



HELPING COCOA FARMERS TO ACHIEVE A LIVING INCOME AND ADAPT TO CLIMATE CHANGE

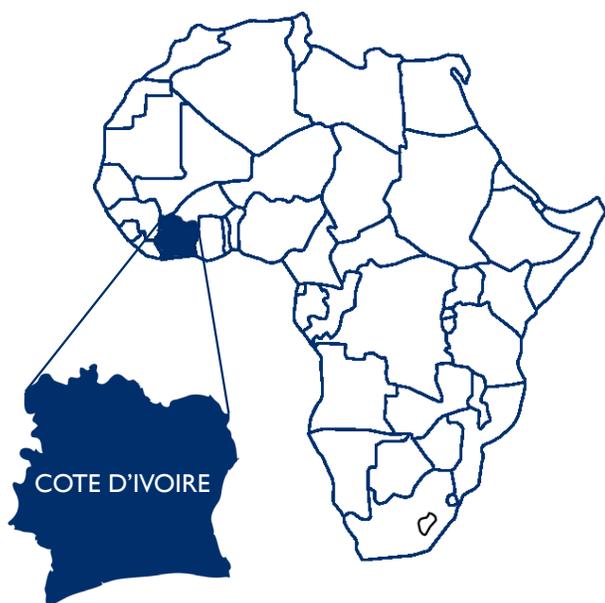
KEY LESSONS FROM PRIVATE SECTOR ENGAGEMENT IN THE
USAID LEARNING COMMUNITY FOR SUPPLY CHAIN RESILIENCE





Summary

US ice cream brand, Ben & Jerry's, in collaboration with Barry Callebaut, Fairtrade International and the Sustainable Food Lab have created a first of its kind pilot program seeking to improve cocoa farmers' income in West Africa. The program, known as the Producer Development Initiative (PDI), has been created to improve agricultural practices and farm renovation, with an end goal of providing improved resilience to climate change and increased farmer income. This case study reviews the relationship of key actors in the pilot program and outcomes to date. The case has been documented as part of the USAID Learning Community for Supply Chain Resilience, led by the CGIAR Climate Change, Agriculture and Food Security global research program, which seeks to bridge the gap between science and industry through the development of recommendations for improved partnership with private sector actors.





Background

Today 70% of the world's cocoa comes from Cote d'Ivoire and Ghana, employing an estimated 1.5 to 2 million farmers. Though better off than their counterparts without land or cash crops, cocoa farmers are still living in extreme poverty. In 2016, Fairtrade conducted a large scale 4,000 household study. From this study, Fairtrade was able to provide baseline information for the specific cooperatives in Cote d'Ivoire that provide cocoa to Ben & Jerry's. The baseline included the following information:

- On average, farms are 5 hectares (12 acres), with 80% of land planted in cocoa
- Cocoa trees are old (on average 25 years old) with relatively low productivity of 389 kg/ha (compared to a potential productivity of over 1 ton/ha)
- 70-80% of cash income comes from cocoa
- Household cash income was measured at \$2,700 USD per year at 2016 prices, which is about \$.92 USD/person/day
- A living income benchmark completed in 2018 estimates the cost of a decent standard of living to cost \$5,448 USD per year (for a family of 2 adults & 4 children)¹

In summary, the average farmer producing cocoa for Ben & Jerry's had income of about 50% of the international poverty line in 2016. When farm gate prices fell more than 30% in 2017/2018 due to the international market crash, farmer income continued to decline.

Myriad factors, including low productivity, small landholdings, price volatility, and dependence on cocoa explain the endemic poverty among cocoa farmers. Climate change, already a reality in cocoa regions, threatens to further destabilize cocoa families, as drought, intensive rainfall, high heat, and a prolonged dry season are predicted to decrease yields and cocoa quality. Without changes to farming practices or additional support for farmers, projections show that cocoa farmers will actually be worse off in the coming decades.

Against this challenging backdrop, Ben & Jerry's, Barry Callebaut, Fairtrade International and the Sustainable Food Lab began a bold pilot in 2016, the Producer Development Initiative (PDI), to make a step change in farmers' incomes – through improved agricultural practices and farm renovation -- and build their resilience to climate change. The goal of PDI is to provide services and cost sharing that enable farmers to invest in their farms and therefore help support viable pathways to a living income. The initiative is based on the concept of climate-smart cocoa,² which aims to increase farm income and production on existing farmland while adapting to the hazards of climate change and prevention of deforestation.

