

BALANCING THE LIVING INCOME CHALLENGE

Towards a multi-actor approach to achieving a living income for cocoa farmers

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ABSTRACT

This paper is intended to contribute to a data-led and evidence-based point in view to the discussion around living income for cocoa farmers in Ghana and Côte d'Ivoire – the largest cocoa producing countries in the world. It presents new insights from research and data gathered by the author organizations, Wageningen University & Research and Cocoa Life – Mondelez International's cocoa sustainability program – alongside inputs from a range of partners and other sector experts. This report follows a [shorter discussion paper](#) published in November 2020.

Building on prior work with new data and insights, we show the wide inequalities among cocoa farming families that impact how well they are able to achieve a living income through cocoa farming alone. Systemic interventions need to address low income across all farmers – particularly the most vulnerable families who may never be able earn a living income through cocoa alone. Different actors, with different strengths and focus, are needed to achieve this. We show that certain interventions will have more impact for some farming families than others, and that some interventions that provide short-term gains are unsustainable in the long term. Interventions should therefore be tailored based on a thorough understanding of different farming families' circumstances as well as market and policy dynamics. There is no one size fits all solution.

We want farming families to be paid a fair price for their labor and produce, which can be sustained over time in each market, and manage the risks of price increases that may lead to boom and bust cycles – which can have a long-term detrimental impact on farming families. To do this we need to pay more and support local economic and global market development to provide stability. We argue that productivity improvements and higher cocoa prices are fundamentally important for a more sustainable cocoa sector, but yield and price increases that are not connected to supply management are risky tools when applied at scale. That is why we recommend that such tools should be implemented alongside stabilizing market policies, and through coordinated processes with governments and sector industry actors.

In the absence of supply and demand policies, price increases and premium tools support cocoa farmers in the short term and the evidence points to this approach being the most efficient one for a minority of cocoa farming families, namely those with relatively high volumes produced. However, especially for the majority of actors relying on wide supplier networks, we recommend broader approaches to tackle the most significant human rights risks while promoting positive long-term developments. That means identifying strategies that deliver for the most vulnerable farming families with the lowest success in farming cocoa, while continuing to provide support in parallel to more relatively successful farming families.

We support approaches that aren't conditional on cocoa farming, but positively interact with other sector sustainability goals and promote a long-term perspective on rural development. These are becoming more important in general because positive sector development cannot be achieved without tackling the concerns of different types of farming families. Among such tools we include targeted agroforestry, payment for environmental services including carbon credits, other unconditional or non-cocoa conditional financial support mechanisms, improving local infrastructure and market access, value-adding activities and economic (micro and meso level) diversification. We believe that addressing wider human rights risks and development needs supports building a stable sector in the long term that can develop and sustain higher prices, even at scale.

This research paper cautions that no single tool can succeed in the long term in tackling what are complex and inter-connected problems. Ultimately, we argue that it is important that all stakeholders from the cocoa sector, government, farmers and beyond come together to build a shared understanding of the living income challenge, so that every actor can determine where they can have the most impact and develop coordinated strategies to do so. We present different tools and options for how different actors in the cocoa sector - chocolate producers, cocoa traders, farmers, country governments and NGOs - can work together to implement this holistic approach to create healthy rural economies with the conditions for farming families to earn and sustain living incomes.

1. INTRODUCTION

That cocoa farmers earn sufficient income is a precondition to achieve several human rights, to support farming families and live a decent life. It has fed into high profile initiatives like the living income movement and Living Income Differential policies in Côte d'Ivoire and Ghana. 'Living income' is a well-defined, influential, and desirable outcome, and all actors need to play their part to enable farmers to earn enough to live a decent life.

In the 2020 “**No Silver Bullets**” paper, we looked to establish an understanding of the scale of the living income challenge, and provided an initial assessment of how it could be addressed sustainably. We argued that effective action could only come from a shared understanding of the magnitude and nature of this challenge. Our view was that building the research and evidence base for a shared understanding would help to catalyze a coordinated response by actors from the cocoa sector and beyond and inform the vital role of government leadership.

In this report, we take that thought forward to explore where the sector should focus and why. We invited experts from across the sector into our discussion. The more feedback we collected, the clearer it became that there is no consensus yet around the different options to intervene, or which route makes sense to whom and why. This paper looks to shed light on what works for different types of farming families and why, and to help all actors start to align on solutions. Three key themes emerged from the research and stakeholder contributions: the diversity of cocoa farming families, the interaction of cocoa centric mechanisms with income and the cocoa market, and the insight that lasting impact requires all farming families to progress.

Finally, we look at what is needed practically to progress towards living income for cocoa farming families: the required level of coordination and alignment between different actors from government, civil society, and private industry on strategies, reporting, and safeguards across different types of farming families is not given. This means, we doubt one can ensure that activities will achieve their intended long-term impact, to guard the human rights of the most vulnerable families alongside growing the prospects of the most successful farming families, without unintended long-term consequences. Such coordination requires leadership from an independent institution that can successfully bridge interests of governments, civil society, and private industry.

At the same time, every actor individually shares in this responsibility and industry actors should show how they progress living income in the current environment. For that purpose, we outline a private sector roadmap that might specifically help that group of actors to move ahead and improve the way we communicate and report on progress - while certain elements hinge on platforms for multi-stakeholder coordination, other elements can be pursued independently.

1.1 The structure of this paper

Section 1 presents our own findings from studies conducted by Wageningen University & Research and initiatives and projects run as part of Mondelez International's Cocoa Life sustainability program.

Section 2 presents high level discussion around farmer incomes and introduces concepts and definitions that will be used through the rest of the paper.

Section 3 presents insights and evidence from Cocoa Life's empirical work, with theoretical underpinning from academic and practitioner literature on farmer inequality and market forces that are driving low income for cocoa farming families, as well as contributions from peers and partners.

Section 4 discusses measures aimed at increasing farmer income. Our analysis is supported by evidence from Cocoa Life's program experience, literature, and contributions from peers and partners.

Section 5 presents our conclusions and a roadmap for private sector action.

A brief focus on Mondelēz International and Cocoa Life

The “No Silver Bullets” paper series is a co-owned report of learning and insight between Wageningen University and Research, Mondelēz International and our Cocoa Life program. The paper is our joint voice, but must impact how we individually, at Mondelēz International and Cocoa Life, understand our work and role in cocoa sustainability. This evolution will be reflected in our strategy and reporting approaches.

Mondelēz International will update our Cocoa Life strategy in 2022, showing how our learnings will shape our future work. In addition, we are updating our reporting and transparency approach, taking the roadmap for private industry actors in the final chapter of this paper as a guideline to report periodically on our plans, achievements, and impact. This alone is not enough, because understanding our work as a meaningful contribution in the context of joint action to tackle global sustainability issues requires aligned reporting frameworks and standardization between actors.

We at Mondelēz International are dedicated to continue to support the many platforms that have risen to tackle different aspects of this enormous task, but we want to call out that the journey is far from over. Currently, there is no effective governance approach to secure the level of coordination and alignment needed between all stakeholders to fully address the challenges ahead (in cocoa and beyond cocoa), and we don't believe that any individual industry actor can play that role. We want to encourage everyone reading this report to continue researching, practicing, engaging, and searching for ways that will allow us all to improve the way we work together. There will be no success to the degree needed without joint action.

A brief focus on Wageningen University and Research

Wageningen University & Research aims to contribute to achieving the UN Sustainable Development Goals (SDGs) by addressing the major challenges faced by the world. We do so through knowledge development and transfer, providing the evidence base on what interventions and policies work for target groups to enable decision making on policy design and implementation.

Throughout our work, and in collaboration and partnership, we bridge the academic world with practice and the real situation on the ground, under our core values of scientific rigour, independence and value creation. We translate research findings into concrete meaning and recommendations, so partners and stakeholders can use it in their work to enable strategies built on traceable and trustworthy evidence.

We aim to contribute to achieve a living income for the millions of people working in agriculture who are currently not earning a living income or living wage. Because earning a decent (living) income is a human right, and achieving a living income is connected to the SDGs: No poverty, Zero hunger, Decent work and economic growth, Reduced inequalities and Partnerships for the goals.

To achieve a living income, Wageningen University & Research works with others, as making change happen lies within the direct sphere of influence of companies, governments, NGOs and producer organisations. We support the design of policies and field-level interventions and publish research insights for wider inspiration. But we also actively contribute to sector and thematic dialogues to create a shared understanding of the challenges and to find pathways for improvement together. For achieving a living income this is crucial, as collaboration between multiple actors is required to achieve a living income for all. We look forward to continue our discussions in the cocoa sector based on this paper and other research results, to achieve the impacts we strive for.

2. COCOA FARMER POVERTY AND LIVING INCOMES

2.1 Poverty in cocoa farming communities

Farmer poverty is one of the most significant and complex challenges faced by rural agricultural communities across the world.

The first issue to understand is the scale of farmer poverty. Smallholder agriculture supports the livelihoods of an estimated 500 million households globally, with about 70% of those living in the global south pursuing agriculture as their main means of income¹. At the same time, it is estimated that about 80% of the world's extreme poor live in rural areas, dependent on smallholder agricultural production². Among those, by some estimates, there are about 5-6 million cocoa farming families globally accounting for 40-50 million individuals which are directly dependent for their livelihood on cocoa either by growing cocoa or working on cocoa farms³.

Second, is the breadth of root causes. Poverty is a cause of deprivation itself, but also a direct result of other systemic challenges. The causes of, and subsequent solutions to, farmer poverty are interwoven with global market dynamics, micro-, macro- and socioeconomic factors, as well as political headwinds.

It is clear that poverty cannot be fully understood and tackled just by considering only the financial circumstances of a person.

As put by Amartya Sen:

“Poverty is not just the lack of money; it is not having the capabilities to realize one’s full potential [...] Poverty is the deprivation of opportunity”⁴.

Income is a key enabler of opportunity, but it also relies on opportunity. In West Africa specifically, many farming households move into cocoa not because their farm and household context is geared to be successful with cocoa but because they have few other economic opportunities to choose from. Especially when market prices are low, those families do not have the ability to switch out of cocoa or supplement income, leading to overreliance on cocoa.

2.2 Living incomes

Living income is an entire household concept that accounts for the cost of food, decent housing, and other essential needs for all family members, as well as for the cost of unexpected events⁵, all of which ladder up to the concept of a ‘decent standard of living for all family members’. This benchmark of decency can be compared with actual incomes achieved by farming families.

A living income has not been realized for most farming families. The fact that cocoa farm-gate prices continue to fluctuate significantly, which is compounded by long-term falling global commodity price levels, is one explanation for this, and farmers are often not able to invest to improve yields. Other factors include land fragmentation and few alternative sources of income. This impacts all farmers, but especially those farmers that are not benefiting from sustainability program activities and premiums⁶.

The governments of Côte d’Ivoire and Ghana have identified the issue of low farmer incomes from commodity chains, such as cocoa, in their national development plans and made clear their intention to strengthen their position in cocoa, while diversifying the economy and stabilizing incomes.

Recent developments such as the Living Income Differential or the African Regional Standard are concepts designed to contribute to this vision while creating a level playing field at true scale. These concepts require collaboration by all involved actors to ensure that they can work effectively - platforms such as the Cocoa and Forest Initiative or European Sustainable Cocoa platforms have been established to align multi-stakeholder actions, while also helping governments to formulate clear expectations and tools. However, the level of alignment between government national development plans and other stakeholders’ actions does not have the required level to address the living income challenge effectively, and is not well supported by multi-lateral actors, donors, and civil society. This lack of coordination and alignment is one factor that prevents a truly efficient use of resources⁷.

¹ Farmers that benefit from such programs are usually registered farmers, participating in farmer organizations. However, there remain significant portions of farmers across West Africa who are not part of farmer organizations. For example, Cocoa Life currently sources 68% of the required cocoa volume for Mondelez International chocolate products through Cocoa Life. (Cocoa Life, 2021, “Making an Impact”, <https://www.cocoalife.org/impact>).

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A living income: The net annual income that enables a family to “afford a decent standard of living for all members of that household”⁸. It considers food, water, healthcare, education and other essential needs, including provision for unexpected events. The living income story illustrated is shown in Figure 01 below.

Living income benchmarks: The benchmark of the cost of a decent standard of living, as defined by the Living Income Community of Practice, for a family in a particular place. With an emphasis on “decent standard of living”, it is significantly higher than poverty benchmarks. Living income benchmarks are not targets in themselves and are not accompanied by an accountability framework or action plan.

The income gap: This refers to the difference between average (mean) household income and the (mean) living income benchmark in a particular location. Actual household income is typically composed of net farm income (from cocoa and other crops), off-farm income, and any other income.

Living income differential: An additional sum of 400 \$USD per ton of cocoa on top of the floor price, to be paid by cocoa buyers as of the 2020/21 season, as defined by the Ivorian and Ghanaian governments. It is designed to enable the governments to guarantee a fixed and higher minimum price to farmers.

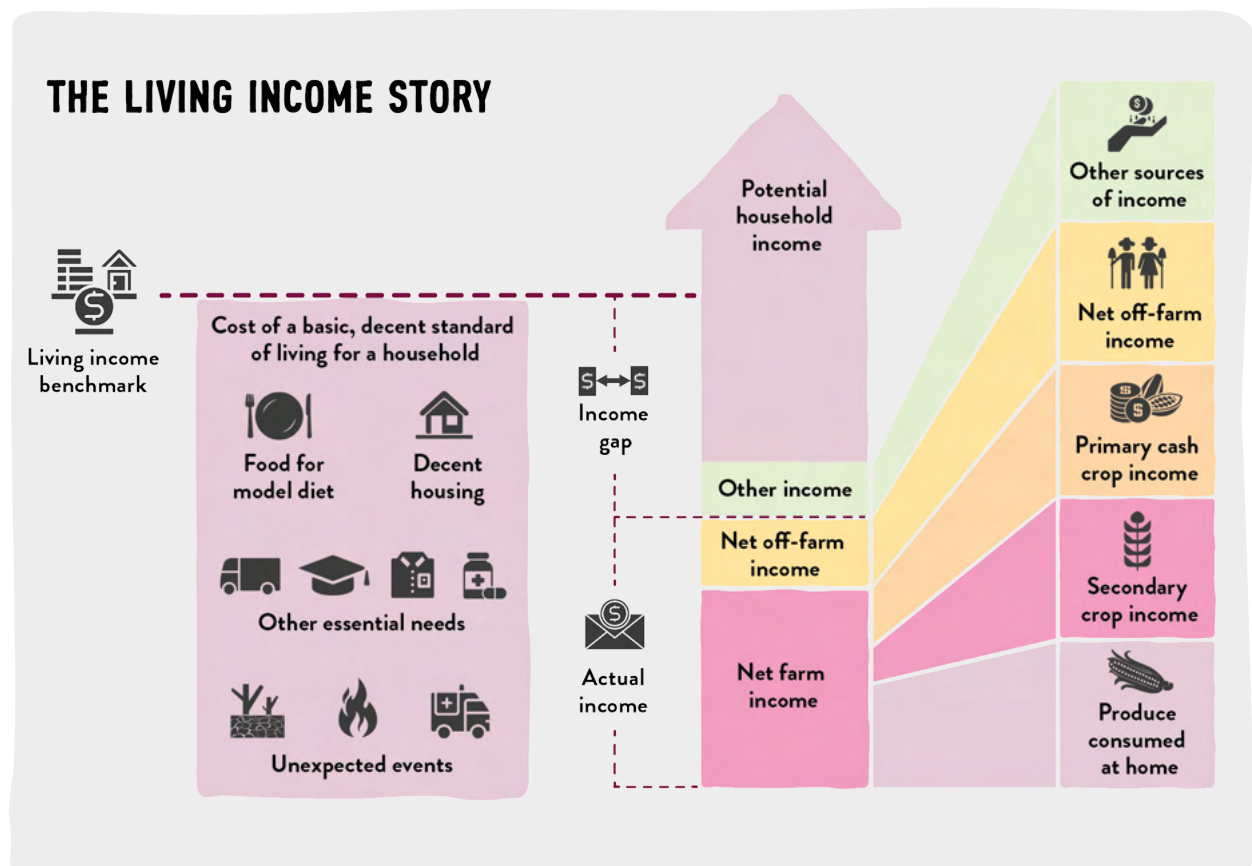


FIGURE 01: The living income story.

Data source for figure: The illustration is based on the Living Income Community of Practice: <https://www.living-income.com/the-concept?lightbox=datatem-je4i0471>.

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2.3 The size of the living income challenge

For the purposes of this paper, we consider two ways of conceiving the size of the living income challenge: the number of cocoa farming families which fall beneath the living income threshold, and the gap between those families' income and a living income.

While most living income studies agree that less than one quarter of cocoa farmers in west Africa are currently reaching a living income, because of different approaches to calculating living income, combined with different approaches to the collection of income data from farmers, there is significant variation between studies, from 17-24% in Ghana, and from 10-26% in Côte d'Ivoire^{ii,9,10}.

Among cocoa farming households working with Cocoa Life in 2019 in Ghana and Côte d'Ivoire, average income per person per day is at about 1.42 \$USD and 1.23 \$USD respectively. The Living Income Benchmarks, estimated as per person per day needs equate to approximately 2.55 \$USD for Cote d'Ivoire (2018) and 2.08 \$USD for Ghana (2018)ⁱⁱⁱ.

It is estimated that in Ghana and Côte d'Ivoire combined, up to 2,000,000 smallholder farmers produce cocoa¹¹. The income gap between the average income of those farmers and recent living income benchmarks¹² equals about 5.21billion \$USD per year^{iv}. That's almost double the total 2018 cocoa export earnings for Ghana and Côte d'Ivoire (estimated at roughly 5.31billion \$USD¹³), and is close to 10% of the total combined annual gross domestic product of both countries together¹⁴. It also equals about forty times Mondelez International's 2020 net earnings attributable to cocoa. Paid as a uniform price mechanism, such as a premium, this 5.21billion \$USD would allow 30-40% of the farming households to reach a living income, as many farmers earn less than the average. This is a clear minority and while this means not everyone can be lifted to a living income this way, such a measure would provide some form of assistance to all farming families.

If such a measure would aim to lift a clear majority of farmers to a living income, about 10billion \$USD would be needed (for 75% of households).¹⁵

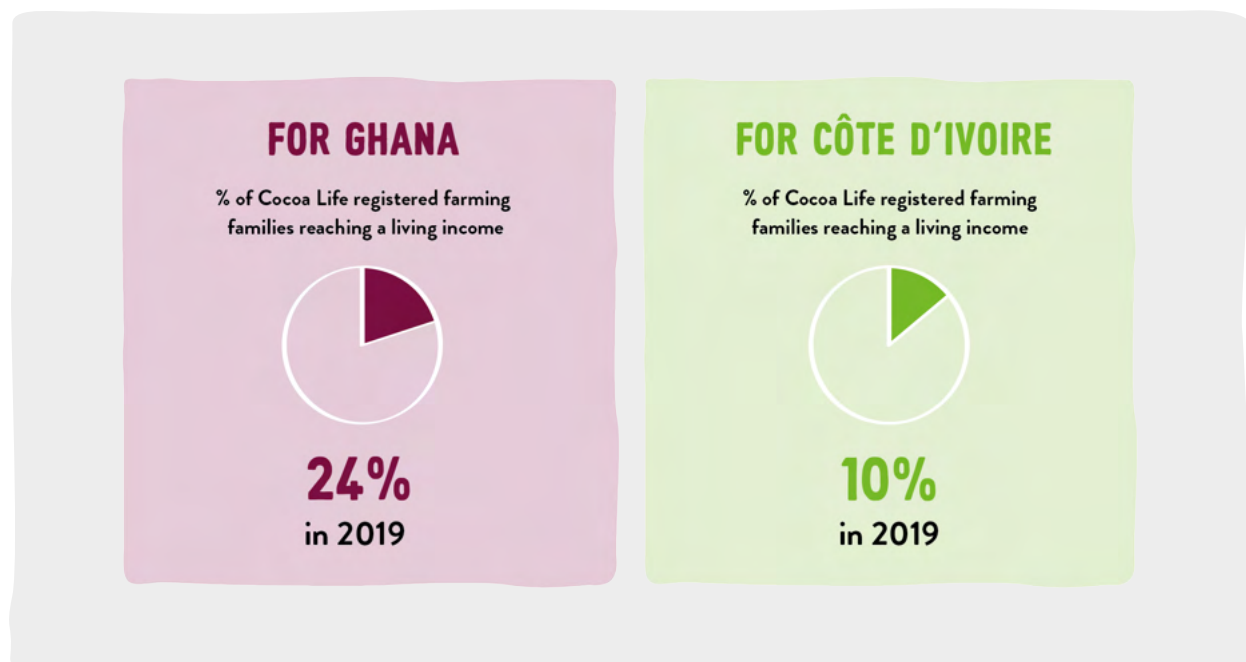


FIGURE 02: Cocoa Life registered farming families reaching a living income.

Data source for figure: Data that references Cocoa Life farming families as source has been collected in 2019 by Ipsos Mori during Cocoa Life's annual impact evaluation.

ⁱ Waarts et al. (2019) end line data from Côte d'Ivoire: 26% of families reach a living income, Ghana: 20% of families reach a living income. KIT (2018), Côte d'Ivoire: 14% of families reach a Living Income, Ghana: 17% of families reach a living income.

ⁱⁱ The official living income benchmarks based on the Living Income Community of Practice are calculated in \$USD per month per household for a reference household size consisting of adults and children. For the conversion to per-person-per-day rates, we applied a flat conversion across all household members as approximation.

ⁱⁱⁱ In our 2020 paper 'No Silver Bullets' we wrote that the average living income gap is 2,065 \$USD/yr/hh. In this paper this statistic has been corrected to 2,605 \$USD/yr/hh, in line with data from the KIT living income analysis for Ghana and Côte d'Ivoire. That aligns to our newly cited 5.21billion \$USD income gap.

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In addition to the scale of the living income challenge in monetary terms, there is an equally large question about what actions make most sense to sustainably address the issues of low household income, which we look at in section 2.4 and later in this paper.

An approach such as the one explored above would lift the 75% of the families to a living income that are currently doing best with cocoa growing, but not necessarily the 25% of the most vulnerable families which currently struggle the most. It is clear from this data that lifting all farmers to a living income with a uniform price mechanism alone would be challenging - and that the most vulnerable farmers will need a varied approach. To this day, there is no consensus or strategy across all actors to determine who will prioritize what tools to support what types of farming households. We believe that there will not be a sustainable solution for cocoa if there is not an approach that considers the future of all different types of farming families, and different actors will need to leverage different interventions and support mechanisms in alignment, in order to reach the goal of living income for all farmers.

This paper will contribute perspectives to this discussion by highlighting what differences exist between farming families, which interventions are effective for which farming families, and what considerations are important when considering strategies of different actors.

2.4 Income from cocoa is one part of the poverty puzzle

What we know is that focusing on raising income earned through cocoa is helpful but not a sustainable solution to poverty for all cocoa farming families. Doing so without the support of a wider holistic strategy can result in the uptake of unsustainable practices - such as land conversion, supply and demand imbalances, deepening single commodity dependence, or certain forms of engagement of cheap or unpaid labor. These are all challenges that declining incomes equally pose. This increases the risk of contributing to or re-distributing poverty in the long-term. This ties the issue of poverty eradication and enabling a living income to broader human rights concerns and combating climate change - often, a decent standard of living is thought of as a precondition to the achievement of many those goals.

“**Human rights are rights inherent to all human beings, regardless of race, sex, nationality, ethnicity, language, religion, or any other status. Human rights include the right to life and liberty, freedom from slavery and torture, freedom of opinion and expression, the right to work and education, and many more. Everyone is entitled to these rights, without discrimination**”¹⁶.

Sen’s definition states that poverty is rooted in the ‘deprivation of capabilities’¹⁷, which leads to a lack of opportunity, so achieving living incomes sustainably means that measures need to create long-term capabilities and opportunities for households. This can include improvements such as education, health, job opportunities, justice, or resources. The income earned from cocoa can support this build-up, but if cocoa becomes the only income stream available for farming families it may act as a limit to new opportunities beyond primary production, which is an important pathway towards higher income and less dependency, as we explain later in this paper.

Several researchers^{18, 19, 20, 21} caution about increasing incentives towards primary production (producing raw materials) and point towards approaches such as value addition and service sector jobs that need to go in tandem with overall economic development as a counter-weight to cash-crop dependence.



As Page and Hewitt (2001) put it:

“ [...] specific measures to reduce the negative consequences of primary [production] on the poor may be desirable in the short run but should not make commodity production more attractive in the long run[†]. What is needed is to enhance the capacity of the poor to respond to change. General support to enhance and diversify assets and increase productivity and value-added through the development of agro-processing includes: access to finance, rural credit facilities to non-farm activities, provision of extension services, training, etc²².”

Looking beyond agricultural activities, better transport, logistics and energy systems are also relevant²³, as are social protection systems²⁴.

