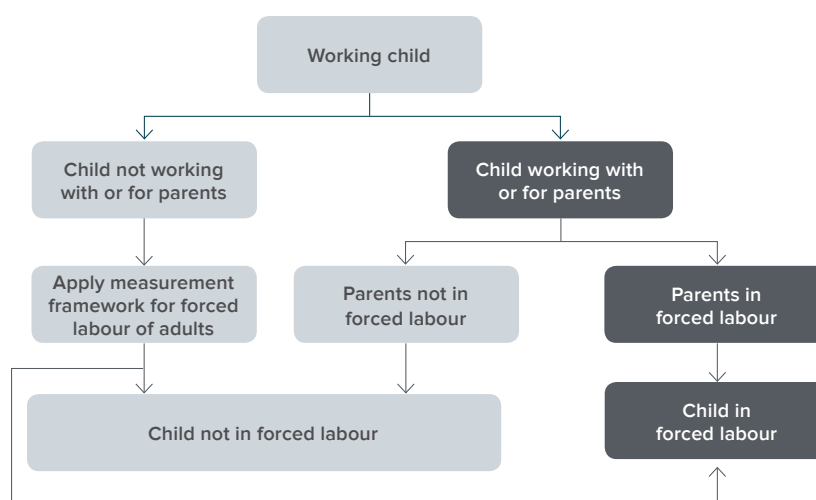
While the current ILO measurement framework for children in forced labour (see Figure 1; note that this measurement framework is currently under review) considers that children working for parents in forced labour are themselves in forced labour, our study did not capture data that would enable us to estimate the number of these children, so this aspect is not included in our estimates and, as a result, there may be an underestimate of the overall number of children in forced labour. At the same time, when it comes to estimating the number of children who are forced to work,⁴⁴ the ILO includes children who are forced to work by any family members who are not a parent. However, in the context of children working in cocoa agriculture, relatives other than parents (for instance, aunts, uncles, siblings, grandparents) are often primary caregivers who take on the role of parent and make decisions for the child. It also happens frequently that children are working for a relative other than a parent while at the

same time living with their parents. To account for this, this study presents two estimates of child forced labour; the prevalence of children forced to work in cocoa agriculture by someone who was not a family member (i.e. excludes cases where children forced to work by parents and extended family) and the prevalence of children forced to work in cocoa agriculture by someone who was not a parent (i.e. excluded cases where children were forced to work by a parent).

Children were asked about their own experiences while adult participants were also asked about the experiences of their immediate family network (partner/spouse, parents, siblings and children). The forced labour questions determined whether the respondent or someone in their immediate family had been forced to work against their will in the cocoa sector, the nature of the forced work (e.g. to repay a debt), the duration and time since the experience occurred, the form of coercion (e.g. threatened with violence), the type of work performed in cocoa agriculture, and whether they had experienced forced labour in another sector. While experiences of an adult respondent's family were recorded, only the experiences of the respondent themselves were recorded when interviewing children based on the assumption that children would be less likely to know and be able to accurately recall the experiences of others. In addition, this served to reduce the risk of double-counting cases.

For children, an additional question was added to allow differentiation between forced labour by a parent, another relative or a non-relative.

Figure 1. ILO measurement framework for forced labour of children^{}**



^{*} For this study the five-year period spanned the years 2013 to 2017.

^{**} International Labour Organization 2012, *Hard to see, harder to count: Survey guidelines to estimate forced labour of adults and children*, Geneva, pp. 17. Available from: http://ilo.org/global/topics/forced-labour/publications/WCMS_182096/lang--en/index.htm [23 February 2018].

SAMPLING AND SURVEY IMPLEMENTATION

A two-stage cluster sampling design was used to select a representative sample of 900 adults aged 18 and over working in cocoa agriculture and 900 children between 10 and 17 years living in the same households in medium and high cocoa producing areas of Ghana and Côte d'Ivoire. The sampling frame was limited to areas with medium or high intensity cocoa production and excluded enumeration areas (EAs) with fewer than an estimated 40 cocoa-growing households to ensure that it was possible to reach the target of 30 households in each of the enumeration areas selected in the sample. The number of cocoa-growing households per EA was determined by the Ghana Statistical Services based on the GSS 2010 Population and Housing Census. In Côte d'Ivoire, the number of cocoa-growing households per EA was selected by the statistic division of the Ministry of Agriculture based on enumeration data that were collected in preparation for the most recent agricultural census in the country.

In both countries, the first stage of sampling involved random selection of 30 census EAs from medium and high cocoa-growing areas. The second stage of sampling involved the selection of 30 households with at least one adult member who had worked in cocoa in the previous 12 months and, where possible, a child in the same household. Further information on first and second stage sampling in each country is detailed below.

Both the definition of the sampling frame and the sampling process were undertaken by local research partners, ENSEA in Côte d'Ivoire and ISSER in Ghana, in collaboration with the national statistical institutes in the two countries. Both organisations employed the best available national information, i.e. data from the most recent population and agricultural censuses, to construct the sampling frame and draw the sample.

FIRST STAGE SAMPLING IN CÔTE D'IVOIRE

Initially, a list of departments (first-level administrative subdivisions) categorised as medium and high cocoa production was established. The list of cocoa-growing departments was based on a 2006 research report that categorized the cocoa production departments of Côte d'Ivoire, and it deemed 31 departments as medium or high producing.⁴⁵

The Côte d'Ivoire Ministry of Agriculture, in partnership with ENSEA, local experts and the National Agency for Rural Development Support (ANADER) held in depth discussions regarding the need to update the district categorisation because some departments previously classified as medium cocoa production were considered in need of downgrading to the low production category. This was, in part, due to an agricultural migration from cocoa production to rubber production. In addition, the categories were created before there was a (reported) strong growth in illegal cocoa plantations (e.g., in protected areas). The updated list categorised 23 departments as medium and high cocoa producing.

The list of medium and high cocoa-growing departments was sent to the Ministry of Agriculture, for the selection of 30 enumeration areas with a minimum of 40 cocoa-growing households. According to the Ministry of Agriculture, a total of 828,478 households reside in the 23 districts and, of those, 321,069 households are involved in cocoa production. Prior to EA selection, any enumeration areas with fewer than 40 cocoa-growing households were dropped from the sampling frame resulting in a total of 3,427 enumeration areas. Thirty EAs were then selected as primary sampling units with simple random sampling. The sampled EAs contained a total of 3,246 households and of these, 2,712 households were involved in cocoa agriculture.