1. Living Income Community of Practice (2018) https://docs.wixstatic.com/ugd/0c5ab3_a437a776dc7747c2999d3b0c60a46a97.pdf

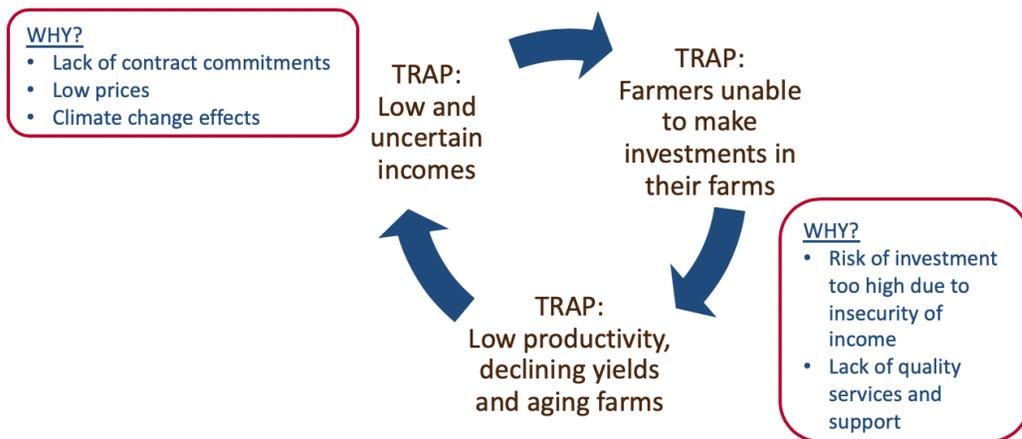
2. Bunn C, Castro F, Lundy M, Läderach P (2018) Climate change and cocoa cultivation. In: The University of the West Indies, Trinidad and Tobago, Umaharan P (eds) Burleigh Dodds Series in Agricultural Science. Burleigh Dodds Science Publishing, pp 445–467



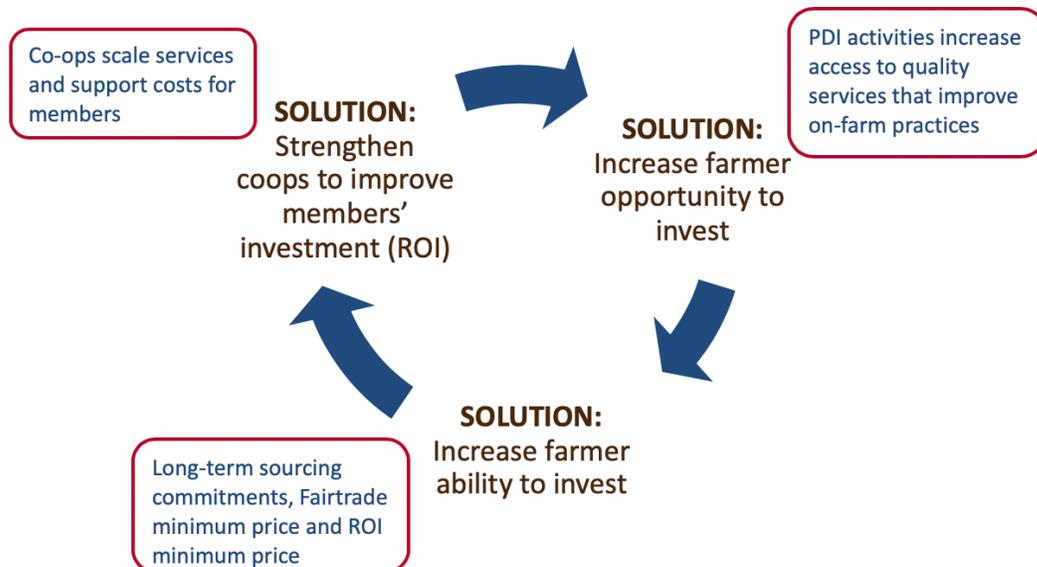
The Producer Development Initiative

PDI is a program of Ben and Jerry’s and Fairtrade focused on their five primary Fairtrade raw materials. The central goal of the PDI program in this pilot is to help ensure that cocoa can be a **dignified investment** for farmers, with the idea that linked prosperity means sufficient return from cocoa and sufficient opportunities for investment such that farmers are able to invest in their farms and families.