Therefore, cocoa income should be considered one tool in the toolbox for creating sustainable livelihoods, while also taking into account critical environmental and social contexts²⁵. A person's livelihood is sustainable when a farmer can cope with, and recover from, stresses and shocks and maintain or enhance its capabilities and assets both now and in the future²⁶. In this context, sustainable livelihoods mean enabling subsequent generations of cocoa farmers to access the resources they need to lead a life free of deprivation. Considering the environmental and social context: it means farmers have the capability to realize their full potential and live a decent life in their community, while not undermining the natural resources for future generations to be able to do the same²⁷.

Sustainable livelihoods: This concept takes into account environmental and social contexts, as well as income. A sustainable livelihood is one that enables subsequent generations of cocoa farmers to access the resources needed to lead a life free of deprivation and realize their potential, without undermining natural resources. A sustainable livelihood is an ideal that spans all areas of sustainability work and provides the lens for a holistic approach when working on any area within a sustainable livelihood framework, such as living income^{28, 29, 30}.

In the following section we look closely at the causes of low income - in particular the inequality among cocoa farmers - that make a broad toolbox of solutions essential to raising incomes. Before we do, we present a case from IDH on the cocoa and coffee sector, which makes clear this need for diverse but targeted solutions.



[†]ODI here refers to the observation that primary production of raw materials is an economic activity of relatively low value-add and typically secures the least income.

"SMART MIX SOLUTIONS" TO DRIVING INCOMES

Contribution from Gael Lescornec & Ashlee Tuttleman of IDH

Closing the living income gaps of smallholder cocoa farmers is an ambitious but necessary commitment towards a sustainable cocoa sector, as recognized by the [2018 ICCO World Cocoa Conference Declaration](#).

In pursuit of this goal, IDH convenes multi-stakeholder initiatives to bring commitments and action around living income - alongside deforestation, child labour and traceability - including through the Belgium partnership of "Beyond Chocolate" and the Dutch Initiative on Sustainable Cocoa" (DISCO).

This builds on years of IDH's work to move different actors together from commitment to action towards living wage and more recently living income in cocoa, coffee, tea, bananas, flowers and beyond. This work is generating long term engagement and real change - particularly from **major brands** and **investors**.

Efforts to close living income gaps require an income driver approach to assess what can be done, how and with whom. Income drivers are cocoa land size, yield, production costs and price; as well as net income generated from other activities than cocoa. Understanding current levels of each driver, and the feasible degree of improvement for each, is imperative to match the most promising improvements in farmer income with an appropriate and mix of interventions that lead to impact, or what IDH calls smart-mix solutions. A smart-mix solution recognizes:

- Opportunities for substantive income increases are more likely when multiple drivers are targeted.
- Attention is given to how interventions - and drivers - interact.
- Cocoa value chain actors have significant influence over cocoa yield, price and production costs, and historically to a more limited extent on other incomes and land, signaling opportunities for partnership with other stakeholders where influence is limited.

Smart mix solutions are enhanced, and have more impact, if driven by brands and retailers which allows product differentiation, targeted marketing, direct consumer engagement and end-product price controls, thus influencing market demand and the potential for higher market value of the end product. The smart mix solutions for cocoa farming households are implemented in Côte d'Ivoire and Ghana by supply chain partners from Belgium, the Netherlands, France, Switzerland and the US.

An important aspect of IDH's work with these different value chain partners is to better understand the conditions under which smart-mix solutions are effective. Reliable, comparable and shareable data is essential in this effort. Data also enables appropriate segmenting of farmers to uncover income drivers with the most potential for improvement and the corresponding smart mix of interventions and actors required per segment.

“SMART MIX SOLUTIONS” TO DRIVING INCOMES (CONTINUED)

[IDH analysis of the coffee sector](#) demonstrates how farmer segmentation can influence the formulation of smart-mix solutions: here, IDH segmented farmers based on supply chain structures and end consumer product differentiation. Results suggest that most small producers in loose supply chains serving low-value markets face an insurmountable living income gap that cannot be solved by improving yield and price alone. For smallholders producing certified and/or higher quality coffee, the living income gap could be narrowed with a mix of higher prices, efficiency gains in cost of production and yield increases. Smallholder producers of specialty coffee meanwhile earn a living income due to higher yields and prices. In general, medium and largescale producers currently earn a living income.

IDH’s findings underline that coffee industry actors can close the living income gap through coffee-specific income drivers for some farmer segments. But for most farmers, there is a need to include and go beyond coffee-related income drivers and consider opportunities around income diversification and land size. IDH [Farmfit’s Market Transformation Insights Report](#) highlights how, even short of a landscapes approach, companies can support farmers in their income diversification strategy by:

1. Becoming a more holistic service provider
2. Creating service coalitions with other companies, CSOs and/or origin governments, and/or
3. Leveraging vertical value chain partnerships

Building on a landscape approach to integrate smart mix solutions to living income can contribute towards improved alignment among communities, suppliers, and governments, and also leverage different assets and influence. For example, the new [Cameroon Roadmap to Deforestation Free Cocoa](#), launched in January 2021, has integrated specific targets and action around living income, creating opportunities to build a suitable enabling environment to optimize income driving interventions.

The momentum around living income in the cocoa sector today is unprecedented including efforts from the EU to create synergies through investments, policies and programs. Global investors and brands are taking on the topic of income inequality in an unprecedented way. IDH is excited to be working with these different actors as a convenor, a learning partner and a co-investor to carve out sustainable paths to closing living income gaps by 2030.

3. UNDERSTANDING THE CAUSES OF LOW INCOMES FOR COCOA FARMING FAMILIES

In this section we look at how the inequality among groups of cocoa farmers and market forces together exacerbate the issue of farmer poverty. Cocoa farming families in West Africa are generally smallholder farming businesses.

Their household income comes from multiple sources: for example, income from a focus crop (such as cocoa) and income from other economic activities (such as local craft and trade or working in a seedling nursery). The income from cocoa is influenced by two main factors: (1) a households' access to, and use of, resources, which results in the amount of cocoa produced and sold, and (2), market related factors including buying arrangements and the price of cocoa. Here we begin by discussing factors related to lack of resources, then factors tied to the price of cocoa.

3.1 Resource inequality among cocoa farmers drives income inequality

Cocoa farming families are not a homogenous group. There are significant inequalities among these households in terms of access to the resources needed to achieve high returns from agriculture: notably land, financial resources and labor.

At the same level of land-use efficiency, farming families with smaller plots of land will generally not earn as much from cocoa farming as those with larger farms, even when prices are strong and stable. Some with low production efficiency and small parcels of land may never be able to produce enough volume of cocoa to reach a living income, no matter how high the price of cocoa. Meanwhile, larger farms with more land often suffer from a lack of finance, labor or other resources that prevents them from reaching adequate productivity levels, but the sheer farm size may compensate for that at least to some degree^{31,32}. Paradoxically, there are among the small and mid-size farms some of the most efficient farms that reach the highest relative income results, but these are the minority. In general, a larger farm is likely to deliver better income results for a farming family. We discuss this situation later in this paper.

Significantly improving income by focusing on cocoa (or other agricultural commodities) requires a combination of interventions and a certain level of investment, expertise, labor availability and consistent implementation by the farmer - something that might not be achievable for all farmers. Data from cocoa communities in Ghana and Côte d'Ivoire, as well as tea communities in Kenya, draw similar conclusions³³.

In fact, research conducted by Wageningen University & Research found that:

“for many farmers, primary agricultural production [i.e., producing raw materials from farming] of global commodities will never be a pathway out of poverty because of small farm sizes and low productivity levels”³⁴.

Other investigations come to similar conclusions, Cocoa Life's research and development team as well as Wageningen University & Research estimates that around one-third of smallholder farmers in Ghana and Côte d'Ivoire are currently able to benefit significantly from short-term efficiency improvements for their farming ventures given their circumstances. Two-thirds of farmers, however, suffer from significant constraints concerning the level of available resources - such as soil condition, labor availability, ability to invest and withstand risk, land availability, and land rights, which necessitate long-term interventions.

3.1.1 Farm size, cocoa production and cocoa revenues

As shown in Figure 03 below, we estimate using 2019 Cocoa Life data from Ghana that only about one-third of cocoa farming households reach or exceed ‘average’ resource conditions regarding land availability, cocoa volume sales, or cocoa revenues. In terms of land availability, only 34% of households have access to the average farm size or more and the top 22% largest land-holders own 50% of all farmland under cocoa. Only 35% of farmers reach the average 1,544 kg of sales per year, with most farmers selling 954 kg or less. Annual cocoa sales are equally skewed - with over 50% of all sales volume being conducted by the top 17% of total producers.

This unequal division of land and sales volume leads to unequal distribution of farmer household incomes. The Cocoa Life data shows that only 32% of households actually achieve average income conditions, while 50% of all income earned from cocoa goes to the top 12% of producers. In addition, Cocoa Life observed that on-farm labor will typically be paid below a living wage, and increasing labor costs would further decrease the net income achieved from cocoa among farming households³⁵.

For this publication, we concentrate on the cocoa farming families themselves, but it is important to bear in mind that the ecosystem of workers tied to cocoa is much broader: from on-farm labor, to truck drivers, to labor at the export-harbors, to staff at farmer organizations. Most struggle to earn a living wage in their own right, underlining the full systemic scope of the challenge³⁶. Among all of these groups, it is typically women and children that are most severely impacted by unequal access to resources and effects of poverty^{37,38}.

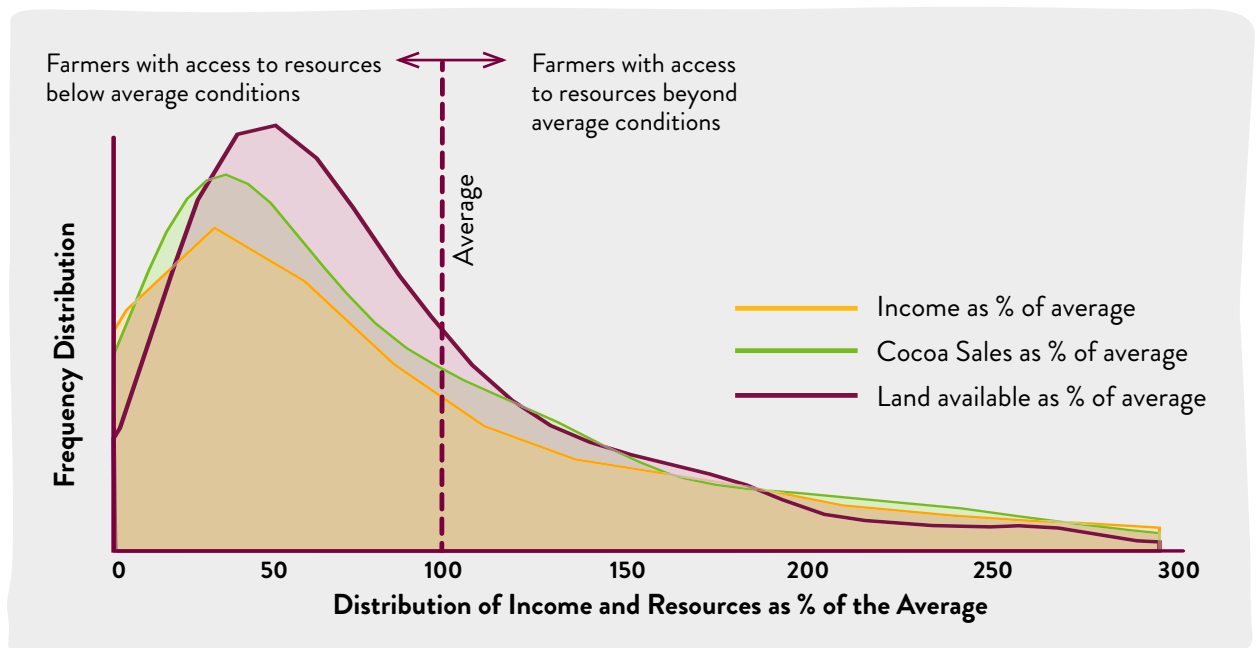


FIGURE 03: Distribution of income and resources for Cocoa Life registered farmers in Ghana.

Data source for graph: The official living income benchmarks based on the Living Income Community of Practice are calculated in \$USD per month per household for a reference household size consisting of adults and children. For the conversion to per-person-per-day rates, we applied a flat conversion across all household members as approximation.

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3.1.2 Larger farms assure higher household income on average

The farming families with the largest sales volumes have the highest potential to earn a living income. As the Royal Tropical Institute (KIT) 2018 income gap analysis for Côte d'Ivoire and Ghana has shown, male-headed households, classified as large landholding, are about five times as likely (32.6%) to reach the living income benchmark as small land-holding households, which is consistent with the findings in Ghana (9.4% versus 44% likelihood of reaching the living income benchmark). At the same time, women headed households are significantly less likely to achieve a living income³⁹. However, for most farming families who have below average access to resources, earning a living income is extremely challenging.

While this correlation between income and land-size exists, it doesn't tell the whole story, as resources and conditions beyond access to land are needed to achieve a good return from farming. This relationship is displayed in Figure 04, based on data from Waarts et al.⁴⁰, which shows country differences in the relationship between farm size - as one of the main productive resources - to the probability of earning a living income.

While the correlation was very strong in Côte d'Ivoire for this sample, it was not uniformly the same in Ghana. In Ghana, land-tenure agreements that specify how revenue received from cocoa must be split between landowners and farm managers are popular. These agreements influence the relationship between farm size and income. Across Cocoa Life registered farmers in Ghana (2019), 31% of farmers either rented or sharecropped the farmland, while in Côte d'Ivoire (2019) only 1% of farmers did. In other data sets we see different shares of owners

and sharecroppers, however, sharecropping is a practice that is consistently more common in Ghana where it influences the income that farming families can achieve from cocoa.

Sharecropper: As USAID and the World Cocoa Foundation describe, sharecropping arrangements are widely used in cocoa and consist of an agreement between farmer and farmer tenant (sharecropper) allowing the sharecropper to farm the land. Typically, arrangements fall into two categories: **abunu**, where the sharecropper brings the entire farm to maturity, and then it is divided into two, with land and the trees on half then becoming the sharecropper's property; and **abusa** under which a landowner establishes a farm, and a sharecropper is responsible for farming and maintaining the entire farm. The sharecropper keeps one third of the crop proceeds but has no rights or ownership over the farm, while the land owner keeps two thirds - although arrangements vary by context and locality⁴¹.

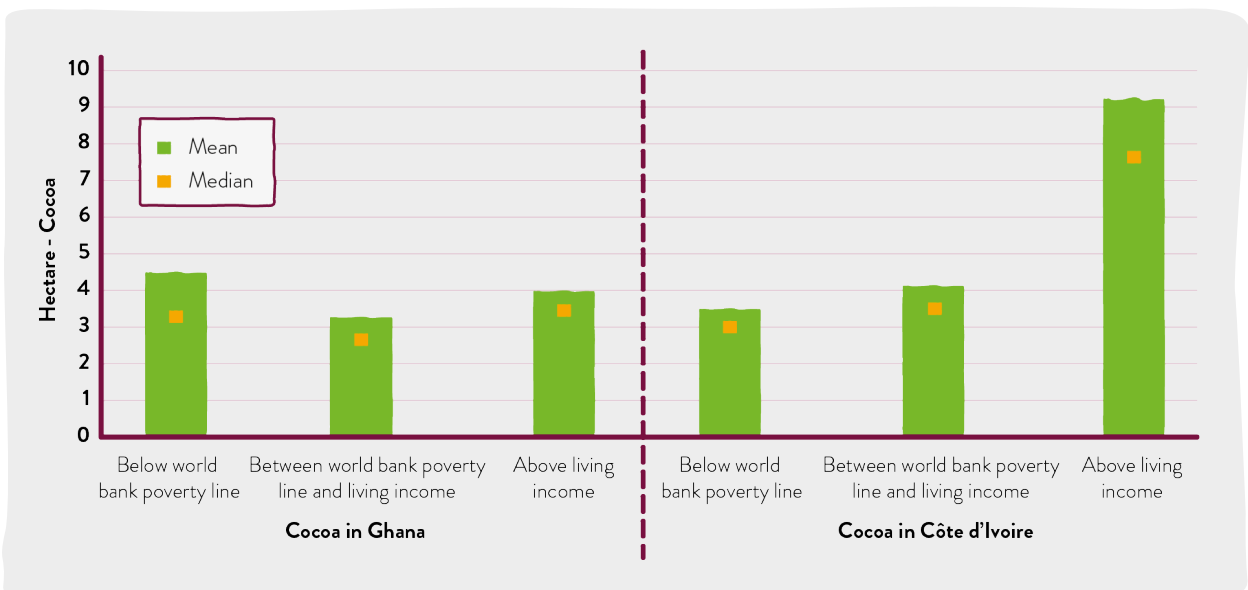


FIGURE 04: Cocoa and tea farm size in hectares by income group.

Data source for graph: Waarts et al. (2019)⁴².

3.1.3 Small and mid-sized farms achieve the highest land-use efficiency

Figure 05 below illustrates the relationship between yield, land size, and total cocoa production from Ghana using Cocoa Life data from 2019: 31% of the top producing households are selling 69% of all cocoa volume.

Those top producing households are either those with large farms and average yields, where the farm size compensates for the unoptimized yield performance, or those with small farms and high yields that compensate the smaller farm size. While the most efficient farms (highest production per unit of land) are not the largest ones - but actually small and mid-sized farms - across the whole population it holds true that the larger the farms, the more cocoa is produced and sold.

Cocoa Life’s segmentation exercise of farming families in Ghana (outlined in the following box out) highlights that those two groups - most efficient farming families and largest land-holding households - achieve the highest net income from cocoa. Among those two groups, it is the households with the most efficient farms that achieve the absolute highest individual income performance. We have not dived deeper into the question about specific constraints of the larger land-holding households to reach similar efficiency as small and mid-sized farms - it is likely that labor and other resource availability play a major role but more dedicated analysis would be necessary to conclude.

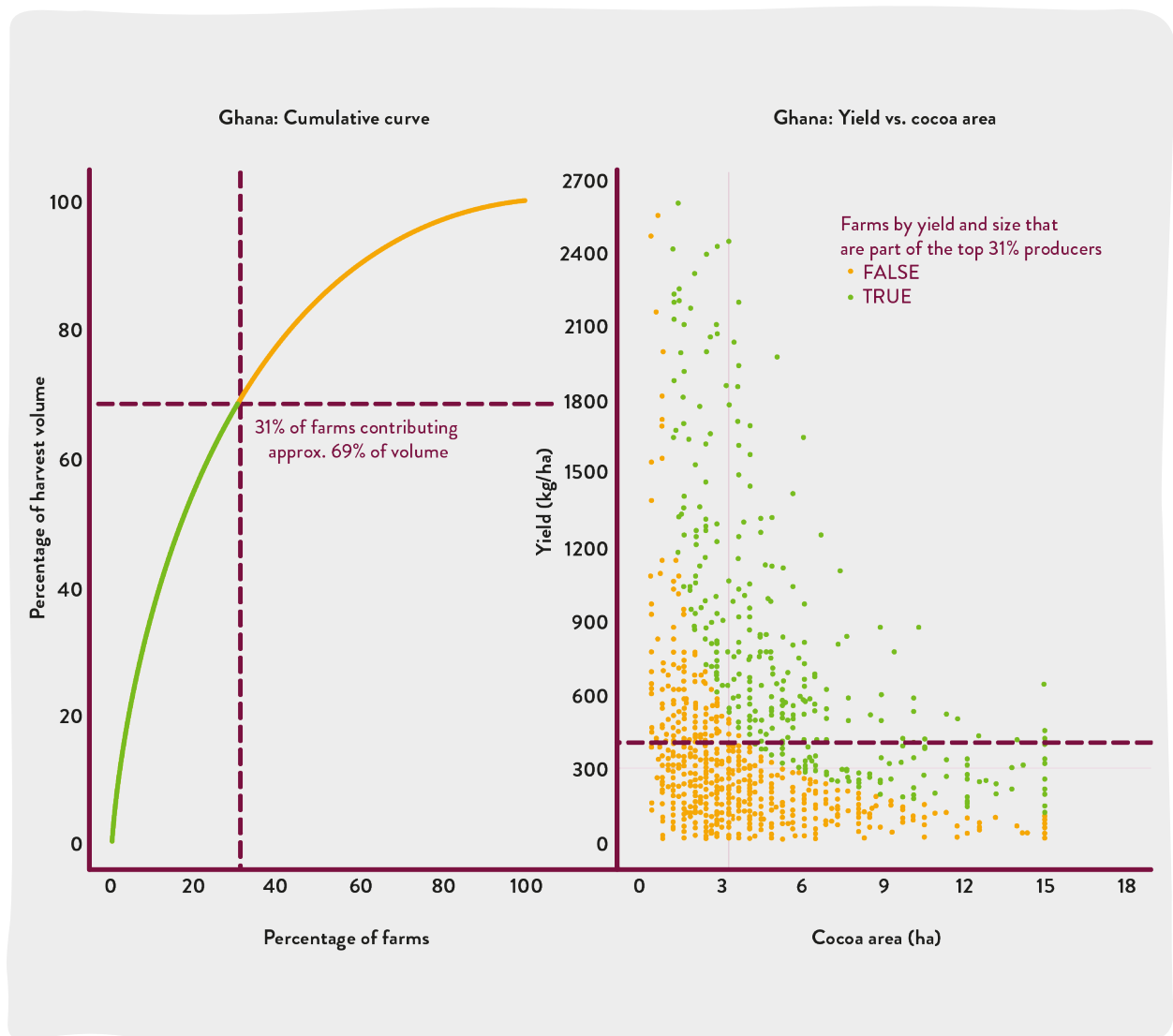


FIGURE 05: Efficiency and cumulative distribution of cocoa production among Cocoa Life registered farmers in Ghana.

Data source for graph: The official living income benchmarks based on the Living Income Community of Practice are calculated in \$USD per month per household for a reference household size consisting of adults and children. For the conversion to per-person-per-day rates, we applied a flat conversion across all household members as approximation.

CASE STUDY:

Using segmentation to inform how we create and implement actions to increase farmer incomes sustainably

Cocoa farmers are not a homogenous group. There can be large differences in incomes and living conditions in farming households even within the same communities. This is an important insight, and one that is important not to ignore when it comes to policies to improve incomes, as it allows such policies to be cost-effective. Households with different conditions and characteristics will require different support.

To better understand the reality between households and their income, Cocoa Life, Ipsos, and Wageningen University & Research engaged in a segmentation exercise using data from the Cocoa Life 2019 Farmer Household Survey, which included a representative sample of farmers in the Cocoa Life Ghana program.

We defined different groups of farmers by their economic potential and need for support interventions, to inform hypotheses around how best to support different groups with income interventions. Using quantitative and qualitative evaluation criteria and working with field experts in Ghana, we were able to distinguish five distinct farming household segments, grouped by weighted criteria including: current income level, sources of income, cocoa farming involvement and level of production, and demographic indicators that influence economic performance.

Of the five segments, there are two which are typically, or close to, earning a living income (“Cocoa Professionals” & “On Their Way”), and two segments (“Mixed Earners” & “Struggling Farmers”) that are significantly further removed from a living income, and one relatively small segment that shows rather erratic characteristics regarding income levels (“Shifting & Fluid”). The segmentation shows how indicators such as ‘available farm resources’ and ‘current income performance’ shape the

groups, but also how aspects of household characteristics, such as age and gender of household members, are layered into these realities. The segments achieving the lowest income performance are over-proportionally prone to feature older household members and more female household members or female heads of households. This also underlines the importance of applying a gender lens when interpreting a farming household segmentation.

We started working with our supply chain partners to create appropriate field tools that allow approaching individual farming households with the most meaningful interventions specific to their situation - the current segmentation provides inspiration and pointers for such tools, but is not fit to accomplish this task in a meaningful participatory manner with individual households. At a high level, this tool is used to inform goals and target setting to create scenarios of what interventions can deliver a living income with which households - that is a current focus for Cocoa Life in using this segmentation.

The findings are helpful to advise overall strategy in terms of understanding the variety of household situations and potential program responses, but these segments are not designed to be used to communicate individual household progress, nor to diagnose the financial significance of growing cocoa for these households.