FIRST STAGE SAMPLING IN GHANA

Initially, a list of EAs in medium and high cocoa-growing areas was compiled using information from the Ghana 2010 Census. Before drawing the sample of EAs, the Ghana Statistical Services (GSS) excluded all EAs with less than 40 cocoa-growing households, resulting in 4,040 EAs in the medium and high cocoa-growing areas. Out of the 4,040 EAs 30 enumeration areas were selected using simple random sampling. The sampled EAs contained 2,621 households involved in cocoa agriculture.

SECOND STAGE SAMPLING IN GHANA & CÔTE D'IVOIRE

Household selection and data collection were undertaken by National School of Statistics and Applied Economics (ENSEA) in Côte d'Ivoire and the Institute of Statistical, Social and Economic Research (ISSER) at the University of Ghana. Mixed gender groups of experienced interviewers collected the data. A multi-day training was carried out in each country before the start of data collection and covered the research methodology, sampling, questionnaires and field procedures including a module on child protection. Handheld devices (tablet computers) and the data entry software CPro were used for collecting the data. Ethics clearance was obtained both locally (through ENSEA and ISSER) and from the Tulane University Institutional Review Board. An informed consent process was strictly followed and the data entry format and procedures were explained to each respondent before the start of the interview.

The random route method was used to select the target of 30 households from each enumeration area. In both countries, teams of three interviewers and one supervisor were allocated to each EA. In each of the sampled EAs the team leader sectioned the EA into the number of interviewers and conducted an enumeration of potential starting points in each section of the EA. Permanent structures such as places of worship, schools, sports fields/places, health centers, the house of the chief, or similar were then selected as starting points.⁴⁶ The team leader assigned each interviewer a starting point. Commencing at the starting point, the interviewer carried out household selection by walking in a straight line approaching all households on both sides. Once the interviewer reached the end of the street/settled area they turned 90 degrees to the right in Ghana and to the left in Côte d'Ivoire and again proceeded in a straight line. This process was continued until the required number of interviews had been reached.

Only households that included at least one adult member who had worked in cocoa in the last 12 months were eligible to participate in the study. Households were eligible even if they did not include any children. If a household was eligible, the interviewer created a listing with the names of all adults in the selected household who had worked in cocoa agriculture at any time in the previous 12 months. The interviewer also created a separate listing of all children from 10 to 17 years in the same household including both children working in cocoa and non-working children. Both household members that were currently present at the structure as well as those that were temporarily absent (e.g., working on the farm, in a local school, etc.) were listed.

Of the listed individuals, one adult who had worked in cocoa in the past 12 months was randomly selected for the adult worker interview. In addition, one child between 10 and 17 years in the same household was also randomly selected for the child interview including both children working in cocoa and non-working children. In Ghana, if a selected household did not include any child within the age range, two children were interviewed in the subsequent household with more than one child. In Côte d'Ivoire, due to limited availability of eligible children in the sampled households (many eligible children in the household were in urban areas for school at the time of survey), all eligible children per sampled household were interviewed. The selected individuals were asked for their consent (adult workers and children's caregivers) or assent (children). If interviews were refused, another household member was randomly selected from the household listing. If no household member was willing to be interviewed, the household was skipped. If a selected individual was temporarily absent, the interviewer set an appointment and made two additional attempts to reach the selected individual.

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Cocoa producers in Cote d'Ivoire calibrating beans. Cocoa workers, earn approximately 6.6 percent of the total value of chocolate, yet bear the brunt of drops in the price, whereas others in the chocolate supply chain have the means to avoid and even profit from price falls.

Photo credit, Godong/UIG via Getty Images

DATA ANALYSIS

All adult participants (all those selected had worked in cocoa in the preceding 12 months) and only child participants who reported they had worked in cocoa in the 12 months preceding the survey were included in the analysis. Forced labour estimates were produced for children who were forced to work by anyone who was not a parent as well as for children who were forced to work by someone outside the family (i.e. also excluded force exerted by aunts/uncles/grandparents, et.). All estimates were rounded to the nearest hundred.

Data weighting was conducted to ensure the adult and child samples were representative of the cocoa-growing population in medium to high cocoa producing areas of Côte d'Ivoire and Ghana.

The design weight was first calculated, taking into consideration the probability of selection at each stage of sampling. This considered the chance an enumeration area would be selected into the sample, the chance a household would be selected into the sample, and the chance that an eligible person in a household would be selected into the sample (given the number of eligible members of their household). For Ghana, sampling information used to calculate the design weight was from the 2010 census and was provided by ISSER in Ghana. Sampling information for Côte d'Ivoire was obtained by ENSEA in Côte d'Ivoire from the Ministry of Agriculture of Côte d'Ivoire. For base weights calculated for children, the proportion of cocoa-growing households with children was obtained from

the 2013/14 Tulane study and applied to the number of cocoa-growing households per EA in aim of improving the accuracy of the probability of selecting children into the sample. This was done to address the lack of cocoa-growing children in the criteria in determining whether a household was a cocoa-growing household. In Ghana, 73 percent of cocoa-growing households in medium and high cocoa-producing areas had children also involved in cocoa-growing, In Côte d'Ivoire, 56 percent of cocoa-growing households in medium and high cocoa-producing areas contained children who also worked in cocoa agriculture.

The design weights were then adjusted to the total population of cocoa-growing households in medium and high cocoa regions of both countries, using population estimates from Tulane 2013/14 research as the population benchmarks. Further adjustments were then made to ensure the distribution of age and gender among the sampled participants reflected the age and gender distribution of the study population. As population-level information on cocoa growers in each country was not known, data on demographics of the rural population in both countries, obtained from the most recent census data, were employed.

The final step of the weighting process was to calculate the variance to account for the effect of the study design and weighting and was used to determine the level of confidence in our estimates. Confidence intervals have been presented in Appendix 1.



FINDINGS

In Côte d'Ivoire, 920 adult cocoa workers and 893 children in the same households residing in areas of medium or high cocoa production participated in the survey. Interviews in Ghana were conducted with 907 adult cocoa workers and 901 children in the same households residing in areas of medium or high cocoa production (see Table 6.1).

DEMOGRAPHIC AND FARMING CHARACTERISTICS OF SURVEY PARTICIPANTS

For Côte d'Ivoire, the average age of adult participants was 44 years, with 86 percent of participants male. In Ghana, the average age was 47 years, with female making up almost half (46 percent) of participants (see Table 1).

Adult participants overwhelmingly were born in the country in which they were interviewed and almost always held citizenship of the same country. This was especially true for Ghana, where more than 99 percent of the adult participants were born in Ghana and held Ghanaian citizenship. In Côte d'Ivoire, about 15 percent of adult participants were born outside of the country, most often in Burkina Faso, and almost 20 percent held citizenship of another country (see Table 1).

