



Swiss Platform for
Sustainable Cocoa



Ghana Cocoa Board
Poised to Maintain Premium Quality Cocoa

INCOME STUDY OF COCOA PRODUCING HOUSEHOLDS IN GHANA

AN EVALUATION OF HOUSEHOLD IN-
COME, LIVING INCOME GAPS, AND THE
CONTRIBUTION OF SUSTAINABILITY
INTERVENTIONS ON COCOA FARMING
HOUSEHOLDS INCOME SITUATION

Abridged report prepared by
Ghana Cocoa Board (COCOBOD), SWISSCO, FiBL

INTRODUCTION

The Swiss Platform for Sustainable Cocoa (SWISSCO), in collaboration with the Ghana Cocoa Board (COCOBOD) and other partner institutions such as FiBL¹ and HAFL², conducted a joint study to assess the current income situation of cocoa farming households in Ghana.

The study builds on the extensive lessons learned and guidance provided by the Living Income Community of Practice, as well as the recently published Cocoa Household Income Study approach (Van Der Haar et al., 2024), which offers a sector-wide framework for evaluating the living income status of households in the cocoa sector.

The specific objectives of the study were to:

1. Estimate the average household income of cocoa farmers in Ghana;
2. Estimate the living income gap among cocoa farmers in Ghana;
3. Estimate the living income reference price at the farmgate level;
4. Assess the determinants of household income for cocoa farmers in Ghana; and
5. Evaluate how selected sustainability interventions supported by SWISSCO and its members affect the household income situation of cocoa producing households.

METHODOLOGY

The Living Income concept can be understood as an equation balancing income and costs. On one side is the Living Income Benchmark (LIB), which estimates the cost of maintaining a decent standard of living for a household.

On the other side is the actual household income, accounting for all income sources and related expenses. The gap between the LIB and the actual income represents the household's income gap (see Figure 1).

The estimation of the Living Income Benchmark was guided by the methodologies of Smith & Sarpong (2018) and Anker & Anker (2022). Household income assessment closely followed the CHIS approach as outlined by Van Der Haar et al. (2024).

Utilizing the frameworks established by Fairtrade International (Fairtrade, 2019), the Living Income Reference Price (LIRP) at the farmgate level and the Living Income Price Differential (LID) were calculated.

The study applied a mixed-method approach, combining quantitative and qualitative tools to comprehensively address the specific objectives above. Quantitative surveys were conducted

1 Research Institute of Organic Agriculture, Frick (Switzerland)

2 School of Agricultural, Forest and Food Sciences, Zollikofen (Switzerland)

with 450 farmers in the non-intervention group and 150 for the three SWISSCO interventions. Additionally, 22 focus group discussions (FGDs) were held across seven cocoa-producing regions, with 14 FGDs for the non-intervention group and 8 for the SWISSCO interventions, providing complementary qualitative insights.

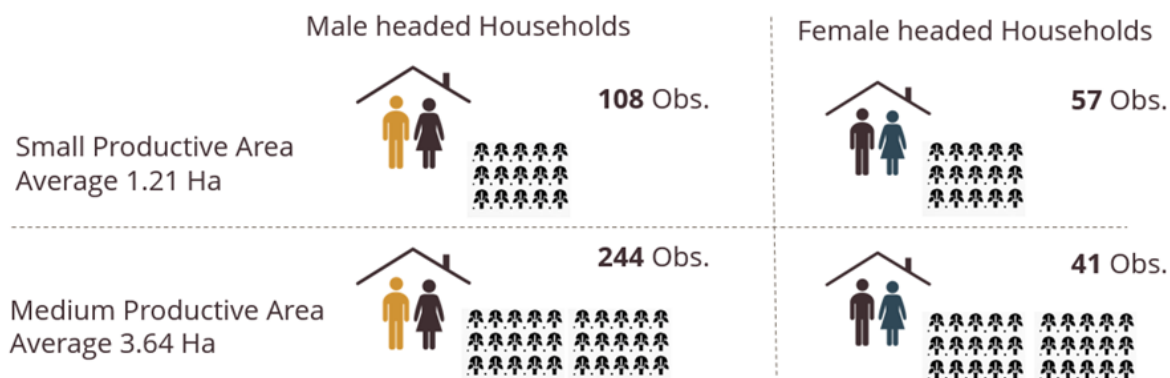
Figure 1: Analytical Framework for Living Income



KEY RESULTS

The households are clustered based on the sex of the household head and the scale of production to provide for a more accurate comparison of the income situation across different cocoa producing households (See Figure 2).

