

FINAL REPORT

Income Study of Cocoa-Producing Households in Ghana

An evaluation of household income, living income gaps, and determinants

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Ghana Cocoa Board
Poised to Maintain Premium Quality Cocoa

Swiss Platform for Sustainable Cocoa

Executive Summary

The Swiss Platform for Sustainable Cocoa (SWISSCO), in collaboration with the Ghana Cocoa Board (COCOBOD) and partner institutions such as FiBL, conducted a second Cocoa Household Income Study to assess the income situation of cocoa farming households for the 2024/25 cocoa season in Ghana. Building on the baseline study, which covered the 2022/23 cocoa season, this follow-up assessment reflects SWISSCO's and COCOBOD's commitment to regularly monitoring and reporting on progress towards living incomes in the cocoa sector. Like the baseline, the study builds on the guidance of the Living Income Community of Practice (LICOP) and the Cocoa Household Income Study (CHIS) approach (Van Der Haar et al., 2024), which provide a sector-wide framework for assessing the living income status of cocoa households.

The specific **objectives of the study** were to:

- estimate the average household income of cocoa farmers in Ghana;
- estimate the living income gap of cocoa farmers in Ghana;
- assess the determinants of cocoa productivity, net cocoa income and the living income gap.

The main household income analysis is based on a representative sample of 507 non-affiliated cocoa farming households drawn from the Cocoa Management System database using a two-level stratification by region and by the share of female-headed households.Interviews with farming households took place between 31 March and 30 April 2026 and covered the 2024/25 cocoa season. The analysis applies a gender lens by examining differences in income, farm characteristics and living income outcomes between female-headed and male-headed cocoa farming households. After the quantitative data was analysed, a validation was held with key stakeholders in Ghana on 28TH October 2026, which resulted in additional insights and recommendation ideas, included in this report.

Cocoa remains the backbone of household income. For the 2024/25 cocoa year, cocoa farming households in Ghana earn an average annual income of GHS 61,577 (USD 4,433). Cocoa is the primary source of household income, accounting for an average of 85% of total household earnings, and about one quarter of households (26%) depend on cocoa alone without having any other source of income. Income levels increase substantially with farm size. Medium-scale households earn GHS 111,879 (USD 8,055) on average, compared with GHS 51,958 (USD 3,741) for male-headed small-scale households and GHS 43,932 (USD 3,163) for female-headed small-scale households.

The median net income from cocoa grown on own land is GHS 33,000 (USD 2,376) per household per year. Per hectare, however, net cocoa income is remarkably similar across groups based on gender and household productive cocoa areas, at a median of GHS 18,451 (USD 1,328). This suggests that differences in household income are driven mainly by the size of the productive cocoa area rather than by differences in land productivity. Average yields stand at 476 kg/ha, and producers received a median farmgate price of GHS 3,100 (USD 223) per bag (about GHS 48.4 per kg). Labour is the dominant production cost, with the median cost of GHS 1,631 (USD 117) per hectare for labour and GHS 390 for material inputs. These labour costs do not include the unpaid household labour.

More than half of cocoa households still fall short of a living income, but the situation has improved markedly compared with the 2022/23 season. Adjusted for inflation and household size and composition, the Living Income Benchmark (LIB) is GHS 60,188 (USD 4,333) per household per year. Overall, 55% of surveyed households still earn below this benchmark, underscoring the persistent economic challenges faced by many cocoa farming families. At the same time, this represents a substantial improvement on the baseline study of 2024, in which 91% of households were below the benchmark. This improvement coincides with a sharp rise in the farmgate price, from GHS 12.8 per kg in 2022/23 to a median of about GHS 48.4 per kg in 2024/25, although the study design (particularly sample size and household composition) does not allow to fully compare the results of both studies.

The share of households below the LIB is highest among small-scale farms: 69.4% of female-headed and 60.7% of male-headed small-scale households, compared with 21.4% of medium-scale households. Households below the benchmark face an average annual shortfall of GHS 42,559 (USD 3,064), equivalent to 62% of their benchmark. On average, they earn less than 40% of what is needed for a basic but decent standard of living.

Closing the gap through cocoa alone would require substantial changes. A scenario analysis based on median farm characteristics shows the scale of the challenge. Assuming no other income sources, and holding costs and productive cocoa area constant, a household would need either a roughly 37% increase in yields (from 476 to 652 kg/ha) or a roughly 37% increase in the farmgate price (from GHS 48.4 to GHS 66.3 per kg) to reach a living income from cocoa income alone. In practice, a combination of higher productivity, better prices and income from other activities is the more realistic pathway to achieve a decent standard of living.

Only a few factors drive productivity, profitability and living income outcomes. A regression analysis examined which farm and household characteristics are associated with cocoa productivity (kg/ha), net cocoa income per hectare (GHS/ha) and the living income gap (GHS per household per year). Only a limited number of factors were statistically significant.

For **cocoa productivity**, larger productive cocoa areas are associated with lower yields per hectare, while higher material input and labour costs are associated with higher yields. This suggests that where labour is scarce and costly, and agronomic investment is low, farmers struggle to sustain good agricultural practices on larger plots. Adequate and complementary use of inputs and labour, by contrast, raises yields.

For **net cocoa income per hectare**, larger productive areas are again associated with lower returns. Participation in training is associated with higher net income per hectare.

For the **living income gap**, households with larger productive cocoa areas face a smaller gap, reflecting the higher total income generated by the farm scale despite lower per-hectare returns. In addition, access to a loan is significantly associated with a lower living income gap.

RECOMMENDATIONS.

Based on these findings, we recommend that:

COCOBOD:

- focus on yield improvements and producer-price increases as complementary leverage points to reduce the living income gap, while ensuring that productivity gains are not offset by higher production costs. Interventions should therefore promote cost-effective yield improvements, efficient input use, labour-saving practices and sustained improvements in the producer price of cocoa.
- given the current productivity of 476 kg/ha, strengthen and scale up Productivity Enhancement Programmes, such as mass pruning, hand pollination and improved planting material, working with stakeholders and focusing on small-scale farms, where income shortfalls are greatest;
- support targeted programmes for female-headed households, which typically earn less than male-headed households; and
- expand farmer training, given its association with higher net cocoa income.

We further recommend that **Development Partners** should strengthen income diversification programmes, particularly non-cocoa income-generating activities, given that cocoa accounts for 85% of household income on average. They should also support access to affordable, purpose-built finance, including Village Savings and Loan Associations, to reduce farmers' reliance on higher-cost borrowing.

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Introduction

Enhancing the economic well-being of cocoa-producing households has been a central objective for stakeholders across the cocoa value chain. The concept of a Living Income for cocoa farming families is widely recognized as crucial for addressing various sustainability challenges that are closely linked to climate change, deforestation, child labour, nutrition, education, and health. Ensuring that cocoa farmers receive a Living Income aligns with broader efforts to tackle interconnected issues that affect both the livelihoods of farmers and the sustainability goals of the cocoa industry. To develop effective strategies for achieving a Living Income, it is essential for stakeholders from both cocoa-producing and consumer countries to share a common understanding of the context in which cocoa producers live. This joint study between COCOBOD and SWISSCO aims to provide comprehensive insights into the actual household income and Living Income of cocoa farmers. The study is intended to inform regulators, key stakeholders, and partners in the cocoa value chain about the current economic situation of cocoa farmers and their household income status in Ghana. This report outlines the primary components of the research, offering a concise overview of the main research objectives, the methodology employed, and the results, conclusions, and recommendations.

Research Objectives

The main objective of the study is to determine the household income of cocoa farmers in Ghana. Specifically, the study seeks to:

- Estimate the average **household income** of cocoa farmers in Ghana
- Estimate the **living income gap** of cocoa farmers in Ghana
- Assess the **determinants** of cocoa productivity, net cocoa income and living income gap of cocoa farmers in Ghana.

Throughout the research process, a gender lens was applied given the pivotal role of gender dynamics in Living Income outcomes.

Methodology

This section briefly outlines the methods used to determine the household income of cocoa farmers in Ghana. It includes details on the research design, analytical framework, data collection methods, stakeholder workshop and ethical considerations.

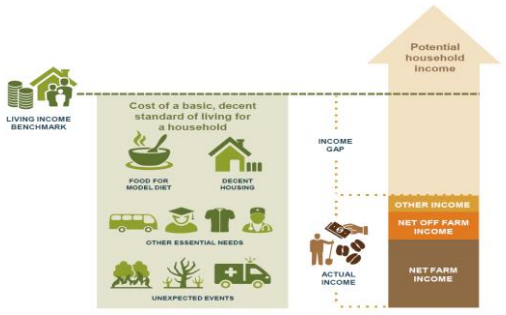
Research Design

The methodology draws extensively on established frameworks, particularly the Living Income Community of Practice (LICOP) guidelines and the Cocoa Household Income Study (CHIS) approach (Van Der Haar et al., 2024). By building on previous work, particularly the study undertaken in 2024, the study aimed to ensure a well-informed and refined investigation, leveraging lessons learned and established methodologies to estimate the income situation of cocoa farming households in Ghana.

Analytical Framework

The Living Income narrative can be conceptualized as an equation, with income and costs considered on either side of a formula. On one side, we find the Living Income Benchmark, which factors in living costs—specifically, it estimates the cost of maintaining a decent standard of living for a household. On the opposite side, there is actual income, encompassing all sources of income and associated costs for a household. The variance between the Living Income benchmark and the actual household income represents the income gap (see Figure 1).

Figure 1. Visualising the Living Income Elements.



Source: LICOP.

Living Income Benchmark

A Living Income benchmark estimates the expenses for maintaining a basic but decent standard of living. Given its household-centric nature, the benchmark considers costs pertinent to a typical household, factoring in size and composition. Importantly, living costs vary significantly by location. Thus, these benchmarks address geographical variations in the cost of living.

The Living Income Benchmark for cocoa regions in Ghana was initially calculated by Smith & Sarpong (2018). They estimated a monthly Living Income of GHS 1,464 for a family of two adults and three children in 2018. This benchmark was last updated in June 2025 to account for inflation from 2018 to 2025, resulting in a new monthly Living Income estimate of **GHS 4,893 (USD 352)** for the same family size or an **annual Living Income estimate of GHS 58,716 (USD 4'224)**.

The Benchmark was adjusted based on the household size and composition. To do so, we use the method of the OECD Equivalence Scales. In the case of Ghana, the raw Living Income Benchmark was computed for a reference family of 5 members of 2 adults and 3 children. According to the OECD equivalence scale, this reference family is composed of 2.4 adult equivalent members. This number is obtained by assigning the value 1 to the first adult of the household (usually the head), a value 0.5 to all other adults and children from 14 years old, and a value of 0.3 to all children of 13 years and below.

Household income and Living Income Gap

The assessment of household income was largely aligned with the CHIS approach (Van Der Haar et al., 2024). The calculation of net farm income involves a comprehensive evaluation of various farming activities on the farm, extending beyond cocoa income exclusively. Additionally, production costs, encompassing hired labour, input-related expenses and transportation, were considered. Off-farm income encompasses earnings generated by household members from non-agricultural activities, such as employment in alternative industries. Other income includes sources of earnings apart from farm and non-agricultural activities, for instance, remittances or income from land rentals. Once household income has been estimated, the next step involves computing the income gap. This gap signifies the value that a household would need to earn, in addition to their existing income, to adequately meet the estimated Living Income Benchmark.

Determinants of Income

Various socio-demographic and structural factors, such as education level or household size, agricultural productivity and market access, impact households' attainment of a

living income. By integrating a comprehensive set of control variables, we identified the primary drivers of cocoa productivity (kg/ha), net cocoa income per hectare (GHS/Ha), and the living income gap (GHS per year) using an ordinary least squares regression model. The ordinary least squares regression model is given by the equation (1)

$$(Yi) = \beta 0 + \beta 1X1i + \beta 2X2i + \beta 3X3i + \cdots + \beta kXki + \epsilon i \quad (1)$$

Where,

- Yi: The dependent variable Y for observation *i.*
- β_0 : The intercept term.
- β_1, β_2,…,β_k: The coefficients for the independent variables (covariates).
- $X1_i$,$X2_i$,…: The independent variables (covariates) for observation i.
- ϵi : The error term.