The average age of child participants was 13 years in both Côte d'Ivoire and Ghana. For Côte d'Ivoire, male children were more likely (58 percent) to be interviewed than females, as was the case for Ghana, with male children making up 52 percent of those interviewed (see Table 2).

Over 95 percent of child participants in both countries were born in the country in which the data were collected. In Ghana, more than 99 percent of the interviewed children also held Ghanaian citizenship while in Côte d'Ivoire about 15 percent of the interviewed children were Burkinabe and 1.2 percent of the interviewed children were Malian (see Table 2).

The cocoa-growing households in the Côte d'Ivoire sample averaged seven members. Cocoa-growing households in Ghana had, on average, five members. While the number of adults and the number of children in the selected households were relatively evenly split, significantly more adults were reported as working in cocoa agriculture. A typical household included two to three adults working in cocoa agriculture and about one child (10 to 17 years) performing work in cocoa agriculture (see Table 3). On average, farms in Côte d'Ivoire were about twice as large as farms in Ghana. A typical farm was over eight hectares in Côte d'Ivoire but just over four hectares in Ghana.

TABLE 1:
Demographics of participants: Adults working in cocoa agriculture

	Côte d'Ivoire	Ghana
Sample size (n)	920	907
Average age (years)	43.6	46.9
Gender		
Males	794 (86.3%)	487 (53.7%)
Females	126 (13.7%)	420 (46.3%)
Place of Birth		
Côte d'Ivoire	807 (87.7%)	1 (0.1%)
Ghana	1 (0.1%)	903 (99.6%)
Burkina Faso	101 (11.0%)	0 (0%)
Mali	8 (0.9%)	0 (0%)
Other	3 (0.3%)	3 (0.3%)
Nationality		
Ivorian	740 (80.4%)	0 (0%)
Ghanaian	0 (0%)	904 (99.7%)
Burkinabe	164 (17.8%)	0 (0%)
Malian	10 (1.1%)	0 (0%)
Other	6 (0.6%)	3 (0.3%)

TABLE 2:
Demographics of participants: Children working in cocoa agriculture

	Côte d'Ivoire	Ghana
Sample size	664	715
Average age (years)	13.0	13.3
Gender		
Males	517 (57.9%)	468 (51.9%)
Females	376 (42.1%)	433 (48.1%)
Place of Birth		
Côte d'Ivoire	855 (95.7%)	1 (0.1%)
Ghana	0 (0.0%)	897 (99.6%)
Burkina Faso	34 (3.8%)	0 (0%)
Mali	3 (0.3%)	0 (0%)
Other	1 (0.1%)	3 (0.3%)
Nationality		
Ivorian	738 (82.6%)	0 (0%)
Ghanaian	0 (0.0%)	900 (99.9%)
Burkinabe	140 (15.7%)	0 (0%)
Malian	11 (1.2%)	0 (0%)
Other	4 (0.4%)	1 (0.1%)

TABLE 3:
Household size of participants

	Côte d'Ivoire	Ghana
Average household size	7.2	5.6
Average number of adults in the household	3.4	2.7
Average number of children per household	3.9	2.9
Average number of adults per household that have worked in cocoa agriculture in the last 12 months	2.8	2.4
Average number of children per household who have worked in cocoa agriculture in the last 12 months per household	1.0	1.3

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11 trafficked children were arrested by the police at the border between Burkina Faso and Ivory Coast in 2008. They were going to be exploited in cocoa plantations in the south of Ivory Coast. Forced labour of children was identified in both Côte d'Ivoire and Ghana.

Photo credit, Veronique de Viguerie/Getty Images

The clear majority of child participants had attended school or preschool in Côte d'Ivoire (88.4 percent) and in Ghana, nearly all children who participated had attended school or preschool (99.5 percent). Participation in school programs designed to support working children was very low in both Côte d'Ivoire (2.2 percent) and Ghana (4.6 percent). Child awareness of child labour was also relatively low, particularly in Côte d'Ivoire where only 16 percent of the child participants reported that they were aware of child labour in comparison to 35.4 percent in Ghana.

Of the participants in Côte d'Ivoire, the majority (86 percent) reported earning an income from work in cocoa agriculture in the prior 12 months, this included from the sale of cocoa beans, from work on a cocoa farm or both (see table 4). Of those earning an income from cocoa, most (93 percent) earned at least some of their income through the sale of cocoa beans while only 8 percent of those earning an income from cocoa earned at least some of their income from work on a cocoa farm. Most participants (86 percent), regardless of whether they themselves earned income from cocoa agriculture, reported that their household cultivates land for cocoa production and more than half (51 percent) of the participants reported that their household cultivated land to produce a crop other than cocoa. Over half (64 percent) of participants reported that their household owned all the land that was used for cultivation. For participants in Côte d'Ivoire, the average annual wage from the sale of cocoa beans was US \$980, whereas the

average annual wage from work on a cocoa farm was US\$269. In Côte d'Ivoire, over two thirds of participants (71 percent) reported that their total earnings (from cocoa and other income streams) had reduced in comparison to the previous year, however by what proportion of their income is unknown. Just under a quarter (23 percent) of participants reported that they were a member of a cocoa farming cooperative.

Of the participants in Ghana, 89 percent reported that they had earned an income from cocoa agriculture in the previous 12 months, from either the sale of cocoa beans, work on a cocoa farm, or both. Most participants reported that at least some of their income from cocoa agriculture was from the sale of cocoa beans, whereas only 5 percent of participants earned some wage from cocoa agriculture from work on a cocoa farm. Almost all participants reported that their household cultivated land for cocoa production, with 61 percent or participants reporting that their household produced crops other than cocoa. Two thirds of participants reported that their household owned all the land they cultivated. For participants in Ghana, the average annual wage from the sale of cocoa beans was US \$983 whereas the average annual wage from work on a cocoa farm was US\$206. In Ghana, 40 percent of participants reported a decrease in their annual income on the previous year. Almost one quarter (24 percent) of participants reported that they were a member of a cocoa farming cooperative.



