

FAIRTRADE LIVING INCOME REFERENCE PRICES FOR COCOA

An explanatory note (revised version 2019)

INTRODUCTION

A Living Income Reference Price indicates the price needed for an average farmer household with a viable farm size and an adequate productivity level to make a living income from the sales of their crop.

Living Income Reference Prices play a critical role within Fairtrade's holistic living income strategy. They are instrumental for raising awareness around the fundamental need for sustainable pricing to enable living incomes on one hand, and on the other hand they inform price setting for Fairtrade and other actors committed to sustainability.

End 2018, Fairtrade established preliminary Living Income Reference Prices for cocoa from Côte d'Ivoire and Ghana, triggered by the urgency to prioritize progress towards living incomes for cocoa farmers in West Africa and tied to the comprehensive Living Income benchmark studies by the Living Income Community of Practice.

In 2019, the model was adjusted, incorporating new insights from the field, particularly in relation to the potential diversified (in-kind) farm income for cocoa households, linked to the imperative to manage risks for oversupply.

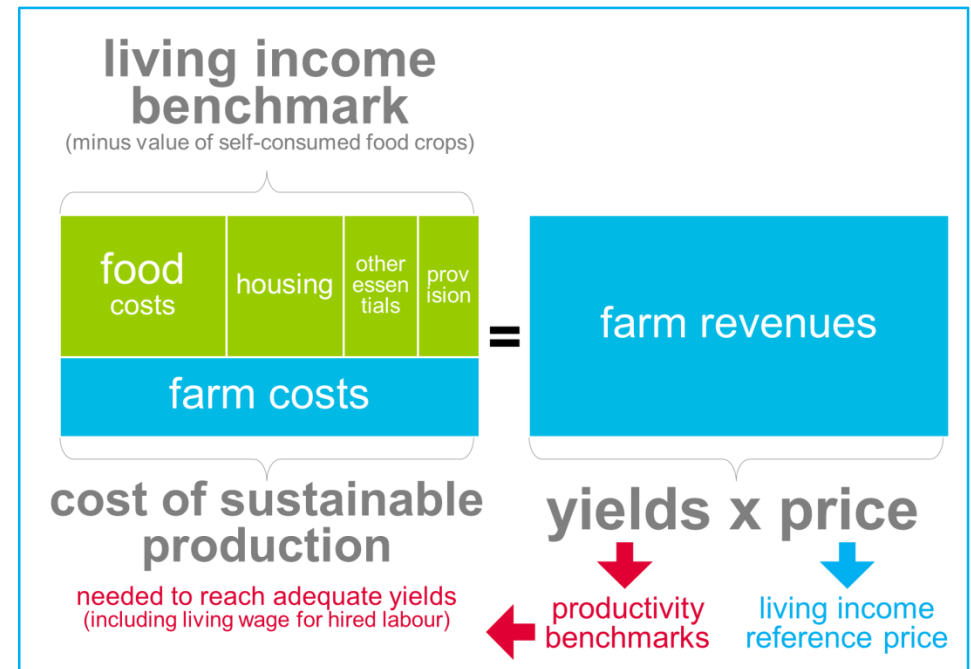
Revised Living Income Reference Prices for cocoa are estimated at US\$ 2.20 and US\$ 2.10 per kilo at farm gate for Côte d'Ivoire and Ghana respectively, based on the parameters outlined in this document.

THE CONCEPT

The Living Income Reference Price concept is derived from the universal human right of everyone who works to a just and favourable remuneration, ensuring an existence worthy of human dignity. Hence, a full-time farmer should be able to make a living income from the farm revenues.

A Living Income Reference Price is based on the following key parameters:

1. Cost of a decent standard of living (living income benchmark)
2. Sustainable yields (productivity benchmark)
3. Viable farm size (to fully employ the available household labour)
4. Cost of sustainable production (in order to achieve above mentioned yields)



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A price that allows an average farmer household with a viable farm size and a sustainable productivity level to earn a living income can thus be calculated with the formula: price x volumes produced = cost of decent living + cost of production, or:

$$\text{Living Income Reference Price} = \frac{\text{cost of decent living} + \text{cost of sustainable production}}{\text{viable land area} \times \text{sustainable yields}}$$

In this model, the value of food produced on the farm for home consumption is considered an important source of in-kind income, that reduces the cost of decent living.