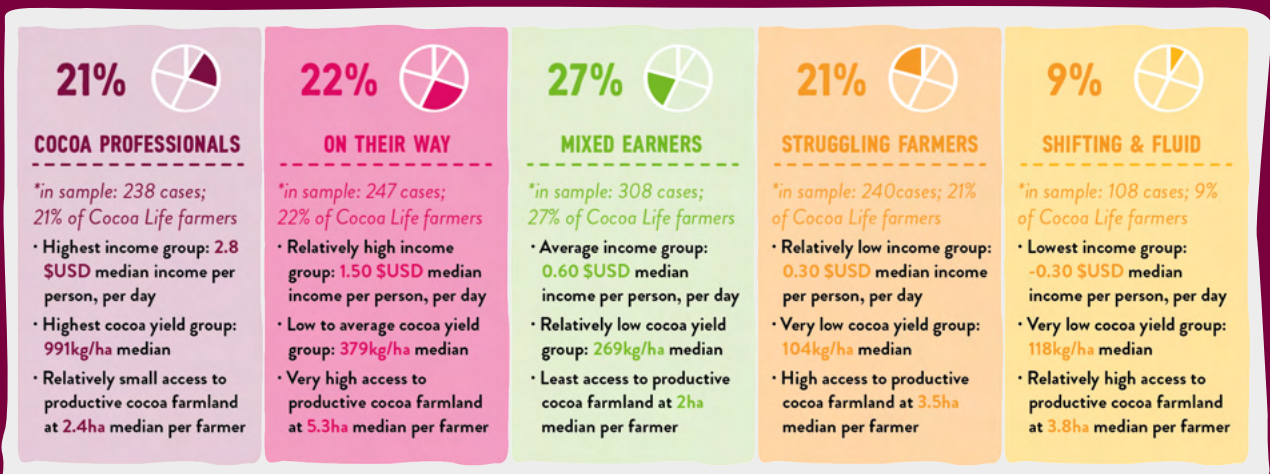


FIGURE 06: Cocoa farmer segmentation.

Data source for figure: The official living income benchmarks based on the Living Income Community of Practice are calculated in \$USD per month per household for a reference household size consisting of adults and children. For the conversion to per-person-per-day rates, we applied a flat conversion across all household members as approximation.

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3.1.4 Low incomes can reinforce low productivity

Farming families that are operating at below an average income level can become trapped in a cycle of poverty because they cannot invest enough in their farms. Without a certain level of income that can be invested in the productivity of their farms, farm development may stagnate, and households may struggle to afford labor and other inputs. We argue that such a cycle may lead to continually declining yields.

Data from households working with Cocoa Life in Ghana and Côte d'Ivoire surveyed in 2019 confirm this assessment. The leading reasons for not applying productive inputs are because they have “no money to invest” and “available products are too expensive”^{vi}. At

the same time, farmers perceive the availability of better inputs (such as fertilizers) as one of the top three factors for improving yields, next to the application of [other] good agricultural practices and weather conditions.

On average and by total cocoa sales, the top fifth of farmers spend significantly more on fertilizer and labor per hectare than the bottom fifth farmers in Côte d'Ivoire and Ghana. However, translated to spending per produced cocoa volume, the bottom fifth is significantly spending more than the top fifth of producers, which underlines two messages: well-performing farming families are spending more per land area than households with low productivity, and their spending is much more effective. Reasons can relate to the location of the farm, quality of inputs applied, or good practices when applying labor and inputs.

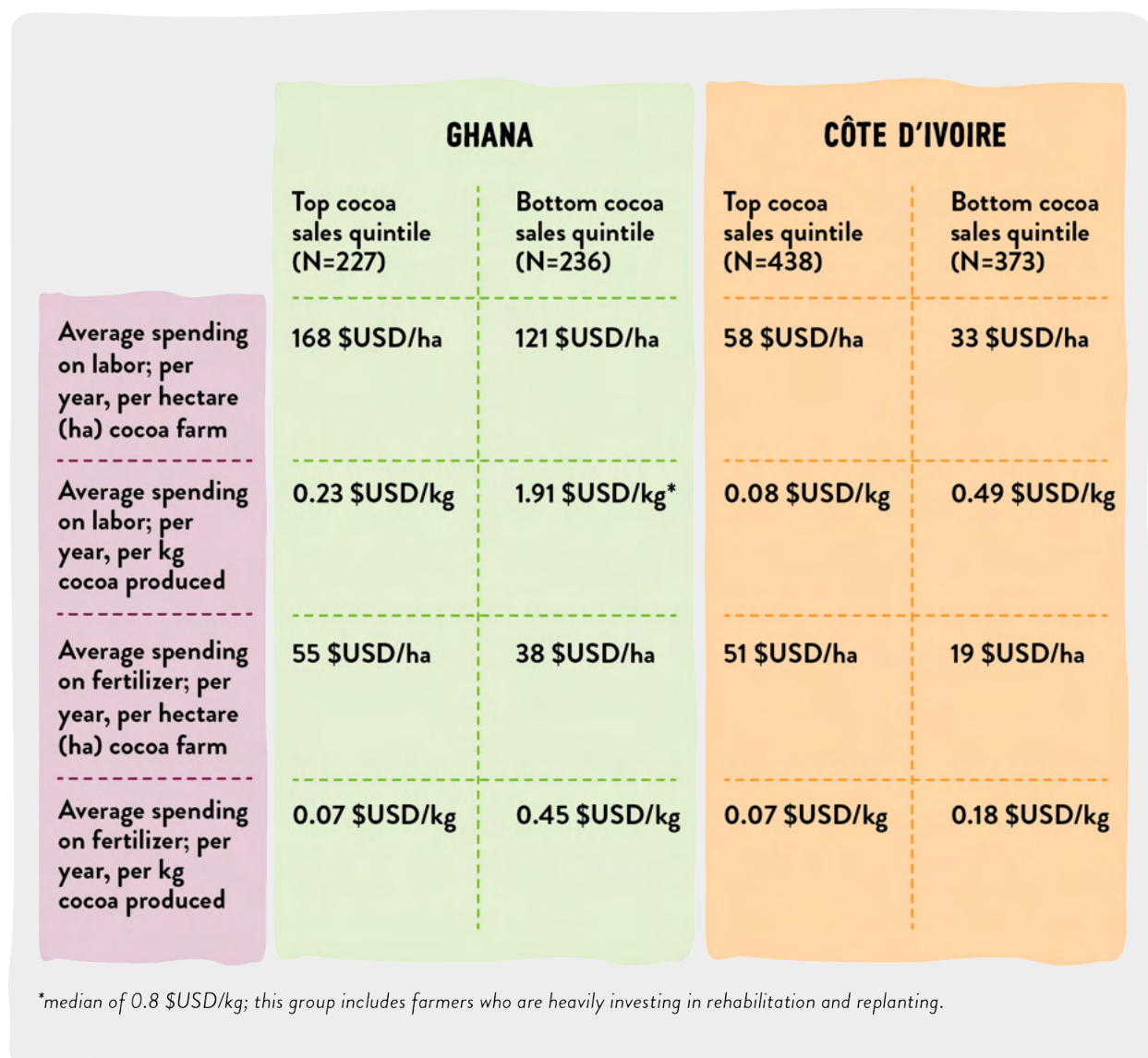


FIGURE 07: Overview of the average expenditure on labor and fertilizer across cocoa farmer segments in Ghana and Côte d'Ivoire.

Data source for figure: The official living income benchmarks based on the Living Income Community of Practice are calculated in \$USD per month per household for a reference household size consisting of adults and children. For the conversion to per-person-per-day rates, we applied a flat conversion across all household members as approximation.

^{vi} The official living income benchmarks based on the Living Income Community of Practice are calculated in \$USD per month per household for a reference household size consisting of adults and children. For the conversion to per-person-per-day rates, we applied a flat conversion across all household members as approximation.

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It is important to note that higher cocoa sales do not translate directly to farming families achieving a living income. Cost of production, family size, other income sources, and other conditions that influence the availability of resources need to be considered. While the living income benchmark sets the final destination, those factors determine each household's starting point, the terrain, and the difficulty of the path on the journey to reach a living income - a journey that is therefore unique to each household and its individual situation.

When we segment the Cocoa Life farming population by their current economic performance and farming potential, we see that the highest earning segments spend "moderate" to "high" on labor and inputs, while among the low-income segments there is a lot of diversity in spending. While one segment shows "very low" expenditure that translates to low yield and low income, we also find segments with low yield and low-income reporting "high" to "extreme high" expenditure on labor and inputs.

The explanations for this are likely to vary among sub-groups and individual farming families. For example, we find evidence of higher investment into farm rehabilitation or to combat pest and disease among some groups, but not consistently enough to explain the over-spending within those segments. From reviewing the available data, we are equally convinced that there are cases of farming families over-spending, especially on agrochemicals.

That means that it is likely that several farming families have a very low return on investment on purchased inputs, or a return that could even be negative. The reasons for those cases are likely to vary, but purchasing farming inputs can become a trap if it is paired with a lack of information about the state of the farm and soil, or the proper application of inputs, as well as lack of access to the right inputs (i.e., spread of contrabands)⁴³.

As Peppelenbos (2017) put it:

Fertilizer needs to go hand in hand with knowledge. There are a million myths about how to use fertilizer, and 99% of them are just that: myths⁴⁴.

For smallholder households, investing in their farms is prone to several risks. These include unexpected climatic events and political or economic turmoil that can influence market and price stability, unexpected expenses or labor shortfalls within the household.

Among the cocoa farming families working with Cocoa Life in Ghana in 2019, for example, 44% attributed yield decreases to poor weather conditions, showing some of the dependencies and unpredictability of return on investment into farming. Contrary to farmers in Germany or the United States^{vii}, very few (if any) cocoa farmers in Ghana and Côte d'Ivoire have access to crop insurance, and governments are less likely to bail-out struggling businesses in the case of natural disasters. The less income a farming families commands, the less likely they are to withstand income shocks and the riskier any investment is to them. The assessment of such real risks makes farmers careful about investment, resulting in lower investment levels than expected by support programs.

3.1.5 Access to services that support cocoa production

For many farming families, services meant to support their farm performance to increase net income from cocoa are either not available, or not accessible because they are viewed as too expensive or unnecessary by the farmer.

A study by Wageningen University & Research conducted in 2017 on cocoa farming families in the Côte d'Ivoire analyzed equality in service access (i.e. access to inputs, access to loans, access to information and training etc.) of farmers who were in different types of support programs, ranging from very limited support (e.g. uncertified farmers) to some farmers receiving quite intensive support in a sustainability program including certification. In this study, less than half of uncertified farmers had access to services, while 74% of the sustainability program participants had access to training. However, while service delivery was generally better for certified farmers, especially with regards to training, a quarter to half of the farmers did not have access to resources and inputs required to fully realize the lessons learned in trainings⁴⁵.

Cocoa farmers in Ghana showed a comparable trend during a similar study covering cocoa certification programs in 2013-2014. Here, less than 30%, 40% and 60% of the farmers in the study made use of fertilizer, planting material and pesticide input/services in the last year of their training⁴⁶.

^{vii} Compare the (2018) drought in the European Union and the million Euro support packages to farmers provided by member states <https://www.dw.com/en/calls-for-farm-support-intensify-as-europe-struggles-with-heat-wave-drought/a-44902321> or the United States Farmer Disaster Assistance programs <https://www.farmers.gov/recover>.

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3.1.6 Limited wealth limits quality of life and capabilities

It is not only the resources and assets essential to growing cocoa that are unequally distributed, but also everyday goods and the financial means to safeguard health, education, and nutrition. These are important to shield households from shocks and make them resilient to risks.

Through the USAID Demographic and Health Surveys (DHS), a wealth index can be constructed. The DHS wealth index for Ghana and Côte d'Ivoire indicates that 77% and 57% of the farmers are in the bottom two wealth quintiles respectively^{viii}. In addition to many farming families earning low incomes, most have a low number of assets such as household items, property and livestock.

Cocoa Life data from 2019 indicated that ownership of household items is quickly evolving over time. For example, we found that 96% of the sample had access to one or more mobile phones in 2019, 59% of households had access to television or other related entertainment media, while 19% of households have access to a motorbike or car. Importantly, in the 2016 method to calculate the Progress Out of Poverty Index (PPI)⁴⁷ those items were all highly related to poverty levels between households, while we found that in 2019 near universal coverage with some of those items was achieved.

While the data does not allow us to conclude about rising or falling levels of financial poverty, it suggests that poverty is changing rapidly in terms of absolute asset availability. This is important, as access to new assets can open new capabilities and opportunities for poor households (i.e. accessing mobile services, radio or television broadcast information etc.). However, in relative terms, a low-income household may still have comparably fewer assets than a high-income household and may still have little access to cash. Thus, such assets do not necessarily translate in increased investments or changes in practices and through those in income increase. Also, it is only certain types of assets that seem to have become highly commonplace (like cell phones) while other asset types (like a car or motorbike) did not. It is worth noting that these results may differ for other groups of farming families, given that those working with Cocoa Life are organized farming families.



^{viii}Please note that the DHS index is created as a relative index within each country. Therefore, scores cannot be directly compared between countries over time.

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3.2 Market forces and their effects on incomes**3.2.1 Many households are over-dependent on cocoa**

Cocoa is crucial for household income in rural Ghana and Côte d'Ivoire: the average cash income solely earned from cocoa is estimated at about 80-90% of the total household income for organized farmers^{ix}. This is unlikely to change without large investments in on- or off-farm diversification, including facilitating well-functioning supply chains, and employment creation.

“Cocoa is currently the ‘best options’ for most households in cocoa growing regions [in Ghana and Côte d'Ivoire].”

Bymolt, Laven, Tyszler (2018)⁴⁸

One clear sign of, and a self-perpetuating cause for, overdependency is the observation that primary producers stick to producing the focus crop, or even increase production despite problematic income from its sale. Most cocoa households do not achieve a living income, 24% in Ghana and 10% in Côte d'Ivoire respectively achieved a living income in the 2019 Cocoa Life sample. At the same time, 90% of Cocoa Life registered farmers in Ghana and Côte d'Ivoire responded in 2019 that they are satisfied, or very satisfied, working in cocoa compared to other income opportunities in their area, and the persistent drop-out rate from cocoa is only 0.5% year-on-year^x. Generally, cocoa is considered the best option for rural households in Ghana and Côte d'Ivoire to earn cash income⁴⁹.

Limited opportunity to pursue alternative income sources leads to overreliance and dependency on cocoa. This dependency poses a risk to farmer income because, as we will show, it may create a long-term vicious circle of decreasing market prices and increasing cocoa production. Opportunity cost, i.e. the value of alternative income opportunities that are not pursued when growing cocoa, are main drivers in determining wages and the cost of goods in a free market, as they set the minimum bar for the value of land and labor. However, if there are no opportunities, there is no opportunity cost and no minimum bar-labor and goods are being supplied at too low prices and the free market has failed to deliver sustainability outcomes.

“

They [cocoa farmers in West Africa] have few alternative options for income generating activities. Without alternatives, they will continue to produce cocoa even at very low prices.”

Oomes & Tieben et al. (2016)⁵⁰

Cocoa farmers are not able to negotiate their needs with a single voice due to the absence of effective organization and lobbying^{41,42,43}. However, market theory predicts that the result of aggregate individual decision making across farmers would balance the market. For example, farmers would be expected to leave the market if it does not provide adequately for their needs⁴⁴. The resulting drop in supply should force up prices. But this is not happening. In reality, economic conditions (e.g. no income earning alternative available) alongside crop specific and cultural factors (e.g. time and financial investment in starting a cocoa farm; time and financial investment in setting up alternative tree crops; cultural ties to the land) prevent cocoa farming families from leaving the cocoa market. They are locked into an economic activity that might not fit their capabilities and does not deliver to their needs. This is a sign of over-dependency and lack of alternative market opportunity leading to the failure of the free market - and requires intervention to correct⁵⁵.



^{ix} The official living income benchmarks based on the Living Income Community of Practice are calculated in \$USD per month per household for a reference household size consisting of adults and children. For the conversion to per-person-per-day rates, we applied a flat conversion across all household members as approximation.

^x The persistent drop-out ration describes the share of farmers not having farmed cocoa in the year of assessment and not planning to go back to farming cocoa in the coming year.

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3.3 Self-reinforcing cycles of dependency among commodity crop farmers

Smallholder commodity farmers do not easily switch to alternative income activities because it is too costly (they need upfront investment), too risky (returns are unclear, or it takes some time before income is earned), returns on investment are low, and people in rural areas have limited labour mobility^{56,57}.

3.3.1 The challenge to transition to alternative income sources

Switching to other activities is especially difficult in the case of tree crops, as they are capital intensive crops that require significant resources to replace or renovate, usually by cutting down trees and preparing the land for new activities. This results in a situation where farmers attempt to increase their incomes when prices are low by increasing their production. Large numbers of farmers doing so reinforces aggregate oversupply leading to further price decreases^{58,59}. When prices are high, this motivates farmers to increase their production and to take advantage of the opportunity for higher income, which equally creates new downward pressure on price⁶⁰. Decreasing prices and incomes make it continuously more difficult to transition to alternative income earning options.

Signs of overdependency can be found in other agricultural smallholder chains. In the Kenyan tea sector, the tea dependency is slightly lower, with farmers earning around 70% of total household income with green leaf⁶¹. In coffee, we see huge variability in the share of cash income from coffee in the total household income, which range between about 5% in Rwanda to about 45% in Uganda and about 75% in Tanzania⁶².



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3.3.2 Market opportunity helps overcoming dependency

While similar trends can be traced across smallholder farms in various crops and countries, how they play out depends to a large degree on the economic opportunities available to individuals in the rural landscape. For example, based on research by FAO⁶³ and CGAP⁶⁴, rice is a crucially important cash-crop and food crop staple in Bangladesh (86% of smallholders indicated rice as most important crop in 2018), less than 40% of smallholder household income came from agriculture and livestock in 2015. While another 40% was generated by off-farm wage labor across households (with wages in this sector reaching 8 to 10 \$USD per person per day). On the other hand, in Ethiopia where teff was indicated as the most important crop to smallholder households (which is primarily a household staple food crop), income from agriculture provided nearly 80% of household income, with a meagre 15% income through off-farm opportunities. Smallholder households in Bangladesh earned about 2.90 \$USD per person per day while smallholders in Ethiopia earned about 0.80 \$USD per person per day.

In cocoa, this absence of opportunity is problematic in West Africa, but less so in Indonesia, another of the world's major cocoa growing nations. As the country offers a more vibrant rural economy, farmers are able - and much more likely - to switch to an alternative to cocoa farming if price and income conditions do not meet their needs. Since cocoa is a globally traded commodity, Indonesian cocoa farming households are influenced by decisions of West African households. If West Africa continues to supply cocoa at low world market prices, Indonesian farmers face similar decisions concerning their willingness to stay in the market. Among farming families working with Cocoa Life in 2019 in Indonesia, the drop-out rate from cocoa farming was 14% - 28 times as high as in Ghana and Côte d'Ivoire at the same time - and local satisfaction with cocoa 50% lower compared to Ghana and Côte d'Ivoire. Many families in Indonesia grow rice in parallel to cocoa or have other opportunities to switch income sources.

That is why encouraging diversification of income, both on-farm and off-farm, for cocoa farming families in areas showing high dependency should be a critical element of a long-term sustainability strategy to provide wider income options in difficult times. Currently, cocoa is a crop most heavily supported by industry and government promotion, extension and marketing. The agricultural sector could diversify if equivalent promotion was done on other crops both for national and export markets⁶⁵. Also, it is important to address off-farm income opportunities for farmers and their children - the next generation.

3.3.3 The impact of volatile markets on income

In situations of over-dependency, both low prices and high prices stimulate farmers to increase their production. Even if many farmers have difficulties in investing cash to increase yield per hectare, in the past, volumes have increased by farmers planting new seedlings/trees on land where cocoa was not previously harvested⁶⁶.

This can be done at relatively low cost; seedlings are not expensive and sometimes even available for free, and farmers can plant the seedlings themselves. Even in the short term: if there is either a crisis or an opportunity, additional household or external labor can be mobilized to minimize harvest or post-harvest losses and increase production⁶⁷. The ICCO estimated in 2012 that a 10% increase in farmer prices for cocoa typically leads to a 0.6% world production increase within the same year and to a mid-term increase of about 8.7% if prices are sustained. Thus, price and production are linked in the short and mid-term; higher prices create a market signal and incentive for producers. Meanwhile, a 10% increase of world cocoa prices would lead to a decline in consumption of about 1.1%⁶⁸. This is linked to higher cost of production which often either results in being handed down to consumers (which then may reduce willingness to buy cocoa products) or in measures to reduce the use of cocoa in recipes on the manufacturing side.



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This creates a conundrum. Increasing production that faces a slump in cocoa consumption presses market prices down in the long run-which may be met by further increasing production because of over-dependency on cocoa. This may result in a downward spiral that can lead to boom-and-bust cycles and periods of very low cocoa prices leading to deepening poverty among farmers⁶⁹.

Boom and bust cycle: Commodity boom and bust cycles describe the phenomenon of the sequence of two economic phases which each can vary in intensity and impact. The boom phase is marked by distinct growth of a commodity market often correlated to an increase in the price of the commodity and demand expectations which can last for years. The boom is followed by a bust phase, which is typically thought of as shorter and more extreme, but is also related to an over-heating of the commodity market where supply outstrips demand and the commodity market contracts rapidly alongside falling future expectations and commodity prices. Observations of boom-and-bust cycles - not only in commodity markets - have become so prevalent that they are also termed the economic or business cycle. In independent papers, both Jacks⁷⁰ and Spatafolo and Tytell⁷¹ have traced and described boom and bust cycles across over 40 commodities in over 150 countries along a timeline of over 100 years, clearly establishing the relevance for the commodity sector.

The most recent significant price-bust event in the cocoa sector occurred in 2016/2017 following a steep increase in production and farmland used for cocoa as shown in Figure 07 on the next page. The impact of the price decline within one year accounted to over 30% price reduction in Côte d'Ivoire. In the season immediately following, there was no discernible decrease in average cocoa sales per Cocoa Life registered farmers; average cocoa sales per farmer in 2017/2018 was 98.7% of the 2016/2017 season. Figure 06 illustrates how national production continues to increase despite falling price levels.

There was little to no supply-side reaction to the low prices and, on the contrary, about 20% of Cocoa Life registered farmers stated in 2019 that they were still interested in expanding cocoa growing further - further increasing production. Looking at historical records in Figure 09, we can see that cocoa prices are highly volatile and are currently in a bust cycle after a price boom between 1960 to 1980. While price fluctuations occur in the mid to short-term, in the long-term typically cocoa commodity prices have decreased - caused by a combination of global supply and price focused competition on the commodity market⁷². That is not unique to cocoa but a general observation across many global commodities^{63, 64, 75}.



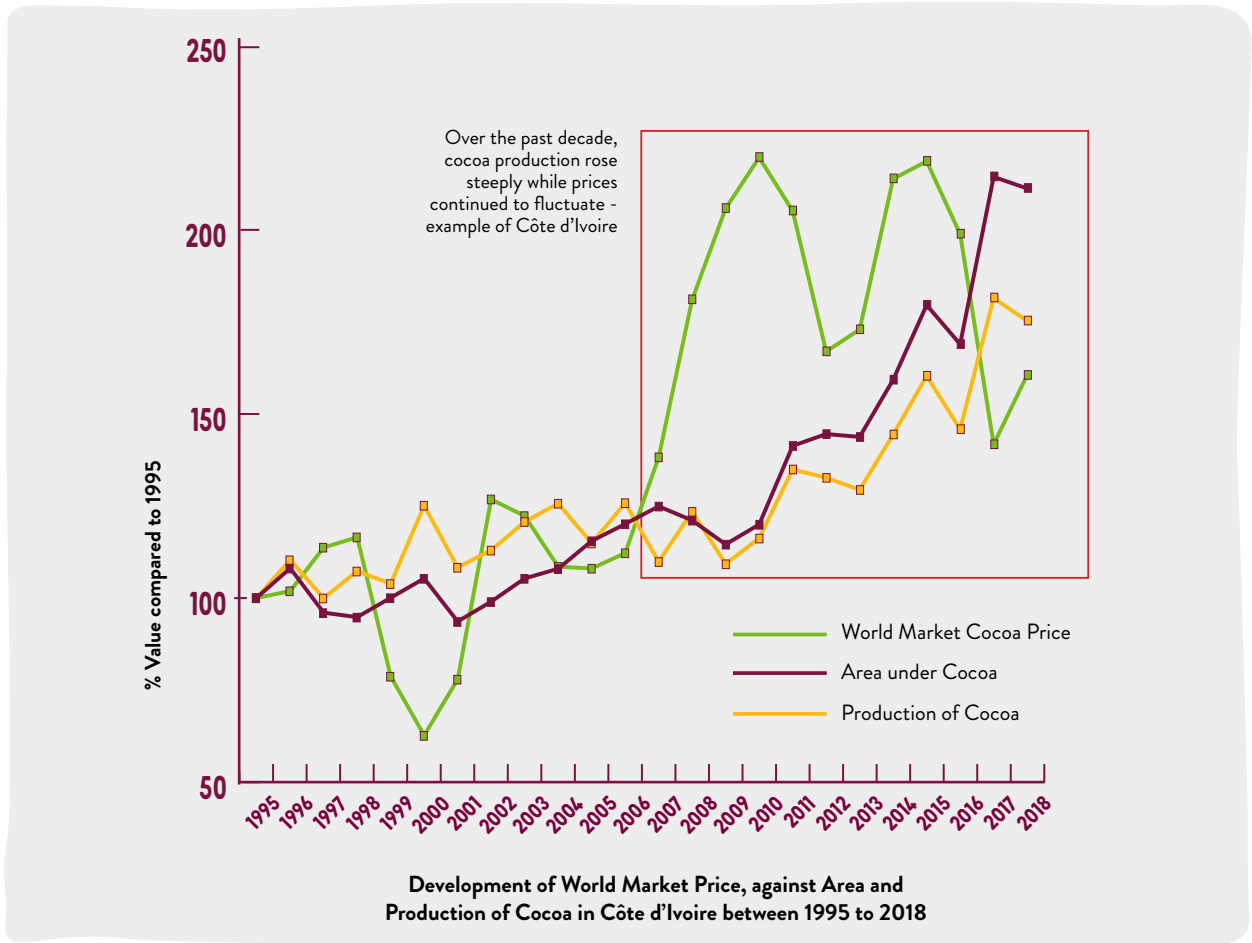


FIGURE 08: Development of World Market Price, against Area and Production of Cocoa in Côte d'Ivoire between 1995 to 2018.