TABLE 4:
Income and income source of adult participants

	Côte d'Ivoire n (%)	Ghana n (%)
Household owns land	772 (84%)	810 (89%)
Household cultivates land for cocoa production (including cocoa mixed with other crops) [*]	791 (86%)	886 (98%)
Household cultivates land for crop production other than cocoa (excluding cocoa mixed with other crops) [*]	471 (51%)	557 (61%)
Household owns all land they cultivate	590 (64%)	604 (67%)
Membership in cocoa-farming cooperative	214 (23%)	214 (24%)
Membership in certified cocoa-farming cooperative ^o	132 (14%)	33 (4%)
Source of income		
Earned income from cocoa agriculture	792 (86%)	837 (92%)
Earned income from the sale of cocoa beans [^]	739 (80%)	819 (90%)
Earned income from work on a cocoa farm [~]	72 (8%)	49 (5%)
Annual income		
Average annual income from selling cocoa beans (US\$) [†]	\$1,036	\$973
Median annual income from selling cocoa beans (US\$) [†]	\$450	\$531
Average annual income for work on cocoa farm (US\$) [‡]	\$352	\$206
Median annual income for work on cocoa farm (US\$) [‡]	\$180	\$149

* Cultivating land does not necessarily mean land ownership

[^] Earned either all or some of their income from cocoa agriculture from the sale of cocoa beans

[~] Earned either all or some of their income from cocoa agriculture from work on a cocoa farm

[†] Income of those whose entire income from cocoa agriculture was from the sale of cocoa beans

[‡] Income of those whose entire income from cocoa agriculture was from work on a cocoa farm

^o Certified by Fairtrade, Rainforest Alliance, UTZ Certified or another certifier

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A cocoa worker in Cote d'Ivoire sews a cocoa bag. Poverty of cocoa workers, both caused and exacerbated by a low market price of cocoa and seasonal price volatility, drive forced and child labour. The governments of Ghana and Côte d'Ivoire, where much of the world's cocoa is produced, along with governments of countries in which multinational chocolate companies are registered must act to protect workers against price falls and enhance the welfare of cocoa workers.

Photo credit, Godong/UIG via Getty Images



ESTIMATES OF CHILD LABOUR IN COCOA AGRICULTURE

Of the children surveyed in Côte d'Ivoire, 664 reported working in cocoa agriculture in the previous year and were included in the analysis of child labour and forced labour. Of the children surveyed in Ghana, 715 reported working in cocoa agriculture in the previous year and were included in the analysis of child labour and forced labour.

CÔTE D'IVOIRE

The results of the study suggest that around 891,500 children aged 10 to 17 years worked in cocoa in medium and high cocoa producing areas of Côte d'Ivoire between October 2016 and November 2017. An estimated 93 percent of those, or 829,400 children, were found to have experienced child labour in the year preceding the survey (see Table 5). An estimated 768,800 children in child labour worked under hazardous conditions in the previous year, this equates to an estimated 86 percent of all children working in cocoa agriculture in medium and high cocoa producing areas of Côte d'Ivoire. Of the participants who reported hazardous work, 70 percent reported they had worked with sharp tools, 59 percent had been involved in land clearing and 60 percent had lifted heavy loads in cocoa agriculture in the previous year (see Table 6).⁴⁷ An estimated 235,700 children in child labour worked more than the allowable hours for a child of their age, this equates to just over 26 percent of children working in cocoa agriculture in medium and high cocoa producing areas of Côte d'Ivoire. Of those participants who exceeded the maximum allowable working hours in the previous week, 33 percent were aged under 12 years and reported at least an hour of work, 34 percent were aged 12 to 14 years and worked greater than 14 hours, and 33 percent were 15 to 17 years of age and worked greater than 42 hours in Côte d'Ivoire. (see Table 7).

GHANA

The research suggests 708,400 children aged 10 to 17 years worked in cocoa agriculture in the medium and high cocoa producing areas of Ghana between August 2016 and August 2017. Just over 94 percent of those, or approximately 667,800 children, experienced child labour over this period (see Table 5). An estimated 632,100 children in child labour performed hazardous work, equating to slightly more than 89 percent of children working in cocoa agriculture in medium and high cocoa producing areas of Ghana. Of the participants who reported hazardous work, 81 percent reported carrying heavy loads and 71 percent reported using sharp tools (see Table 6).⁴⁸ An estimated 326,100 children in child labour had worked more than the allowable hours for children their age in the week preceding the survey, this equates to an estimated 46 percent of children working in cocoa agriculture in medium and high cocoa producing areas of Ghana. Of the participants who exceeded the maximum allowable working hours in the previous week, 23 percent were younger than 12 years of age and had performed at least one hour of work, 43 percent were aged 12 to 14 years and had worked for more than 14 hours, and 35 percent were aged 15 to 17 years and worked more than 42 hours in Ghana (see Table 7).

TABLE 5:
Estimates of children, 10-17 years, in child labour in cocoa production in the last 12 months

	Côte d'Ivoire n (%)	Ghana n (%)
Children in child labour in Cocoa*	829,391 (93.0%)	667,800 (94.3%)
Children in hazardous work in Cocoa	768,848 (86.2%)	632,100 (89.2%)
Exceeded allowable working hours	235,708 (26.4%)	326,100 (46.0%)
Total children working in cocoa agriculture	891,500 (100.0%)	708,400 (100.0%)

* Children exceeding working hours and/or performing any of six different types of hazardous work

TABLE 6:
Types of hazardous work performed by children, 10-17 years, in the cocoa sector in the last 12 months

	Côte d'Ivoire n (%)	Ghana n (%)
Land clearing	393 (67.1%)	24 (3.8%)
Heavy loads	398 (67.9%)	507 (80.1%)
Agrochemicals	143 (24.4%)	261 (41.2%)
Sharp tools	463 (79.0%)	450 (71.1%)
Long working hours	56 (9.6%)	28 (4.4%)
Night work	14 (2.4%)	8 (1.3%)
Total in hazardous work	586 (100.0%)	633 (100.0%)

TABLE 7:
Characteristics of children in child labour in cocoa agriculture in the past 12 months