Otherwise, for calculating the reference price we focus on the Fairtrade crop as our sphere of influence. Although crop diversification is strongly promoted, the formula is based on cocoa as a single cash crop, assuming that any other farm activity would be as profitable as cocoa and thus generate a proportionate share of a living income.

ESTABLISHING LIVING INCOME REFERENCE PRICES

In order to establish Living Income Reference Prices for cocoa in West Africa, values for each of the parameters were determined. The initial values were estimated based on findings from Fairtrade's household income study in Côte d'Ivoireⁱ, complementary research into realistic, sustainable productivity targets and the associated costs of production by New Foresightⁱⁱ, living income benchmark studies by the Living Income Community of Practiceⁱⁱⁱ as well as consultation with key stakeholders, including Fairtrade cocoa farmers in Ghana and Côte d'Ivoire, traders, licensees, research institutes, NGOs and civil society actors.

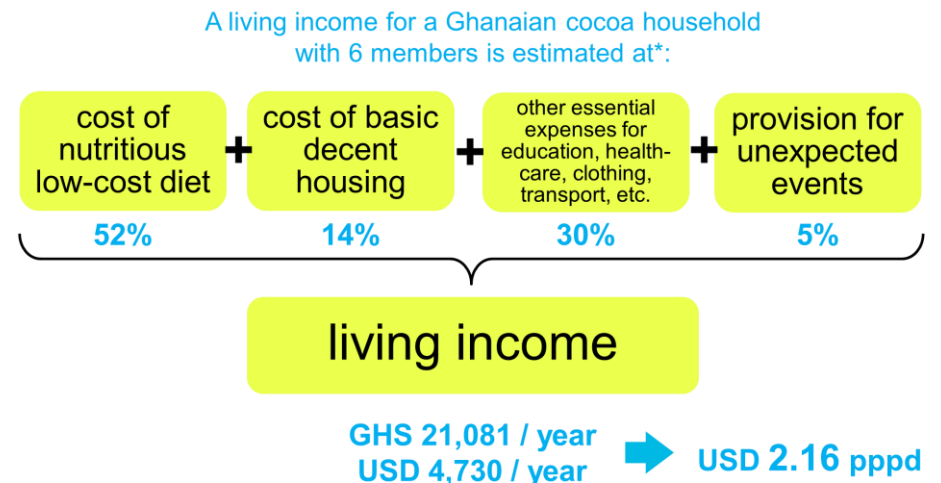
New insights concerning the potential for additional farm income being generated on land under rehabilitation, among other minor aspects, have led to revised Living Income Reference Prices in 2019 as explained hereafter.

PARAMETER 1: LIVING INCOME BENCHMARKS

Living income is defined as **sufficient income generated by a household to afford a decent standard of living for the household members**. Elements of a decent standard of living include: a nutritious diet, water, decent housing, education, healthcare, transport, clothing and other essential needs, including a provision for unexpected events.

Comprehensive living income studies, based on the Anker methodology^{iv}, calculated the cost of decent living at **US\$ 2.16 per person per day in Ghana** and **US\$ 2.49 per person per day in Côte d'Ivoire**.

For a typical six-member household in Ghana^v, this would result in a living income benchmark of **US\$ 4,730 per year**, of which US\$ 2,448 are food costs.