Data

Data collection on farmers' actual income was conducted through face-to-face interviews using a structured questionnaire developed in KoboToolBox. The sample included 507 cocoa-producing households not directly affiliated with any SWISSCO member supply chain. Interviews were conducted by trained enumerators between 31 March and 30 April 2026, and the income data refer to the 2024/25 cocoa season.

Sampling Strategy

Our sampling strategy employed a two-level stratified approach. Cocoa farmers were sampled from the database of the Cocoa Management System (CMS). The database includes data on about 800,000 cocoa farmers. During the initial phase of stratification, the sample of farms was determined based on the number of registered farmers in each cocoa region. The approach adopted guaranteed a representative sample that accurately reflects the diverse characteristics of the cocoa landscape. Subsequently, within each region, a secondary stratification was performed based on the proportion of female farmers, ensuring representation and addressing the common underrepresentation of female farmers. Within each stratum, farmers were randomly selected to minimise bias and accurately represent the gender composition within these regions.

Outlier Management

Income data exhibits considerable variability, largely due to measurement errors inherent in recording income in contexts where records are not available, or income comes from many different sources across household members. To minimise the impact of outliers on our findings, we applied the winsorization technique. Specifically, we adjusted the data within the pooled sample by trimming both tails—replacing the bottom 2.5% and top 2.5% of values with the 2.5th and 97.5th percentiles, respectively. This method helps reduce the influence of extreme outliers while preserving the dataset's overall integrity and improving the robustness of our statistical estimates. We applied this approach to several key variables: for cocoa income calculations, we winsorized the volume of cocoa produced on own land, material input costs, and total labour costs. For other farm-related income, we trimmed data related to income from other crops and livestock. Additionally, we winsorized variables such as total wage income, total self-employment income, and total farm income.

Ethical Considerations

Informed consent was obtained from all participants in the surveys. For purposes of confidentiality, data were anonymised to protect the participants' identities.

Stakeholder Workshop

The findings were presented at stakeholder workshop "Closing the Living Income Gap" on 28th October 2026 at COCOBOD. The 45 participants represented COCOBOD, SWISSCO, cocoa farmers and cooperatives, cocoa and chocolate companies, development partners, non-governmental and standard-setting organization, and the study team. Split in three groups (yield and productivity, price and costs, and income and finance), they proposed priority actions to close the living income gap. These stakeholder views are integrated into the recommendations and summarized in Annex 2.

Limitations when comparing this study

The results of this study should not be interpreted as a direct measure of change since the 2022/23 baseline study, published in November 2024. Several methodological and contextual differences limit the comparability of the findings (see table below).

Limitations when comparing this study with the 2022/23 study (2024)

Single-season observations. Each study captures a single season. Cocoa yields, production costs and household incomes can vary substantially between seasons due to changes in pest and disease pressure, drought, rainfall patterns and other weather conditions. Consequently, differences between the two studies may to a certain extent reflect seasonal variability rather than longer-term changes.

Changes in cocoa prices and inflation. The baseline study covered the 2022/23 season, when the official farmgate price was GHS 12.80 per kg. COCOBOD subsequently increased the price to GHS 33.12 per kg in April 2024 and GHS 48.00 per kg in September 2024. In the current study, households received a median price of approximately GHS 3,100 per bag, equivalent to GHS 48.40 per kg. These price increases can substantially affect reported cocoa revenues and incomes. However, income figures expressed in nominal terms do not account for changes in the cost of living. Therefore, higher nominal incomes do not necessarily translate into equivalent improvements in households' purchasing power or living standards.

Differences in the study samples. The studies do not constitute a balanced panel, as not all households interviewed in 2022/23 were re-interviewed in the current study. Differences in the results may therefore reflect changes in sample composition. This limitation is particularly relevant given the relatively small sample size, which may also affect the stability of estimates and the extent to which findings can be generalised.

Exchange rate. The exchange rate used to convert Ghanaian cedi (GHS) into US dollars changed from GHS 12.28 per USD in the 2022/23 study to GHS 13.90 per USD in the current study. Consequently, comparisons of living income gaps expressed in USD are influenced by exchange-rate movements.

Results and Discussion

This section presents the study's findings, beginning with the results of the cluster analysis, followed by an examination of the outcomes by analytical group. These include an analysis of cocoa farmers' household income, with details on income from cocoa and the overall income structure, a comparison of actual household income to the Living Income Benchmark, and identification of key determinants of income variables.

Cluster Analysis of Socio-demographic Characteristics

To provide a more accurate comparison of cocoa farming household incomes with the adjusted Living Income Benchmark and to account for the diverse compositions and livelihood approaches within households, households were grouped. Following the approach of the cocoa household income study of 2018 in Ghana (Tyszler et al., 2018), we clustered observations on the basis of the sex of the household head and the productive cocoa area[1].

As a result of the hierarchical clustering based on these two variables, we identified four analytical groups: male-headed small-scale (MH - Small), male-headed medium-scale (MH - Medium), female-headed small-scale (FH - Small), and female-headed medium-scale farms (FH - Medium). However, due to the limited sample size of medium-scale farms, the male- and female-headed medium-scale groups were combined into a single category to increase the overall sample size for that stratum. The results of the hierarchical cluster analysis are presented in Table 1. The distribution of productive cocoa areas indicates that small-scale farms have less than 2 hectares on average, while the medium-scale group includes some farms that could be classified as large, with productive cocoa areas exceeding 5 hectares.

Table 1. Cluster Analysis - grouping characteristics

	All	FH – Small	MH – Small	FH/MH – Medium
Sample Size	507	124	285	98
Sex of the household Head				
Share of Males	71.4%	-	100%	79%
Share of Females	28.6%	100%	-	21%
Productive Cocoa Land				
Min	0.2	0.2	0.2	3.84
1st quartile	1.21	0.81	1.21	4.05
Mean	2.54	1.6	1.89	5.62
Median	2.02	1.62	1.82	4.93
3rd quartile	3.24	2.02	2.83	6.47
Max	9.71	3.64	3.84	9.71

Source: Survey data, cocoa year 2024/25.

Table 2 provides an overview of farmer and household characteristics for the 507 cocoa-farming households, of which 29% are female-headed. The average age of household heads is 53 years.

Regarding education, 31% of household heads have no formal education, 16% have some primary education, and 4% have finished primary school. A further 14% have some secondary education, 17% have completed secondary school, 16% have some unfinished university or polytechnic education, and 2% have finished university/polytechnic.

Households have on average 4.4 members, including 1.32 children under 13 years, 0.68 members aged 14–17, and 2.39 adults aged 18 or older. Interviewed cocoa farmers in Ghana have an average total farm area of 4.37 hectares, of which 3.68 hectares are under cocoa and 2.50 hectares are productive cocoa area. In addition, cocoa farmers manage multiple farms, that is, about 2.89 farms with varied tenurial arrangements. About 25% of cocoa farmers indicated that their land

[1]The productive area was reported by the farmers; no data on the age of the cocoa trees was collected.

was cultivated by another household under a sharecropping arrangement, while 8% of households sharecropped land owned by another household.

Table 2. Descriptive Statistics of analytical groups

	All	FH – Small	MH - Small	FH/MH – Medium
Sample Size	507	124	285	98
Farmer and Household Characteristics				
Share of Female-Headed Households	29%	100%	0%	21%
Average age of the respondent	53	53	52	54
Education Level				
No formal education	31%	28%	33%	30%
Some primary	16%	13%	15%	23%
Finished primary	4%	3%	4%	3%
Some secondary	14%	17%	13%	13%
Finished secondary	17%	27%	15%	11%
Some university/polytechnic	16%	11%	16%	19%
Finished university/polytechnic	2%	0%	4%	1%
Household Size and Composition				
Average household size (number of household members)	4.4	4.07	4.39	4.83
Household members below 13 years	1.32	1.08	1.31	1.67
Household members between 14 and 17 years	0.68	0.73	0.67	0.66
Household members above 18 years	2.39	2.27	2.41	2.49
Farm Areas[2]				
Average Total Farm Area (Ha)	4.37	3.25	3.76	7.82
Average Cocoa Farm Area (Ha)	3.68	2.69	3.07	6.98
Average Productive Cocoa area (Ha)	2.5	1.64	1.93	5.62
Number of Farms	2.89	2.47	2.78	3.76
Share of farmers sharecropping-In	8%	11%	6%	11%
Share of farmers Sharecropping-Out	25%	20%	23%	36%

Household Income

Net Cocoa Income

The study estimates the **median annual net income from cocoa grown on own land at GHS 33,000 (USD 2,376) per household** (see Figure 2). By subgroup, medium-scale farmers earn the highest net cocoa income at GHS 80,870 (USD 5,823) per household per year, followed by male-headed, small-scale households at GHS 30,103 (USD 2,167) and female-headed, small-scale households at GHS 26,650 (USD 1,919). Across all groups, mean incomes are consistently higher than median incomes, indicating a right-skewed income distribution in which a relatively small number of households earn substantially higher incomes than the majority.

On a per-hectare basis (see Figure 3), the data reveal very little variation in net cocoa income across the different analytical groups. Overall, cocoa farmers achieve **a median net cocoa income of GHS 18,451 (USD 1,328) per**

[2]The data on farm areas is based on the declaration of farmers. Source: Survey data, 2024/2025

hectare per year, with producers receiving a **median cocoa farmgate price of GHS 3,100 (USD 223) per bag** (approximately 64 kg)**.** Female-headed small-scale farmers and male-headed small-scale farmers achieve similar per-hectare incomes, at GHS 18,719 (USD 1,348) and GHS 18,574 (USD 1,337), respectively. Medium-scale farms show a slightly lower, yet remarkably comparable, median net income per hectare of GHS 17,217 (USD 1,240) per hectare. These figures indicate that despite differences in productive cocoa area or the gender of the household head, land productivity—in terms of the net income generated per hectare—remains highly consistent across all groups.

Figure 2. Median Net Cocoa Income from cocoa grown on own land by analytical group.