	Côte d'Ivoire n (%)	Ghana n (%)
Total children in child labour in cocoa (past 12 months)	627 (100.0%)	659 (100.0%)
Gender		
Male	393 (62.7%)	363 (55.1%)
Female	234 (37.3%)	296 (44.9%)
Age range		
10 – 11 years	208 (33.2%)	150 (22.8%)
12 – 14 years	211 (33.7%)	281 (42.6%)
15 – 17 years	208 (33.2%)	228 (34.6%)
Underage work or exceeded allowable hours*		
Yes	295 (47.0%)	255 (38.7%)
No	332 (53.0%)	404 (61.3%)
Hazardous work		
Yes	586 (93.5%)	633 (96.1%)
No	41 (6.5%)	26 (3.9%)
Primary caregiver		
Parent(s)	531 (84.7%)	590 (89.5%)
Other relative(s)	125 (19.9%)	137 (20.8%)
No caregiver	14 (2.2%)	0 (0.0%)
Other	2 (0.3%)	0 (0.0%)
Household size		
1-3 people	34 (5.4%)	47 (7.1%)
4-6 people	179 (28.5%)	277 (42.0%)
7-10 people	267 (42.6%)	270 (41.0%)
11+ people	147 (23.4%)	65 (9.9%)
Adults in the household working in cocoa		
None	0 (0.0%)	0 (0.0%)
1 adult	63 (10.0%)	87 (13.2%)
2 adults	263 (41.9%)	284 (43.1%)
3 adults	109 (17.4%)	129 (19.6%)
4 adults	87 (13.9%)	101 (15.3%)
5+ adults	105 (16.7%)	58 (8.8%)
Children in the household working in cocoa		
None	36 (5.7%)	8 (1.2%)
1 child	233 (37.2%)	188 (28.5%)
2 children	192 (30.6%)	250 (37.9%)
3 children	103 (16.4%)	124 (18.8%)
4+ children	63 (10.0%)	89 (13.5%)
Participated in support programs		
Yes	7 (1.1%)	26 (3.9%)
No	619 (98.7%)	621 (94.2%)
Unsure	1 (0.2%)	12 (1.8%)

* Children reporting work in cocoa in the past 12 months and exceeding maximum number of working hours allowable for their age group in the previous 7 days including any economic activities (work in cocoa, work in agriculture other than cocoa and/or economic activities other than work in agriculture).



^

Workers carry trays of chocolate at the French Cemoi Chocolate factory on October 31, 2016 in Abidjan. Governments of cocoa-consuming countries must introduce legislation to require companies selling cocoa products to act to prevent modern slavery in their supply chains, in line with the UN Guiding Principles on Business and Human Rights.

Photo credit, Issouf Sanogo/AFP/Getty Images

ESTIMATES OF CHILD FORCED LABOUR IN COCOA AGRICULTURE

An estimated 1.7 children⁴⁹ were forced to work by someone other than a parent per 1,000 children working in cocoa agriculture in medium and high cocoa producing areas of Côte d'Ivoire between 2013 and 2017. This equates to approximately 2,000 victims of forced child labour. None of the children surveyed reported being forced to work in cocoa agriculture by someone outside the family in Côte d'Ivoire during the reference period. While this result may indicate the problem is not widespread in these areas within the country, it may otherwise reflect limitations in survey design or the difficulty of identifying crimes of this nature through self-reports by children (see Table 8).

In Ghana, results of the survey suggest that there were 20 children⁵⁰ forced to work by someone other than a parent per 1,000 children working in cocoa agriculture in medium and high cocoa producing areas between 2013 and 2017. This equates to an estimated 14,000 children who experienced forced labour. In the same areas, an estimated 1.5 children were victims of child forced labour at the hands of someone outside the family for every 1,000 children working in cocoa agriculture in areas of medium and high cocoa production between 2013 and 2017. This equates to around 1,100 victims of child forced labour in cocoa agriculture in medium to high production areas in the country over that period (see Table 8).

TABLE 8:

Estimates of children, 10-17 years, in forced labour in cocoa production in the last 12 months

	Côte d'Ivoire n (%)	Ghana n (%)
Total children working in cocoa agriculture in medium and high cocoa producing areas	891,500 (100.0%)	708,400 (100.0%)
Forced to work by persons other than parents or relatives	-	1,100 (0.2%)
Forced to work by persons other than parents	1,500 (0.17%)	14,100 (1.98%)

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Three children carrying wood back from a cocoa farm to the village of Goboue, in the southwest of Ivory Coast in 2016. "At five years old, I went to work in the fields with my dad. Today, my children go to school," said Peter, a cocoa farmer in Bonikro in the centre of Ivory Coast. Peter is one of a generation of farmers at the heart of a drive to keep the country's children in school and away from its vast plantations. Despite this, the present study estimates that more than 890,000 children aged between 10 and 17 years worked in cocoa agriculture in Cote d'Ivoire in 2016.

Photo credit, Issouf Sanogo/AFP/Getty Images

ESTIMATES OF ADULT FORCED LABOUR IN COCOA AGRICULTURE

All adult participants had worked in cocoa in the 12 months preceding the survey and were included in the analysis of forced labour. The survey results suggest that an estimated 2,296,300 adults work in cocoa agriculture in medium and high producing areas of Côte d'Ivoire in the 12 months preceding the survey. Of these, 4.2 adult workers per 1,000 workers in cocoa agriculture or (approximately 9,600 adults) experienced forced labour in cocoa agriculture between 2013 and 2017.

The survey results also indicate that 1,110,000 adults worked in cocoa agriculture in the medium and high cocoa-growing areas of Ghana. Of those, approximately 3,700 were victims of forced labour in cocoa agriculture between 2013 and 2017. This corresponds to an estimated 3.3 victims of forced labour in cocoa agriculture per 1,000 cocoa workers in medium and high cocoa-growing areas of Ghana (see Table 9).

TABLE 9:

Estimates of adults, aged 18 years and older, in forced labour in cocoa agriculture in the previous 12 months

	Côte d'Ivoire n (%)	Ghana n (%)
Adults working in cocoa agriculture in medium and high cocoa production areas	2,296,300 (100.0%)	1,110,000 (100.0%)
Experienced forced labour in cocoa agriculture between 2013 and 2017	9,600 (0.42%)	3,700 (0.33%)



DISCUSSION

Forced labour of adults in cocoa agriculture was identified in both Côte d'Ivoire and Ghana. In Côte d'Ivoire, 4.2 adult cocoa workers per 1,000 cocoa workers in medium and high cocoa production areas were estimated to have experienced forced labour between 2013 and 2017. In Ghana, 3.3 adult cocoa workers per 1,000 cocoa workers were estimated to be in forced labour in medium and high cocoa production areas between 2013 and 2017. Medium and high cocoa production areas make-up 99 percent

of the total production of cocoa in Ghana and 68 percent in Côte d'Ivoire.