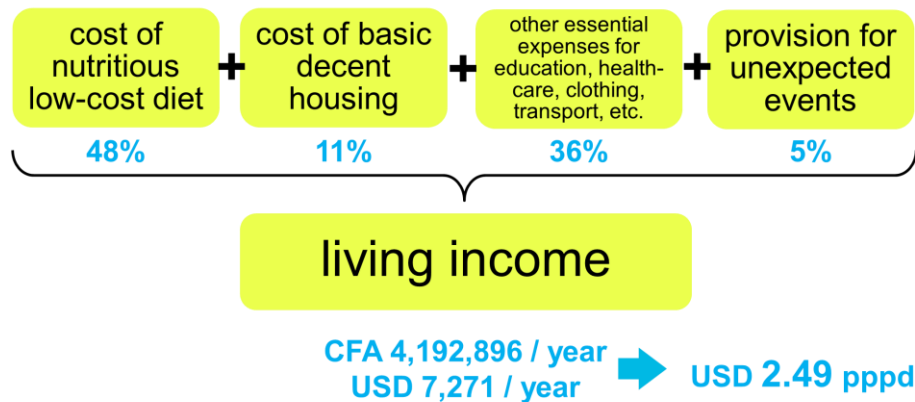


*Source: Living Income Community of Practice, 2018

Similarly, a typical household with eight members in Côte d'Ivoire^{vi} would need **US\$ 7271 per year** to cover their cost of a decent living, of which US\$ 3,490 are food costs.

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A living income for an Ivorian cocoa household with 8 members is estimated at*:



*Source: Living Income Community of Practice, 2018

The cost of a nutritious diet makes up for approximately half the living income cost. Food produced on the farm for home consumption is considered as in-kind income and can be deducted from the financial cost of living, as it reduces the food expenditure of the household.

Research findings, including the extensive “Demystifying Cocoa” household study by the Royal Institute of the Tropics (KIT)^{vii} and private sector data, as well as direct farmer feedback, indicate that a large share of household food needs is - or could be - produced on farm. These food crops are generally grown alongside cocoa and compensate for unproductive years in areas where cocoa trees have been newly replanted as part of rehabilitation efforts. Consultation among Ivorian farmers confirmed that it is realistic to aim for fifty percent of a nutritious diet, valued at **US\$ 1,745**, being produced on farm. Less land is available for growing food crops in Ghana and therefore the target value of farm produced food is set at a quarter of the total food needs or **US\$ 612**.

Hence, the financial cost of decent living is brought down to **US\$ 4,118** and **US\$ 5,526** for Ghana and Côte d’Ivoire respectively.

PARAMETER 2: SUSTAINABLE YIELDS

Adequate productivity levels are determined based on feasible yields, obtained when implementing sustainable agricultural practices. These are called productivity benchmarks.

New Foresight was commissioned to investigate feasible productivity levels in Côte d’Ivoire and Ghana, by reviewing literature, interviewing experts and conducting workshops with Fairtrade lead farmers in both countries. Although they found that yields of 1,500 kg/ha would be possible, these would only be achievable in the long term and under favourable conditions (such as timely availability of good quality seedlings and agricultural inputs, access to finance, etc.).

In consultation with West African producers, 800 kg/ha was considered a more realistic benchmark under current circumstances. For comparison, the average yield in Côte d’Ivoire was 437 kg/ha and only 2% of the surveyed households in 2016 obtained yields per hectare of 1,000 kilos or more.^{viii}

A **productivity benchmark of 800 kg/ha** was put forward for consultation. Although some stakeholders expressed their doubts about the feasibility of these yields, the majority of the producers and technical experts from the cocoa industry confirmed this to be a realistic target yield that can be achieved in the medium term. Moreover, it is in line with Ghana COCOBOD’s productivity target. This feedback was decisive to maintain the proposed productivity benchmark.

Nonetheless, it is important to acknowledge the temporary ban on productivity enhancement projects by the Ivorian Conseil du Café-Cacao, while it is taking stock of the country’s current cocoa production. This will limit farmers’ possibilities to achieve the target yield in the short term.

Some concerns were also raised around agro-ecological production practices not being taken into consideration. Further research is needed to determine whether similar yields are achievable through adoption of agro-ecological production techniques.

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PARAMETER 3: VIABLE FARM SIZE

The Universal Declaration of Human Rights establishes: “Everyone who works has the right to just and favourable remuneration ensuring for himself and his family an existence worthy of human dignity.” Hence, hired workers have the right to a living wage and self-employed farmers should be able to make a living income from their farm proceedings. **Following this guiding principle, a farm that is big enough to fully absorb the available household labour, should generate a living income.** This would be considered a viable farm size or a ‘full-employment farm size’.