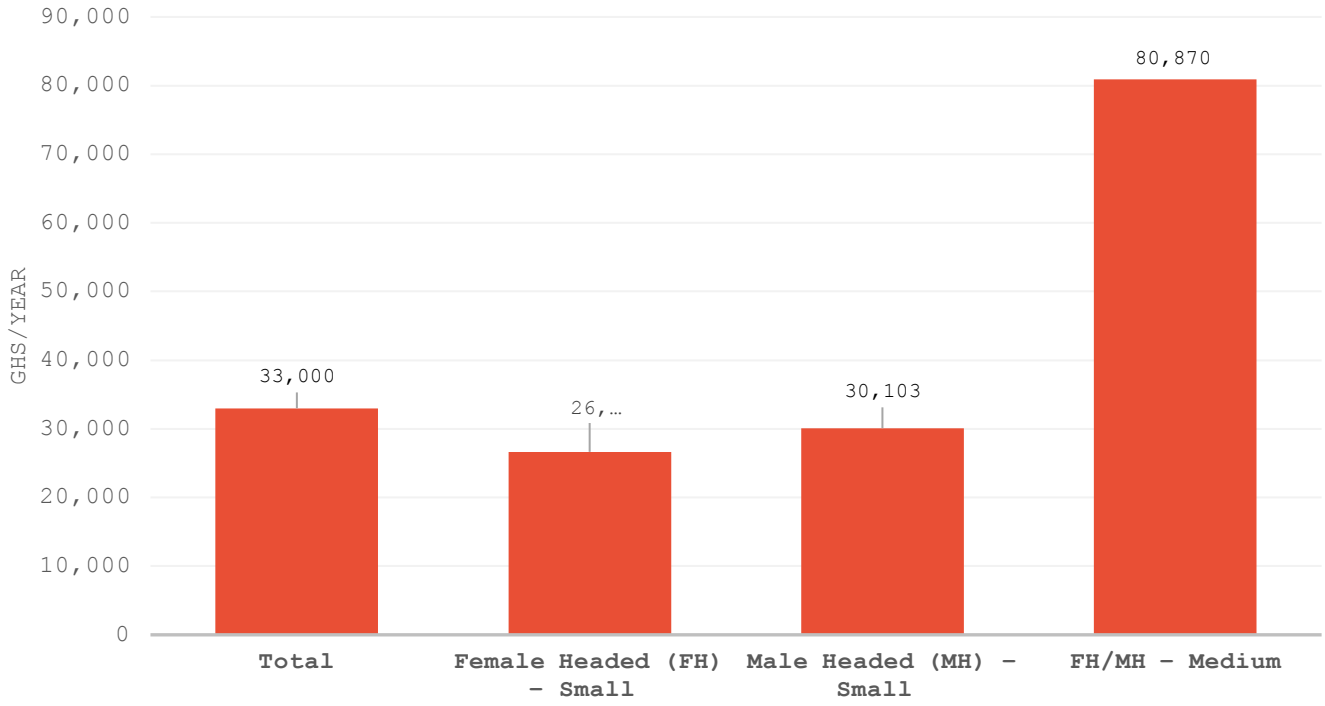
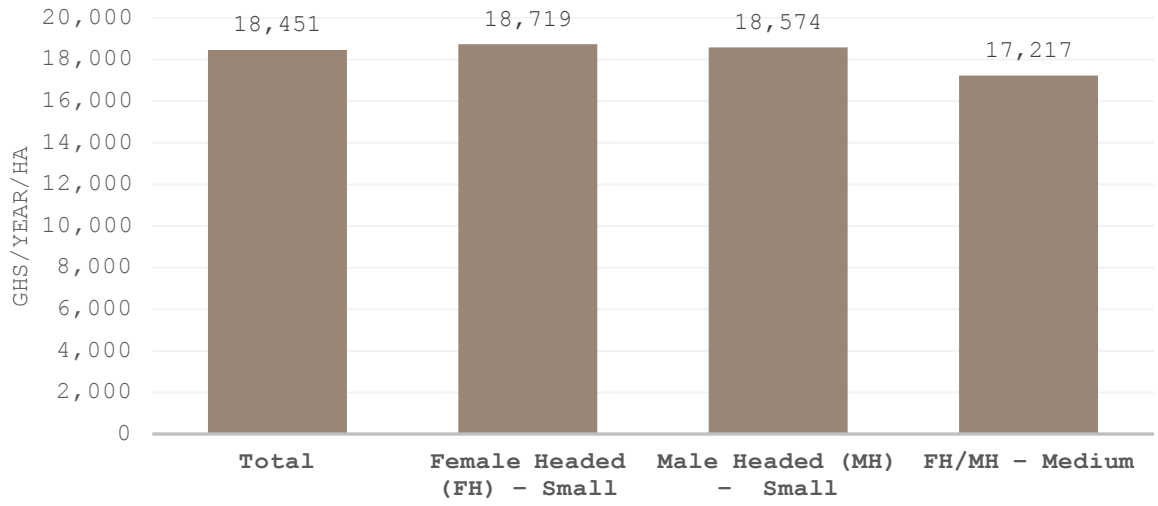


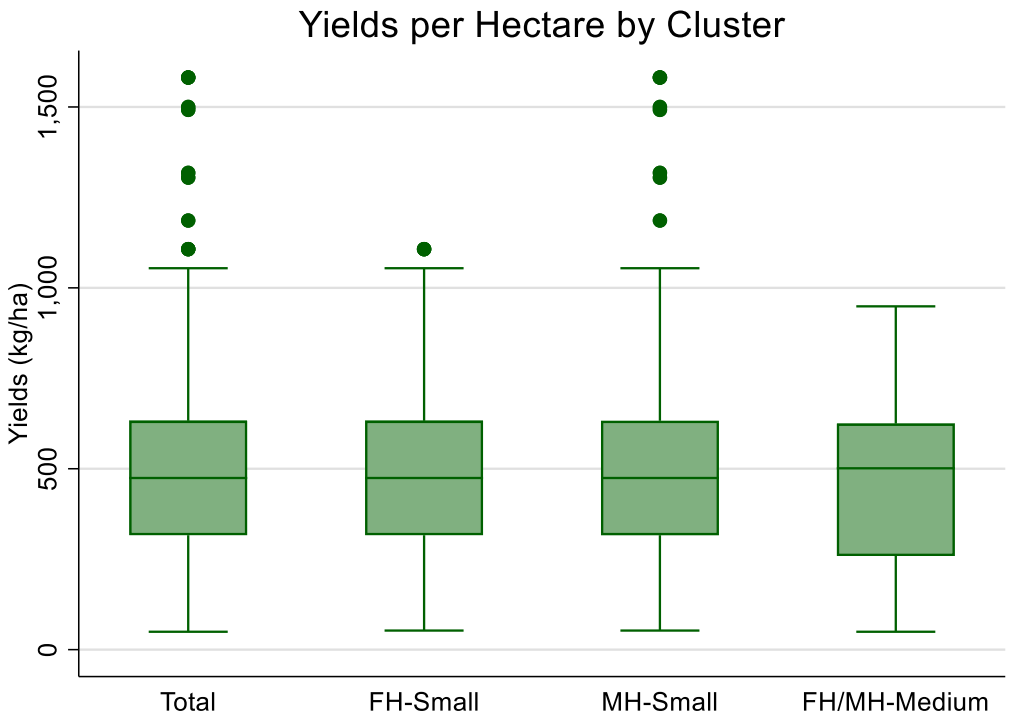
Figure 3. Median Net Cocoa Income per hectare from cocoa grown on own land by analytical group



Total Value of Cocoa Production

The study estimates an average productive cocoa area of 2.54 hectares and an **average yield of 476 kg/ha**. Yields are fairly similar across clusters: MH – Small has the highest average yield (≈484 kg/ha), FH – Small is close behind (≈480 kg/ha), and FH/MH - Medium records the lowest (≈449 kg/ha). Figure 4 shows the distribution of yields across the different analytical groups. As shown by the outliers, some farmers attain relatively high yields around 1500 kg/ha. The data reveal **considerable variation in cocoa yields across regions**, with the highest median yields observed in the Brong Ahafo Region (see Annex, Figure 1).

Figure 4. Cocoa Productivity (kg/ha), distribution by analytical group.

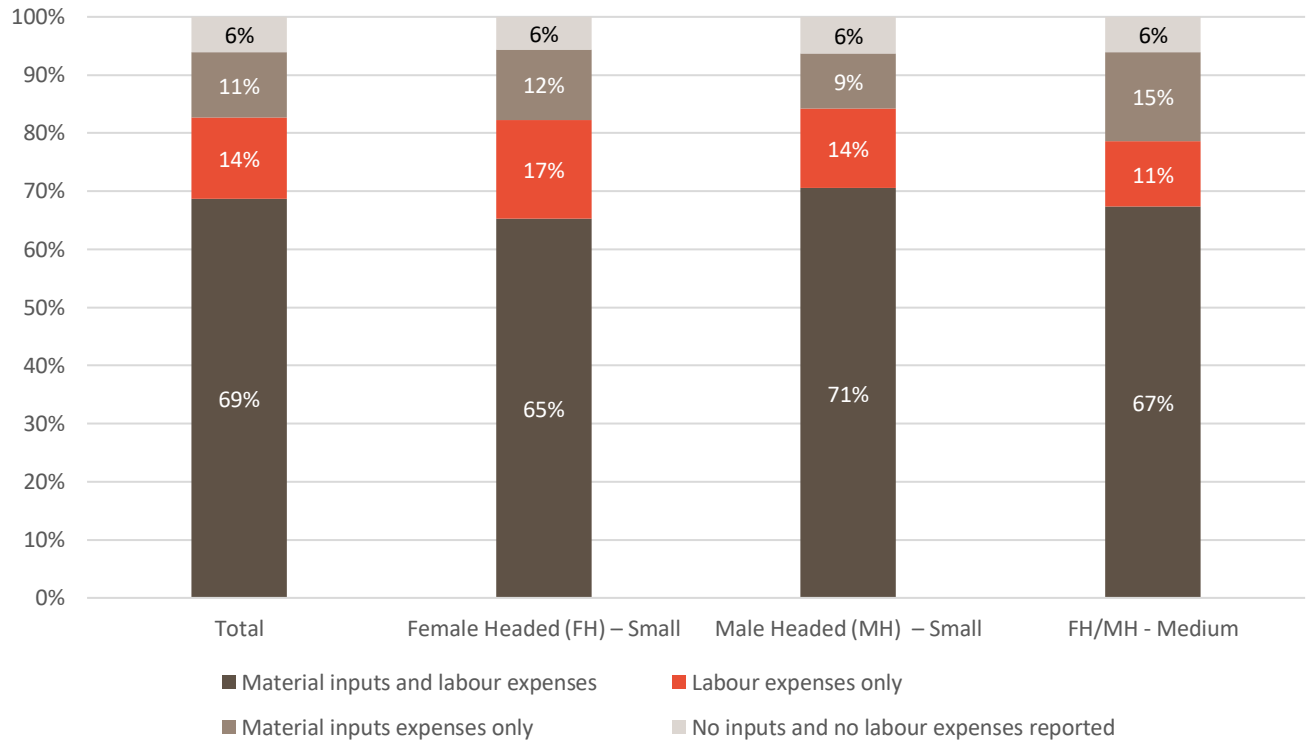


Source: Survey data, 2024/25

Total Costs of Production

Overall, most cocoa farming households (**69%**) reported expenditures on both material inputs and labour for cocoa production (see Figure 5). Smaller shares reported expenditures on **labour only (14%)** or **material inputs only (11%)**, while just **6%** of households reported no expenditure on either category. This pattern is broadly consistent across female-headed small-scale, male-headed small-scale, and medium-scale farming households.

Figure 5. Overview of input use in terms of inputs and labour across analytical groups.



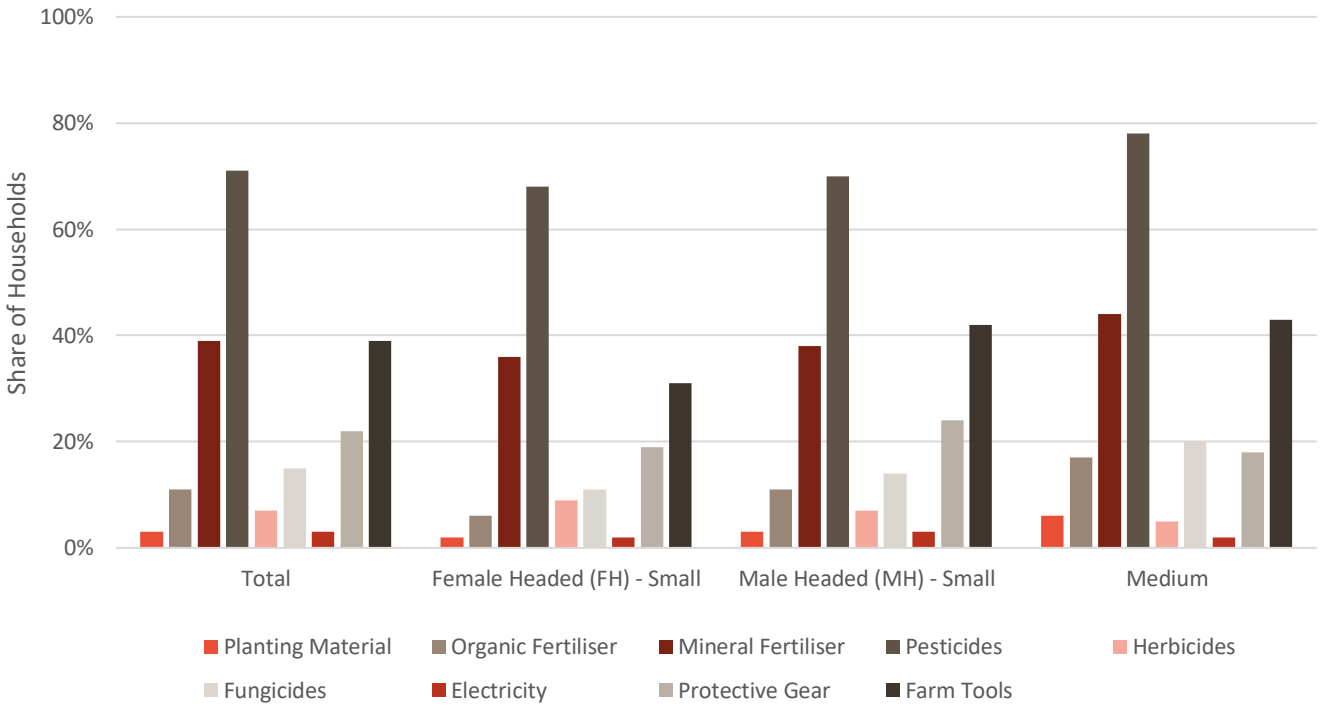
Source: Survey data 2024/2025.