Forced labour of children, where the person who forced the child to work was someone other than a parent, was identified in both Côte d'Ivoire and Ghana, with the rate of child forced labour estimated to be 1.7 child cocoa workers per

Forced labour of adults and children in cocoa agriculture was identified in both Côte d'Ivoire and Ghana

1,000 child cocoa workers in Côte d'Ivoire and 19.8 child cocoa workers per 1,000 child cocoa workers in Ghana. The estimated prevalence of child forced labour in Ghana exceeded the estimate of adults in forced labour in Ghana. While the classification of children forced to work by someone other than a parent meets the ILO guidelines for determining child labour⁵¹, the authors note that, in the context of cocoa agriculture in Ghana and Côte d'Ivoire, extended family (such as aunts, uncles and grandparents) are often living within the household and may also play a similar caregiving role as a parent. Hence, there is ongoing debate regarding the classification of child labour for children who have been forced by an extended family member residing in the household, in the context of West African cocoa agriculture. Further, the significantly lower rate of child forced labour at the hand of someone other than a parent identified in Côte d'Ivoire compared with Ghana, may be a product of the difficulties in identifying a sensitive and hidden issue via surveys in a sample of children, as well as product of the effect of the sample size (see Table A1 of the Appendix for confidence intervals of estimates of forced labour and child labour).

Children forced to work in cocoa by someone outside the family were identified in Ghana only, where an estimated 1.5 children experienced child forced labour per 1,000 child cocoa workers, a rate slightly lower than

child forced labour exacted by someone other than a parent in Ghana. Previous Tulane findings suggest that, where forced labour occurs, it is more frequently at the hands of a parent.⁵² The current findings are congruent with previous findings, suggesting that, in the context of child forced labour in West African cocoa agriculture, caregivers and adult household members are more commonly responsible for forced child labour. In Côte d'Ivoire, no children were identified who reported that they had been forced to work by someone outside the family during the reference period. While this also supports lower rates of forced labour exacted by someone outside the family than by a parent or family member, lack of identified cases may reflect the difficulty in identifying hidden populations using the methodology applied in this study.

Child labour continues to plague the cocoa sectors of Côte d'Ivoire and Ghana, where 93 percent and 94 percent of the children working in cocoa respectively, were estimated to have experienced child labour between late 2016 and late 2017. Experiences of child labour in both countries are largely attributed to the involvement of children in hazardous work. Children were often involved in multiple forms of hazardous work and most commonly, this hazardous work involved the use of sharp tools (70 percent of children working in cocoa in Côte d'Ivoire and 71 percent of children working in cocoa in Ghana) and lifting heavy loads (60 percent of children working in cocoa in Côte d'Ivoire and 81 percent of children working in cocoa in Ghana). To a lesser extent, yet not uncommon, was the issue of underage work and working hours that exceeded the recommended maximum hours of work according to age of a child, which accounted for 47 percent of child labour in Côte d'Ivoire and 39 percent in Ghana.

The results of the current study support the previous findings by Tulane University⁵³ that the majority of children working in cocoa have experienced child labour and that this is largely comprised of children who have undertaken hazardous work. Tulane University estimated⁵⁴ that, in 2013/14, child labour was experienced by 90 percent and 96 percent of children working in cocoa in medium and high cocoa production zones experienced in Côte d'Ivoire and Ghana, respectively. The results of the current study suggest a potential increase in child labour in the order of two to three percent in Côte d'Ivoire and Ghana. Prior research has suggested that increases in rates of child labour are, associated with increased cocoa production, resulting from an expansion of cocoa farming land.⁵⁵

Given the increase in cocoa production over the past five years, driven in part by expansion of farming land resulting from an increase of new farms in protected forests⁵⁶, this may explain the increased rates of child labour in the current study from the estimates presented in the study by Tulane University. Among the root causes of child labour and forced labour is poverty. Cocoa workers who do not earn a living wage are unable to hire adult workers and may instead rely on child labour. In Côte d'Ivoire, a large proportion of adult participants (71 percent) reported a reduction in earnings on the previous year. This reduction in earnings may have contributed to an increase in rates of child labour, with more children recruited into work in cocoa agriculture to boost productivity without adding to the financial strain on the household.

The prevalence of hazardous child labour estimated by Tulane University in 2013/14 (86 percent in Côte d'Ivoire and 94 percent in Ghana) suggests no change in the rates of hazardous labour in Côte d'Ivoire and a decrease of just over five percent in Ghana. While the absolute number of children who experienced hazardous child labour is estimated to have increased in both countries, this is an effect of a growing overall population and increasing number of cocoa farms. These data do not allow analysis of the causes for the decrease in hazardous work undertaken by children in cocoa agriculture in Ghana. One explanation may be greater financial means of cocoa workers, with the results of the current study indicating that a majority of those who received income from cocoa agriculture either saw an increase (40 percent) or no change in income from the previous year (43 percent). This may suggest less financial pressure and an ability to hire additional workers where needed, and less reliance on children in the household to work in cocoa agriculture. Additionally, the higher rates of child involvement in labour support programs in Ghana (while still very low – less than 5 percent) than in Côte d'Ivoire may have had some impact on child labour rates in Ghana. While many similarities exist in the design and implementation of the current study and the study by Tulane University, some differences in methodologies are apparent, and so these comparisons should be interpreted with caution.

While the sample size of the present study did not allow statistical analysis of the characteristics (such as income, gender, education) of those in forced labour or child labour, the results confirm that most adult participants working in cocoa have a relatively low income from cocoa. Majority of participants from both Ghana and

Cote d'Ivoire earned income from the sale of cocoa beans, while far fewer participants were paid for their labour on cocoa farms (e.g., daily rates) or received income from both the sale of cocoa beans and labour.

A 2018 study by True Price and Fairtrade⁵⁷ considered the cost of a decent standard of living for a rural household in Cote d'Ivoire, accounting for expenses associated with food, housing, clothing, work, taxes, and healthcare, among others. The living income for a typical eight-member rural household in Cote d'Ivoire is estimated to be US \$7,318 per year, equating to US \$2.51 per day, or for an adult without dependents, US \$828 per year or US \$2.27 per day. Of the participants from Cote d'Ivoire that reported earning an income from cocoa agriculture in the year prior to the survey, 71 percent reported they earned below the Fairtrade International living wage of \$2.51 per day and 51 percent reported that they earned less than half (US\$1.25) the daily living wage for cocoa growers in Côte d'Ivoire.

When comparing reported income to the poverty line, 41 percent of participants from Cote d'Ivoire earned below the international poverty line using 2011 PPP of US\$1.90 per day, the equivalent of 73 West African francs per day. This is compared with an average rate of income below the international poverty line in Cote d'Ivoire is 28.2 percent.⁵⁸

While a living income calculation for cocoa workers in Ghana has not yet been published, we compared the reported income from cocoa agriculture of adult participants in the prior year to the international poverty line of US\$1.90 per day, the equivalent of \$1.90 Ghanaian Cedi per day (2011 PPP)⁵⁹. The results suggest 16 percent of participants in Ghana earned below the international poverty threshold from work in cocoa. While this is much lower than in Cote d'Ivoire, it is greater than the average rate of 12 percent of Ghanaians living under the international poverty line.