Data source for graph: UNCTADstat⁷⁶; FAO Stat⁷⁷.

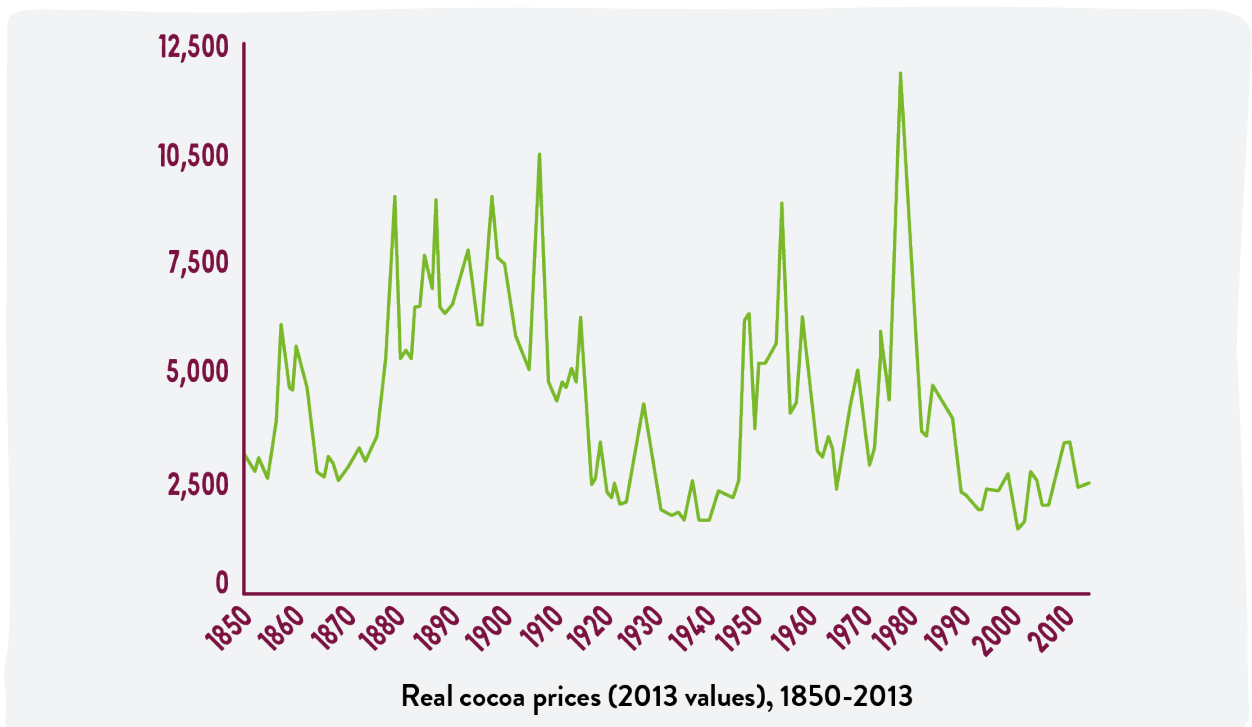


FIGURE 09: Overview of global cocoa prices from 1850 to 2013.

Data source for graph: Gilbert, C.L. (2016). The Dynamics of the World Cocoa Price⁷⁸.

The data in Figure 09 aims to show the sensitive context in which interventions designed to increase price and productivity operate. It does not mean that every intervention on price and productivity is doomed to fail – every short-term benefit that improves the income of local farmers is important. However, we argue that short-term measures must be evaluated for their long-term impact, and risks addressed. It means that projects that aim to significantly increase yield per hectare or total volumes at scale by improving the attractiveness of producing more cocoa need to be implemented in a balanced and measured approach, and with a holistic plan in a context that can maintain long-term stability.

As the cocoa sector has experienced previously, forward planning is not a safeguard against wrong predictions. In the 2010s, a steep increase in world cocoa consumption was widely predicted and prices rose again, which led to a focus on increasing cocoa production at scale^{79,80}. The Voice Network noted in 2009: “To meet this demand, world-wide production has to increase, within a short period, by nearly twenty percent”⁸¹. While an increase in demand did materialize, it was not to the degree anticipated. Meanwhile, cocoa production rose steeply and probably to a more significant degree than stakeholders expected, driven by new entrants to the market and an expansion in productive area⁸² and favorable weather. It is likely that this did more to contribute to the renewed downward pressure on prices that followed, than it did to increase income for existing farmers. It may especially have contributed to the expansion of farmland which, alongside the entrance of new producers into cocoa, is problematic because crops should ideally be grown as efficiently as possible, on as little land as possible, to decrease the land-use burden and optimize farmers’ income potential⁸³.

An increase of farming area poses a high risk to come at the expense of local forests as remaining agricultural land is sparse in Ghana and Côte d’Ivoire. Increasing deforestation, at the same time, further depletes local soils and accelerates long-term climate change – not only a global problem but also threatening local production of cocoa and income of farming families and thereby fueling a vicious circle of land degradation, declining production, and declining income^{84,85}.

As a response, in 2018, Côte d’Ivoire announced that it will discontinue productivity enhancing programs at scale, to be replaced by a dual agenda of more emphasis on forest protection alongside individualized farm development planning⁸⁶. Different countries have different policies, and Ghana, as an example, emphasizes the importance of further increasing the national output of cocoa with an emphasis on productivity improvements^{87,88}. That means for actors interested in aligning with national focus areas for the sustainable development of the cocoa value chain, the emphasis and interventions may differ, so coordinated responses are required for different countries.

3.3.4 Understanding and improving how cocoa is traded is key

Policies that influence how cocoa is grown need to account for the system in which cocoa is traded. The UN’s Food and Agriculture Organization⁸⁹ put it the following way, “It is important to recognize that the majority of trade in commodities will be in bulk and will fetch closer to world prices. The focus of policy should be on equipping farmers to produce efficiently at these prices. [...] It will also be assisted by consolidation of land holdings and clearer land title both of which will facilitate increased mechanization, even at a modest level (more important for coffee than cocoa). [...] These constraints will be eased if the producing economies develop more rapidly providing non-farm opportunities for the labor currently employed in the cocoa and coffee sectors. But this is to see enhanced prosperity in tropical export agriculture as a consequence and not a cause of development.”

It is debatable if pursuing more efficient production at world market prices is a valid strategy if the latter part of the argument (i.e. providing alternative opportunities for labor) is not realized first, but we agree with the observation cited here, that one cannot isolate policies for the production system from the market system cocoa is traded through.

Cocoa is generally traded on the terminal markets of New York and London (also called futures market), which allows for hedging by actors involved in the cocoa value chain to protect from market fluctuation. The terminal markets assist in identifying what a certain amount of cocoa is worth right now, and that opens the market to speculators that inject liquidity and absorb risk⁹⁰. Importantly, the New York and London markets provide reference prices for cocoa that practically decouple the producer price of cocoa from the buying price in the consuming country. It is typically this reference price that is used in buying contracts, which then serves as basis for price negotiation based on other factors such as cocoa quality, risks, etc.⁹¹. Another important pricing element are the ‘country differentials’ which describe additional costs borne by logistics or quality characteristics. These differentials are negotiated ongoingly by the main market actors and are an important source of national price differentiation. It is on those differentials that cocoa traders win or lose money as the differentials are a most dynamic price element.

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The terminal market is a source of stability and an opportunity for producing countries to allow forward selling of beans to the traders which allows hedging risks among all actors⁹². For example, a farmer in Ghana knows what the guaranteed fixed price for their produce is as it is set by the Ghana Cocoa Marketing Company (the only legal buyer and seller of cocoa in Ghana and a subsidiary of the Ghana Cocoa Board) every year, before the harvest starts. This agreed price provides planning stability and protects from downward market fluctuations - the Ghana Cocoa Board operates a stabilization fund to protect from the impact of falling prices. Ghana and Côte d'Ivoire sell most of their cocoa under conditions referenced to the futures market to benefit from its stabilizing function⁹³. Individual farmers cannot access these hedging tools as it requires certain volumes and expertise to access, and therefore depends on the hedging through governments and effective price setting. Large cocoa trading companies use the same principles. For them, the futures market is less a tool to benefit from speculation, but rather to provide security in planning production costs ahead.

Prices at the terminal markets are determined by a range of factors that can be difficult to grasp.

Valiante⁹⁴ summarizes:

“ [...] prices formed in markets for physical commodities and futures contracts are the result of complex interactions between idiosyncratic factors, such as product characteristics (quality, storability or substitutability, etc.) and supply and demand factors (capital intensity, industry concentration, production facilities, average personal income level or technological developments, etc.), and exogenous factors, such as access to finance, public subsidies and interventions, and the weather.”

At the same time, market speculation at the terminal markets through investors not directly involved in the cocoa value chain may have an increasing influence on price fluctuations. For example, some studies tied the steep cocoa market price decline in 2016/2017 to shifts in positions among hedge funds⁹⁵.

The terminal market has an important balancing function as it provides a safeguard to prevent the manipulation of market prices through the purchasing, export, and processing decisions of the few companies who dominate the downstream part of the supply chain. Since physical deliveries can be made through the terminal market, it can prevent power over prices through monopolistic or monopsonic positions - at the terminal market, everyone becomes a price taker⁹⁶. Taking note of those interdependencies, even the producer prices that are set by state actors both in Ghana and Côte d'Ivoire are still linked to the terminal market prices. The guaranteed minimum price set by governments has achieved reduced intra-seasonal price fluctuation, but had limited effect on fluctuations between seasons⁹⁷ because of the continuing dependency on the terminal market which decides the competitiveness of the sector. In effect, because of the large influence of the terminal market prices and because these prices are easily discoverable, there is only limited room for differentiation.

One of the reasons that cocoa is prone to be traded on terminal markets, and lends itself well to this fast-paced price discovery, is because cocoa beans show only limited physical differentiation between most volumes: one ton of cocoa from Ghana is considered somewhat identical to any other ton of cocoa from Ghana⁹⁸. In the absence of strong narratives that forcefully distinguish goods from each other, customers tend to orient towards products with the lowest price and most efficient production method.

This evolution can be beneficial as efficient production is important to spare resources, commoditization and encourages increased flexibility and mobility to switch between offers which provides security from shocks to buyers and consumers⁹⁹. As a result, commodity markets show mainly price-based competition as most other attributes of the goods are considered substitutable¹⁰⁰. Resulting prices might be financially very efficient, however, they might not equally assure social and environmental safeguards.

Problems often seen in commodity markets - especially for agricultural products and if not counteracted by government regulations and policy - include: negative social or environmental externalities not being factored into the product attributes and prices, few or no minimum requirements to uphold social or environmental criteria, environmental or social safeguards difficult to enforce, over-dependent producers continuing to supply under conditions not socially or environmentally desirable¹⁰¹. As a result, commodity prices are often considered to orient too low as to secure sustainable production systems¹⁰².

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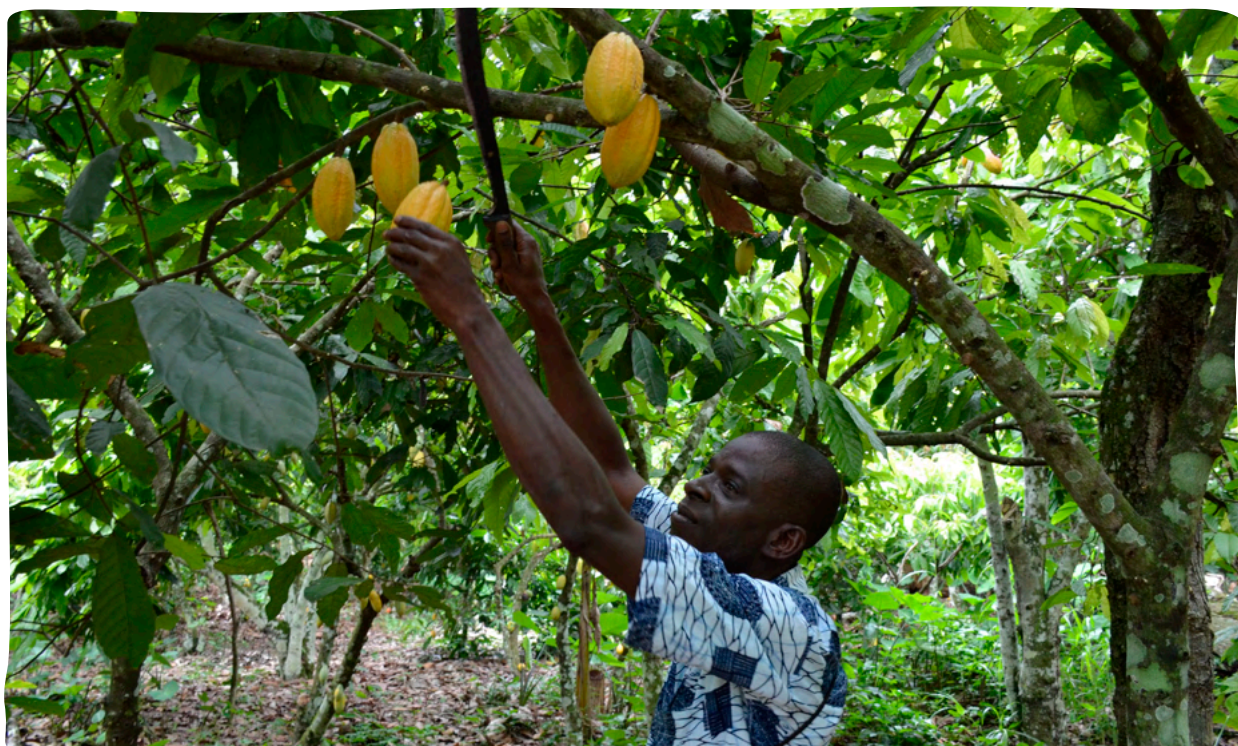
In literature, four routes are often referenced to approaching the negative externalities of commodity markets:

- 1) improved internalization of negative externalities (i.e. programs, policy/ regulation, and other agreements to uphold social and environmental criteria);
- 2) countering commodity dependency (i.e. strengthening competitive income alternatives, increase economic orientation towards value-addition instead of raw-material production);
- 3) governments setting conditions that ensure social and environmental objectives are met;
- 4) and de-commoditization of the good (i.e. re-create product differentiation besides prices, pursue trading relationships decoupled from the terminal markets).

Since cocoa is traded this way, many approaches to improving farmer household income can only be fully successful if those trading regimes are being addressed in parallel, and involve policy making and procurement teams of the cocoa industry. One approach for increased value addition in producing countries is to produce locally manufactured consumer products instead of exporting raw materials or semi-finished-products. Both governments of Côte d'Ivoire and especially Ghana have been vocal in their intention to decrease the

importance of raw material exportation for their economic development and instead transform their economy by processing cocoa and manufacturing their own chocolate bars^{103, 104, 105, 106}.

In the box out on the following page, and rather than present the literature, we have asked researcher in the space Friedel Huetz-Adams to offer his view on de-commoditization.



SAFEGUARDING HUMAN RIGHTS AND ENVIRONMENTAL STANDARDS IN COMMODITY CHAINS

Contribution from Friedel Huetz-Adams, Senior Researcher at Südwind Institut

Less than 200 years ago, labor was treated as a commodity even in Europe. As there was much more labor available than jobs were created, workers had to take every job they could get. There was a constant stream of new laborers coming from the countryside into the cities of the industrializing countries; worst working conditions and child labor were widespread.

In industrialized countries, step-by-step, unions organized workers and it took decades and even centuries to agree on tariff systems to guarantee more or less decent incomes. Governments supported this with the introduction of minimum wages which, despite being typically lower than living-wages, were a first step towards improvement. However, today labor is still much more treated as a commodity in poor countries than in industrialized countries.

This systemic organization of labor and subsequent increase in wages did not take place in the agricultural sector where farmers are not employed. Farmers in Europe might be better off nowadays, but the system is built on subsidies and not on prices. Those subsidies might support the income of farmers, but externalities of production such as environmental damages, soil degradation et cetera are not considered. In Europe, farmers were strong enough to fight for these subsidies and the society was rich enough to pay more taxes.

In poorer countries, farmers completely depend on market prices, and for many agricultural products, these prices are set by an anonymous world market. The cocoa sector is one striking example for this, as the stock exchange sets the price. A handful of multinational companies that buys and processes most of the cocoa and a small group of retailers forms the connection between a vast number of producers and consumers. Within the cocoa value chain, there is a massive concentration of power the moment cocoa leaves farms. Meanwhile, farmers are often not organised and even if they are, they have no influence on the price setting.

Price fluctuation and inflation-adjusted prices decreased significantly over the last decades. A similar development could be observed for many agricultural products. The terminal markets do not care about the environment or human rights. Further down the value chain, economics of supply and demand and scale decide on costs and prices. Due diligence approaches need to be re-embedded into such systems.

Price fluctuations and declining inflation-adjusted prices in the cocoa sector, paired with the dependence of farming households that cannot adapt their production to those conditions, nor have the opportunity to earn similar cash income elsewhere, have a disastrous effect on human rights. When the cocoa price fell, for example, from the season 2015/16 to the next season by 1,000 \$USD per tonne, cocoa buyers saved roughly 4.5 billion \$USD. It was self-evident that this would lead to more problems for farmers and more human rights risks.

While this might be typical for many commodities, it is a vicious cycle. In many sectors, it is known that current world market prices are too low for a sustainable sector. Despite this fact, there is no viable plan on how to de-commoditize at scale or internalize the full social and environmental costs of production.

To change this, human rights due diligence has to become a central focus of all buying operations of companies. The discussion about the protection of human rights including the improvement of farmer income needs a transparent connection from farming households to the shelves of the retailer. Without this, risk reduction measures are not possible. Based on this, targeted approaches to fight poverty of farming households have to become a crucial part of the DNA of companies.

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3.3.5 Roles and responsibilities across a wide network of actors

The context of the living income challenge we have explored so far shows one thing very clearly: this is a challenge requiring many different actors to play their part and be active. The private sector, financiers, local and national governments, and civil society—all have important roles, capacities and responsibilities.

When considering the roles and influence of different actors, it is important to recognize the distinct hour-glass shape of the cocoa value chain illustrated in Figure 10: at the beginning are millions of smallholder farmers; their resources are bought and converted by relatively few traders, processors, and manufacturers; and the final products are consumed by billions of consumers¹⁰⁷. This is accompanied by few governments among the producing and main consuming countries. This setup creates certain

dynamics and dependencies as well as opportunities and difficulties across all segments of the value chain: to cite only one example, it is inherently difficult to organize and manage a supply base consisting of millions of individual actors with different characteristics. This is problematic for producers themselves as they can hardly talk with one voice to exert negotiation power, and are therefore price takers, nor is it easy for downstream actors to ensure compliance to standards and regulations across such a large network^{108, 109, 110}.

Instead of repeating what other great thought leaders have said before us, we want to reference here the works by the Living Income Community of Practice, 2020¹¹², and Voice Network with the Cocoa Barometer¹¹³ as two examples of writings that lay out in detail which actors need to be part of the living income challenge and what roles different actors should play.

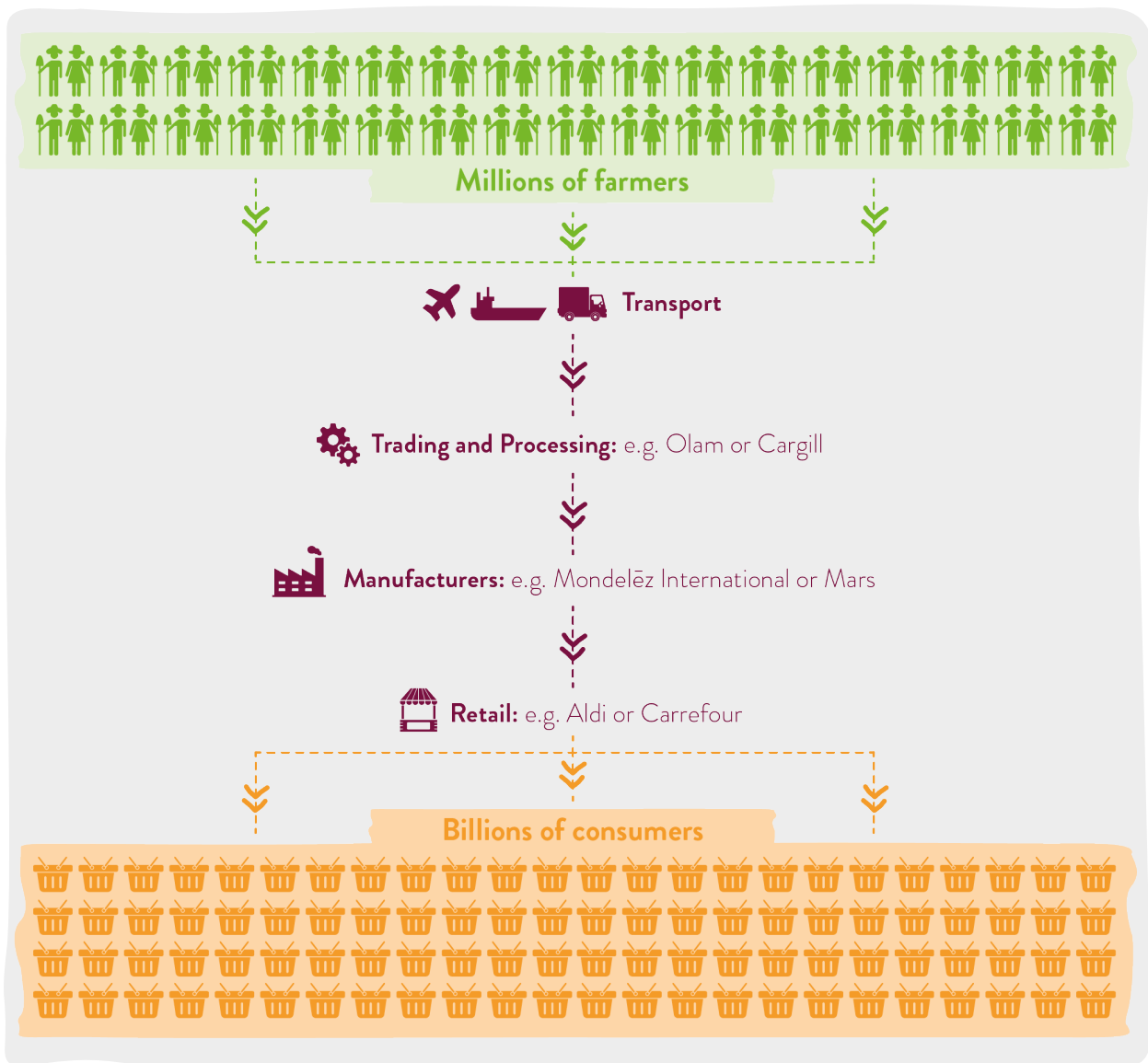


FIGURE 10: The actors within the cocoa value chain.

Data source for figure: Fountain and Hütz-Adams (2020)¹¹¹.

CIVIL SOCIETIES' ROLE TO SUPPORT IMPROVING INCOMES

Contribution from Antonie Fountain of Voice Network

Voice Network considers living income as a human right and sees the main responsibilities to ensure a living income with governments and companies, while there are essential roles for civil society organisations (CSOs) including non-governmental organisations (NGOs) to play, as well.

One of the most important roles for civil society is to support and empower local community and worker voices. Historically speaking, poverty alleviation and structural reforms benefitting workers at the beginning of a supply chain are near impossible without strong farmer organization and representation. Though CSOs - especially from chocolate consuming nations - should not be seen as representing the voice of farmers and the local community, they can hold farmer and worker interests central in their own work. CSOs from Europe and the US have engaged in regular dialogue with their southern counterparts over the past decade and a half. And though southern civil society is becoming an increasingly empowered and vocal part of the cocoa stakeholder conversation, a long way is still to go for farmers and local communities to have the power and influence that is needed.

The second role for civil society is to help develop and implement poverty alleviation projects in cocoa farming communities. Sometimes, this is necessary because the chosen solutions are too risky for companies. At other times, this can be because the types of interventions are not part of the business remit of the companies. The role of major development organizations, such as Care, in setting up and rolling out Village Savings and Loans Associations is a good example, as is the roll out of education projects or the setting up of additional income generation projects for women.