Across the sample, the inputs for which expenditures were reported **are mostly pesticides and mineral fertiliser**. Overall, expenditures were most frequently reported for pesticides (around 71% of households), followed by mineral fertiliser (39%), farm tools (39%), and protective gear (22%). Expenditures on organic fertiliser (11%), fungicides (15%), herbicides (7%), planting material (3%), and electricity (3%) were reported less frequently. These patterns are broadly consistent across the analytical groups: female-headed and male-headed small-scale households exhibit a similar ranking of expenditure categories, while medium-scale farms report expenditures slightly more frequently for the main categories—particularly pesticides (around 78%) and mineral fertiliser (around 44%)—but follow the same overall pattern.

Because these figures reflect reported expenditures, inputs received free of charge are not captured, so actual input use and consequently costs may be somewhat higher[3].

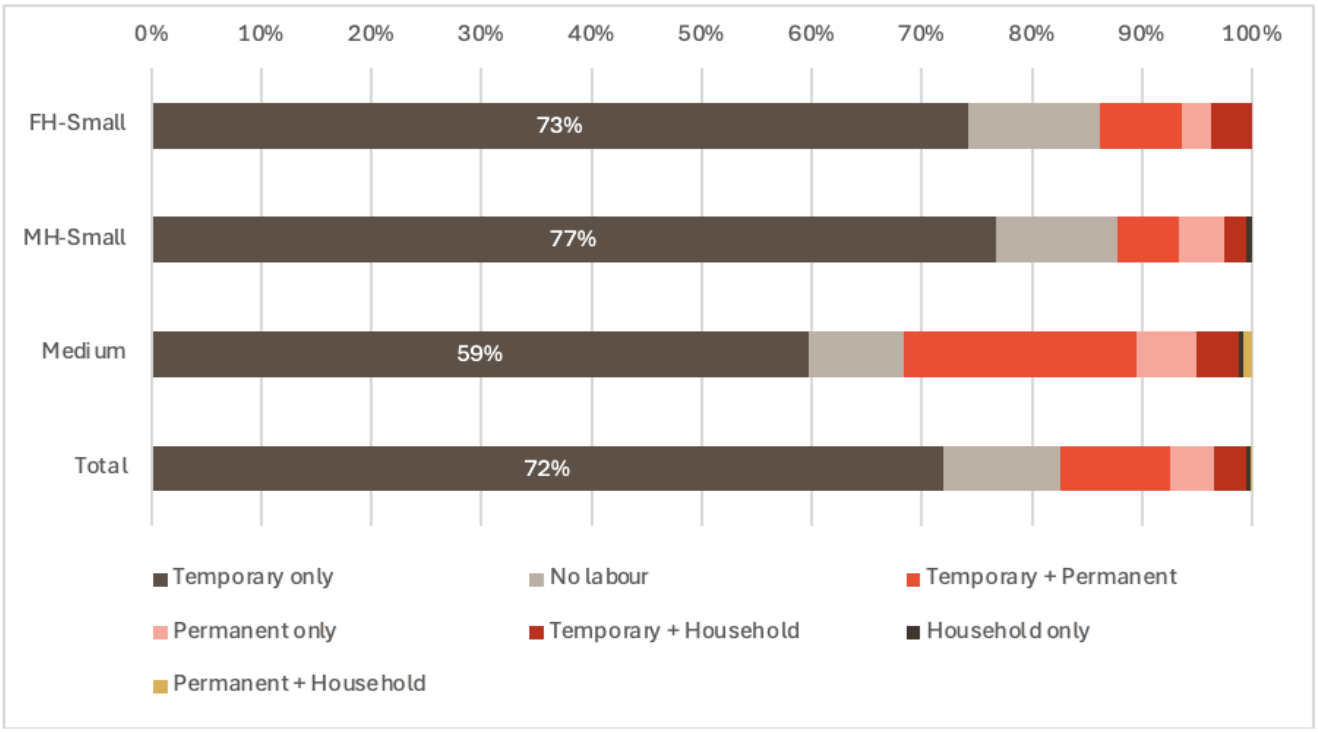
[3]72.98% of farmers received some sort of input free of charge. The value of these inputs, even though captured in the survey, was not accounted for when computing the cost of production.

Figure 6. Reported input costs by input type and by analytical group.



In terms of labour, **temporary labour was by far the most common labour type, with 72% of cocoa farming households reporting costs for temporary workers only** (Figure 7). Around one in ten households (10%) reported costs for both temporary and permanent workers, while 11% reported no monetary labour costs. All other labour arrangements were relatively uncommon, each accounting for 4% or less of households. These numbers do not account for unpaid, household member labour.

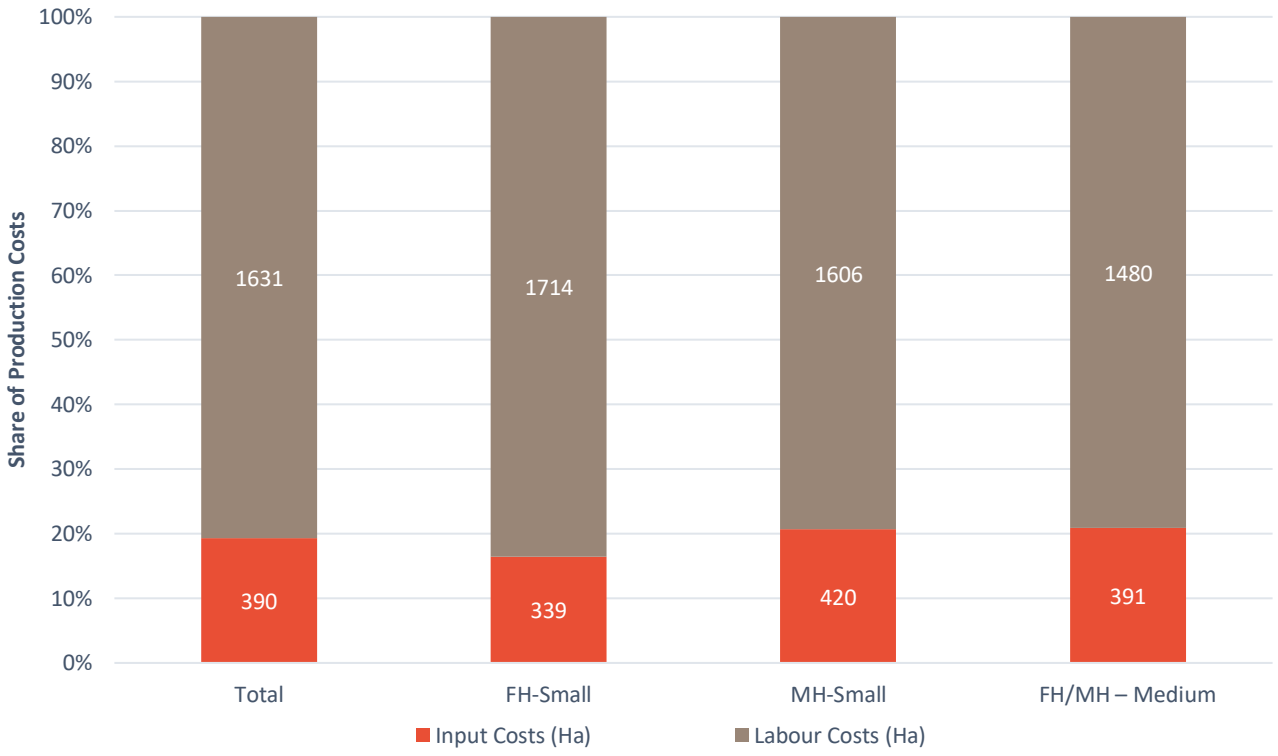
Figure 7. Labour Costs - Reported labour costs by type and analytical group



Cocoa farmers incur a median total production cost of GHS 5,000 (USD 360) per household, with corresponding median values of GHS 1,200 (USD 86) for variable input costs and GHS 3,400 (USD 245) for labour. The corresponding mean costs are higher at GHS 10,602 (USD 763) in total, with GHS 1,965 (USD 141) for materials and GHS 8,640 (USD 622) for labour. This consistent gap between mean and median across clusters (FH-Small, MH-Small, and Medium) indicates right-skewed cost distributions: most farms face lower costs, while a smaller number incur substantially higher expenses that pull up the averages.

On a per-hectare basis, median **material input costs amount to GHS 390 (USD 28)**, and median **labour costs to GHS 1,631 (USD 117)**. As shown in Figure 8, labour clearly represents the largest component of cocoa production costs. This pattern is consistent across all analytical groups: labour costs amount to GHS 1,714 per hectare for FH-Small farms, GHS 1,606 per hectare for MH-Small farms, and GHS 1,480 per hectare for medium farms, compared with material input costs of GHS 339, GHS 420, and GHS 391 per hectare, respectively. These results underscore that labour costs constitute the main cost burden in cocoa production – even without accounting for the labor of household members.

Figure 8. Production Costs - Median input and labour costs (GHS) by analytical group



Total Household Annual Income

Cocoa farming households earn **an average total annual income of GHS 61,577 (USD 4,433) per household**. Among these households, medium-scale cocoa farmers have the highest average annual income at GHS 111,879 (USD 8,055), followed by small-scale male-headed households, with an average annual income of GHS 51,958 (USD 3,741). Female-headed small-scale households have the lowest average annual household income, earning GHS 43,932 (USD 3,163).

Table 3. Total Household Income – average values by analytical group

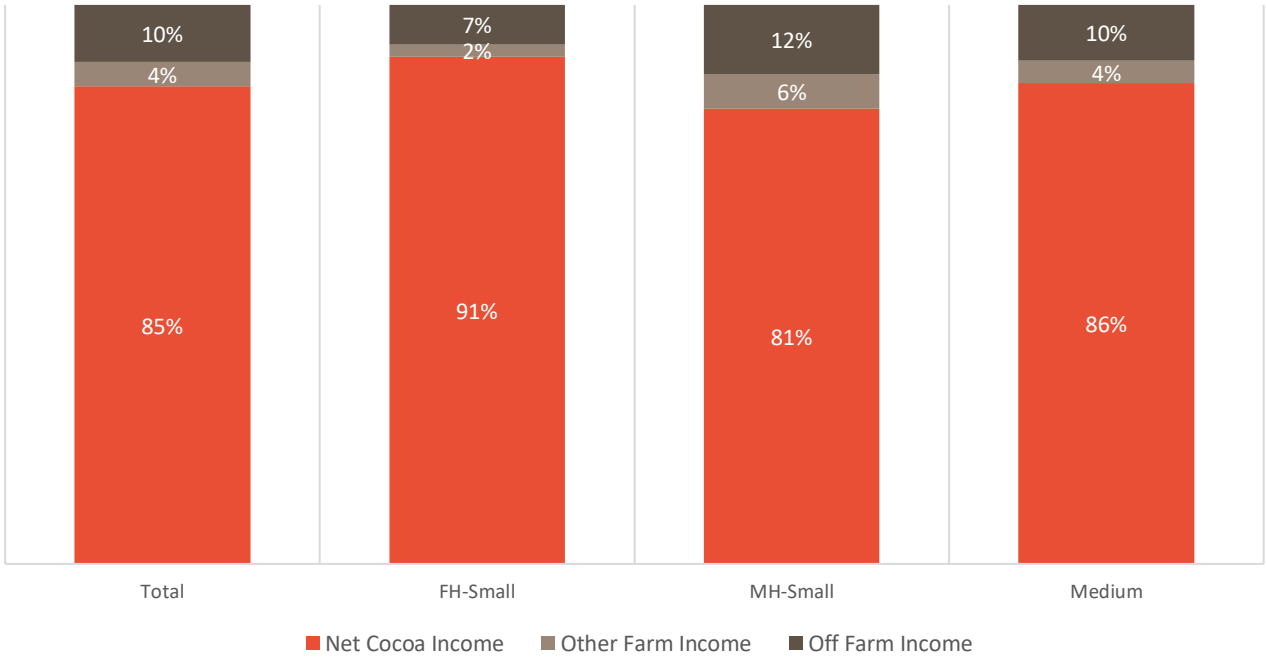
	All	FH – Small	MH - Small	FH/MH – Medium
Average Total IncomeA (GHS /year/household)	61,577	43,932	51,958	111,879
Average Total IncomeA (USD /year/household)	4,433	3,163	3,741	8,055
Total Household income (USD /year/household)				
Min	652	652	652	652
1st quartile	2,077	1,391	1,939	5,052
Median	3,558	2,754	3,336	7,959
Mean	4,433	3,163	3,741	8,055
3rd quartile	5,932	4,164	5,081	11,581
Max	13,340	10,842	13,340	13,340

Source: Survey data, 2024/2025. Notes: The average total household income includes the monetary value of food produced for own consumption. This value was computed by multiplying the estimated value of food for own consumption (estimated to account for around 8% of the Living Income Benchmark) by the household adjusted Living Income Benchmark and then added to the total household net income.