How do we support farmers to break the poverty trap?

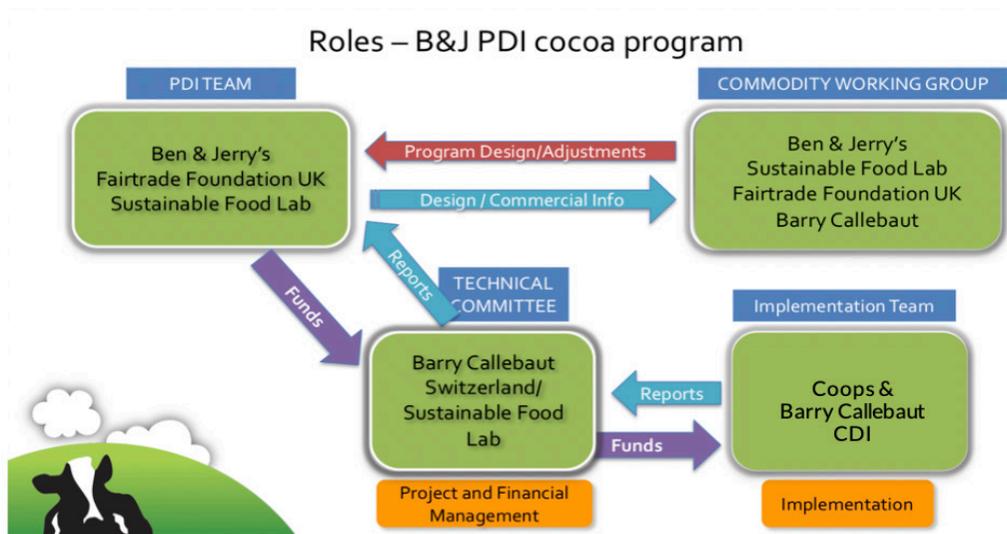


By building an enabling environment for investment :





More specifically, PDI is led by Ben & Jerry's who purchases Fairtrade cocoa and supports the farmer services that Barry Callebaut delivers to cooperatives. The Sustainable Food Lab is on the PDI design and facilitation team, and leads on cocoa (the focus of this case study). Fairtrade provides business training to cooperatives, and marketing support to Ben & Jerry's. Lastly, Barry Callebaut contributes its technical and research expertise to the design and delivery of the renovation and enhancement program. Together the diverse group of stakeholders have provided support throughout the value chain.



Enabling Investment in Long Term Renovation

A number of cocoa sustainability programs to date have focused on technical assistance and access to fertilizers and other inputs to improve farmers' agricultural practices. Yet in the context of aging cocoa trees, disease and vulnerability to climate change, these programs are not sufficient without addressing renovation to reverse declining productivity, combat weather and disease shocks and stop falling incomes.

What is often needed is more tailored coaching and professional farm development plans, site specific climate analytics, and risk sharing mechanisms to allow farmers to safely re-invest in farm renovation based on their farm conditions and goals. **The PDI program offers an innovative and high-reward path out of poverty for a trailblazing group of farmers who have the willingness and ability to renovate their tree stock, offering them financing, price supports and training to do so.**

PDI seeks a step-change in farmer incomes for those ready to invest— bringing cocoa farmers out of poverty and towards climate resilience through renovation and diversification. Specifically, a farmer who is renovating 1 hectare (out of an average 4-hectare farm size) should expect to dou-



ble cocoa income through improved productivity within 6 years from 800 to 900 kg/ha. In addition, the farmer can experience further increases in income through diversification into additional cash crops such as banana, maize and coffee.

Renovation is quite complicated because of the high upfront investment required (approximately \$2,000 usd/ha), short-term income loss while trees are young, risk of long-term financing, and experience and labor required to manage the process successfully. The risks associated with renovation generally deter all but the most resourceful farmers. PDI hopes to create a situation of relative stability, conducive to farmers taking on the risk of this important long-term investment – and renovating large sections (upwards of 25% of their farms at a time).