CSOs also play an important role in bringing forward information and data that is not yet available. The Cocoa Barometers, for example, have made available information and recommendations on living income and farmer poverty for the better part of a decade now, with the 2018 report mentioning the first data on living income compared to actual incomes. These also provide an opportunity for publishing data that companies and governments often have but find too sensitive to publish directly.

Often, CSO publications serve to start conversations and begin a process of more extensive and data-driven analyses. The research by SEO on cocoa pricing and market concentration, the living income benchmarks released by the Living Income Community of Practice, as well as the deep-dive farmer income study published by the KIT are all examples of this, as well as the white paper by Wageningen University & Research. We believe that those were initiated at least partially to answer some of the questions raised by the Cocoa Barometers.

Often times, governments or companies do not act immediately to address challenges for a variety of reasons. In these instances, civil society must play the important role of applying pressure on different stakeholders and advocate for public and media campaigns and bilateral engagement - either in public or behind the scenes. In short, the prime purpose of civil society is to provide a counterweight to power held by companies or governments.

4. AN ASSESSMENT OF INTERVENTIONS TO INCREASE INCOME

In the following section, we consider measures aimed at increasing farmer income directly in the short term, as well as those that aim to create conditions earning higher income in the mid and long-term. Our analysis is supported by insights and evidence from Cocoa Life's program experience and the literature, as well as contributions from peers and partners.

4.1 Increasing price & premiums: opportunities, limitations, and risks

4.1.1 Opportunities of price & premium Focused Measures

The most direct measure to increase income from a person's economic activity is to increase the price received for goods or services directly or via premiums. Price and premium approaches can be implemented by different type of actors. In fact, in Ghana and Côte d'Ivoire, the minimum farm gate price that a farmer receives for his or her cocoa is set by the governments (tied to government forward sales and current world market price conditions), but additional amounts can be paid in the form of premiums. Increasing the price of cocoa or premium price measures have been among the longest-standing approaches to try and tackle cocoa farmer poverty, typically as part of sustainability programs and schemes. Fairtrade, as one prominent example, started to pay premiums and raise prices of cocoa in 1994¹¹⁴. This section will not attempt to investigate all possible mechanisms to influence prices but concentrate on premium approaches which are frequently used by industry actors.

Premium: An additional sum of money paid by cocoa buyers over and above the market price for cocoa.

Sustainability premiums are often a flat amount of money that is paid to farmers or farmer organizations for adhering to certain standards or participating in a program, but they take other forms too - varying in premium objective, amount and practice in terms of to whom, when and how they are paid. For example, some farmers are given loans whereas others may receive in-kind contributions or a mix of other approaches making the impact of different premium interventions challenging to compare. From Cocoa Life's experience, in Indonesia it is customary to pay 100% of the premium directly to the farmers. In Ghana, premiums are paid through farmer organizations who have the right to control premium flows through their by-laws and to agree with their own membership what premiums are used for via premium distribution plans^{115,116}.

Cocoa Life has paid premiums to every registered farming household in Ghana and Côte d'Ivoire since the program launched in 2012. The premium is not globally fixed and can vary by country and supply chain based on the findings from a local needs assessment, additional support projects implemented, and support from supply chain partners. As a global average, the raw cash premium which cannot include additional program support, loans, or in-kind elements, is centred at 70-80 \$USD per metric ton of cocoa among farming families working with Cocoa Life (i.e. leading to a price increase of 4% at an exemplary cocoa price of 1840/metric ton). When combining this with Cocoa Life's additional activities that strengthen sustainable farming businesses, generate additional income, and empower communities, the total benefit amount increases by an additional 154 to 234 \$USD per farmer selling one metric ton of cocoa.

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The additional 154 \$USD per metric ton of cocoa is the average amount invested by Cocoa Life in activities that support directly and indirectly local cocoa farming families. Direct activities include, for example, the establishment of child protection systems, income diversification and business start-up support, good agricultural practice training, establishing Village Savings and Loans Associations (VSLAs), and access to improved planting material. Indirect activities include, for example, the support to community action planning and projects, support to local schools and infrastructure, forest protection and reforestation, strengthening of farmer organizations, and women leadership workshops and literacy training. Not included here are measures taken by processors and traders to support farmers that they source cocoa from. A very common form of support from these actors is pre-financing which allows first buyers such as cooperatives and exporters to pay farmers immediately without yet having sold their cocoa onwards¹¹⁷. Pre-financing allows producers and first buyers to buy inputs and material before the cocoa has reached its final market.

The Living Income Differential (LID) introduced by the governments of Ghana and Côte d'Ivoire is also added to this amount and stands at 400 \$USD per metric ton. This amount is added at world market level while some, or all of it, can be handed through to farming families as a raw cash premium by governments. This represented an additional increase in farm gate prices of about 20-30% in the 20/21 cocoa season¹¹⁸. However, at the time of writing this paper in 2021, the increases of the LID are not being fully felt at the farmer level as a result of market price decreases and decreases of country differentials amid a slow in demand growth and rising supply, which has largely neutralized the effects of the LID.

There are distinct advantages to premium and price approaches: firstly, they are transactional and based on an economic exchange tied to a supply chain and, secondly, they use pre-established distribution channels to ensure that money reaches the intended beneficiary such as the cocoa farming families.

At least in theory, the approach can be implemented simply by deciding on “a top-up” to the actual market prices. Data from Cocoa Life premiums shows that, in communities where farmer organizations discuss and develop plans for premium use, at least 40% goes directly to strengthening family income. In accordance with

national laws, cooperative societies finance themselves through member contributions, and the allocation of bonuses and premiums may be regulated through the cooperative by-laws, crucially these cannot be defined by third parties such as certification schemes or buyers¹¹⁹. In response to such regulation, cooperatives prepare their Premium Development Plans, which must be democratically decided through member voting.

As summarized by a Ghanaian cooperative Agrabopa:

[The premium development plan] has to be approved by the elected Council. It clearly explains which percentage will be paid directly to the farmers in cash and which percentage will be given to farmers for investment, school fees, or other expenses¹²⁰.

“The premium helps us a lot and supports us in growing other crops like corn and rice. Last year, the premium meant I was able to invest in fertilizer and phyto to treat my field properly”

Farmer registered with Cocoa Life
Nawa in Côte d'Ivoire, 2019

Some premiums aim to remunerate farmers for sustainable cocoa practices and cover costs of production in a long-term relationship, which makes it a commercial mechanism to incentivize good agricultural and environmental practices. Other price and premium approaches attempt to address low commodity market prices by helping farming families make the most within their farm conditions. These may be effective in the short term but often do not address the reasons that cause prices to descend to low levels in the first place.

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Not all households are in the same position to benefit from price and premium approaches equally, because the level of benefits are relative to a household's level of cocoa production, farmers producing low volumes will benefit the least. In the mid-20th century, economists like Friedman¹²¹ argued that policies favouring the most productive actors could be considered a form of selection as they tend to strengthen viable businesses while decreasing the competitiveness of businesses that lack the right resources. As a result, the least benefitting businesses are incentivized to leave the market.

However, it has been equally argued that under imperfect conditions this might not hold true, since sometimes the least competitive businesses become the ones unable to exit the market to begin with because they are still reliant on one crop as a main source of income, which is what we generally observe in cocoa and other tree-crop commodity production¹²². Farmer organizations themselves may redistribute premium income across their communities through community development plans, showing the opportunity premium approaches have to strengthen community development and support households that would usually benefit only marginally from premium and price approaches because of selling low volumes.

4.1.2 Premiums support community development

In Ghana and Côte d'Ivoire, farmers' income levels have direct effects on a community's ability to invest in services and infrastructure^{123, 124}.

Cocoa farmer organizations often put proceeds from farming towards supporting crucial infrastructure development within their communities. The co-funding of community activities is especially common in Ghana, where about 90% of farmer organizations surveyed by Cocoa Life in 2019 put funds towards this purpose. Premiums play an important role here, when examining farmer organizations in Ghana, 23% of the total premium amount was earmarked to support community activities, 27% was used to invest in farming inputs, and 40% went directly to household budgets. A single large farmer organization in Ghana may sell about 10,000 metric tons of cocoa per year to Cocoa Life for an additional premium of 800,000 \$USD, which translates to a community support budget of 184,000 \$USD per year - not accounting for additional community infrastructure projects that Cocoa Life funds itself.

This spending distribution varies by cocoa-growing region. In Indonesia, typically 100% of the premium goes directly to household budgets and community development is funded more exclusively by local government. The creation of 'premium development' plans can also be

stipulated by regulations, asking farmer organizations to democratically decide on joint investment priorities for those finances which then typically include items for community development. In Côte d'Ivoire, over half of the surveyed farmer organizations (57%) committed an average of 20% of the total premiums received to community development activities.

“
Our community put our most recent premium directly towards water – but we always agree on where the most benefits will be felt first. If it wasn't for the premiums received, we would not have access to safe drinking water.”

Farmer registered with Cocoa Life
Kwamebikram in Ghana, 2019

Cocoa Life also assessed village leader activities through a community action planning exercise and found that, with the support of cooperatives, premium money is primarily invested in education infrastructure followed by road maintenance, health facilities, or maintenance and development of clean drinking water sources. Even in the cases where projects are not financed, or co-financed directly through cocoa farming organizations, community households tend to contribute labor and materials to help projects such as constructing community meeting space or the maintenance of paths. Since cocoa is often the predominant source of cash-income, some households are able to contribute more meaningfully to those projects if their income allows. Therefore, farmer organizations and the premium paid for cocoa not only directly strengthens the income portfolio of cocoa growing households, which can indirectly strengthen community development, but it also allows farming communities to invest in services and infrastructure that have the potential to improve the availability of business opportunities among community members over the mid to long term.



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4.1.3 Limitations of Price & Premium Focused Measures

Paying additional premiums to increase the net income of farming families is sometimes framed as a one-stop-shop for solving rural poverty^{125, 126, 127}, however as premiums are bound to current production levels, benefits are largely felt by the highest performing farmers with the highest cocoa sales. The more pronounced the inequality is in terms of production levels among farming families, the more important this point becomes.

We can compare these assumptions with Cocoa Life's data. Across the farming households that Cocoa Life worked with in Ghana in 2019, 24% of households operated above living income conditions and sold on average a total of 3,339 kg of cocoa per season, meaning the achieved share of the premium for household consumption was about 3% of the total net annual household income. For the 76% of households who earned below a living income, the realized cocoa sales were an average of 989 kg per season which achieved an average premium of only about 1% of total annual household income. As a result, the positive impact of premiums for well-off households is roughly three times as large versus low-earning households. Dutch chocolate maker Tony's Chocolonely, who pays comparably high premiums to participating farmers, recently found that poverty is still common among their farming communities, concluding in their 2020 farm poverty review: "better pay [alone] will not save the day"¹²⁸.

With Ipsos' data collected for Cocoa Life, we tested the hypothetical effect on net income if prices had doubled in Ghana in 2019. At an assumed price level of 1,500 \$USD per metric ton of cocoa (close to 2019 Ghana farm gate prices), such a measure would generate an additional 15million \$USD for every 10,000 tons of cocoa sourced (major chocolate producers buy hundreds of thousands of tons of cocoa every year).

This measure would have lifted 17% of additional farming households up to a living income, raising the total share of households reaching the living income benchmark from 24% to 41%. As described above: the 24% of households currently reaching the living income benchmark in Cocoa Life's Ghana (2019) sample produce on average three times more cocoa compared with the 76% who don't earn a living income. Thus, for every 15million \$USD paid additionally per 10,000 MT of cocoa, on average 11.25million \$USD go to the highest earning households who already earn above the living income benchmark. The problem here is not that some farmers earn more than a living income, but that the approach is not effective as a strategy to lift mostly vulnerable households towards a living income and protect their human rights—other strategies might be more effective for this group.

As a result, while an increase of 17% of additional farming households reaching a living income is a positive impact, it seems ineffective as a tool to support the lowest earning farming family and the most vulnerable households. Instead, inequality widens and only a minority of farming households would reach the benchmark. The performance against the national poverty line benchmark is expectedly similar, as doubling cocoa income would raise an additional +19% of farmers above this benchmark from about 58% to 77%. These effects are short-term changes and it is unknown how long they could be maintained if implemented at large scale given the tendency towards boom-bust cycles, as discussed earlier. A different approach to financial support systems which overcomes some of the mentioned limitations include cash-transfer approaches that are entirely unconditional to cocoa production, which we will briefly reflect on later in this paper.



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The calculation of the effect of price and premium increases on the living income gap for a certain group of farmers shows that looking at average income levels is not representative for all farmers in a group, but emphasizes opportunities for a minority of highly performing households. The Figure 11 below shows in red the distribution of income across farming households working with Cocoa Life in Ghana (2019)^{xii} at a cocoa price of 1500 \$USD per metric ton. The green curve shows how this income distribution changes if prices are doubled. As can be seen, in both cases, the majority of the population performs under the living income benchmark (green line). This means that even a doubling of prices would not lift 50% of farming families to a living income. This is an effect of resource inequality between households as explored earlier and is also confirmed by other studies of smallholder cocoa and tea production^{120,130}. This important insight can be masked by average income statistics (red line and black line) which far outpace the living income benchmark after a doubling of prices.

The important differences between income from wages and income from self-employed farming or entrepreneurial work. Price mechanisms to support smallholder farmers in commodity chains need to be considered differently from wage mechanisms that support employed laborers. One main difference is that wage labor mechanisms assume that most workers have access to the same productive resources (time and skill), especially wage labor that requires little additional training. A group of smallholder farmers reliant on prices for income can show significant differences in productive resources, such as land¹³¹, the various skills needed to run their business, available labor, or financial means to invest¹³². As argued by Margolis¹³³: many entrepreneurs in developing countries do not start subsistence businesses because they are perfectly equipped to do so, but because of a lack of viable alternatives such as attractive wage employment.

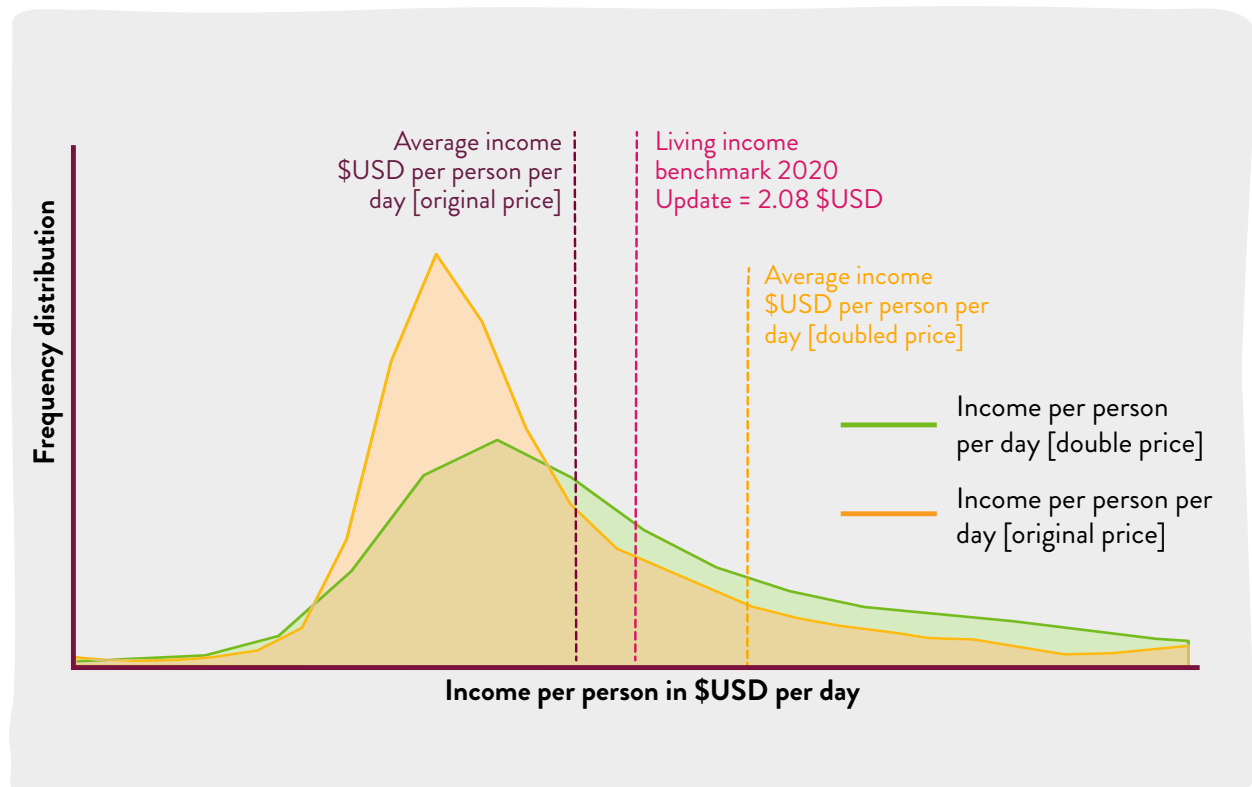


FIGURE 11: Distribution of income across Cocoa Life registered farming households in Ghana.

Data source for graph: The official living income benchmarks based on the Living Income Community of Practice are calculated in \$USD per month per household for a reference household size consisting of adults and children. For the conversion to per-person-per-day rates, we applied a flat conversion across all household members as approximation.

^{xii} The official living income benchmarks based on the Living Income Community of Practice are calculated in \$USD per month per household for a reference household size consisting of adults and children. For the conversion to per-person-per-day rates, we applied a flat conversion across all household members as approximation.

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4.1.4 Risks

The data presented above shows that putting too much focus on prices and premiums (conditional to cocoa) will not help to remediate the most demanding cases of poverty. If a focus on price and premium comes at the expense of supplementary measures, there is a risk of draining resources from other sustainability initiatives that are meant to specifically support the most vulnerable part of the farming population. A balanced approach could include support for moderate price increases, while investing additional funds in activities such as farm rehabilitation interventions to re-establish productive capacity of farms that are over-aged or have been stricken by disease. Without such interventions, households with inefficient farms will not benefit significantly from higher prices. Importantly, the increase in production among all households needs to be counterbalanced to avoid oversupply (just as in the case of productivity interventions). This will require additional investments in strengthening local institutions and structures that can lead to alternative employment opportunities, support elderly farmers, and invest in conservation efforts tied to economic incentives (such as payment for eco-system services)^{134,135}, and measures that ensure oversupply does not materialize.

Another risk around price and premium approaches stems from the potential long-term market effects. As presented earlier, farm gate price increases can stimulate both overproduction and decreased consumption. Many of the limitations and risks presented here relate to measures at scale across the conventional market when applied to all farmers living with different circumstances. On the other hand, price increases can improve farmer profits in niche markets, which are not equally impacted by imperfect competition¹³⁶. This was investigated in the 1930s by a renowned economist who received the Nobel prize for his work¹³⁷, but no empirical evidence since then suggests that it would benefit farmers at scale¹³⁸. Scaled approaches only work alongside some form of global supply management that enables the equal balancing of supply with demand.

With the words of Nelson & Phillips¹³⁹:

“A sustained industry is a significant development contribution [...]. However, as with any ‘resilience’-oriented intervention, they do not challenge power relations and so carry risks of reinforcing power inequalities. The continuing focus on cocoa, and on cocoa productivity, while neglecting diversification and wider rural governance issues carries such risks.”

Supportive policy instruments and governance tools are absolutely required to minimize those risks-which is equally true for any cocoa-focused intervention at scale, be it via price mechanisms or productivity mechanisms.

4.1.5 Take away

Stabilizing and improving prices is a key tool for income improvement, and one of many tools needed for farmers to reach a living income, especially if done at a national scale and in support of national economic development plans. Crucially these need to include some form of supply management, as defined by local governments¹⁴⁰. The Living Income Differential is one example from Ghana and Côte d'Ivoire of a measure at scale coordinated by governments to create a level playing field and to reach across all farming families, which is important. As recent experience has shown, all measures need to be accompanied by strong coordination between industry and across actors and national policies¹⁴¹.

In effect, in the context of significant resource inequality, price and premium mechanisms are not the most appropriate tools to address the needs of the poorest and most vulnerable households. Therefore, when engaging with added price and premium mechanisms it is recommended to first assess the level of inequality across the population and then distinguish specifically what support is required to address the needs among the poorest, versus the better earning segments of the population.

This brings us back to the introduction of this paper and the ask to be more explicit about what tools are best placed to support different types of farming families to pursue sustainable livelihoods. From the analysis above, price and premium based measures that are conditional to cocoa production are generally an important component of sustainability strategies under current conditions, but they are most efficient at supporting the most successful farming families, or the farming families with most resources. It does not seem right to focus only on price and premium approaches (unless an actor only interacts with or wants to target high performing families) if a trickle-down effect to other families is not expected, or if the premium is unlikely to incentivize production across all farming families at levels that would guarantee significant premium shares and that can be sustained.

FAIRTRADE'S PERSPECTIVE ON LIVING INCOME APPROACHES

Contribution from Surmaya Talyarkhan and Tim Aldred of Fairtrade

Fairtrade also views living incomes as a human right. The Universal Declaration of Human Rights asserts: 'Everyone who works has the right to just and favourable remuneration ensuring for himself and his family an existence worthy of human dignity[...]'¹⁴². The Fairtrade movement exists to drive long-term structural change in trade and was a pioneer in the industry drive for a living income in cocoa, by establishing a living income benchmark for cocoa farmers in West Africa, where there are currently more than 400,000 farmer members of Fairtrade-certified cocoa co-operatives.

The Living Income Strategy¹⁴³ developed by Fairtrade focuses on seven areas, including working towards sustainable farm yields, diversification, building strong and efficient producer organizations and encouraging an enabling policy environment. These interventions are designed to work together with the payment of sustainable prices and targeted premium towards a living income. The Fairtrade Minimum Price for cocoa is a first step in a gradual approach to bridge the gap. Fairtrade has also integrated voluntary payment of Living Income Reference Prices for cocoa in living income pilot projects with some of our commercial partners having already committed to it. Fairtrade strongly supports the implementation of price-based interventions such as the Living Income Differential introduced by the governments of Ghana and Côte d'Ivoire, as one of the components towards a living income. It is the only major certification to set a minimum price in cocoa contracts.

Smallholder cocoa farmers have almost no control over global market prices, have weak negotiating power and are at the mercy of price volatility and the goodwill of their market partners. In times of oversupply and market speculation, commodity prices can fall below farmers' costs of production. Where companies have longstanding relationships with farmer organizations, entering into long-term contracts at a fair price enables farmer organizations to plan ahead and invest for the future. If farmers don't know how much they will earn before their next harvest, they cannot effectively plan to make investments in their cocoa business (including buying seedlings or fertilizer) or in income streams not related to cocoa, limiting their ability to achieve a living income.

The Fairtrade Minimum Price, set at 2,400 \$USD per tonne at FOB, is a key milestone for the journey towards a living income. It acts as a floor price, recognising the costs farmers incur to produce their cocoa^{xiii, 144}. The Fairtrade Minimum Price enables cocoa co-operatives and their members to plan. On top of the Fairtrade Minimum Price, the Fairtrade Premium provides co-operatives with 240 \$USD per tonne, which they themselves collectively decide how to reinvest into their farms and communities. Farmer organizations are required to make democratic decisions about how best to invest the premium to improve their businesses and communities. By working collectively, farmers are able to make investments that would not be possible at an individual farm level. Collective decision-making and shared community and business assets help shift financial and non-financial benefits towards smaller and more vulnerable farmers in producer organizations.

^{xiii} In Côte d'Ivoire and Ghana any difference between the reference price and the Fairtrade Minimum Price is payable to cocoa co-operatives within 30 days from transfer of title.

FAIRTRADE'S PERSPECTIVE ON LIVING INCOME APPROACHES (CONTINUED):

Fairtrade's 2021 household survey in Côte D'Ivoire¹⁴⁵ found that for groups selling the majority of their cocoa on Fairtrade terms for five years or more, the gross average household income has risen from 2,670 \$USD in 2016/17 to 4,937 \$USD in 2020/21. We have seen households move to above the living income benchmark and the extreme poverty benchmark. Overall, about 15% of families achieved a living income in 2020/21, an increase from the previously recorded 6.6% in 2016/17. The average cocoa yield increased during the same period by over 40% to 625kg/ha seemingly as a result of higher number of trees per hectare and younger trees, some farmers benefited from the Fairtrade Minimum Price that became active in the period, and the proportion of farmer households that were diversifying their income increased from 55% to over 70%. Additional insight on how this was achieved by farming families is important, but if all farmers were to reach the target yield of 800kg/ha and sell their cocoa on Living Income Reference Price terms, about 33% of families could reach a living income and virtually all would be out of extreme poverty. Thus, these first steps are encouraging, while much more progress is needed.

Price and Premium approaches need to work with other interventions to support farmers in achieving a living income. Complementary interventions are needed to ensure higher benefits to the most vulnerable farmers and more broadly avoid creating oversupply. Fairtrade and Cocoa Life have collaborated on a landscape study of Sustainable Livelihoods interventions in Ghana and Côte d'Ivoire¹⁴⁶. In 2022, we will have produced a further publication defining a future vision for the cocoa sector to work towards sustainable livelihoods, to catalyse lasting change for the cocoa-farming communities.