Figure 2: Household Composition based on Headship and Scale of Production



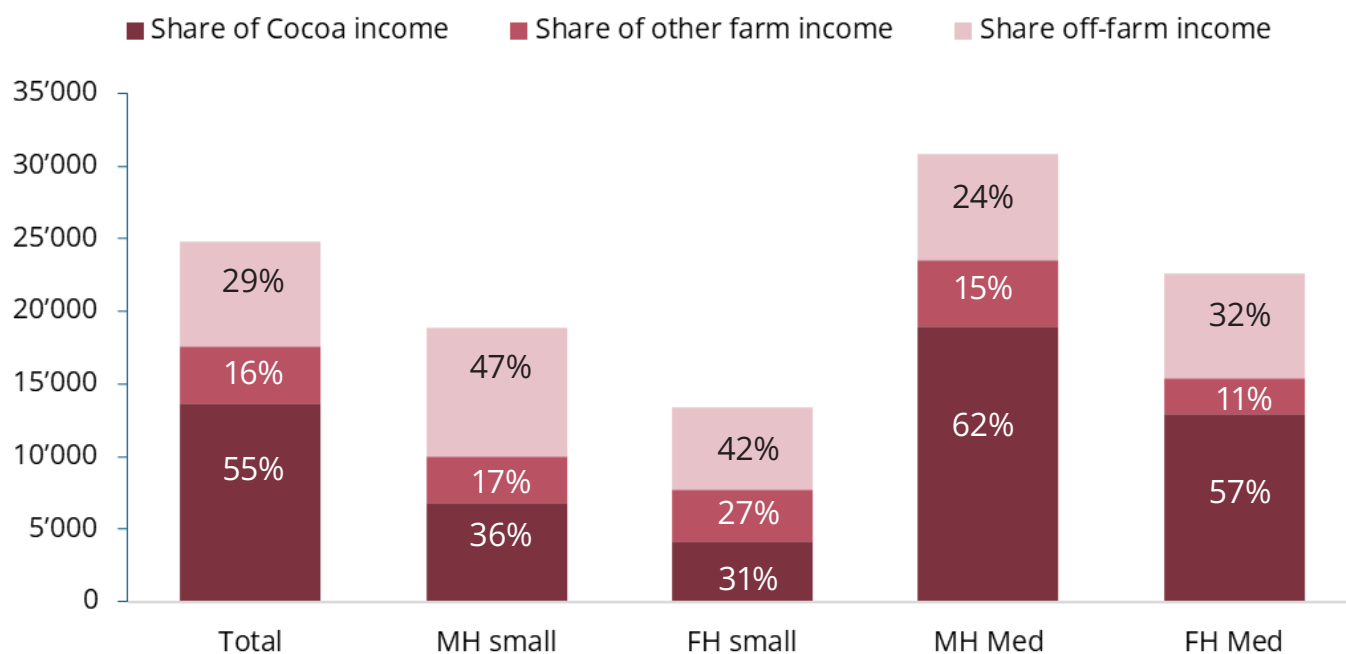
AVERAGE HOUSEHOLD INCOME OF COCOA FARMERS IN GHANA

The study found that cocoa farming households in Ghana earn an average annual income of GHS 24,814 (USD 2,021)³, with cocoa being the largest contributor to household income, accounting for an average of 55% (See Figure 3). The other farm income⁴ includes livestock and crops other than cocoa.

Off-farm income includes self-employment and wage employment with self-employment as the most common. The most common forms of self-employment are petty trading, retail shop and food vending while wage employment include agricultural worker, teacher and night security.

Cocoa producing households incur an average production cost⁵ of GHS 1'386 to cultivate a hectare cocoa, which includes average material costs of GHS 480 and average labour costs of GHS 906 per hectare.