A viable cocoa farm size in Côte d’Ivoire was established at 5.3 hectares, based on 3 full-time breadwinners, of which 2.5 full-time equivalent dedicated to cocoa farming. Similarly, a typical six-member Ghanaian household with 2.25 full-time breadwinners would need four hectares to fully employ their available labour force.

Ivorian households typically own, or have access to, additional plots of land where they grow some food or other cash crops, occupying the remaining household labour. This is not the case for Ghana.

Allowing for continuous crop renovation needed to maintain the cocoa trees optimally productive, implies that part of the land is always unproductive. Considering a 28-year life cycle of cocoa trees^{ix} with zero production during the first three years, 15% productivity in the next 2 years and full production for the following 23 years, the productive cocoa area represents 83% of the total cocoa area. Non-productive cocoa area is assumed to be used for food production as in-kind income.

Therefore, we set a **productive cocoa area of 4.4 / 3.3 hectares for Côte d’Ivoire / Ghana respectively.**

The cost of production, however, is based on the full 5.3 / 4 hectares, also covering the labour incurred in growing food, which compensates the lower investment needed in cocoa during the unproductive years.

PARAMETER 4: COST OF PRODUCTION

The costs associated with a productivity of 800 kg/ha are higher than the actual production costs, since the current low yields can be attributed to insufficient farm investment. In order to project the farm business costs involved in producing 800 kg/ha, the following main cost items are considered:

- **Fertilizer:** Seven bags of fertilizer are required per hectare of productive cocoa to reach the target yield of 800 kg/ha, whereas renovated areas don’t need more than one bag. The non-subsidized fertilizer price is around US\$ 31.50 per bag, resulting in a cost of US\$ 221 per hectare of productive cocoa and US\$ 31.50 per hectare of land under rehabilitation. However, in Ghana, fertilizers and other inputs for cocoa production are heavily subsidized and a bag of fertilizer is factored in at a reduced cost of US\$ 25.
- **Other agricultural inputs:** A lump sum equal to 40% of the fertilizer costs for pesticides and other inputs was put forward for consultation. Feedback received from producers showed large variances, ranging from agreement with the proposed value to more than double. Until more accurate data become available, a slight increase to US\$ 80/ha for Côte d’Ivoire and US\$ 70/ha for Ghana is applied to cover other inputs on productive land, plus an additional US\$ 47/ha to pay for seedlings.
- **Labour:** Approximately 125 labour days per hectare per year are needed to produce 800 kg/ha. Most of this work is expected to be done by household members and is not included in the cost of production. Besides the household labour, a 5.3 hectare farm in Côte d’Ivoire would need approximately 62 hired labour days per year and a Ghanaian 4 hectare farm would have to hire 47 man-days. These are factored in at living wages. **This way, the reference price covers a living income for the farmer household (provided the available household labour is effectively employed on their farm) from the cocoa profits and a living wage for hired workers.**

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Assuming comparable household compositions for rural workers and farmers, proxy living wages are estimated based on the Living Income benchmark study results, at US\$ 9.24 per day in Côte d'Ivoire and US\$ 8 per day in Ghana.

- **Fixed costs:** A fixed amount of US\$ 250 for an average Ivorian farm and US\$ 200 for a Ghanaian farm is included to cover investments in tools, equipment and infrastructure, as well as farm administrative costs.

The above farm cost items add up to a total cost of sustainable production of **US\$ 2216 and US\$ 1431 for a viable farm size in Côte d'Ivoire and Ghana respectively, or US\$ 418 / 358 per hectare.**

The cost of production is added to the living income benchmark, in order to calculate the total farm revenues needed to afford a decent living and make the necessary investments in the farm.