The free market alone is not solving the challenges of poverty in farming communities. The average cocoa farmer in West Africa supplying a 44billion \$USD industry¹⁴⁷ still earns less than 1 \$USD a day¹⁴⁸. It is clear there is a role for the cocoa industry to play in accelerating cocoa farmers' journeys towards a living income. Paying prices that cover farmers' costs of production and enable a decent living, alongside collaborating with government and civil society on a rural development strategy and farmer sensitisation programs, will bring more cocoa farmers out of extreme poverty. Fairtrade will continue to drive this agenda through our independent standards, awareness-raising with consumers and partnerships with farmers, governments and businesses.

4.2 Increasing productivity: opportunities, limitations, and risks

4.2.1 Opportunities

Farmers with access to adequate land, capital, training and the right productivity assets can drastically increase their land-use efficiency, leading to an increase in income and spare land for other use or conservation. Many farmers could increase their income significantly in theory by improving the way they grow cocoa or by rehabilitating unproductive old or diseased farms. It is estimated that only about 18% of cocoa land in Ghana and Côte d'Ivoire achieves its productivity potential¹⁴⁹. This is a problem not only for the farming households on the lower end of the efficiency scale, but also for land-use planning and governance as growing populations require additional space^{150, 151}, while remaining natural resources require protection.

As explored earlier, limited assets (and therefore limited investment leading to low farm efficiency) is one of the key underlying issues of low income from farming. As part of the Mondelēz research project 'Targeted Good Agricultural Practices', it is estimated that just a third of farmers in Ghana and Côte d'Ivoire are in a good position to significantly benefit from farming improvements in the mid-term. During a project pilot in Côte d'Ivoire, Cocoa Life applied concentrated and coordinated measures to a carefully selected group of farms to increase cocoa output over three years, production across those farms increased on average by 190%, and net income from cocoa by over 125%¹⁵². Other authors, such as Norton M.¹⁵³, Aneani & Ofori-Frimpong¹⁵⁴, or Toledo-Hernandez et al.¹⁵⁵, also described the potential benefits of productivity improvement activities on different groups or farmers and effects on their income earned from cocoa, confirming the importance of tailored interventions for different groups.



4.2.2 Limitations

The likelihood of reaching a living income through productivity gains depends on several factors including, but not limited to, the availability of land, capital, and labor. While we estimated the share of farmers that could see significant improvements over the short to mid-term at one-third, that means that this avenue is unlikely to help two-thirds of farmers reach a living income.

While some households may in theory appear well placed to improve their land-use efficiency, evidence illustrates mixed success when scaling productivity improvement programs to large populations. While some households register efficiency improvements, other households similarly decline, often leading to overall stagnating average performance^{xiv}. Equally, many farmers do not translate the learnings from training and resources into farm efficiency improvements, but instead as farm expansion, counter to the objective of productivity improving interventions^{156, 157}. Farm expansion, on the other hand, often comes at the expense of local forest areas, fueling a vicious circle of land degradation, declining production, and declining income^{158, 159}.

4.2.3 Risks

In the short to mid-term, productivity focused interventions bear risks for households because they require investments in productive resources and assets, such as labor and money. As explored earlier, every investment poses an additional risk in an already risky environment, where mitigation options such as weather or pest insurance, affordable loans, or governmental protection programs are nearly non-existent or inaccessible. If an increase in production does not materialize consistently over multiple years or does not deliver enough additional value to the bottom line (for example when commodity prices are declining during a bust phase), then households lose scarce resources or indebt themselves, which exacerbates structural poverty¹⁶⁰.

Additionally, as described previously, cocoa focused interventions all bear the risk of increasing the attractiveness of the sector and increasing cocoa output to the market, with a negative impact on farm-gate prices. If the saying goes that 'price is the best fertilizer' here, increased cocoa output is not a potential side-effect, but the main objective. If that is not met with equally increasing demand, this will have a negative effect on market price levels due to a structural imbalance of supply and demand.

^{xiv} Those increases were achieved by 58% of households in a 40-household pilot using a before-after comparison.

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4.2.4 Take away

Compared to price and premium measures, approaches that increase cocoa productivity are not as strongly dependent on current economic performance of the household to be able to succeed. For example, a household which has appropriate land and labor available, and mostly requires support to rehabilitate an over-aged or diseased farm, can greatly benefit from these interventions even if current productivity is very low. However, it is highly important to provide insurance to households from crop failure and shield them from debt if expected benefits from investments do not materialize.

Tools that support farmer productivity may suffer from the same market risks as price and premium tools, but these interventions support a different target group of farmers. Therefore, it makes sense to combine productivity and price and premium measures strategically when targeting households with an entrepreneurial interest in cocoa who can invest time and money to farm their land appropriately.

Connecting back to the opening statements of this paper, what is not being discussed here are questions about the strategic focus of such interventions in detail. For example, is the goal to move as many farmers as possible to a minimum level of production, or to increase the potential of a few farmers to reach high levels of production? Should there be a layered strategy from the short to the long-term? And how can this be combined with a strategy that aims at supporting other families to move out of cocoa or reduce their cocoa output through providing economic alternatives (e.g. agroforestry, on-farm diversification, alternative income opportunities specifically not from agriculture etc.)?

Equally, productivity interventions need to be accompanied by a holistic approach that optimizes yields for some farmers, while creating alternative income sources for others to prevent supply and demand imbalances.

To close once more with the words of Nelson and Philips¹⁶¹:

“A narrow focus on cocoa specialization further exposes cocoa producers to market risks, especially price depression results from productivity investment and oversupply. Rather than thinking of sustainability ‘choice spaces’ for cocoa farmers, such concepts should be applied to rural development pathways more broadly.”



4.3 Diversification of income sources: opportunities, limitations, and risks

4.3.1 Opportunities

Diversification of income sources besides cocoa, either on-farm or off-farm, plays multiple roles. It is an approach that can address the sustainability risks of the most vulnerable households which struggle with growing cocoa. Diversification at household level can provide additional cash income independent of cocoa performance. Diversification at community or national level can also support certain farming families to find alternatives to cocoa or agriculture altogether. Such approaches may decrease the overall dependency on cocoa by stimulating alternative opportunities to respond to price-bust cycles¹⁶².¹⁶³ It can also support household resilience by bridging income seasonality issues, lowering the cost of living, and improving food security by increasing the amount and nutritional quality of food produced.

“

A consensus has emerged that diversifying income sources is the only way to truly address declining and volatile incomes among commodity-dependent households¹⁶⁴.

Oli Brown and Jason Gibson

Diversification can present benefits beyond just additional income:

“

We received training on how to use our garden to grow our own produce, which means I can eat the vegetables I grow without having to spend income on buying them. For us, this works just as well as receiving additional income.

Farmer registered with Cocoa Life from Pinrang, Indonesia

The main risk of cocoa focused interventions, as described in the previous sections, could be addressed by successful diversification. Brown and Gibson (IISD¹⁶⁵) write: “[The goal is to] address the potential moral hazard by integrating income stabilization into a wider rural development or diversification program. This will help ensure that increased income stability will not result in increasing production of a single commodity and lower overall welfare.” However, to enable such a long-term positive development, it is not

mainly individual farming families that need to act, but actors that have influence on economic and other policies such as trade conditions.

In the absence of viable income alternatives to commodity production in rural landscapes, relatively few farming households will be able to diversify their income pathways, as commodities are often the best income earning option available to them¹⁶⁶. This reality needs to change for diversification opportunities to become a viable path at scale, and to do this national leadership and international support from industry actors and beyond is required. As Page and Hewitt (2001) put it, “The evidence from those countries which have developed successfully is that the long-term strategy must be to diversify, into new products (or services). External assistance can provide general support for this: improving general economic and social infrastructure, developing regulatory and financial institutions, technical assistance in new products, and good access for new products, but the strategy has to be national. Other countries can avoid offering ‘negative incentives’, [for instance] encouraging failure to diversify through preferences favoring traditional goods or through protecting their own traditional sectors”¹⁶⁷. Therefore, providing incentives which continue to put emphasis on the supply of commodity raw materials can become a hindrance to successful economic diversification at a national scale.

There are various sources which explore income diversification of cocoa farmers, including studies by Cocoa Life^{xv} and Voice Network¹⁶⁸ which uncovered that 20% and 10% of direct cash income in Ghana and Côte d'Ivoire, respectively, comes from non-cocoa sources. This estimate was put at 39% and 34% in Ghana and Côte d'Ivoire, respectively, by Bymolt et al. (2018)¹⁶⁹, which sampled not only farmers organized in farmer groups but equally ‘unorganized’ cocoa producers, and also interviewed more women than generally evaluated in cocoa studies. Samples between studies typically differ with respect to participants who may or may not have been more dependent on cocoa compared to other cocoa farming households. When asked at the 2021 edition of the Cocoa Soils Forum in the session on living income, 70% of the participants (n = 108) indicated they agreed that ‘on-farm diversification is a realistic opportunity for many households to earn a living income’. 10% disagreed and 20% neither agreed nor disagreed. The proponents mentioned the following examples that would allow more farmers to earn a better income: livestock and poultry, pepper, and vegetables or fruits. However, these are perceptions, and thus not necessarily accurate of what is possible to implement on the ground in all cocoa producing areas. Authors such as Koning and Jongeneel¹⁷⁰, have equally argued for models that combine policy approaches with crop diversification and models of conservation approaches that emphasize opportunities such as reforestation, carbon sequestration, and respective payment for environmental services- which combines interventions on household income with approaches to combating climate change.

^{xv} The official living income benchmarks based on the Living Income Community of Practice are calculated in \$USD per month per household for a reference household size consisting of adults and children. For the conversion to per-person-per-day rates, we applied a flat conversion across all household members as approximation.

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4.3.2 Limitations

Diversification is a broad term that includes many activities and interventions, not all of which can enable farmers to break free from over-dependency on cocoa. In fact, a certain level of diversification already exists at broad scale today as we very rarely find homogenous cocoa-only farms while cocoa often remains the main source of income.

What some describe as ‘cocoa plantations’ are actually smallholder farms with highly diverse approaches to land management and informal arrangements of different plants interacting in the same space. For a typical smallholder farm, one will encounter arrangements of pineapples, yams, mangoes, citrus fruits, with cassava and cocoa. Among farmers working with Cocoa Life in Ghana and Côte d’Ivoire, for example, around 65% grow cassava, 64% grow plantain, and 38% grow maize. 98% of farmers also grow other trees to use as shade cover, alongside their cocoa trees. However, these arrangements are unlikely to create the desired outcome in terms of significantly reducing cocoa dependence, as the cash income generated from selling these other goods through local markets does not compare to income from cocoa, even during very low cocoa market price conditions¹⁷¹.

Looking at successes and challenges in the Cocoa Life program, households typically report that income diversification (considering both on-farm and off-farm diversification projects) would have strengthened their household income. From Cocoa Life’s quantitative data, it can be observed that in countries where non-cocoa income generating activities (IGA) are more accessible total non-cocoa income is higher. From Cocoa Life data (2019)^{xvi} in Côte d’Ivoire, farmers who participated in any form of support to diversify incomes within the past 12 months or earlier self-report an average of 12% higher non-cocoa income than those who did not participate^{xvii}. In Ghana, those farmers reported 53% higher non-cocoa income, and in Indonesia 45%. At the same time, we must recognize that besides modest increases in income, the group of households that saw a significant transformation is rather small and successes cannot easily be replicated, as shown by the example of Ghana (2019)^{xviii} in Figure 12 below.

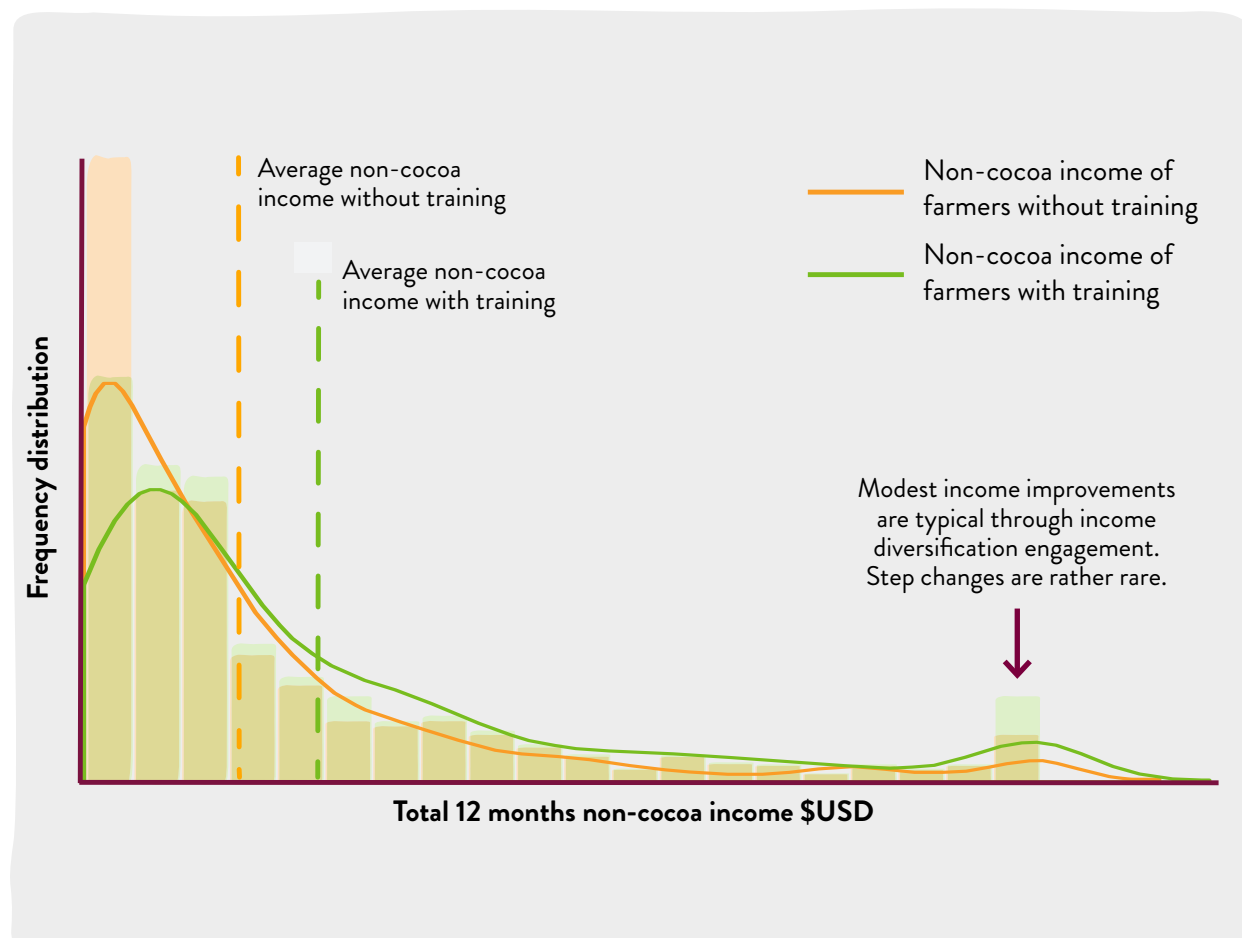


FIGURE 12: Non-cocoa income diversification from Cocoa Life registered farmers in Ghana.

Data source for graph: The official living income benchmarks based on the Living Income Community of Practice are calculated in \$USD per month per household for a reference household size consisting of adults and children. For the conversion to per-person-per-day rates, we applied a flat conversion across all household members as approximation.

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When asked at the 2021 edition of the Cocoa Soils Forum in the session on living income, participants were less certain about whether ‘off-farm diversification is the way forward for many households to earn a living income’: 52% agreed, 13% disagreed, while 35% neither agreed nor disagreed. It is interesting to note that achieving a living income through either on- or off-farm diversification must have some barriers to individual farming families as otherwise living incomes would naturally materialize for a larger group of households than it currently does.

Some barriers we’ve observed include the fact that market and supply chain linkages do not exist at scale. There is uncertainty about the existence of buyers accompanied by a lack of community infrastructure such as roads, plus production input is often not available on time and is costly. Additionally, recommended practices do not easily fit into a family’s role division or create a conflict with the timing of cocoa production activities: labor is often not available, and farmers are either uncertain about their return on investment, because the return takes too much time, or they cannot invest.

Diversification projects which depend on tapping into larger markets are often bottle-necked by inadequate distribution networks, access to markets, and poor infrastructure. **As one woman from a community which participated in a food-security/ income diversification project through Cocoa Life in Côte d’Ivoire Nawa Region explained:**

“

When we produce our food here, we have no buyer. We sell little by little until the rest rots in our hand. If we have proper roads, I think that will solve the problems we have.”

This leads to a situation in which continuing with cocoa production is often the best option since the supply chains have established transport mechanisms for producers already. However, evidence from projects and pilots on diversification are worth looking into for designing future strategies to reduce smallholder farmer poverty and achieve a living income, including how cocoa supply chain structures can be used for products other than cocoa.

4.3.3 Risks

In terms of risks, diversification efforts require an investment of household resources (finances, labor, land, etc.), which are already stretched. Significantly upscaling marketing efforts among other crops, increasing the share of other crops grown, or embarking on new non-agricultural business ventures comes with investment risks to households – as well as requirements to improve local infrastructure and market access, which also need large investments. If stakeholders cannot invest enough in supporting market access and logistics, and if households cannot produce the initial investment for diversification, or absorb potential shocks, it’s likely that this approach is not feasible. In addition, the financial benefits of diversification are most often reaped in the mid-term or long-term future, which makes them unappealing to households facing immediate economic pressures.

The most vulnerable households therefore, will not easily participate or engage with diversification approaches. If expected benefits do not materialize in relationship to the effort invested, then households can face a net loss. Unfortunately, diversifying incomes by growing current or starting new ventures is always a risky undertaking: it is almost guaranteed that not everyone who attempts it will benefit to the degree envisioned¹⁷². However, risks can be mitigated by proper analysis of the local context, by including safeguards and insurance mechanisms alongside an honest approach to managing expectations among farmers, and by ensuring that the supply chains are in place so the farmers have input and market access.



4.3.4 Take Away

On-farm diversification is highly unlikely to deliver significant income improvements in the short or medium-term to many farming families at scale - there simply aren't that many viable opportunities to diversify into, and building new markets is risky and time-consuming. That said, it is highly likely to deliver at least modest improvements, and, in some cases, even significant long-term change for food and nutrition security. While 'on-farm diversification' in practice often does not, or cannot, move far enough to open new income streams to households, there is a compelling long-term perspective to rural economic development at its basis. In some local contexts cocoa urgently requires income or crop competition to decrease farmer dependency, especially among households that are not set up to earn a living income by growing cocoa.

To refer back to the initial question about the aim and focus of different tools to improve local incomes, diversification can benefit different groups of farming families in a more targeted way than price, premium or productivity approaches. While the latter best supports households that grow a lot of cocoa or households well-endowed with land and labor, the former would be most appropriate for households that are neither currently productive nor are likely to ever turn highly productive with cocoa. This does not need to be either/or; strategies need to allocate resources across several actions depending on the profile of farming families they interact with.

There can be different strategies pursued with diversification. Diversification as an income-mix with cocoa might be advisable to a large share of households to support food security outcomes and to bridge income seasonality. It can also be used as a mechanism to transition cocoa farming families to other income earning practices altogether. If the goal is to see most or all farming families to a living income, opening up new opportunities to entirely diversify away from cocoa, or farming altogether, for certain families might be the only long-term option given the situation of agricultural resource distribution explored earlier in this paper.

4.4 Increasing household resilience

4.4.1 Supporting micro saving and loan opportunities

Previously discussed interventions are designed to increase household income directly. However, there are several activities that are meant to function as catalysts for further improvement, or to reduce household expenses. Many such interventions have the benefit of being able to apply to almost all households irrespective to their current agricultural performance and become tools to support the most vulnerable. It is highly important not to neglect households which struggle to generate significant income from cocoa as they might face the most severe human rights and sustainability challenges.

Indirect income tools, such as micro savings, cash transfers, capability building and food security programs, focus on the mid-to-long-term by positively impacting household conditions. They are designed to increase household resilience and stabilize the household economy to help generate higher incomes in the future. Resilience describes how well households can withstand shocks and reengage unscathed in their livelihood activities.

In alignment with USAID¹⁷³, E. Kiewisch¹⁷⁴ defines resilience as follows:

“**Resilience is often determined by the access to resources - be that food, shelter, or income - at critical times. Many resilience programs therefore focus on bridging the resource gaps that leave households vulnerable to shocks and stressors. Resilience interventions aim to increase or diversify household activities and assets to bridge these gaps, or to promote social safety nets in times of acute stress”.**

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Supportive tools like micro-saving and loan options, such as VSLAs, are considered highly successful tools generally to assist rural households to overcome sudden spending shocks and strengthen social and financial inclusion^{175,176}. The VSLA approach was developed throughout the 1990s to early 2000s. It is based on the concept of local self-help groups in which community volunteers organize participants to contribute to a savings pool, from which members can draw loans against jointly determined conditions.

Data shows that these approaches are highly sought-after in rural agricultural communities. Across a range of cocoa sustainability actors, the use of VSLAs has expanded in response to the high interest among community members. In 2017 Cocoa Life supported 1,247 VSLA groups with approximately 34,753 members which increased to 3,205 VSLA groups and 82,371 members by the end of 2020¹⁷⁷. In 2020, Mars Wrigley reached 850 VSLA groups with approximately 24,112 members¹⁷⁸.

In terms of uptake, VSLAs and other local savings groups have become a first choice for micro-loans for many cocoa farmers in Ghana, while in Indonesia, intra-family loans and rural banking are more common. According to Cocoa Life data collected by Ipsos in Ghana in 2019, 32% of farming households working with Cocoa Life had accessed a loan. 23% accessed the loan through a VSLA, 15% through an official bank, and 14% through a form of Susu group^{xvi,179}, other than VSLAs. In Indonesia, 30% of farming households accessed a loan, with 36% accessing a loan through 'family & relatives', 29% via an official bank, and 20% through 'friends and neighbors'. VSLAs were accessed by 6% of farmers. Across Ghana and Indonesia, loans are mainly used to pay for education, followed by farming inputs, and finally to cover expenses such as medical emergencies or to cover urgencies like clothing and food^{xvii}. VSLAs are especially popular among women in rural cocoa growing communities to allow networking and resource mobilization among trusted peers, employing mechanisms outside of the direct household portfolio¹⁸⁰.

66

They introduced the Susu [VSLA] groups, that has helped us a lot. Even when your child is going to school and you don't have money you can take some money from there and pay back when you have it. Last year when my child was going to school, I needed GHS400.00, if I take that loan from elsewhere, I would have had to pay GHS800.00 but with the Susu group, I only have to pay GHS40.00 interest."

Ghana, women from the Sefwi Kwamebikrom community working with Cocoa Life

Qualitative data from Cocoa Life underlines that VSLAs are likely to increase the resiliency of cocoa farming families - a key measure of a sustainable livelihood - helping them to absorb small shocks, such as health issues or school equipment purchases. On a more individual basis, access to micro-loans can prevent households from sliding deeper into poverty and work best when accompanied with income diversification methods to help improve social cohesion and inclusion. These positive effects have been described equally by authors such as Ackah and Tshikudi¹⁸¹, Diallo et al.¹⁸², and Volmer¹⁸³. However, data from Cocoa Life suggests that VSLAs strengthen the long-term outlook of households, but do not have an immediate impact on actual household income to help raise families towards a living income benchmark in the immediate future. Further, the impact of VSLAs can be case specific depending on the needs and use of loans, meaning that VSLAs alone will not transform the cocoa sector and eradicate poverty, but they can provide crucial support for farmers and their families.

^{xvi} "Susu" as one of the microfinance schemes in Ghana is thought to have originated from Nigeria and spread to Ghana in the early twentieth century. It is an informal financial identification for daily or weekly collection of deposits which is prevalent on the West African markets. In Ghana, for example, it is now common to find that large numbers of individual "susu" collectors have established offices (kiosks) at various points in cities and towns where their clients can actually walk in to make deposits and engage in other transactions.

^{xvii} The official living income benchmarks based on the Living Income Community of Practice are calculated in \$USD per month per household for a reference household size consisting of adults and children. For the conversion to per-person-per-day rates, we applied a flat conversion across all household members as approximation.