This supports the theory that for many cocoa farmers in the study areas, their income is not enough to be able to deal with falls in the price of cocoa and thus may lead to vulnerability to exploitation or pressures to cut expenses by forcing children to work.

71 percent of Cote d'Ivoire participants reported their earnings from cocoa were below a living wage

RECOMMENDATIONS

Poverty of cocoa workers, both caused and exacerbated by a low market price of cocoa and seasonal price volatility, drive forced and child labour. The governments of Ghana and Côte d'Ivoire, where much of the world's cocoa is produced, along with governments of countries in which multinational chocolate companies are registered must act to protect workers against price falls and enhance the welfare of cocoa workers. While tackling poverty is necessary to eliminate forced and child labour, strategies must also address the widespread involvement of children in hazardous work while child labour exists. The authors make the following recommendations to businesses who make a profit from cocoa products and governments of both the countries which produce and import cocoa:

ENABLE SUSTAINABLE DOMESTIC AND INTERNATIONAL PRICES

- » The Governments of cocoa supplying countries in West Africa must introduce supply management to avoid the driving down of cocoa prices because of oversupply of cocoa beans. Farm gate price management is having an impact on supply, e.g. high prices encourage investment in harvesting and production. Therefore, regionally coordinated supply management is required. This must also include comprehensive regional strategies to combat deforestation, land tenure reform and policies to stimulate crop diversity and good agricultural practices.
- » Businesses throughout the cocoa supply chain should commit to paying a living wage (the cost for an average household to maintain a decent standard of living) and ensure transparency regarding this. Interventions targeted at reducing poverty by paying higher wages and improving living conditions work to address the root causes of labour abuses in the cocoa sector.
- » Businesses operating in the cocoa sector should implement a code of conduct which includes human rights due diligence, include net income of cocoa workers as a key performance indicator. In addition, Businesses should regularly publish data on program efficacy and sustainability efforts.
- » Voluntary codes alone will not prevent forced labour and child labour in cocoa agriculture. Governments of cocoa-consuming countries must introduce legislation to require companies selling cocoa products to act to prevent modern slavery in their supply chains, in line with the UN Guiding Principles on Business and Human Rights.
- » Certification schemes and standards, such as UTZ-Rainforest Alliance and Fairtrade should include criteria for certification which requires that retailers report on livelihoods and labour conditions within their supply chains, specifically, whether a living wage is being earned.

IMPROVE SUPPORT FOR COCOA WORKERS

- » Businesses that purchase cocoa from West Africa should offer favorable trading terms for cocoa workers, such as pre-finance, quick payments, and long-term trading arrangements to guard against seasonal fluctuations in cocoa prices.
- » Governments must ensure policies relating to land rights and credit do not discriminate against women, who run around one quarter of cocoa farms.⁶⁰
- » Governments of cocoa-producing countries should undertake agricultural reforms which provide the option for workers to be supported to exit cocoa production if becomes unviable and is unable to provide a sustainable livelihood.
- » Governments of cocoa-producing countries must ensure free education and affordable healthcare is accessible to all children. This will require investment in rural infrastructure to ensure children have access to school and healthcare. This must be coupled with increased transparency around public spending and investment in support measures for cocoa workers.
- » Governments and businesses should increase investment in education programs for cocoa workers to increase the sensitization of cocoa-growing households and their communities to forced labour, underage work and the different types of hazardous work, including guidance on how to prevent violating labour laws.
- » Governments must support workers to establish and control farmer cooperatives to improve the bargaining power of cocoa workers to ensure that the interest of workers and is catered for while fostering a competitive domestic downstream sector.
- » Governments of cocoa-producing countries should enable and promote local businesses to process cocoa, to add values to the raw product before export.

IMPROVE FARM PRODUCTIVITY

- » Government should promote crop diversification to encourage sustainable farming and enable workers to cope when cocoa productivity is affected
- » Governments and businesses should promote mechanization of cocoa farming. This includes government and business investment in machinery that reduces the need to manpower and increases income, the provision of safety equipment to both adults and working children, and funding education sessions for workers on new techniques and technologies to both promote productivity and reduce the need for child labour.

INCREASE THE EVIDENCE-BASE FOR EFFECTIVE INTERVENTIONS AND MONITOR PROGRESS

- » Businesses should continue and scale up child labour monitoring systems. These will allow more accurate and up-to-date analysis of the situation and inform future interventions.
- » Governments should draw from child labour monitoring systems implemented by businesses to inform strategies to address child labour in cocoa.
- » Government should fund research to identify best practice. There is a continuing need for further research, not only to track progress over time but to continue to improve our understanding of the causes of child labour and forced labour in the cocoa sector, as well as identify effective mechanisms address it.

LIMITATIONS

Only medium and high cocoa-growing areas were sampled and within those, only enumeration areas with a threshold of 40 cocoa-growing households were eligible for selection. This was to ensure that the target of 30 cocoa-growing households could be sampled per enumeration area. As a result, the estimates of forced labour and child labour presented here cannot be generalized to low cocoa production areas of Ghana and Côte d'Ivoire. Medium and high production areas make-up 99 percent of the total production of cocoa in Ghana and 68 percent in Côte d'Ivoire.

The desired sample size of 900 children working in cocoa agriculture was not obtained in either Ghana or Côte d'Ivoire. As a result, the margin of error is increased and the certainty of the child labour and child forced labour estimates is reduced.

The decision to exclude children younger than 10 years of age was made to improve recall accuracy of experiences of children. This may, however, have led to an underestimate of child forced labour and child labour experienced by children younger than 10 years of age, particularly given that parents who are responsible for forcing their children to work may be less likely to report forced labour or child labour experiences of their children and these cases are therefore unlikely to be identified through the interviews with adults in the household.

Illegal cocoa farms which have been established in protected forest in Ghana and Côte d'Ivoire were not included in the sampling frame. Contribution of crop from illegal cocoa farms is reported to contribute to as much as 30 to 40 percent of total output in Côte d'Ivoire.⁶¹ This may have resulted in an underestimate in forced labour of children and adults and in estimates of child labour.

In Ghana, data from the most recent national Census, conducted in 2010, was used to define the sampling frame and to weight the data to the total population of cocoa-growers in medium and high production areas. Given the amount of time since these data were collected, changes in the size of the population and composition of cocoa-growers in enumeration areas is likely, and the bias introduced as a result is unknown.