Income structure

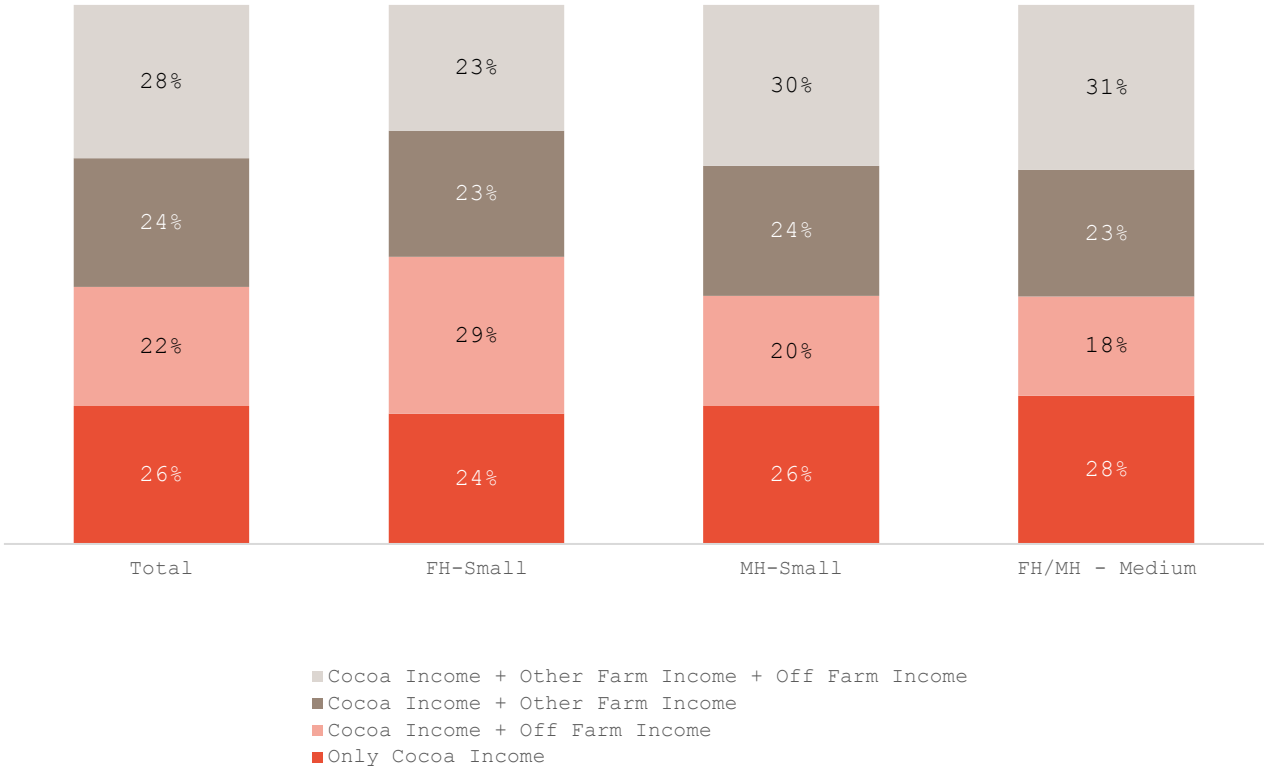
Across the entire sample, cocoa is clearly the dominant source of household income: **on average cocoa contributes 85% of total income**, compared with 10% from off-farm activities and 4% from other farm activities. This pattern is remarkably similar across all groups. Among female-headed small-scale households, cocoa accounts for 91% of income, while for male-headed small-scale households it contributes 81%. In medium-scale households, cocoa still provides 86% of total income.

Figure 9. Income Structure - Average share of income by primary income source categories



Notes: Other Farm Income includes the income from other crops as well as the income from livestock activities. Off-farm income includes income from wage employment, from self-employment and other income across all household members. The graph is based on average values for each income source.

Figure 10. Income diversification - Share of households by level of income diversification.



Looking at the composition of income sources (see Figure 10), the structure of incomes is very similar across all groups. **About one quarter (26%) of households rely exclusively on cocoa income**, while the remaining three quarters have at least one additional income source. Overall, 22% of households combine cocoa with off-farm income, 24% combine cocoa with other farm income, and 28% have income from all three sources—cocoa, other farm activities, and off-farm work. This distribution is closely mirrored across the FH-Small, MH-Small, and FH/MH - Medium groups, indicating that households of different scales and headship types diversify their income in broadly similar ways.

Other Farm Income

An analysis of farm-level diversification reveals **that most surveyed households generate income from at least one or two additional crops** (see Figure 11). In contrast, only a relatively small proportion of farmers exhibit a higher degree of diversification in their crop production (9%).

Figure 11. Other Farm Income – Share of households by number of crops.

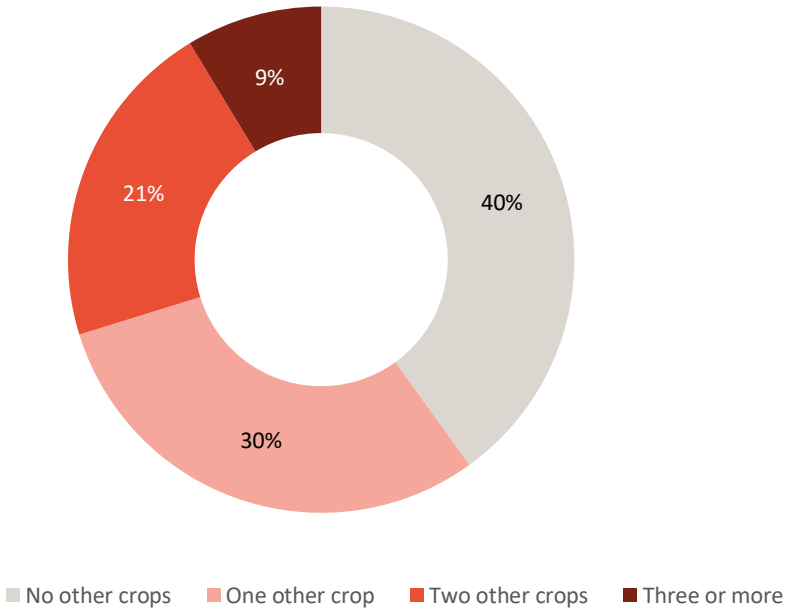
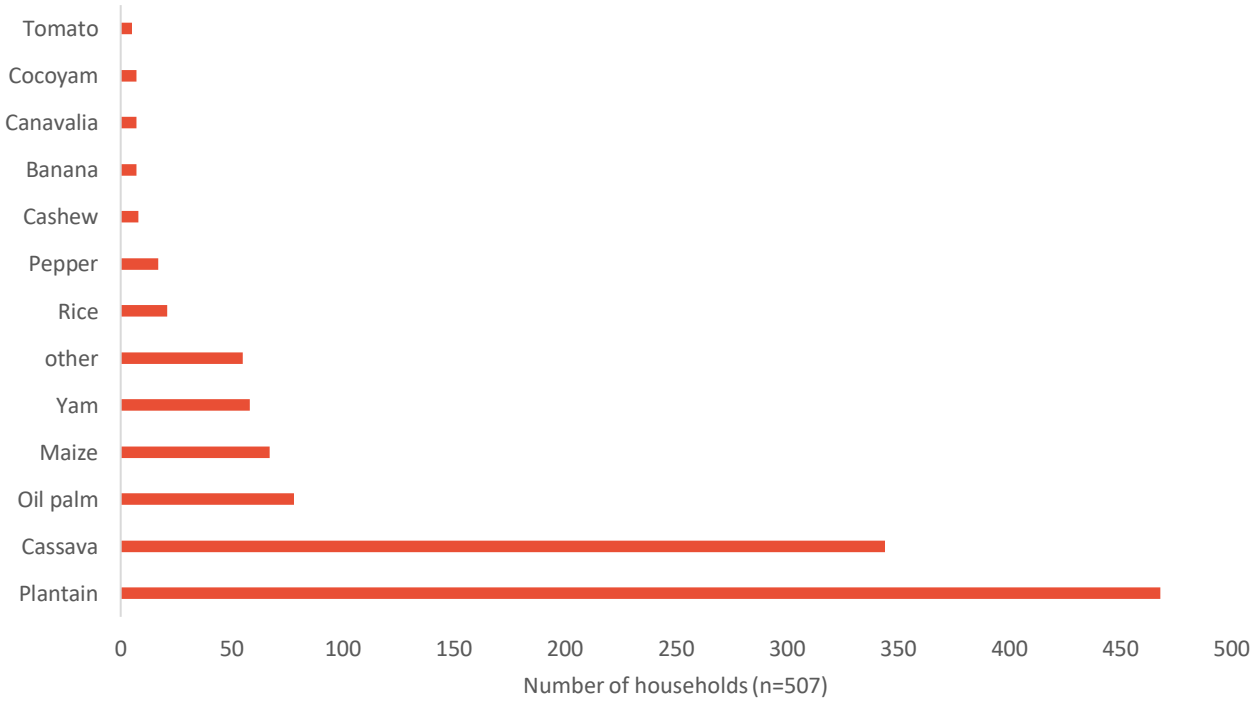


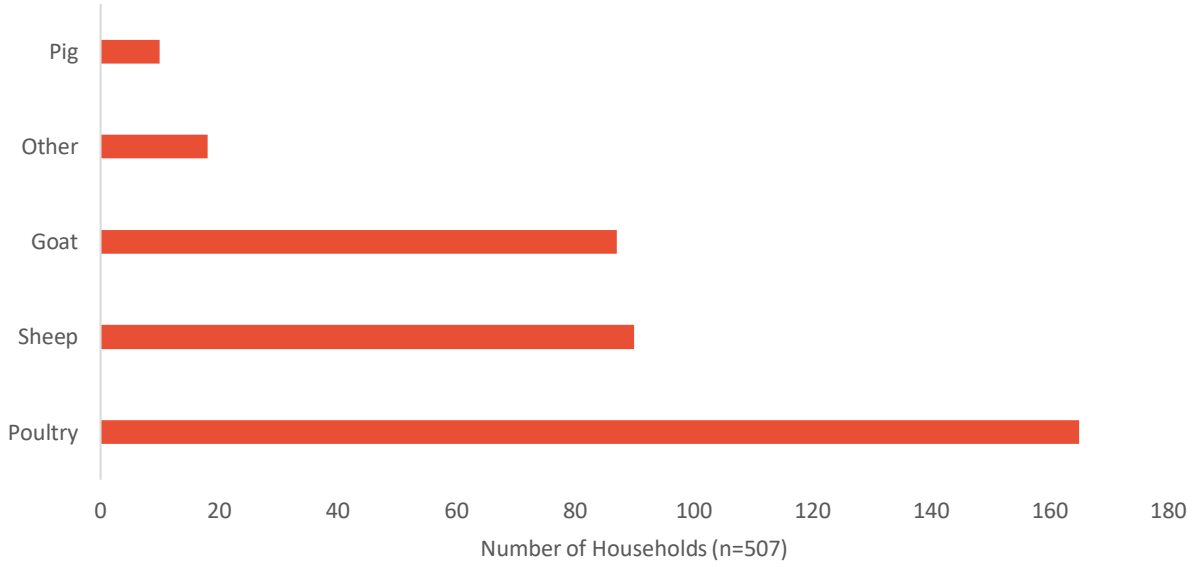
Figure 12 presents the most commonly grown crops other than cocoa. As illustrated, **plantain, cassava, and oil palm are the most prevalent crops.**

Figure 12. Other Farm Income - Most commonly grown crops across surveyed households.