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4.4.2 Unconditional and conditional cash transfers

Cash transfers that are unconditional to cocoa production, such as social policies or support that guarantees a minimum basic income, present an opportunity to increase the share of farming families from the lowest income brackets towards a living income benchmark more efficiently than financial mechanisms tied to cocoa growing. One approach, often employed by national governments, to overcome risks of resource inequality are cash transfer mechanisms that are not conditional on the pre-existing economic strength of the household, but are conditional on other desired behaviors^{184,185}. For example, providing incentives to families that achieve a certain school enrollment and attendance rate for their children; pension schemes for elderly farmers to encourage transition of land titles; or incentives to families demonstrating protection of environmental services (i.e. Payment for Environmental Service schemes). Such tools can be more effective to address the most vulnerable farming families with the most pronounced human rights and sustainability risks¹⁸⁶. These mechanisms do not typically fall into the comfort zone of private industry actors since their attention and expertise lies in value chain specific interventions and not social policy making, but some industry actors started exploring how they could interact with respective approaches through appropriate partnerships. The Nestlé Cocoa Plan, for example, is piloting cash incentives unrelated to cocoa sales that aim to support school enrollment¹⁸⁷.

4.4.3 Local capacity building and upskilling

Access to market information and business training has been documented to have a positive relation to successful cocoa and non-cocoa businesses. From Cocoa Life data, we can observe significant correlation between smallholder business performance and the ability of their owners to document and track business records, such as information about farm size, the amounts of agrochemicals used, cost of employed labor, and proceeds from cocoa sales^{xviii}. In Ghana and Côte d'Ivoire, we observe a positive and significant correlation between visiting business schools and keeping farm business records, and also between keeping records and higher yield. This effect is still observable at the level of net cocoa income which is positively and significantly correlated to record keeping^{xix}. It's noted that successful farmers are more likely to show interest in visiting business schools to begin with. And according to qualitative feedback, we found that keeping track of key business performance information helps farmers to optimize good agricultural practice application alongside other household expenses, resulting in lower over-spending and inefficiencies.

Participants in business school training are significantly more likely to keep records of their cocoa farming business. In Côte d'Ivoire, 86% of farmers began keeping sales receipts, and 71% of farmers started to record income from sales following training.

“It was all about planning all the expenses. I take the case of my plantation; I must try to budget all my expenses. For example, to clean my plantation, it may take 10,000 Francs. In terms of fertilizers and phyto products, I may need a box. So that, how much the box can cost me, I'm trying to plan all of these expenses. And also plan for family expenses.”

Farmer registered with Cocoa Life from Côte d'Ivoire, Nawa Region

“For example, if a man sells his cocoa, he has to then sit down and calculate, what he has to spend and pay, the children's school fees and then also save in the bank.”

Farmer registered with Cocoa Life from Côte d'Ivoire, Nawa Region

^{xviii} The findings are consistent among several cross-sectional studies.

^{xix} The official living income benchmarks based on the Living Income Community of Practice are calculated in \$USD per month per household for a reference household size consisting of adults and children. For the conversion to per-person-per-day rates, we applied a flat conversion across all household members as approximation.

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4.4.4 Food security improvements

Another main contributing factor to household resilience is household food security, defined as “the ability of all people to have enough food for an active and healthy life”¹⁸⁸. According to the Global Hunger Index, 2020, West Africa is one of the global regions most threatened by severe hunger¹⁸⁹.

In terms of quantities of food consumed, in 2019 about 19% of households working with Cocoa Life in Ghana experienced food shortages^{xx}, mostly during the months of May to July. In Côte d’Ivoire, only 3% of cocoa producing households experienced food shortages, mostly between June to August. The same trend of lower food security in Côte d’Ivoire compared to Ghana was also observed in an evaluation conducted by Dalberg¹⁹⁰.

Cocoa Life observed that of all the food crops produced among households, about 53% in Ghana and 72% in Côte d’Ivoire is used for direct consumption while the rest is sold - which may contribute to those surveyed in Côte d’Ivoire showing significantly lower experience of food shortage. These findings underline the importance of local food production for rural households and the trade-offs between food crop and cash crop cultivation. Importantly, food and cash crop production are often gendered concepts which implies that specific strategies have to be used to effectively involve women farmers and progress women empowerment^{191,192}.

While in some regions, cash crop production and availability of increased income has boosted investments into food crop production, in other regions, an opposite effect has been observed. Anderman et al.¹⁹³ described how food-security is strongly influenced by seasonality of income, food crop production cycles, and household spending decisions as these influence availability, access, and utilization of food resources. Anderman et al. also found specifically for the Ghanaian context that increased emphasis on and competition between cocoa, oil palm, and gold mining has decreased rural household food security across all sampled locations, with significantly increased focus on cash crop production at the expense of land availability and labor spent for food crop production¹⁹⁴. It has been estimated that West African households pay about 50% more in relation to their total available income for food than other regions in the world, and most regions in West Africa have become net food importers as the drive towards cash crops intensifies¹⁹⁵. Therefore, a holistic vision for a sustainable cocoa sector must consider food security in parallel, as cash crop cultivation cannot replace food crop cultivation entirely.

4.4.5 Strengthening communities

Activities to build a community’s ability to attract additional resources for development projects is an important avenue for long-term community development. Where support and interest from community leaders and local governments can be secured, improvements to local infrastructure can dramatically transform the conditions of entire cocoa growing communities. Governments have typically created policies to strengthen rural economic development, including processes that structure rural development planning and funding processes. However, working within those processes, formulating project requests and budgets is not always an easy task for local communities, and that is where actors that are interested in creating an enabling environment in rural communities can play a role through capacity building and awareness raising.

Across communities in Ghana and Côte d’Ivoire that work with Cocoa Life, about 37% of 5,608 projects^{xxi,196} identified across community action plans have been implemented with a funding mix from national governments, farmer organizations, community member contributions and donor support such as Cocoa Life^{xxii}. Examples of this include establishing secure electricity connections, opening more accessible potable water sources, and creating trusted spaces for childcare and education. This kind of investment in the community can support individual household income indirectly in the long-term.

91% of village leaders in Ghana, and 83% in Côte d’Ivoire agree that planning tools provided through Cocoa Life mobilize additional support for projects, and improve the ability of communities to steer their own development.

^{xx} Defined here as two meals or less per day.

^{xxi} The official living income benchmarks based on the Living Income Community of Practice are calculated in \$USD per month per household for a reference household size consisting of adults and children. For the conversion to per-person-per-day rates, we applied a flat conversion across all household members as approximation.

^{xxii} The official living income benchmarks based on the Living Income Community of Practice are calculated in \$USD per month per household for a reference household size consisting of adults and children. For the conversion to per-person-per-day rates, we applied a flat conversion across all household members as approximation.

CASE STUDY:

The Musrenbang System of Indonesia

The Indonesian government set a target to reduce the number of villages at the beginning of their development journey. To achieve this, the government allocated significant funding to support community action plans and issued a law for village development with an explicit focus on the Musrenbang system.

Musrenbang was first introduced in Indonesia in 2004 as part of reformation and decentralization policies and is a bottom-up community management approach that ensures the needs of communities are met, while also strengthening the government's development initiatives¹⁹⁷.

Integrating communities into the Musrenbang process requires raising awareness and local capacity building¹⁹⁸ – something sustainability programs can help deliver. Andi Sitti Asmayanti, Cocoa Life's program lead for Indonesia, explains that Musrenbang enabled Cocoa Life and its partners to empower community members to drive their own development. "Over the years, we've found that working in partnership with regional and national government has enabled us to engage the full community with Musrenbang, and that this has led to greater impact."

The program experience sheds a positive light on the integration. The rate of successful funding and completion of projects from the community action plan, as reported by community leaders during the 2019 program evaluation by Ipsos, stands at 82% in Indonesia versus each 37% in Ghana and Côte d'Ivoire. In Indonesia, government funds were the main source of funding for sizable infrastructure projects related to education, health,

and access to drinking water. Community self-funding and support from NGO partners was put towards road and light infrastructure maintenance, and education projects. Overall, 81% of farmers and 86% of community leaders agree or strongly agree that support to improve integration with the Musrenbang concept has improved community planning and development.

In Cocoa Life's experience, the Musrenbang process provides a helpful and clear structure to align the program's sustainability goals with government priorities. This approach has allowed the program to concentrate on capacity building of community members, helping them to attract and allocate resources for local development. In addition, the framing of the Musrenbang policy emphasizes the benefits of women's empowerment and equally supports Cocoa Life's implementing partners to deliver projects specifically designed to empower women and increase their participation in local governance processes. Not only has it enhanced the capacity of women to attain positions in local institutions, but also to attract resources to projects designed to support household income and economic growth. However, the question remains, how can we learn from the Musrenbang approach and mirror these concepts in other cultural and political landscapes?

4.5 The enabling environment

4.5.1 Governments of producing and consuming countries must continue to work together

Governments have the role to create an enabling environment in which their population thrives without negative effects on the environment.

As the UN Guiding Principles put it:

“

[a] State's... obligation [is] to respect, protect and fulfil human rights and fundamental freedoms¹⁹⁹. Their role is to address “market failures, externalities and other potential downsides of private sector activity which can undermine contributions to development and poverty alleviation”.

Producing country and consumer country governments have to be allies and work together to create sustainable legislative and regulatory solutions that support living income agreements and interventions.

Governments of producing countries, for example, shape the public policy landscape in which all the other actors in the cocoa value chain interact. “An effective enabling environment contributes to the chances of investor success, which is in the interests of all stakeholders²⁰⁰. This includes regulations, institutional arrangements, transport networks as well as research infrastructure. In this section we focus our analysis on the enabling environment and relevant living income policies in Ghana and Côte d'Ivoire.

Consuming country governments, including individual markets and state unions such as the European Union, also have a responsibility towards protecting cocoa-producing country interests. ‘Considering the role of the EU as a policy and global standard setter, the objective of the dialogue is to support the elimination of child labor and child trafficking, the protection and restorations of forests, and to ensure a living income for cocoa farmers²⁰¹. If the EU creates legislation, combined with support for, and agreements with, producer country governments to facilitate better sustainability outcomes, this could have a positive impact. The EU could connect these endeavors in the Economic Partnership Agreement with West Africa such as the ‘stepping stone’ Economic Partnership Agreements entered into provisional application in 2016 with Côte d'Ivoire and Ghana.

4.5.2 Government Supply Management and the International Cocoa Agreement (ICCA)

National and international policy-making also holds one of the potential answers to risks of overproduction through cocoa centric income interventions: a system of international supply management to match production with market demand. International commodity agreements for cocoa were signed in 1972, 1975, 1980, 1986, 1993, 2001 and 2010²⁰². The ICCAs from 1972 and 1975 included supply management measures which matched cocoa production with market demand between 1972 and 1980, as they combined buffer stocks and export quotas²⁰³. In the 1980s a chronic surplus occurred, which the agreements from 1980 and 1986 could not address as the export quotas were removed because of opposition from OECD countries²⁰⁴. Keeping buffer stocks as the only supply management measure without exports quotas resulted in the oversupply of cocoa²⁰⁵. An agreement in 1993 included supply management provisions again, “but these were too small to have a significant effect²⁰⁶. The agreements from 2001 and 2010 did not attempt to establish supply management measures and most recently in 2021 the ICCO²⁰⁷ released a concept note which pointed to the importance of increasing cocoa demand through promotion strategies, in addition to supply management. Such promotion strategies can be targeted at national markets or upcoming cocoa consuming countries.

The ICCA is considered to have had a positive effect on cocoa prices. Cocoa prices decreased by 35% for the first six-year period following the collapse (1990-1996), compared to the final six-year period of the agreement²⁰⁸. They recovered slightly in the second six years after the collapse being 32% lower compared to prices in 1990. The 2005 price for cocoa as a percentage of the adjusted 1980 price was 22.4%²⁰⁹. Under the cocoa agreements until 2001, price levels above the recommended price were achieved for around the first half of the life of the agreements, because of removing measures in the second half²¹⁰.



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The history of the ICCA underlines the importance both to balance demand and supply of cocoa and to align measures between different actors to be effective. Authors such as Koning and Jongeneel²¹¹, continue to argue for models which combine market price increase with a supply balancing model alongside conservation approaches.

And the FAO (2008)²¹² notes that such systems are effectively working against the free market and thus require a very stable support system:

“Working against the market requires considerable unanimity on the part of governments of major producing countries but probably also the active consent of consuming country governments.”

For supply management systems to work, different conditions should be present. Its focus should be farmer centered, politically supported with effective administrative capacities. Furthermore, independent financing mechanisms should be in place and land use plans should be developed with farmers and their communities. For more information on how it could be implemented for the cocoa sector, see Waarts et al.^{213, 214} and ICCO²¹⁵.

Attempts to manage supply and demand are wide-spread and it is hotly debated if they can ever work sustainably or not. Besides commodity agreements, other measures can be taken such as increasing domestic consumption or elimination of over-production. An example of an ad-hoc measure to reduce over-supply of a commodity and to stabilize prices and be found in the Brazilian coffee sector. At various times during the last century (1906, the 1930s and the early 1970s), the coffee giant decided to destroy many millions of bags of green coffee, often by dumping it in the sea or burning it to prevent a glut in the market [and thus kept prices stable]²¹⁶. During the Great Depression and World War II Brazil destroyed more than 10 billion pounds of coffee²¹⁷. This example shows the extreme measures governments decide upon to avoid a collapse in prices and to protect farmer and governmental incomes, whereas supply management aims to avoid such extreme measures.

4.5.3 Other areas of government policy intervention

Land governance, such as tenure, land use planning, and inheritance policies, are important as they can address the fragmentation of farm sizes so that farmers are not left with farms too small to earn a decent income if their family members do not have the opportunity to earn additional income elsewhere.

Land fragmentation is a challenge in Ghana and Côte d'Ivoire (see section 2.1), as well as the whole of Sub-Saharan Africa, and there are expectations that farm sizes will further decrease due to the increasing population in connection with existing inheritance policies and structures²¹⁸. If land becomes available for consolidation via policies addressing fragmentation, this could allow remaining farmers to work on larger farms, which in principle would increase the likelihood for them earning a living income. To achieve shifts of labor to other sectors it is important that the enabling environment is correctly set up for this—that means that other economic sectors need to present viable opportunities, that measures are taken to upskill or re-skill workers, and that infrastructure exists that allows farmers and their families to settle elsewhere²¹⁹. Finally, the fact that labor is “sticky”, such that people do not easily move away from their current social networks, should be addressed²²⁰.

Social protection systems in Sub-Saharan Africa ‘tend to benefit mostly formal workers²²¹, and generally do not benefit smallholder cocoa farmers, their family members and workers. Article 25 of the Universal Declaration of Human Rights indicates that “everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control”²²². Pensions would be one specific type of a social protection program. They “are essential to ensuring rights, dignity and income security for older persons” but there is a very limited legal coverage in Côte d'Ivoire with 10% of the working age population included, while in Ghana the coverage is 51%²²³. Social assistance and protection programs are thus important to consider for achieving a living income for the most vulnerable households.

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The Living Income Differential (LID) follows joint deliberations and weighting of the market situation against the situation of farming households to devise a tool that is implemented across cocoa markets in Côte d'Ivoire and Ghana, covering all actors and farmers. The LID effectively creates a price top-up based on national policy and on economic expectations concerning the demand and supply situation of cocoa, and the ability of the market to absorb the LID without readjusting other pricing components. Just as in the case of supply management systems, such tools depend on favorable market conditions, or agreements between governments and buyers to neutralize potential negative market effects that a price increase can trigger. A part of the cocoa industry had signaled a positive stance towards government leadership on the issue²²⁴. Currently, the LID faces implementation challenges which call for improvements and realignments between buyers and governments. However, it remains an important example of a cross-country policy measure aimed at improving the income situation of farmers at scale.

4.6 Multi-stakeholder collaboration and coordination on policy design, and cross-sector data sharing attempts

Cocoa sector actors and stakeholders must collaborate and align planned activities with governments and peers to increase the efficiency of sustainability efforts. There are a variety of multi-stakeholder collaborations and platforms existing in the cocoa space and some of them have been credited as being front-runners on specific topics to drive solution-finding and change.

These collaborations might not have managed to solve complex issues in the cocoa sector, but they are invaluable attempts to improving the situation of farming households. We believe that collaborative approaches, beyond what is available today, will be at the heart of improved forms of governance for sustainable supply chains.

As Nkamleu and Kielland (2006)²²⁵ concluded when researching how to create systemic change for child protection in agricultural supply chains:

“**There is no simple, or even a dominant way to approach the problem. Government agencies need not go alone [...] some of the more successful initiatives have been the result of partnerships in which businesses have come together with communities, government agencies, NGOs, and international organizations to work toward a common objective”.**



WHY COLLABORATE?

Contribution from Stephanie Daniels of Sustainable Food Lab

For effective living income strategies at scale, we need a systemic analysis of all sources of revenue, factors of farm profitability and the wider enabling environment for living income. Collaboration between farmer organizations and NGOs on the ground, governments - for both exporting and importing countries - and industry is needed to develop this analysis and resulting strategies. The cocoa sector is a leader in collaborative methods and learning, through sector-wide support of the Living Income Community of Practice, including the development of third party, robust living income benchmarks in Ghana and Côte d'Ivoire²²⁶. Collaboration is hard and time consuming, but critical for tackling living income at scale.

The global cocoa sector has at least seven major platforms focused on collaborative action with living income included as one topic: the ICCO and the World Cocoa Foundation; Europe has four Cocoa Platforms and the VOICE network; Ghana and the Côte d'Ivoire have recently founded the Ivory Coast-Ghana Initiative. Some of these organizations also come together quarterly in the Alliance for Living Income in Cocoa, which aims to “contribute to systemic change in the cocoa sector to ensure that farmers earn a living income with an initial focus on West Africa”.

The establishment of these platforms demonstrate the urgent need for effective dialogue on the most difficult parts of the living income debate – commodity pricing and volatility, supply management, and the link between incomes and other sustainability goals like halting deforestation and child labor. Recent #EUCocoaTalks have contributed to this policy dialogue and advanced the bilateral collaboration between the European Union and the governments of Ghana and Côte d'Ivoire. The Ivory Coast-Ghana Initiative, which was founded to oversee economic policies on cocoa between the two countries, is an important advance in the alignment of the two largest cocoa producing nations on the fundamentals needed for economic viability for their farmers.

To realize the potential of these platforms, the coming months and years must see more concrete collaborative action on topics such as policy development for international development aid that can raise the stability of origin governments, the sharing and harmonization of farm level data for common understanding, and evidence-based learning on effective strategies to develop pathways to living income and prosperity through cocoa and other revenue sources. Collaboration is hard, but worthwhile if it leads to implementing a vision we could not accomplish alone.

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4.6.1 Alliance on living income in Cocoa

The Alliance on Living Income in Cocoa (ALICO) started in 2018 as a response to the World Cocoa Conference in Berlin with the goal to contribute to systemic change in the cocoa sector to ensure that farmers earn a living income²²⁷.

19 organizations from civil society, industry, European governments, multi-stakeholder platforms, and certification schemes meet through ALICO to:

“**Promote and provide policy dialogue; align living income efforts and ensure not to duplicate efforts; and to support collaborative action among different actors**”²²⁸.

ALICO is an example of broader umbrella structures that go beyond industry actors and governments but also align strategic and policy dialogue among the backbone organizations of other multi-stakeholder platforms. ALICO underlines the urgent need to progress coordination and alignment in order to drive meaningful progress on the living income challenge.

4.6.2 Cocoa soils

The Cocoa Soils program is a multi-partner initiative co-led by Wageningen University & Research, the International Institute of Tropical Agriculture (IITA) and IDH the Sustainable Trade Initiative. The program started in 2018 and will run through to 2022 with the aim of delivering improved soil fertility management recommendations to help cocoa farmers in Côte d'Ivoire, Ghana, Nigeria, and Cameroon improve yields and avoid deforestation.

The goal of Cocoa Soils is to close the knowledge gap regarding good crop nutrition and proper management of cocoa trees, as cocoa plantations in West Africa are not as productive as expected, yielding low income for farmers. A key element of the partnership is the sharing of data and information. To this end, a knowledge and data sharing portal has been established to share all data from the project in an 'open source' pre-competitive space. A longer-term goal is to bring all background research and knowledge on cocoa into the public domain. This is linked to the Global Open Data in Agriculture Network (**GODAN**). There is also potential to integrate socio-economic data to this partnership and data portal, as it is able to utilize the existing participating and the existing data and research infrastructure to recommend interventions to achieve living incomes for different types of farmers.

The program is implemented in partnership with the national Cocoa Research Institutes of Cameroon (IRAD), Côte d'Ivoire (CNRA), Ghana (CRIG) and Nigeria (CRIN). Other partners include the University of Guayaquil, Ecuador, international research centers (including the International Centre for Tropical Agriculture – CIAT, the World Agroforestry Centre – ICRAF, the UN Environment World Conservation Monitoring Centre – UNEP-WCMC) and many commercial companies (input supply, trading companies and confectionery companies) who also invest in the program. The Norwegian Agency for Development Cooperation (NORAD) is one of the funders of this partnership.



4.6.3 The World Cocoa Foundation: CocoaAction and Cocoa & Forest Initiative

The World Cocoa Foundation (WCF) is a non-profit organization committed to transparency and accountability with the vision to contribute to a thriving and sustainable cocoa sector, where farmers prosper, communities are empowered, and the planet is healthy²²⁹. WCF is a membership organization with members spanning about 80% of the global cocoa market²³⁰. Through its members, WCF facilitates cocoa sustainability projects, research, and partnerships such as CocoaAction and the Cocoa & Forest Initiative. Importantly, those partnerships do not only create alignment and cooperation among industry members of WCF, but they increasingly build connections with producing country governments, integrating ministries into partnership agreements and action planning processes.

4.6.4 International Cocoa Initiative (ICI)

Founded as an NGO in 2002, the ICI is a multi-stakeholder platform and a main implementer of child protection systems meant to identify, monitor, and remediate cases of child labor in cocoa. The ICI works at supply chain, community, national, and international level to “improve the lives of children and adults at risk of child labor or forced labor in cocoa-growing communities²³⁴”. About 25 companies are members of the ICI reaching an approximate 420,000 with child protection and family income support activities between 2015 to 2020²³⁵.

CocoaAction is a voluntary strategy that aligns the world’s leading cocoa and chocolate companies, origin governments, and key stakeholders on regional priority issues in cocoa sustainability. Through CocoaAction sector actors agree on complementary roles and responsibilities, leverage scale and efficiency through collaboration, and catalyze efforts to accelerate sustainability in the cocoa sector.

The **Cocoa & Forest Initiative** is a multi-stakeholder partnership initiated in 2017 between 35 industry actors alongside the governments of Ghana and Côte d’Ivoire to end deforestation and restore forest area²³¹. At the heart of CFI are individual action plans for each participant in the platform which are tied to concrete actionable commitments, monitoring of progress, and public reporting^{232, 233}.



EUROPEAN SUSTAINABLE COCOA PLATFORMS

Contribution from Beate Weiskopf of the German Initiative for Sustainable Cocoa (GISCO)

Across several EU countries - Belgium, the Netherlands, Switzerland, and Germany - multi-stakeholder platforms for sustainable cocoa come together to provide an intersection between governments, civil society, and private sector actors with the goal to strengthen the progress towards sustainable cocoa. Among all of those platforms, the need to achieve a decent income for cocoa farming families plays a central role. In the following segment, the secretariat of the German initiative on sustainable cocoa will introduce the platform and its contribution to cocoa sustainability.

The **German Initiative on Sustainable Cocoa (GISCO)**, a multi-stakeholder initiative in which the German Federal Government (BMZ and BMEL), the German sweets and confectionery industry, German retail grocery trade and civil society have joined forces, pursues the goal of improving the living conditions of cocoa farmers and their families, conserving and preserving natural resources and biodiversity in the cocoa growing countries, and increasing the cultivation and marketing of sustainably produced cocoa.

Beyond these three overarching goals, the more than 70 members of the association agreed in May 2019 on **twelve specific goals** as a framework for action for a sustainable cocoa sector. **Specifically in goal 1, the members of GISCO advocate for:**

“Improved farm-gate prices, minimum price and premium systems as well as other income-generating measures as contributions to a living income of cocoa farming households.”

Other goals include the improvement of productivity, the support of governments in the development of holistic regional agricultural programs, promotion of diversified production systems, end of deforestation, abolishment of child labor, enhancement of gender equality, the compliance with human rights and environmental aspects, strengthening of governments in producing countries, increasing the share of cocoa certified by sustainability standards or equivalently independently verified in the German market and joint learning within the multi-stakeholder setting. This set of specific goals represents the holistic approach that GISCO and its members take to improve the living conditions of cocoa farmers and contribute to a living income. The long-term goal: that all cocoa in cocoa-containing end products sold in Germany comes from sustainable cultivation as defined in GISCO's holistic and ambitious **definition of sustainable cocoa** – taking into account economic, environmental and social aspects of sustainability.

The achievement of its goals is measured within a monitoring system, which is jointly implemented with the other national platforms for sustainable cocoa in Europe in which yearly reporting is envisaged. Through that platform, GISCO members report on sustainability premiums paid to suppliers and/or farmers, and report transparently on implemented income relevant projects and programs. The first monitoring report of GISCO as well as the one of the Belgian initiative, Beyond Chocolate, has been published in September 2021. The respective information will be published on the **website of GISCO**.