During the weighting process, determining the probability of selection of a child cocoa worker into the sample required knowledge of the total number of households with cocoa-growing children in each

enumeration area. In both countries, in the absence of identification of a definition of cocoa-growing household used in the census datasets, the assumption was made that EA-level information on cocoa-growing households is based on adult household members who worked in cocoa agriculture. Hence, information on the proportion of cocoa-growing households with cocoa-growing children was obtained from prior research by Tulane University, conducted in 213/14, and applied to the total cocoa-growing households per enumeration area to determine the probability of a child being selected into the sample. While basing the probability of selection of children on households with adult cocoa-workers would have yielded incorrect estimates, the proportions applied may not have reflected the actual proportion of households with cocoa-growing children and therefore, may have introduced bias.

With the assistance of the ILO, the governments of Côte d'Ivoire and Ghana have each developed detailed lists of hazardous work activities that children are not allowed to perform. In this report, hazardous work is measured by focusing on six hazardous activities that are included in the country frameworks of both Côte d'Ivoire and Ghana and that are in line with the ILO guidance on formulating relevant indicators. By focusing on six hazardous activities common to both country frameworks, the two frameworks were not fully covered. Moreover, the Ivorian country framework has gone through several versions. As a result, the estimates of hazardous work presented in this report, even though they are placing more than 90 percent of children working in cocoa agriculture in the WFCL, may underestimate the scale of the problem.

The measurement of forced labour in cocoa agriculture remains challenging. The ILO concepts of "involuntariness" and "coercion" are difficult to operationalize in a situation in which children (and adults) are expected to follow the instructions given by elders. Terms such as "employer", "recruiter", etc. are not easily translated to environments in which all work is carried out informally and most often within the (extended) family unit. The findings from this research confirm that children working in cocoa agriculture almost always work for either a parent or another family member. As a result, cases of forced labour may fall into a "grey area", in which the existing international definitions are difficult to apply.



The projected estimates of children and adults in forced labour in the cocoa sector of Côte d'Ivoire and Ghana are based on very few identified cases. Due to the small numbers, the estimates are less precise (see Appendix 1 for confidence intervals) and should be interpreted with caution. The small number of identified cases does not imply that forced labour does not exist, rather it may be an indication of the barriers to identifying forced labour using the chosen methodology.

^

Stephen Sembuya, co-founder of the Pink Food Industries, looks at the cocoa fermenting at their factory in Wakiso on November 21, 2014. Two Ugandan men, Stephen Sembuya and Felix Okuye have embarked on chocolate manufacturing in Uganda and own more than 70 acres of cocoa plantation. Governments of cocoa-producing countries should enable and promote local businesses to process cocoa, to add values to the raw product before export.

Photo credit: Isaac Kasamani/AFP/Getty Images





CONCLUSION

The problem of labour abuses in the cocoa sector is growing. The data presented in this report show how widespread hazardous work and underage child labour continue to be. Cases of child forced labour and adult forced labour were also documented. Despite 15 years of research and hundreds of interventions progress remains elusive. A growing cocoa sector has resulted in more cocoa farms and more children working on these farms. The percentage of children who knowingly benefitted from any intervention remains very small. Low adult wages appear insufficient to move cocoa-growing households out of poverty and replace child labour with the work of adults.

While these problems can be solved they require political will, collective effort, and significant, well-directed resources. Change requires concerted action from the international chocolate industry, the governments of the cocoa producing and the cocoa importing countries, third party certifiers, and chocolate consumers. Consumer demands, as indicated by their purchasing decisions, drive political will and economic pressure to address inequality globally and encourage the social interventions needed to tackle the identified problems. While a bar of chocolate costs more if fair prices are being paid to the workers, a higher price is a small price to pay to contribute to a sustainable cocoa sector and a more equitable future.

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A selection of confectionery and chocolates on a newsagent shelf on December 8, 2016 in London, England. Voluntary codes alone will not prevent forced labour and child labour in cocoa agriculture. Governments of cocoa-consuming countries must introduce legislation to require companies selling cocoa products to act to prevent modern slavery in their supply chains, in line with the UN Guiding Principles on Business and Human Rights.

Photo credit: Leon Neal/Getty Images

APPENDIX 1

TABLE A1:
Weighted Estimates of Forced Labour, Child Labour and Hazardous Work for Côte d'Ivoire

	Count	Estimated persons	Estimated prevalence	Confidence interval	Estimated population
Adults					
Forced labour	2	9,600	0.42%	0.01% - 2.44%	2,296,300
Children*					
Forced labour (other than relatives)	0	NA	NA	NA	891,500
Forced labour (other than parents)	2	1,500	0.17%	0.018% - 0.66%	891,500
Child labour [^]	620	829,400	93.03%	88.26% - 95.95%	891,500
Child labour - Tulane 2013/14 estimate [†]	477	592,800	89.68%	-	-
Hazardous work	579	768,800	86.24%	79.54% - 91.39%	891,500
Hazardous work - Tulane 2013/14 estimate [†]	455	569,400	86.15%	-	-
Working excessive hours	177	235,700	26.44%	21.84% - 31.61%	891,500

* Child outcomes estimated by using the estimated proportion of cocoa-growing households with children working in cocoa agriculture.

[^] Child labour does not include counts of forced labour.

[†] Children, 10-17 years, working in cocoa in medium and high cocoa production zones only (Tulane University, Child Survey, 2013/14).

TABLE A2:

Weighted Estimates of Forced Labour, Child Labour and Hazardous Work for Ghana

	Count	Estimated persons	Estimated prevalence	Confidence interval	Estimated population
Adults					
Forced labour	3	3,700	0.33%	0.02% - 1.48%	1,110,200
Children[*]					
Forced labour (other than relatives)	1	1,100	0.15%	0.003% - 0.91%	708,400
Forced labour (other than parents)	4	14,100	1.98%	0.97% - 3.59%	708,400
Child labour [^]	666	667,800	94.26%	92.26% - 95.77%	708,400
Child labour - Tulane 2013/14 estimate [°]	682	615,400	95.90%	-	-
Hazardous work	633	632,100	89.22%	85.53% - 92.05%	708,400
Hazardous work - Tulane 2013/14 estimate [°]	664	605,400	94.40%	-	-
Working excessive hours	293	326,100	46.03%	40.88% - 51.27%	708,400

^{*} Child outcomes estimated by using the estimated proportion of cocoa-growing households with children working in cocoa agriculture.

[^] Child labour does not include counts of forced labour.

[°] Children, 10-17 years, working in cocoa in medium and high cocoa production zones only (Tulane University, Child Survey, 2013/14).

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