Livestock production is relatively uncommon among cocoa farming households, with only 28% of the households surveyed reporting any livestock. Among the households keeping livestock, poultry farming and goat or sheep rearing are the most common livestock activities (see Figure 13).

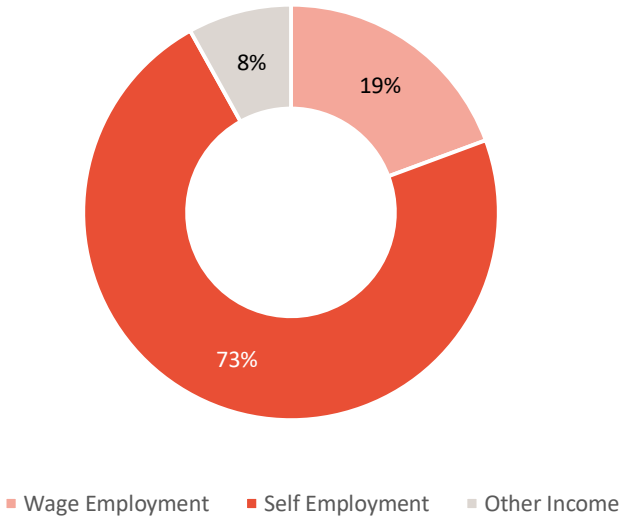
Figure 13. Other Farm Income - Most common livestock activities



Off-Farm Income

Among off-farm income sources, self-employment for instance managing a retail shop, hair and beautician among others is the most common off-farm source of income (45% of surveyed households), followed by wage employment.

Figure 14. Off-Farm Income - Most common primary sources.



Comparison of Living Income Benchmark with Actual Income

Adjusting the Benchmark based on Household Size and Composition

Adjusting the Living Income Benchmark to the household size and composition shows that cocoa-producing households, on average, require **GHS 60,188 (USD 4,333) per year** or **GHS 5,016 (USD 361) per month** to maintain a basic but decent standard of living. The required income varies slightly across groups. Female-headed small-scale households need GHS 56,960 per year (USD 4,101), male-headed small-scale households require GHS 60,167 per year (USD 4,332), and female/male-headed medium-scale households need GHS 64,333 per year (USD 4,632). These differences reflect variations in household size and age composition within the analytical groups.

Table 4. Adjusting the Living Income Benchmark based on household size and composition.

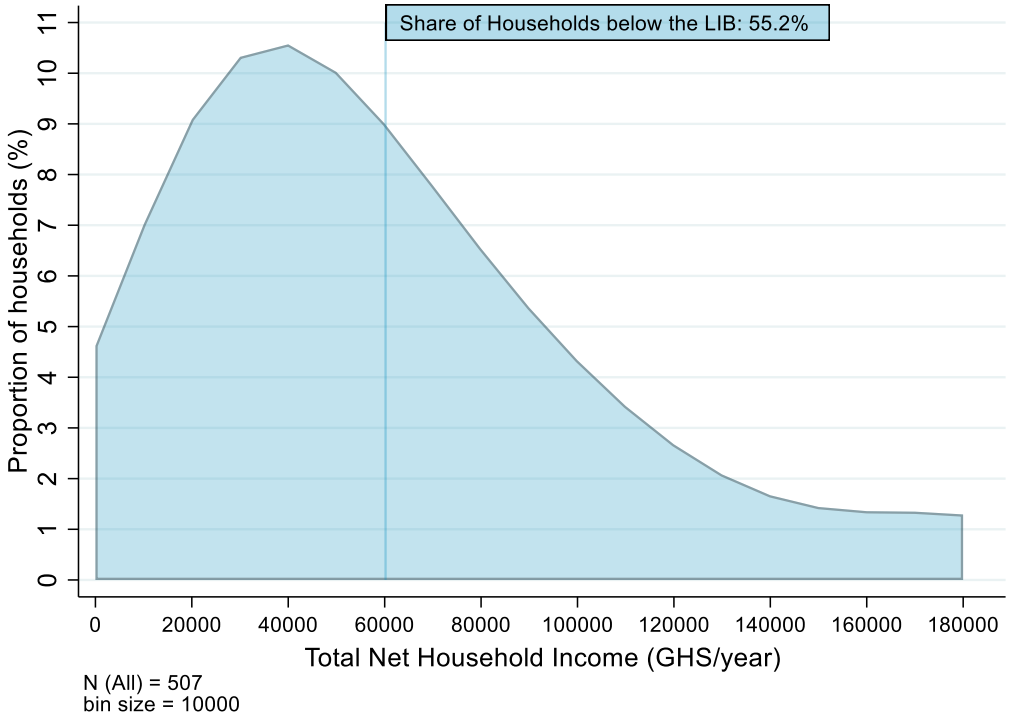
Adjusted household composition	All	FH - Small	MH - Small	FH/MH – Medium
Household size (number of persons)	4.4	4.07	4.39	4.83
Below 13 years old	1.32	1.08	1.31	1.67
Adults, 14 to 17 years old	0.68	0.73	0.67	0.66
Adults, 18 + years old	2.39	2.27	2.41	2.49
Adjusted Living Income Benchmark by Cluster				
GHS/month/household	5,016	4,747	5,014	5,361
GHS/year/household	60,188	56,960	60,167	64,333
USD/year/household	4,333	4,101	4,332	4,632

Source: Survey data, 2024/2025 cocoa season.

Comparison of Estimated Incomes to the Living Income Benchmark

Figure 15 illustrates the distribution of the total annual net household income for all cocoa farming households in comparison to the Living Income Benchmark. The results show that across all cocoa households surveyed, **55.2% earn an income below the Living Income Benchmark.**

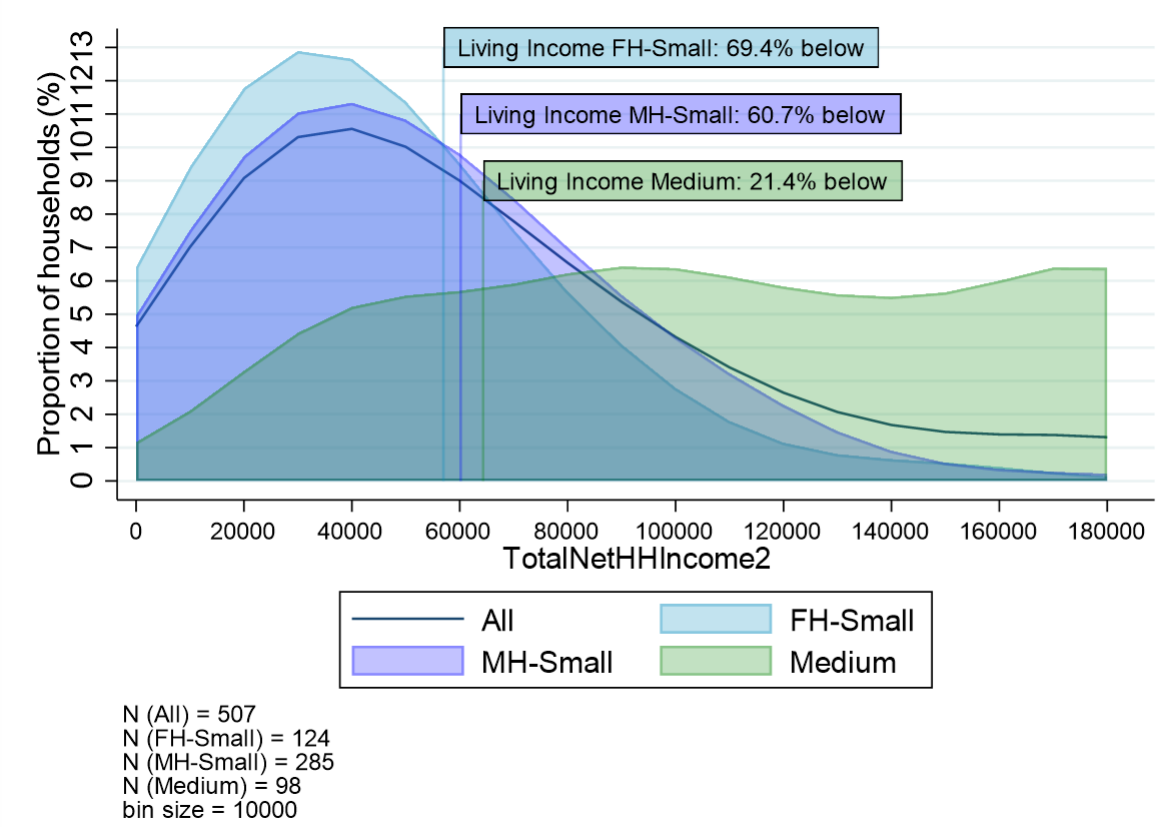
Figure 15: Distribution of total annual household income to Living Income Benchmark.



Source: Survey data, 2024/2025

The share of households below the Living Income Benchmark differs markedly across the analytical groups. Overall, 55.2% of all households fall below the Benchmark (see Figure 15), but this share is much higher among households with a small productive cocoa area: **69.4% of female-headed small farms** and **60.7% of male-headed small farms** are below the Living Income Benchmark (see Figure 16). In contrast, only **21.4% of medium farms** fall short of the Benchmark, indicating that a relatively small share of households with larger productive cocoa areas live below the Living Income Benchmark.

Figure 16. Distribution of total annual household income by analytical groups.



Source: Survey data, 2024/2025

Size of the Living Income Gap

As shown in Table 5, the average living income gap is relatively similar across analytical groups. Overall, households below the Living Income Benchmark face an average annual shortfall of **GHS 42,559 (USD 3,064)**, equivalent to **62%** of the Benchmark. Female-headed small-scale households have an average shortfall of **GHS 41,062 (USD 2,956)**, or **61%** of their Benchmark, while male-headed small-scale households face a slightly larger gap of **GHS 43,627 (USD 3,141)**, representing **63%** of their Benchmark. However, the situation for small scale farming households is similar and not significantly different. Although medium-scale households have a comparable absolute shortfall (**GHS 40,255; USD 2,898**), this corresponds to a smaller relative gap (52%) because of their higher Living Income Benchmark. Overall, these findings indicate that cocoa-producing households below the Benchmark typically earn less than 40% of the income required to achieve a living income, with an average shortfall equivalent to 62% of the Benchmark. However, the size of the gap varies considerably across households.