As a multi-stakeholder initiative, GISCO has an important role in supporting joint learning processes. GISCO collaborates closely with its partners in the European and International context to harmonize the monitoring and evaluation systems and create network effects through joint working groups. The **collaboration with other national platforms for sustainable cocoa in Europe** (The Belgian initiative Beyond Chocolate, the Dutch Initiative on Sustainable Cocoa (DISCO) as well as the Swiss Platform for Sustainable Cocoa) was formalized in 2020/21. The **Memorandum of Understanding** focuses on the central challenges of the sector, increasing transparency and traceability in the cocoa supply chain, contributing to a living income for cocoa farmers, halting deforestation and ending child labor. Additionally, GISCO collaborates with other partners to implement a smart mix of strategies to reach a living income such as the World Cocoa Foundation, the International Cocoa Initiative, the International Cocoa Initiative (ICI) and the Alliance on Living Income in Cocoa (ALICO).

In the context of the joint project PRO PLANTEURS, GISCO has a close collaboration with the Conseil du Café-Cacao in Côte d'Ivoire with the objective to improve the living conditions of cocoa farming households by increasing their income towards a living income and by promoting balanced nutrition. After a successful first project phase from 2015 – 2020, the project is now implementing a second 5-year-phase that started in June 2020.

5. CONCLUSIONS

We have set out the sizable 10billion \$USD a year living income challenge in cocoa; a challenge underscored by marked inequalities among cocoa farmers in West Africa, and global and local market forces that together make no one solution viable alone.

5.1 What all this tells us

Our research shows that cocoa farming families are a diverse group with different needs and different ways to achieve a living income and life without poverty. We cannot solve this challenge among farming families sustainably, responsibly, locally or globally by just looking at one type of farming family. As the evidence presented in this paper shows there are many households who will always struggle to reach a living income through cocoa. Therefore, it is crucial to develop interventions that improve the prospects of the most vulnerable farming families, while continuing to provide support to more successful farming families in parallel. Not all interventions that are needed now will push income towards the living income benchmark in the short-term - much more is needed in the medium to long-term.

Reaching a living income will be easiest and fastest for productive farming families that already do relatively well in terms of growing cocoa, and hardest for a large proportion of households that are struggling the most. It's important to note that it's among these households - those struggling - that the most concerning poverty and human rights challenges are concentrated.

Individual supply chains cannot fully isolate themselves by only tackling challenges in their remit, for example by concentrating on the best performing farmers: the situation of all farming families influences market and rural living conditions, thereby connecting progress and failures across all actors. Every actor has a role and responsibility to contribute. That does not mean that everyone needs to do everything. As well as governments or development institutions, even industry actors working with only high performing farming families will have other priorities than those industry actors working with a broader set of farming families.

Therefore, we conclude that we will only succeed in lifting all families to a living income if the strategies we adopt are holistic, seriously consider the diversity of cocoa farming households, and include interventions tailored to meet individual conditions. We must find viable support both for the farming families succeeding with cocoa, but importantly also for the large numbers of farmers that are not - those that simply do not grow enough cocoa or have enough land for cocoa- and farm-centric tools to ever be a pathway to a living income.

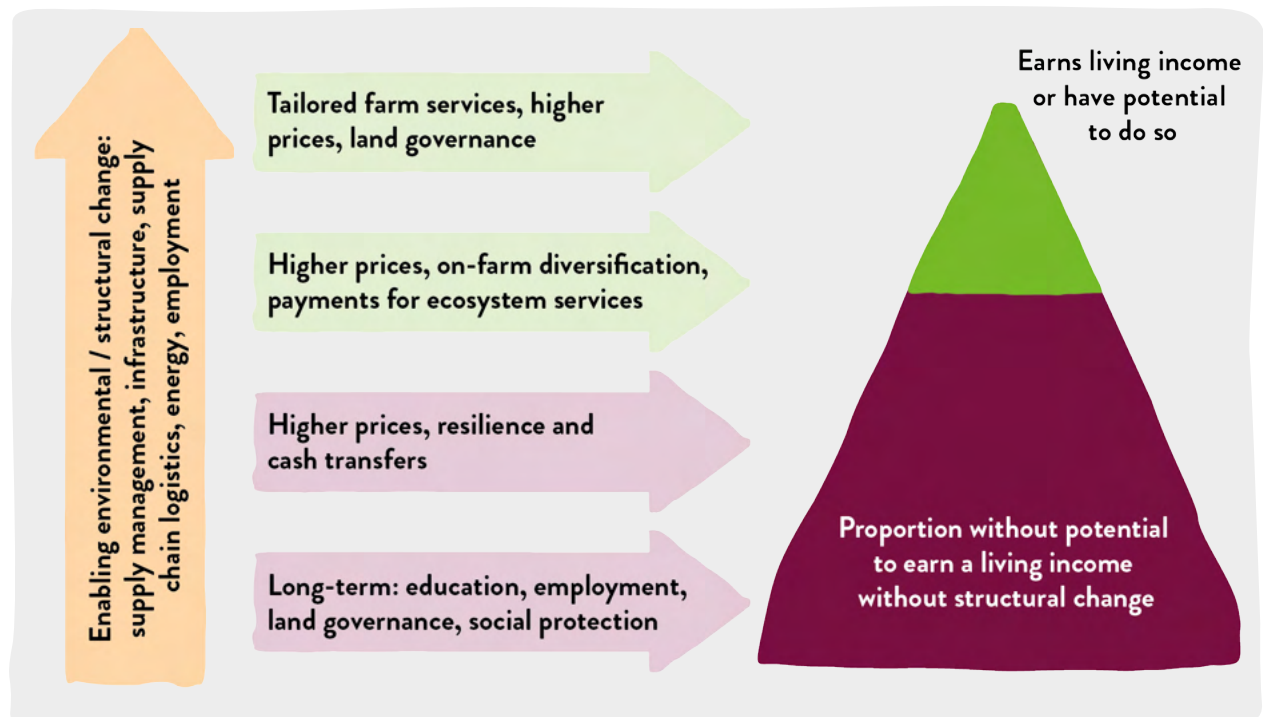


FIGURE 13: Interventions and enabling environments that impact the ability to earn a living income for different types of farming households.

Data source for figure: Adapted from Waarts (2021)²³⁶.

5.2 Towards a shared understanding of the living income challenge

The current insights on the potential of cocoa farmers to achieve a living income indicate that a coordinated approach is needed to transform the sector, because structural weaknesses lead to the “persistent sustainability problem”²³⁷ of smallholder poverty. The following three steps are important for an effective approach: 1) creating a shared understanding of the system and sector performance, 2) vision and strategy development, and 3) managing for sector transformation²³⁸. This paper contributes to creating a shared understanding of cocoa sector performance. In this concluding chapter we summarize the different root causes, linked by evidence to the current poverty levels, to different sector activities and drivers as defined in a food system framework (see Figure 12 below). A food system includes all the activities and processes associated with food production and food utilization²³⁹. Using the food system framework to present our results, allows to analyze trade-offs between different activities and sector outcomes such as (living) income, as well as food and nutrition security and the environment. Based on this, actionable choices can be made on what root causes are the most urgent and important to be addressed, and who could or should play a role.

Please find on the next page a summary of the different key root causes for smallholder farmer poverty based on the evidence presented in this paper^{xiii}. It is important to note that interventions in the different sector activities can interact with each other, and can result in various socio-economic, food and nutrition security as well as environmental outcomes. Therefore, addressing the living income challenge cannot be addressed without taking into account the environment and food security.

Looking at these different challenges to be addressed, effective support strategies will require coordinated action from multiple types of actors in parallel to ensure that activities work at scale and do not have unintended negative consequences on market balance and rural opportunities. Despite several platforms approaching living income, we do not see that the required level of coordination and alignment exists today that is required to address the living income challenge effectively.

Furthermore, local actors such as farming families themselves need to be better included in discussions on challenges and opportunities to identify relationships of dependency which make it hard for different types of players to change their behavior and policies²⁴¹. Proper stakeholder involvement is an important element of a responsible transition process in which the ecological carrying capacity is not surpassed, while social needs are addressed, including during the transition period^{242, 243}.

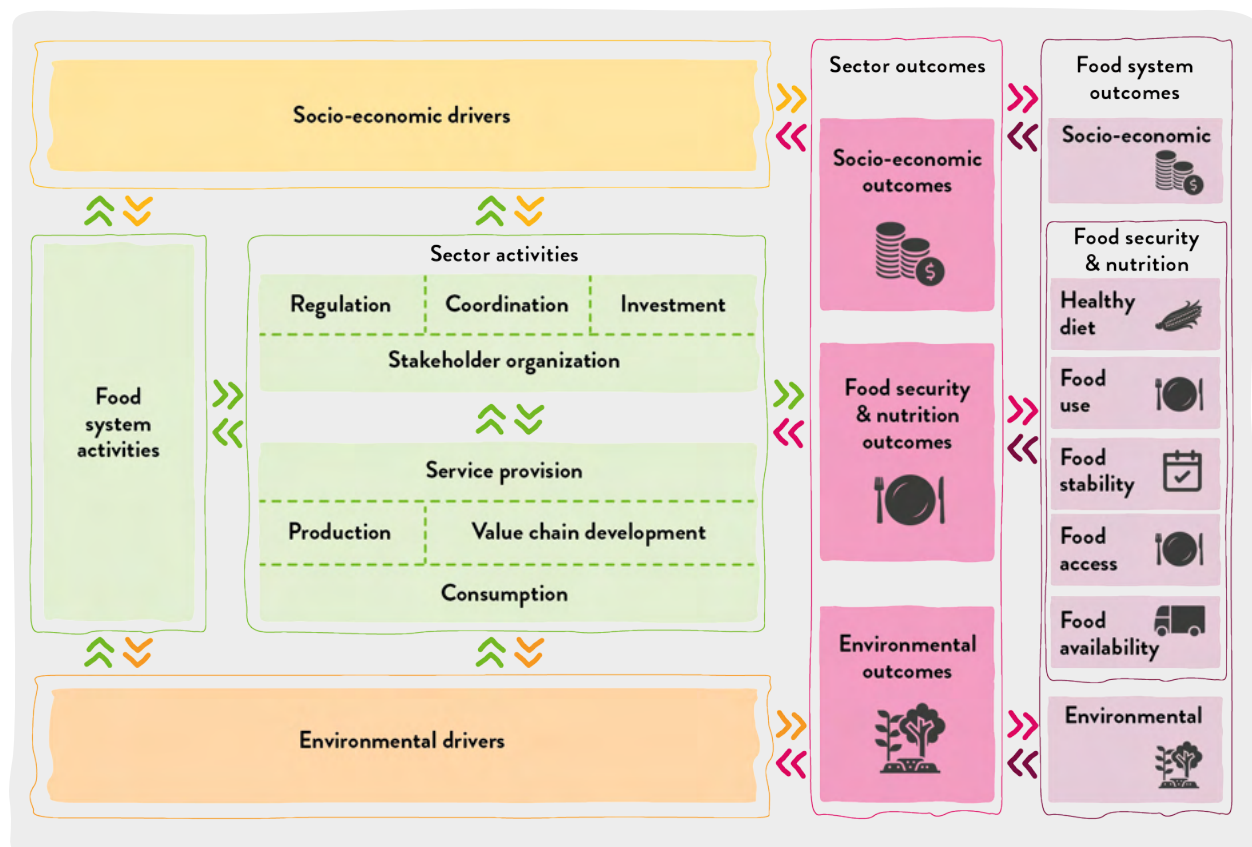


FIGURE 14: Food system framework to assess cocoa sector performance.

Data source for figure: Borman et al., forthcoming. Figure adapted from Berkum et al., 2018²⁴⁰.

^{xiii} It builds on a recent publication of Aidenvironment in the Netherlands as well as existing and forthcoming Wageningen University & Research studies.

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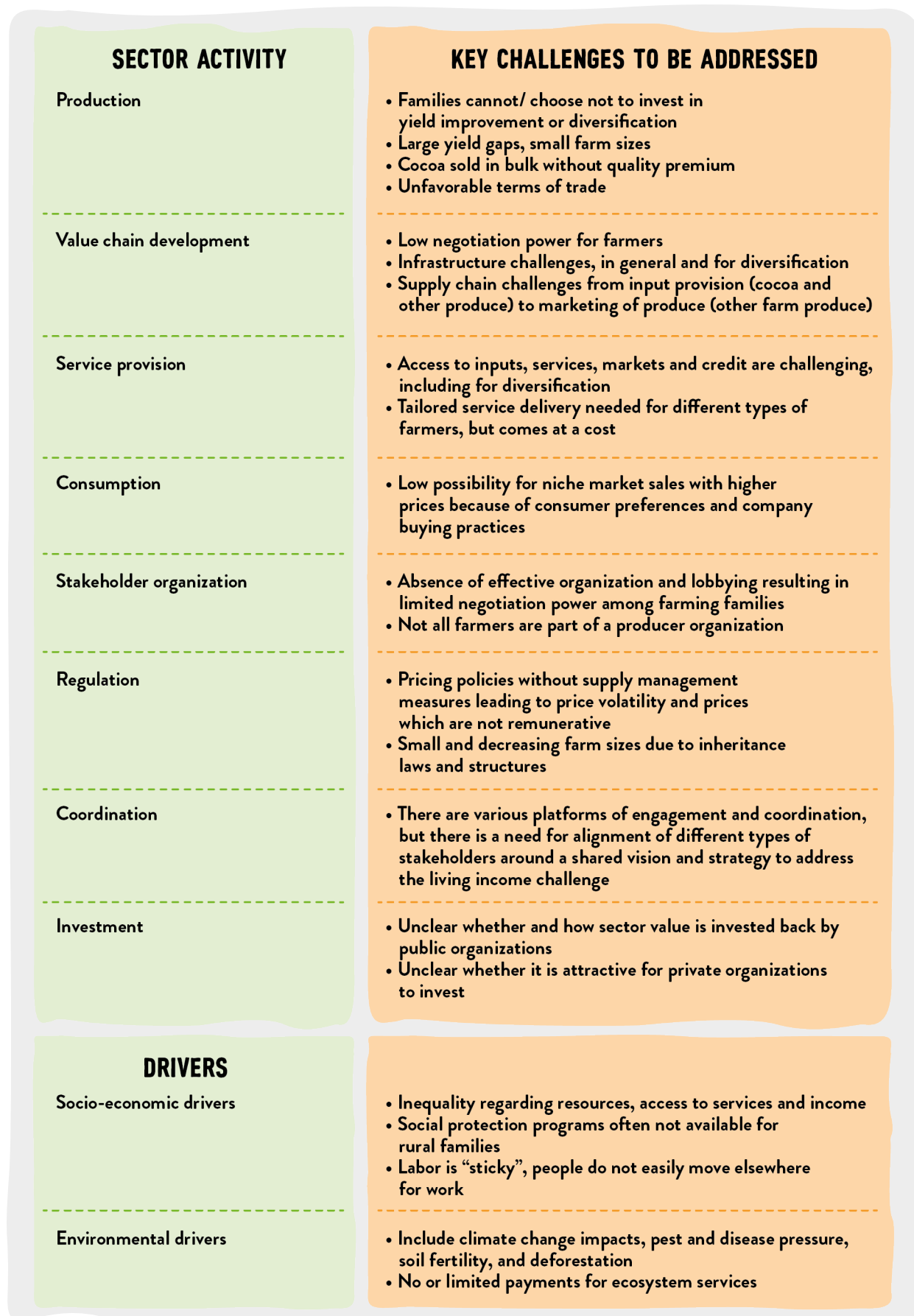


FIGURE 15: Summary of barriers to achieve a living income for all cocoa farming families.

5.3 Call for creating a shared vision and strategy based on a shared understanding of the current and future challenges and their root causes

To address the issue of farmer income sustainably, we believe it is important that all cocoa sector stakeholders come together to discuss and build a shared understanding of the living income challenge and create a shared vision and strategy, so every actor can determine where they can have the most impact and act in that space, in coordination with others. This is best championed by a trusted independent party linking government priorities, civil society, and industry across different sectors²⁴⁴.

No one actor alone can solve this challenge, but every actor must commit to action that tackles the poverty level, while working to improve how the sector integrates its work more meaningfully. We argue that not every actor need approach this in the same way, and not every actor will have the same effect on increasing living income coverage on the same timeline. For example, certain industry actors work predominantly with few high performing farming families and farmer organizations while others work at a much broader scale with very different types of farming families. While in the long-term both actors will be dependent on progress across all households (as they all impact the sector and market

conditions), the actor working with high performing households might put more short-term emphasis on cocoa-centric measures being able to push faster towards the living income benchmark, whereas for actors working with more vulnerable farming families, addressing pressing human rights concerns and implementation of non-cocoa centric tools need to be done in parallel. Further, these industry actors have very different leverage points on social and rural development policy compared to national governments, for example.

Respective partnerships will be key for actors with close ties to farming families which are difficult to reach through cocoa centric and other measures, but in the long-term, everyone depends on successful rural development across all farming households to minimize human rights risks and enable farming families to reach a living income. Thus, while short-term strategies might differ between different types of actors, all depend on progress across all segments of farming families for lasting long-term change. The question of how to address the challenges across the sector should be considered in every actor's strategic reflection on the living income challenge and will require significant cooperation across multiple actors.

Cocoa Life is currently refining its own strategy to address this challenge and, together with Wageningen University & Research we are calling on others to join us.



5.4 Towards effective management

For the most successful approach, we need to work openly together to ensure that no group or segment of farmers slips through the net and gets left behind. To ensure the living income challenges will be addressed cost-effectively, the following activities can be undertaken as part of the wider sector transformation process:

- **A sector or cross-sector wide targets-based approach** that provides a framework to define the meaningful contribution every player can have and their different roles, analogous to what the Science Based Targets initiative has done to lead the way in addressing climate change.
- **Dialogue, insight and data sharing** between public and private sector to inform government policy as well as private sector and NGO strategies and enable all parties to complement each other in action, leaving no gaps.
- **Multi-stakeholder coalitions** implementing landscape approaches in certain areas. These are being used effectively to tackle deforestation and promote children's education. They enable alignment with national development plans and integration into local structures, without negatively affecting the negotiating power of farmers to sell their produce to whomever they choose.
- **Public-private partnerships** utilize the strengths of both partners and enable actors to coordinate their sustainability interventions in a meaningful way towards a shared goal aligned to government leadership. Essential enablers for this are clear national government strategies for cocoa, rural development, and development of other sectors that could provide employment for people who would otherwise have few opportunities for earning a decent income from cocoa.

Such collaborations will require both transparency across actors and a shared understanding of the challenge itself: of these inequalities, the scale of the challenge to reach all farming families, and the breadth and holistic nature of the interventions required. And crucially, agreement as a sector that we must reach all farmers – not just those in any one supply chain.

Partnerships between different actors, such as Mondelez International and Wageningen University & Research, can help overcome barriers some groups face as well as strengthen the capacity of others. On the next page we present a roadmap for action which is also useful to actors beyond the private sector. Every party, the private sector, as well as research institutes, plays a role in enabling other actor groups to be able to clearly define their contribution to addressing the living income challenge.

As an example:

The Science Based Targets Network²⁴⁵:

has formulated reference frameworks to set meaningful targets for the reduction of CO² as a contribution to mitigate climate change. Within their framework, the setting of a target and committing to a target are steps three and four in their proposed six-step guidance to prepare for the setting of meaningful targets and can only be approached after data gathering and measurement in relation to their framework. In the living income space today, an equally clear reference framework to commit to meaningful contributions towards the goal of enabling all farmers to reach a living income is still missing, and while commitments are frequent, they are often not based on adequate data and realistic action frameworks that integrate with data²⁴⁶.

A landscape approach: is a multifaceted integrated strategy that aims to bring together multiple stakeholders from multiple sectors to provide solutions at multiple scales. It can be broadly defined as a framework to address the increasingly widespread and complex environmental, economic, social and political challenges that typically transcend traditional management boundaries. (Arts, B. et al., 2017)²⁴⁷.



5.5 A cocoa sector roadmap for private sector companies

Based on the insights and data set out in this paper, we propose a roadmap for private sector action in the cocoa sector. The approach presented here follows classic program management cycles, draws from due diligence recommendations, Cocoa Life's own experiences embarking on its living income strategy, and aligns with similar recommendations by the Living Income Community of Practice^{248, 249}.



1) Assess:

- **Assess** your own role by analyzing how and where your organization's work interacts with living income and sustainable livelihoods

for smallholder farmers. This includes assessing what types of farmers you are sourcing from and whether they earn a living income, have the potential to do so, or perhaps a low or no potential to do so. A gender lens has only been rudimentarily applied in this paper and demands special attention alongside the assessment of opportunities at the intersection of enabling living incomes and combating climate change. Often, significant data is already available through the supply chain at the level of farmer organizations and traders/processors so that this important assessment stage can often be managed quickly and at minimal cost.

- Based on those findings, determine the level of priority given to the topic and where it lives within your organization, reflecting your mission.

- For private sector actors, this often happens alongside risk and needs assessments^{xxiv}, or materiality analysis as part of a due diligence or sustainability strategy formation.



2) Define & Mobilize:

- **Define** your organization's vision and ambition to interact with the living income theme.

- Develop a joint understanding across your organization on the level of priority that the topic is given in general and in specific countries, to ensure that resources can be **mobilized** to pursue action. The Living Income Toolkit of the Living Income Community of Practice²⁵⁰ provides helpful orientation and recommendations on this topic.
- Where feasible, this stage can include the setting of quantitative performance targets (for different types of farmers, including the most vulnerable).
- Optimally, targets would indicate not only how much a living income gap is closing and how many farming families should be able to achieve a living income, but also take account of wider contribution activities that address household resilience and improve the enabling environment for a living income. It is important here that a reference framework exists for how to account for such contributions, as many important activities (as discussed earlier in this paper) are not designed to provide a short-term boost but a long-term improvement to the overall situation.

^{xxiv} While we have not made all needs assessments available in their entirety, an exemplary executive summary of a (2016) Program Needs Assessment is available under the following link. Cocoa Life currently reviews possible approaches to make additional needs assessments available online in the future. https://www.cocoalife.org/~/_media/CocoaLife/en/download//article/April%202020%20Cocoa%20Life%20Cote%20d'Ivoire%20Needs%20Assessment%20Exec%20summary.pdf.

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**3) Align & Amplify:**

• **Alignment** with government, other sector actors, and local partners is essential, from national development frameworks

to membership platforms and local partners under shared funding mechanisms. Certain parts of the cocoa supply chain are becoming accustomed to cooperating (e.g. traders/ processors with their client manufacturers). However, linkages at the level of competitors or towards integration of the retail sector is still not common. Coordination between the private and government sector urgently requires a trusted independent facilitator.

- Organizations may choose to **amplify** messages or to take a lead in focusing attention across different global fora (Consumer Goods Forum, World Business Council For Sustainable Development, World Economic Forum) on the issue. Such champions, who present aspirational goals and show others new ways of working jointly across many different actors, will be needed to reach living income ambitions.

**4) Create & Implement:**

• Identify which actions are most likely to **create** impact on the ground (for different types of farmers), especially those that tackle underlying root causes of poverty.

- Draw from existing best practice examples or existing data^{xv}, conduct local needs-assessments, or utilize other means based on partnership and co-creation to inform action. In many cases it is helpful to understand effects of inequality and needs across households via segmentation studies which can highlight differences between households and how to approach those differences²⁵¹.
- Long-term farmer and community relationships are important. Program and sourcing activities should be communicated well, and not change every few years, allowing farmers to build their business. And where possible, similar activities **implemented** by different parties in the same communities should be coordinated to drive efficiencies for everyone.

**5) Measure, Report, & Improve²⁵²:**

• **Measure:** Assess the impact of your actions against the goals and expectations you set out in stage 2. Measuring such impact can be complex and expensive, and it is strongly recommended to look for partners that specialize in evaluating relevant programs, including agronomic expertise.

- **Report:** Where public frameworks or internal accountability requirements expect it, data and insight should be reported. In certain cases, data can also be helpful for farmers or farmer organizations, so should be shared in a way that creates a meaningful and helpful source of information.
- **Improve:** The field of sustainability evolves constantly: the actions, activities, and concrete strategies understood to be part of 'sustainability' changes according to social discourse, the development state of countries, and policy frameworks. As such, approaches to fight poverty and lift farmers to a living income will need to evolve and be fine-tuned.

There are still gaps to be filled in this roadmap, especially elements that are difficult for private sector actors to steer alone, such as coordinating action beyond cocoa industry actors; creating policies and national institutions that provide the context in which living income efforts are implemented; and spreading awareness, sharing research, informing and educating.

COCOA LIFE DATA STATEMENT

In this paper, Cocoa Life data collected and analysed by Mondelez International/Cocoa Life and Ipsos are presented, as well as data from other authors and sources. Reliability of the Cocoa Life data rests with Mondelez International/Cocoa Life and Ipsos, whereas Wageningen University & Research cannot be held responsible for their accuracy.

^{xv} A great start to discover available resources is the Living Income Community of Practice: <https://www.living-income.com/resources>.

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