Figure 3: Average Household Income and Share of Income Sources



LIVING INCOME BENCHMARK, INCOME GAP AND LIVING INCOME REFERENCE PRICE AT THE FARMGATE LEVEL

The findings reveal that 91% of the surveyed cocoa farmers earn an income below the adjusted Living Income Benchmark⁶ of GHS 52'970 (USD 4'315), highlighting the significant economic

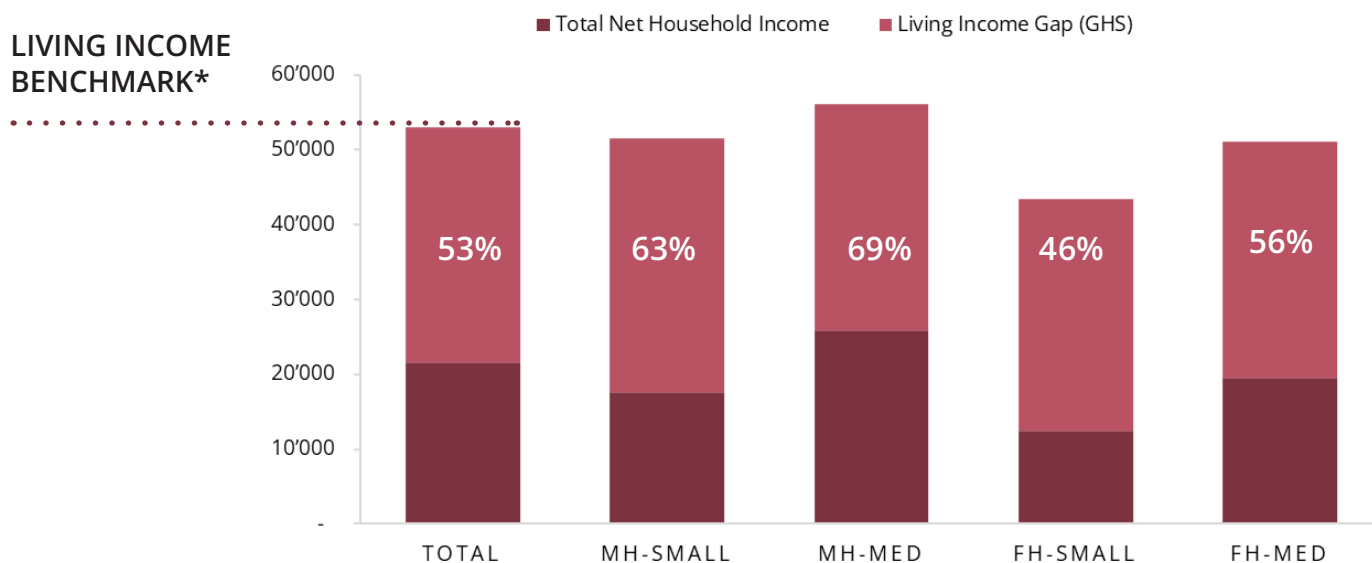
3 1 USD = GHS 12.28 at the time of reporting

4 Farm-level diversification shows that the majority of households generate income from at least one or two additional crops, with goat rearing and poultry farming being the most common livestock activities.

5 64.2% of farmers received some sort of inputs free of charge, which were not accounted for when computing the cost of production.

6 The living income benchmark for the 2022/23 crop year was computed using the OECD Equivalence Scales for a family of five—two adults and three children.

Figure 4: Living Income Benchmark and Income Gap



* adjusted to inflation, household size & composition (OECD equivalence scale) .

challenges faced by cocoa farmers in Ghana. Cocoa farming households require USD 4,315 per year (USD11.8 per day) to have a decent standard of living. On average, households experience a living income gap of GHS 28,132 (USD 2,291) per year, representing 53% of the living income benchmark adjusted to inflation, household size and composition (see Figure 4).

Figure 5 shows that the estimated Living Income Reference Price (LIRP) at the farmgate level was GHS 51.29 per kilogram as of April 2024. At the time of the study, the actual farmgate price (FGP) was GHS 12.8, which was subsequently raised in April 2024 to GHS 33.12 per kilogram of cocoa by COCOBOD.

By April 2024, this increase means that the farmgate price would still need to rise by an additional 55% to meet the LIRP and achieve a living income under 2022/23 yield conditions.