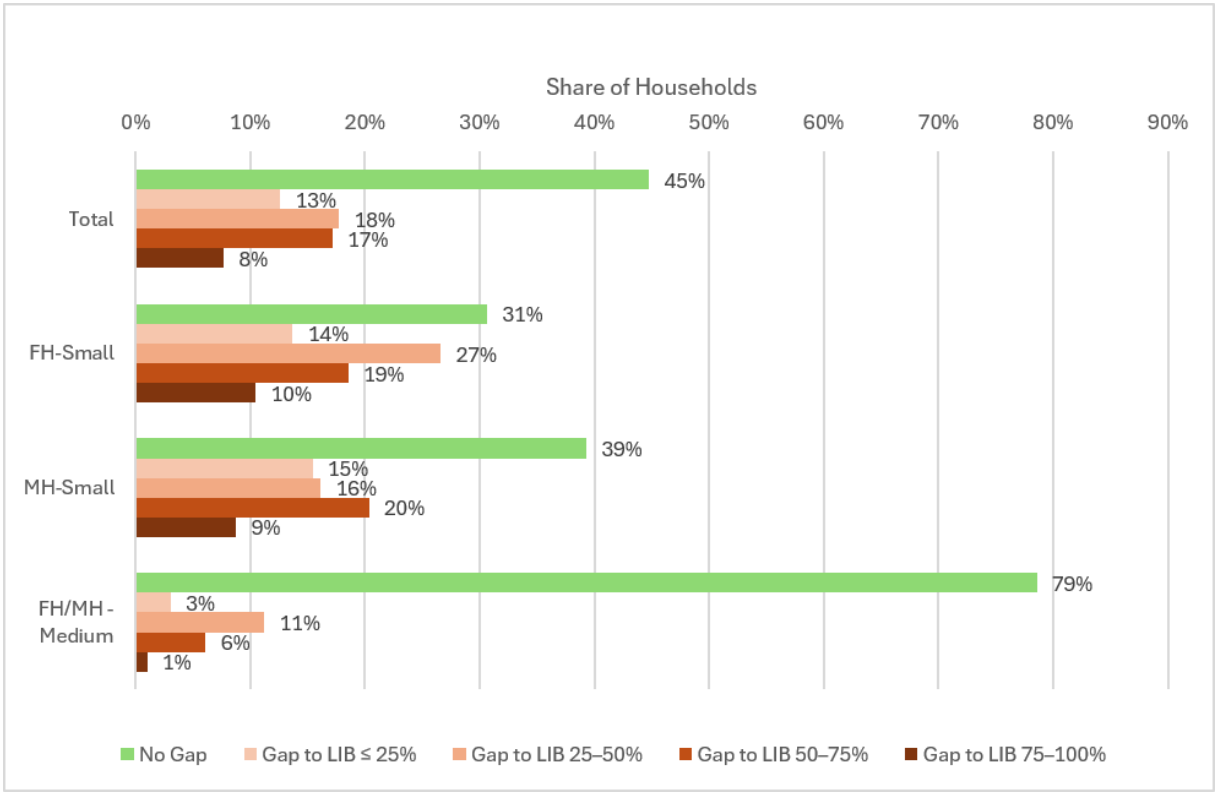
Table 5. Income Gap – Share of households average values below the benchmark across analytical groups.

	Total	FH-Small	MH-Small	FH/MH Medium
Share of Households below the LIB	55.2%	69.4%	60.7%	21.4%
Average Yearly Adjusted Benchmark (GHS/household/year) A	69,171	67,279	69,147	77,621
Total Household Income (GHS/household/year)	26,612	26,217	25,521	37,365
Average Size of the Living Income Gap (GHS/household/year)	42,559	41,062	43,627	40,255
Average Size of the Living Income Gap (USD/household/year)	3,064	2,956	3,141	2,898
Average Size of the Living Income Gap (% of LIB)	62%	61%	63%	52%

Source: Survey data 2024/2025. A The figures in this table differ from those in Table 4 because they are based on a sub-sample of households falling below the Living Income Benchmark, rather than the full sample of surveyed households.

Figure 17 gives a picture of the extent of the Living Income gap by showing the share of households according to how large their gap to the Living Income Benchmark is. About 13% would need up to a 25% increase in their current income to reach the Benchmark, 18% would need a 25–50% increase, 17% a 50–75% increase, and 8% a 75–100% increase in income to attain the Benchmark. Patterns are broadly similar across groups, but the incidence of gaps is higher among households with smaller productive cocoa areas. Female-headed small farms show the highest concentration of households in the deeper gap categories, followed by male-headed small farms. Medium farms are in a comparatively stronger position, with only a small share of households in the categories 50–75% and 75–100% below the LIB.

Figure 17. Distribution of households by the size of the Income Gap



Scenario Analysis – Yields and Prices changes required to close the Living Income gap

To illustrate what would be required to close the Living Income gap through cocoa income alone, we conducted a simple scenario analysis based on the **median farm production characteristics** and assuming households do not have any other source of income. The analysis considers changes in cocoa yields and cocoa prices while keeping the productive cocoa area and current production costs constant. The scenarios are therefore intended to illustrate the magnitude of improvements required rather than to predict actual outcomes. In particular, higher yields may require additional investments in labour and inputs, which are not accounted for in these scenarios.

Table 6. The current median production and income situation.

Indicator	Median
Productive cocoa area (ha)	2.1
Cocoa yield (kg/ha)	476
Cocoa price (GHS/kg)	48.4
Gross cocoa income (GHS/year)	47,570
Material input and labour costs (GHS/year)	5,000
Net cocoa income (GHS/year)	**42,570**
Living Income benchmark (GHS/year)	60,188
Gap to Living Income (GHS/year)	17,618

Note: Values are based on median farm characteristics, except for the Living Income Benchmark, which uses the average adjusted benchmark applied elsewhere in the report.

Yield scenarios[4]

Assuming cocoa prices and production costs remain unchanged, a 25% increase in yields would raise net cocoa income from GHS 42,570 (USD 3,045) to GHS 54,463 (USD 3,900), reducing the Living Income gap from GHS 17,618 (USD 1,260) to GHS 5,725 (USD 410). However, this increase would still not be sufficient to reach the Living Income Benchmark. Yields would need to increase by approximately 37%, from 476 to around 652 kg/ha, to close the gap under current price and cost conditions.

Table 7. Yield scenarios in closing the living income gap.

Scenario	Yield (kg/ha)	Increase in yield	Net cocoa income (GHS/year)	Gap to benchmark (GHS/year)
2024/25 study situation	476	–	42,570	17,618
Yield +10%	524	+10%	47,327	12,861
Yield +25%	595	+25%	54,463	5,725
Required to close gap	652	+37%	60,188	0

Price scenarios

Assuming current yields and production costs remain unchanged, a 25% increase in the cocoa farmgate price would reduce the Living Income gap from GHS 17,618 (USD 1,260) to GHS 5,725 (USD 410), but would not be sufficient to

[4]The results should be interpreted as illustrative scenarios rather than forecasts of achievable outcomes. The analysis assumes that productive cocoa area and production costs remain constant when yields or prices increase. In practice, achieving higher yields may require additional investments in labour and inputs, which would reduce the resulting increase in net income. Similarly, the analysis does not account for changes in cocoa prices that may accompany changes in production or market conditions. Furthermore, the calculations are based on median farm characteristics and therefore describe a representative scenario rather than the situation of individual households. Finally, the analysis assumes that cocoa income would need to cover the full Living Income benchmark, whereas households may also rely on income from other farm and off-farm activities. The results should therefore be viewed as an indication of the magnitude of yield or price improvements that would be required under simplified conditions, rather than as a prediction of how households could achieve Living Income.

close it. To reach the Living Income Benchmark, the farmgate price would need to increase by approximately 37%, from GHS 48.4 (USD 3.5) to around GHS 66.3 (USD 5) per kg.

Table 8. Price scenarios in closing the living income gap.

Scenario	Cocoa price (GHS/kg)	Increase in price	Net cocoa income (GHS/year)	Gap to benchmark (GHS/year)
2024/25 study situation	48.4	–	42,570	17,618
Price +10%	53.2	+10%	47,327	12,861
Price +25%	60.5	+25%	54,463	5,725
Price required to close gap	66.3	+37%	60,188	0

Overall, the analysis indicates that closing the Living Income gap through cocoa income alone would require a substantial improvement in either productivity or the price received by producers. In practice, a combination of higher yields, improved prices and income from other household activities is likely to provide a more realistic pathway towards closing the gap.

Determinants of Household Income

We analyzed the determinants of cocoa productivity (kg/ha), net cocoa income per hectare (GHS/ha), and the Living Income gap (GHS per Household) using a simple regression model including a wide range of covariates[5]. The results are presented in Table 9.

Table 9. Determinants of Land Productivity, Net Cocoa Income and of the Living Income Gap.

	(1)	(2)	(3)
	Cocoa yield (kg/ha)	Net cocoa Income (GHS/ha)	Living income gap (GHS/year)
Age of household head	0.16	-38.68	201.45
	(0.71)	(43.48)	(121.77)
Sex of household head	12.50	699.66	-1,132.05
	(20.74)	(1,275.98)	(3,568.36)
Household size	-1.12	-41.13	
	(3.82)	(234.91)	
Productive cocoa area (ha)	-18.61***	-936.43**	-14,120.66***
	(5.14)	(317.29)	(885.54)
Material input costs (GHS/ha)	0.05***		
	(0.01)		
Labour costs (GHS/ha)	0.00*		
	(0.00)		
Income diversification	-9.91	-1,070.90	3,387.65
	(14.01)	(861.37)	(2,298.23)
Member of producer organisation	14.68	683.71	-2,991.12
	(20.64)	(1,266.49)	(3,539.72)
Received training	26.87	3,309.75*	4,805.30
	(27.03)	(1,646.84)	(4,596.76)
Access to advisory services	-7.50	-747.16	-1,626.67
	(16.78)	(1,035.28)	(2,880.89)

[5]To address potential issues of multicollinearity among covariates, we carefully selected the variables included in the regression models. We conducted variance inflation factor (VIF) analyses and other diagnostic tests to ensure that the predictors are not excessively correlated.

	(1) Cocoa yield (kg/ha)	(2) Net cocoa Income (GHS/ha)	(3) Living income gap (GHS/year)
Access to loan	17.37	772.81	12,728.08**
	(24.69)	(1,523.70)	(4,198.22)
Constant	272.29*	11,469.15	-14,425.60
	(110.70)	(6,824.54)	(19,110.85)
Observations	507	507	507
Adjusted R-squared	0.34	0.13	0.43

Notes: Standard errors in parentheses * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The regression results show only a limited number of statistically significant associations. For **cocoa yield per hectare**, a larger productive cocoa area is significantly associated with lower yields, while higher material input costs and higher labour costs are significantly associated with higher yields. This finding is consistent with realities in the Ghanaian cocoa landscape, where inadequate and high-cost farm labour, together with low agronomic investment, limits the ability of farmers to sustain Good Agricultural Practices (GAPs) on larger plots. In effect, poor farm management — including inadequate weeding, pruning, and pest and disease control — tends to reduce yield, particularly when the cultivated area is large. The positive association between material input costs, labour costs, and yield reflects the fact that the adequate and complementary use of these two inputs boosts the intensity and timeliness of farm management, reducing crop losses and raising yield per hectare.

For **net cocoa income per hectare**, a larger productive cocoa area is again significantly associated with lower net cocoa income per hectare. In contrast, having received training is positively associated with net cocoa income per hectare. This is consistent with the effects of training provided under the Farmer Business School and Good Agricultural Practices programmes run by the Cocoa Health and Extension Division (CHED) of COCOBOD: farmers who receive this training tend to improve their productive capacity and adopt more efficient input use, which lowers production costs and raises net income.

In addition, access to a loan is significantly associated with a smaller **Living Income gap**. Households with access to loans are, on average, approximately GHS 12,728 (USD 910) closer to the Living Income Benchmark than otherwise comparable households without loan access. This association should not be interpreted causally, as households closer to the Benchmark may also be better positioned to access credit.

Recommendations

The recommendations below, with the corresponding responsibilities in brackets, draw on the survey findings and on the stakeholder workshop held on 28 October 2026 (Annex 2).

A. Cross-cutting topics

Combine yield improvements and producer-price increases to reduce the Living Income gap, ensuring that that productivity gains are not offset by higher production costs (COCOBOD).

Design targeted support programmes for female-headed households, which earn less than male-headed households (COCOBOD and stakeholders)

B. Yield and productivity

Scale up Productivity Enhancement Programmes (pruning, hand pollination, improved planting material), prioritizing small scale farms, where income shortfalls are greatest (COCOBOD with stakeholders).

Expand farmer training and access to inputs (COCOBOD).