ADJUSTED LIVING INCOME REFERENCE PRICES 2019

The adjusted parameter values lead to Fairtrade **Living Income Reference Prices of US\$ 2.20 per kilo of cocoa at farm gate for Côte d'Ivoire and US\$ 2.10 per kilo for Ghana**, as follows:

$$\text{Living Income Reference Price Côte d'Ivoire} = \frac{(7271 - 1745) + (5.3 \times 418)}{4.4 \times 800} = 2.20 \text{ US\$/kg}$$

The lower reference price for Ghana can be attributed to a relatively lower cost of decent living per person, as well as the subsidized costs of production.

$$\text{Living Income Reference Price Ghana} = \frac{(4730 - 612) + (4 \times 358)}{3.3 \times 800} = 2.10 \text{ US\$/kg}$$

IMPLEMENTING LIVING INCOME REFERENCE PRICES

By establishing Living Income Reference Prices, Fairtrade quantifies the gap between market and sustainable prices at farm gate level and emphasizes the need to address price as a crucial factor to attain sustainable supply chains that enable farmers to earn a living income.

The price gap is large and it will take considerable effort and commitment from the entire industry to make living incomes possible.

The increased Fairtrade Minimum Price for cocoa, entering into force per October 1st 2019, is a first step in a gradual approach to bridge the price gap. Applying today's differential of nearly US\$ 800 between farm gate and free on board (FOB) prices, as per regulated price breakdown in Côte d'Ivoire^x, the Fairtrade Minimum Price at FOB would have to be US\$ 3,000 per tonne to result in a farmer price that equals the Living Income Reference Price. Hence, a Minimum Price increase from US\$ 2,000 to US\$ 2,400 per tonne closes **40% of the price gap**.

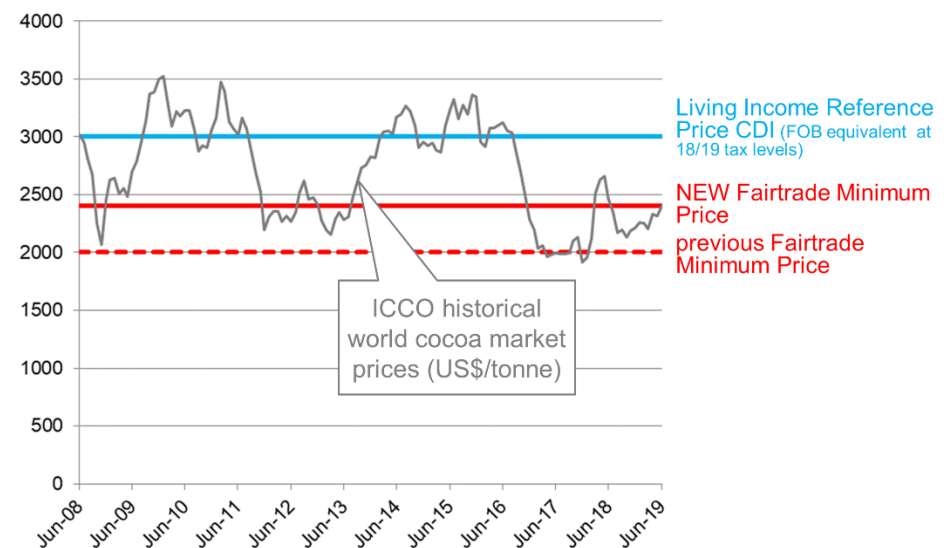


Figure 1: Fairtrade living Income Reference Price for Côte d'Ivoire in relation to the Fairtrade Minimum Price and historical world market prices

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An average Ivorian household would need to receive US\$ 1,438 per metric tonne at farm gate to reach the World Bank's extreme poverty line.^{xi} The Fairtrade Minimum Price increase allows cocoa farmers to escape extreme poverty with current yields.