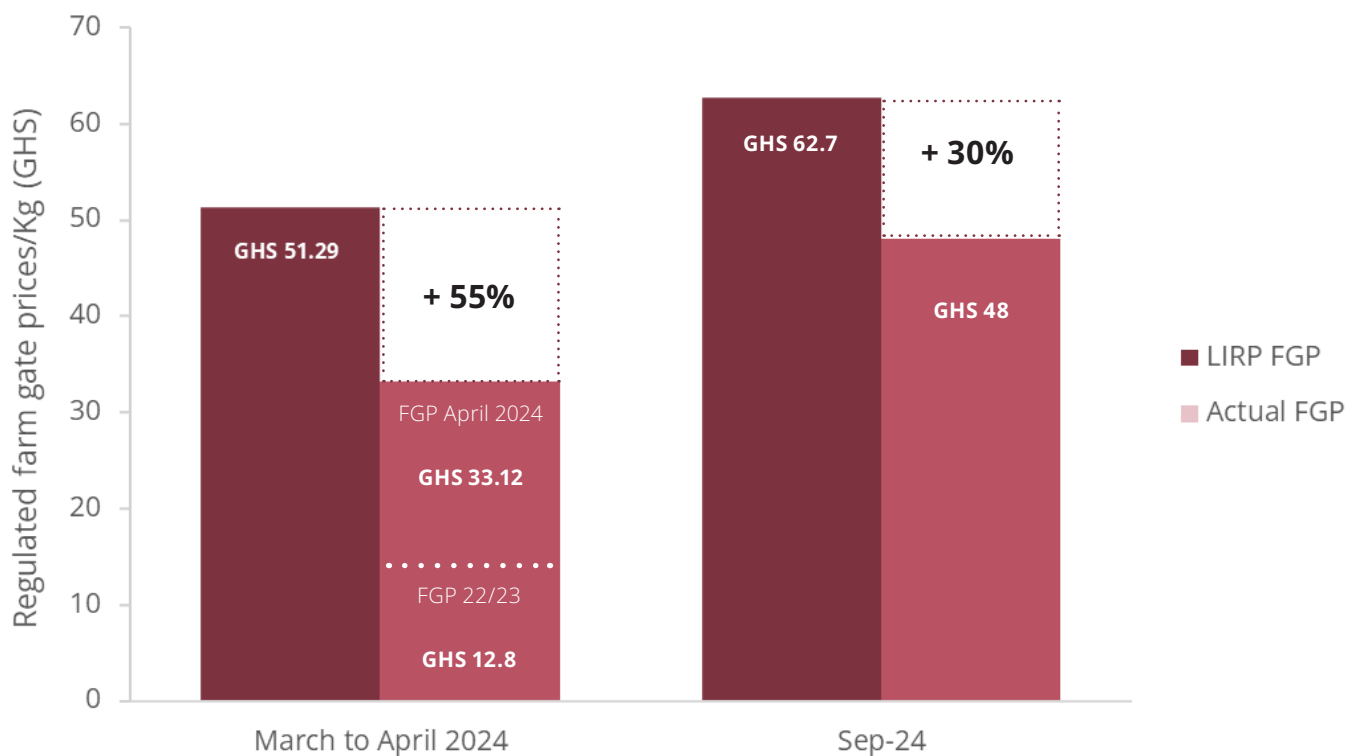
The columns to the right show the updated LIRP as of September 2024, adjusted for inflation**. Although the farmgate price was raised again in September to GHS 48.00 per kilogram, it remains insufficient to reach the desired living income. To meet the adjusted LIRP, the farmgate price would need to be GHS 62.7 per kilogram (a 30% increase), based on the 2022/23 yield levels.

DETERMINANTS OF PRODUCTIVITY, HOUSEHOLD INCOME AND LIVING INCOME GAPS

The analysis showed that cocoa farmers who have more experience, use improved cocoa varieties, join farmer groups, and spend more on inputs and labor tend to be more productive. However, farmers with larger cocoa farms often have lower productivity and earn less per hectare (low net income), suggesting that expanding farmland doesn't always increase profits.

Additionally, having other sources of income and differences between regions affect how much farmers earn. Diversifying income helps close income gaps, and farmers in certain regions earn more from cocoa due to higher yields and regional differences, including inflation.

Figure 5: Farm Gate Price viz Living Income Reference Price



Notes: 1 USD = GHS 12.28 at the time of reporting; Yield is 329Kg/Ha; Average cocoa productive area 3.44 Ha; Living income benchmark value GHS 52,970; **Adjusted by inflation of 22% (Ghana Statistical Service, 2024)

CONTRIBUTION OF SWISSCO INTERVENTIONS TO THE HOUSEHOLD INCOME OF COCOA FARMERS

Three SWISSCO interventions—KOA, Akwaaba, and Sankofa projects—with distinct objectives and areas of focus were assessed. However, the sample size of 50 farmers per intervention limits the generalizability of the findings. Additionally, since neither experimental nor quasi-experimental designs were employed, no causal conclusions can be inferred from the results.