Workshop participants also prioritized **improving farmers access to pruning tools and knowledge** (COCOBOD and License Buying Companies (LBCs)) and promoting **high yielding planting material and grafting**, with attention to possible trade-offs with bean quality and CSSVD control.

C. Price and costs of production

Promote cost-effective production through efficient input use and labour-saving practices (COCOBOD).

Reduce labour costs and improve labour availability, as labour is the largest cost of cocoa production.

Workshop participants considered labour an urgent priorty. They proposed forming community service groups pre-financed by LBCs with support from cooperatives and repaid in cocoa beans. LBCs, cooperative and the private sector should support developing farm service providers and CHED to strengthen cooperatives for self help. They noted that the Ghana Cocoa Board Act, 2026 (Act 1182) guarantees farmers at least 70% of the gross farmgate price.

D. Income and finance

Support income diversification as a risk management measure (Development Partners and companies).

Expand access to affordable, purpose built credit, including Village Savings and Loan Associations (Development Partners and companies).

Workshop participants called for diversification into demand-driven crops and other livelihoods, subject to community or needs based assessment, and for branding and marketing to be integrated into Farmer Business Schools, starting now. They proposed formalizing Village Savings and Loan Associations, linking them to microfinance instituions and strengthening cooperatives, and recommended that companies continue their existing conditional and unconditional loan schemes.

Methodological Reflections

We offer some reflections on the key tasks involved in conducting a living income study, organized into two categories: data collection and data analysis.

Reflections on collecting the income survey data:

- **Ensure enough time and enumerators for collecting data:** Consider the travel time between districts or communities when planning duration of the data collection as well as the involved enumerators.

Reflections on the data analysis of the Income Survey

- **Data Variability**: With a relatively small sample size, outliers can significantly influence the data, complicating the interpretation of mean values. Therefore, we recommend to carefully examine distribution parameters for key outcome variables such as productivity and net cocoa income to ensure a better understanding and interpretation of the data.
- **Productivity Indicators**: Beyond cocoa, we were unable to calculate the profitability of the other two major crops due to missing data on acreage. This information could provide valuable insights into farmers' production choices. Additionally, labour productivity could not be assessed, as the available data included only labour expenditures without any information on the actual amount of labour used, not the unpaid household labor.
- **Input Costs**: A large proportion of farmers receive subsidized inputs, which are not accounted for in our production costs calculations, likely leading to an underestimation of actual production costs.
- **Cost of Labour:** The structure of the survey leaves some room for ambiguity regarding the reporting of labour costs. While labour costs are captured in the cocoa production section, it is not entirely clear whether the costs associated with permanent workers may be reported more than once, potentially leading to double counting. The survey instrument should therefore be reviewed and refined to clarify the reporting instructions and improve data quality in future survey rounds.
- **Opportunity cost of labour**: Our calculations of net cocoa income do not include a) the value of in-kind compensation or b) the opportunity cost of unpaid household labour, suggesting an understatement of production costs. This in turn might skew the results as it does not consider additional cost of opportunities for farming household members. Further methodological guidance on incorporating these aspects, at least for scenario analysis, would be beneficial.
- **Hidden incomes**: Income reporting can be sensitive, particularly when it involves illegal mining activities or poses risks to respondents (e.g. income from child labour below age 13).
- **Value of food produced**: In line with CHIS methodology, we adopt a pragmatic approach, assuming the monetary value of food produced at home for own consumption accounts for at least 8% of the overall Living Income Benchmark in Ghana. However, this percentage was not verified during the study, and further in-depth analysis is recommended for more accurate estimates.
- **Living Income Benchmark**: We updated the Benchmark to account for inflation, followed by adjustments based on household size and composition within each cluster. However, we did not modify the Benchmark to reflect regional variations in the cost of living.
- **Household income distribution dynamics**: This study did not explore how income is managed, distributed or benefits individual household members, despite its potential impact on the well-being of cocoa farming households.

Acronyms

CEM	Coarsened Exact Matching
CHED	Cocoa Health and Extension Division
CHIS	Cocoa Household Income Study
CMS	Cocoa Management System
COCOBOD	Ghana Cocoa Board
FiBL	Research Institute of Organic Agriculture
GHS	Ghanaian cedi
LBC	License Buying Company
LIB	Living Income Benchmark
LICOP	Living Income Community of Practice
LID	Living Income Differential
OECD	Organisation for Economic Co-operation and Development
SC	Supply chain
SWISSCO	Swiss Platform for Sustainable Cocoa
USD	United States dollar

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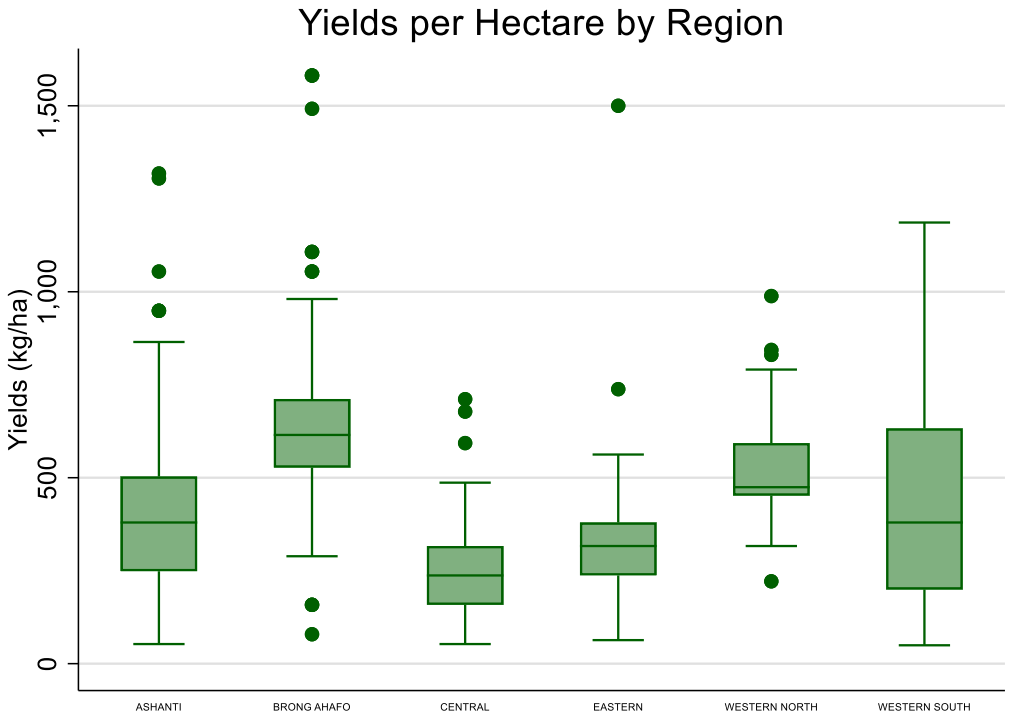
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Annex, Figure A1. Cocoa Productivity (kg/ha), distribution by analytical group. 29

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Annex, Figure A1. Cocoa Productivity (kg/ha), distribution by analytical group.



Annex 1, Table A1. Description of covariates.

Covariate	Description
Sex of the Household Head (binary)	Indicates whether the household head is male or female (0 = male, 1 = female).
Education Level of respondent (categorical)	Measures the level of education attained by the respondent (No formal education; Some primary; Finished primary; Some secondary; Finished secondary; Some university/polytechnic; Finished university/polytechnic)
Household Size	The total number of individuals sharing the household budget.
Productive Cocoa Area (Hectares)	The size of the household's cocoa-producing land in hectares.
Cocoa Variety (categorical)	The type of cocoa variety planted by the household (Hybrid, Amazon, Amelonado), which can impact productivity and income.
Input Costs (GHS/Ha)	The total cost of inputs (e.g., fertiliser, pesticides) used per hectare of cocoa land, influencing overall production costs.
Labour Cost (GHS/Ha)	The total labour costs per hectare, covering hired labour for tasks such as pruning, harvesting, and farm maintenance.
Income Diversification (categorical)	Describes the variety of income sources available to the household (e.g., cocoa only, cocoa + other crops, off-farm income), reflecting economic resilience.
Producer Organisation (binary)	Indicates whether the household is a member of a cocoa producer organisation or cooperative (1 = yes, 0 = no), which can affect access to resources and markets.
Training participation (binary)	Reflects whether the respondent has participated in any agricultural or cocoa-specific training (1 = yes, 0 = no), which may influence farming practices.
Advisory Services (binary)	Shows whether the household received advisory services from agricultural experts (1 = yes, 0 = no), potentially improving farm productivity and income.
Access to Loan (binary)	Indicates if the household has accessed a formal loan for farming purposes (1 = yes, 0 = no), affecting their ability to invest in farm improvements.
Region (categorical)	The geographical region where the household is located (e.g., Eastern, Western, Ashanti), which can influence climate conditions, access to markets, and infrastructure.

Annex 2. Stakeholder Workshop: Summary Report

Purpose: The workshop had two aims:
- to share the CHIS findings on household income, the Living Income gap and its drivers; and
- to discuss practical ways to close the gap.

Date and venue. 28 October 2026, 10:00–13:30, CMB Board Room, COCOBOD, Accra, Ghana.

Participants. A total of 45 participants attended, from: COCOBOD; SWISSCO; cocoa farmer cooperatives; cocoa and chocolate companies (Barry Callebaut, ECOM, Hershey, Lindt, Mars, Touton); development partners and international organisations (GIZ, IDH, International Trade Centre, Swiss Federal Department of Foreign Affairs); farmers and farmer cooperatives, industry and civil society organisations (Fairtrade Africa, Rainforest Alliance, Swisscontact, World Cocoa Foundation); and the research team.

Programme. Deputy CEO in charge of Agronomy and Quality Control, COCOBOD, Dr. Francis Baah and Regional Lead of SWISSCO, Dr Joseph Bandanaa, opened the workshop. COCOBOD then presented the study results, followed by a plenary discussion on clarifying questions or comments. In breakout groups, participants worked on practical actions to close the income gap, and each group reported back in plenary. The workshop closed with next steps.

Group work. Each group started from one study finding:
- yield and productivity: the average yield of 476 kg/ha, and the 37% yield increase needed to close the gap;
- price and costs: the 37% price increase needed to close the gap, and labour and material inputs as the main costs;
- income and finance: the association between loan access, larger productive area and a smaller gap.

Groups were asked to identify priority actions, who should lead them, and by when.

Annex, Table A2. Priority actions identified by workshop participants

Summary: Participants saw labour (its cost and availability) as the most urgent cost issue and assigned clear leads and timelines for it. On yield, they stressed pruning, better planting material, and access to inputs and training. On income, they emphasised affordable credit and diversification adapted to market demand and the environment. Several proposals still need clearer leads, timelines and business models.

Theme	Priority action	Who leads	By when
Yield and productivity	Access to pruning tools and knowledge	COCOBOD, LBCs	As soon as possible
	High-yielding seedlings and grafting (trade-off with quality and CSSVD mode of spread to be assessed)	COCOBOD	As soon as possible
	Access to inputs and training	COCOBOD, LBCs	As soon as possible
	Other: labour gangs (rural service centre model for ageing farmers; financing); crop insurance; farming as a business (Farmer Business Schools)	COCOBOD, LBCs	As soon as possible
Price and costs of production	Community service groups for labour, costs offset by LBCs with beans	LBCs, cooperatives	As soon as possible
	Farm service providers	LBCs, cooperatives, private sector	As soon as possible

	Strengthen cooperatives for self-help	CHED (technical), private sector	As soon as possible
	Price: the Ghana Cocoa Board Act, 2026 (Act 1182) guarantees farmers at least 70% of the gross FOB price	Addressed by the new law	Existing now
Income and finance	Conditional and unconditional loans from companies	Companies	Already existing; continue
	Income diversification into demand-driven crops and livelihoods, with community needs assessment. Farmer Business Schools (incl. branding and marketing)	Development partners and companies	Now
	Formalise VSLAs and link them to microfinance; strengthen cooperatives	Development partners and companies	As soon as possible

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Cover picture: Dennis Nipah/SWISSCO

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