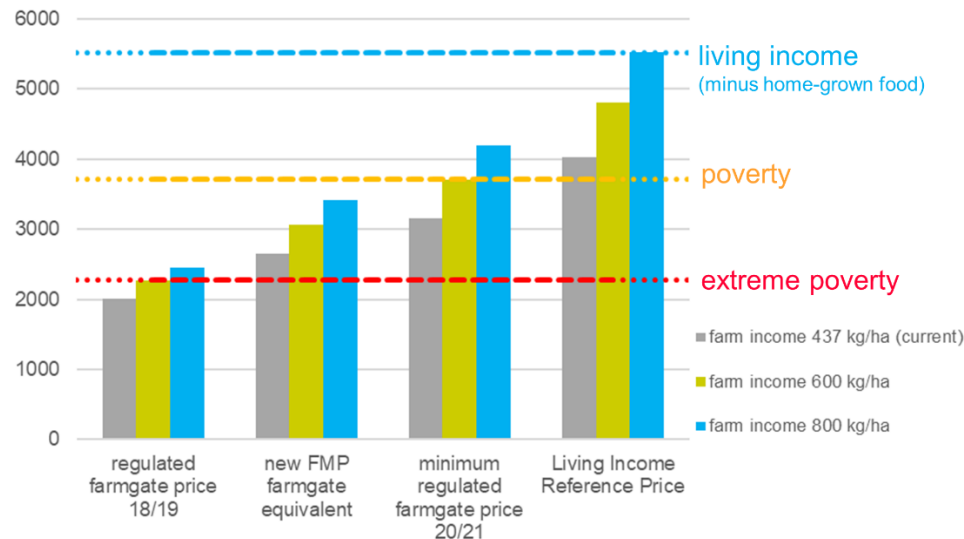


Figure 2: Income scenarios for Côte d'Ivoire with different price and yield levels in relation to poverty lines and living income

Starting the harvest season 2020/21, the Ghanaian and Ivorian governments have jointly announced to go a step further. The introduction of a Living Income Differential (LID) of US\$ 400 per tonne on top of the FOB price and its consequent guarantee of a minimum price of US\$ 1,820 per tonne for a cocoa farmer at farm gate creates a

welcome level playing field for the industry to address low cocoa prices at scale.

Fairtrade will integrate voluntary payment of the Living Income Reference Prices in living income pilot projects with committed, forward looking, commercial partners. By implementing the holistic living income strategy on a controlled scale, Fairtrade seeks to demonstrate its effectiveness and validate the price component as a critical driver to achieve living incomes.

In this, Fairtrade recommends that the Fairtrade Premium is paid on top of the LIRP. The Fairtrade Premium is an important (and in Ghana often the only) source of income for cooperatives to cover their costs to operate and provide the services to support their members reach target yields, cost efficiency and farm resilience, which are equally needed to achieve living incomes.

Further steps in terms of raising the mandatory Fairtrade Minimum Price and/or introducing other price mechanisms will be based on careful evaluation of the impact of before-mentioned price interventions on market acceptance and the incomes of cocoa farmers.

The Living Income Reference Price model makes up an integral part of Fairtrade's Living Income Strategy. Fairtrade is constantly testing and improving its model in order to develop a standardized approach for establishing sustainable price levels for smallholder farmers, applicable to a wide range of commodities and regions. We welcome your feedback in this process.

For more information or comments, please contact:

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ⁱ Cocoa Farmer Income, Fairtrade International, 2018

ⁱⁱ Assessing Living Income from cocoa, New Foresight, 2017

ⁱⁱⁱ Living Income Reports Rural Ghana / Côte d'Ivoire, Living Income Community of Practice, 2018

^{iv} <https://www.globallivingwage.org/about/anker-methodology>

^v Royal Tropical Institute Gap analysis, Bymolt, Laven & Tyzler, 2018

^{vi} Cocoa Farmer Income, Fairtrade International, 2018

^{vii} Demystifying cocoa, Bymolt, Laven & Tyzler, 2018

^{viii} Cocoa Farmer Income, Fairtrade International, 2018

^{ix} <https://www.icco.org/faq/57-cocoa-production/129-how-much-time-does-it-take-for-a-cocoa-tree-to-become-productive.html>

^x Applicable for harvest season 2018/19.

^{xi} The World Bank's extreme poverty line is set globally at US\$ 1.90 per person per day. By applying the Purchasing Power Parity rate for Cote d'Ivoire, this converts into 78 dollar cents per person per day or US\$ 2,276 on an annual basis for an 8-member household. With the current average yield of 437 kg/ha, productive farm area of 5.3 hectare and production costs of US\$ 200/ha, a farm gate price of US\$ 1,438 per tonne is minimally needed to reach the extreme poverty line.