KOA Intervention

The project offers farmers an additional income stream by utilising cocoa pulp, reducing waste, providing agronomic training, and improving their standard of living.

Quantitative and qualitative data shows that KOA farmers exhibit a slightly higher net cocoa income per hectare compared to the comparison group⁷. Nearly all male and female farmers in the focus group discussions reported an increase in their income since partnering with KOA, with some attributing this to higher prices per bucket of produce.

⁷ To assess the intervention's contribution on farmers' income, a comparative analysis was conducted using Household Income Survey data, comparing farmers who received the intervention with those in the same region who did not. A Coarsened Exact Matching approach was applied to ensure comparability between the groups, enhancing validity, balance, and reducing model dependence and bias, even without a randomized experimental design.

KOA farmers incur slightly higher material input costs per hectare (GHS 741 vs. GHS 646 for non-intervention farmers) due to the intervention's encouragement of input use.

However, KOA farmers benefit from lower labour costs (GHS 1,445 vs. GHS 1,629), likely due to free transportation provided by the intervention, resulting in nearly identical total production costs between the two groups, with only a modest increase in net cocoa income for KOA farmers. Many farmers expressed overall happiness with the intervention's effects on their livelihoods.

AKWAABA Intervention

The project finances health insurance to reduce household costs, improving the chances of earning a living income and families' health. All farmers supported by this intervention are producing cocoa organically, and thus receiving a corresponding premium.

Akwaaba farmers have a higher net cocoa income per hectare compared to the comparison group, primarily due to lower production costs, as the yields and income per hectare are quite similar between the two groups.

The main driver of their higher net income is the significant reduction in production costs, with Akwaaba farmers incurring much lower material input (GHS 47 vs. GHS 424) and labour costs (GHS 603 vs. GHS 1,375), resulting in total production costs of GHS 666 compared to GHS 1,974 for the comparison group.

Additionally, Akwaaba farmers benefit from reduced health expenditures and receive a premium price for their cocoa due to their organic farming practices.

Farmers perceive the Akwaaba intervention to have improved their standard of living, saying they are healthier and happier because the health insurance lowers their medical costs. They recommend increasing insurance coverage to ten household members due to larger family sizes and propose expanding the program to a national level, as it is currently limited to specific districts.

SANKOFA Intervention

The objective of the project is to enhance the livelihoods of cocoa farmers through income diversification, fairtrade premiums, living income differential payments and by building climate resilience, and conserving biodiversity through dynamic agroforestry.

Farmers in the Sankofa group earn higher net cocoa income per hectare, averaging GHS 3,433 compared to GHS 2,316 in the comparison group. They spend an average of GHS 970 on production per hectare compared to GHS 1,188 in the comparison group.

Farmers believe the Sankofa intervention has improved their living standards by increasing their income from the Living Income Differential (LID) payment and selling other food crops through mixed cropping.

They also gained valuable knowledge from training programs. Farmers also reported overall happiness and anticipate guaranteed additional income in the future when fruit trees begin to bear fruit.

RECOMMENDATIONS

Based on the key findings of the study, the following recommendations are made. Although specific responsibilities are outlined below, we strongly encourage COCOBOD, development partners and other stakeholders to collaborate on these recommendations.

For COCOBOD, the following are recommended:

- Implement a 30% increase in farmgate prices to help cocoa farmers achieve a living income under the 2022/23 yield conditions (as of September 2024) and base future increases on production costs and inflation.
- Enhance productivity through the intensification of farms (from 329 kg to 800 kg per hectare), improving cocoa variety selection, optimizing input use and pruning.
- Encourage and support the formation and strengthening of producer organizations, as membership significantly influences cocoa productivity and income.
- Explore and implement strategies to reduce production costs, particularly labour costs, through mechanization, cooperative labour arrangements, or access to affordable inputs.

For development partners and other stakeholders, the following are recommended:

- Develop and support strategies for the reduction of household expenses (both production specific and other expenses)
- Develop and support income diversification programs for cocoa farming households (e.g. non-cocoa related activities or off-farm activities).
- Implement targeted programs to support female-headed households, which typically earn less income compared to male-headed households.