To help understand the risk to farmers, the project conducted an economic analysis to see what minimum price was needed for farmers to have a minimum decent return on investment on the renovation. **The results of the analysis suggested that during renovation farmers needed at least a farm gate price of 900 CFA on their remaining cocoa.** Because this was substantially above the Fairtrade minimum price at that time (750 CFA), **Ben & Jerry's decided to support a Return on Investment (ROI) minimum price that would ensure 900 CFA for the cocoa of farmers in the renovation program.** In this way Ben & Jerry's shared in the costs and risk of market price fluctuation.

Beyond a ROI minimum price, PDI provides a series of activities to strengthen farmer cooperatives and improve productivity for over 3,000 farmers, through access to financing, inputs, and 1-on-1 coaching, to help farmers make investments on their farms. Of the 3,000 farmers, 450 were targeted for in-depth productivity improvement work and 75 were targeted for a more intensive multi-year renovation program, paving the way for other farmers to follow suit.

The PDI program shares the cost and risk with farmers for the duration of the 5-year loan period through:

- a) Commitment on the part of Ben & Jerry's to buy Fairtrade (at a minimum price) from the cooperatives

- b) Access to long-term financing

- c) Cost sharing and a "ROI minimum price" (in addition to the Fairtrade premium) based on a minimum price to ensure a decent minimum return on investment based on sales of their existing cocoa. Providing both stability and a return on investment that de-risks renovation for the farmers

- d) Multi-year technical support to ensure the health and success of new plantings, and training on new agronomic models such as underplanting, which is lower risk than radical re-planting

- e) Support with diversification, and specifically planting of other cash crops to provide short-term income while cocoa income decreases



The long-term vision of PDI is to create a proof point for farmers, industry, and government to scale this basket of interventions, culminating in farm renovation and widespread higher incomes and resilience in the face of climate change impacts. While admittedly small-scale in terms of farmers reached with the full, intensive package—the renovation package targets 75 farmers – with the hope that hundreds of other farmers will watch and learn, that companies can test and refine their service delivery model, and a new norm will begin to take shape. At the same time, PDI partners will iterate and create a blueprint for appropriate risk-sharing mechanisms, which private and public players alike could replicate and scale to help cocoa farmers across Cote d'Ivoire and Ghana renovate and diversify. While some form of risk sharing will likely always be necessary due to the volatility in the cocoa market, the group believes that over time, cost sharing will become more affordable because of increased experience, scale, and identification of best practices.

GOAL	DESCRIPTION OF ACTIVITIES	# OF FARMERS TARGETED
Strong farmer organizations as a foundation for linked prosperity	<ul style="list-style-type: none"> • Fairtrade training on business management, internal control systems, governance and financial management, membership engagement, and child labor prevention • Farms mapped and surveyed, supporting accurate yield measurement • Fairtrade premium (200 USD/mt) supports social and commercial programs. 	3,825
Cushion against extreme poverty	<ul style="list-style-type: none"> • Fairtrade minimum price protects against lowest price points in the market ensuring that farmers incomes don't fall too low in price crisis 	1,800
Support services to improve productivity	<ul style="list-style-type: none"> • Farmer field school focused on pruning, crop protection and fertilizer use • Development of farm-specific plans through ongoing 1-on-1 coaching, tools, and loans for farmers able to invest in Good Agricultural Practices (GAPS) and inputs – helping farmers choose investment pathways aligned with their assets, goals, risk appetites • Extensive agronomic training from Barry Callebaut 	995 (450 receiving 1-on-1 coaching)
Long term investment for cocoa tree renovation	<ul style="list-style-type: none"> • 5-year loans, with cost sharing and additional ROI minimum price for those renovating and experiencing temporary income loss • Replanting support package, which includes intensive coaching, seedlings, farm clearing and planting • Services, and integrated diversification crops 	75



Results to Date

4,610 farmers trained in four cooperatives out of a total of 5,367

645 farmers have started to create Farm Development Plans

100 cooperative staff have received capacity building

55 hectares have been replanted

1 shade tree nursery has been established

Due to the early analysis on return on investment, the partners knew that a Fairtrade premium alone would not be sufficient to support renovation, which entails both cost of inputs, labor and loss of short term income. For farmers engaged in the renovation, the ROI minimum price provided by Ben & Jerry's was a critical component as the market prices stayed very low through 2018. The ROI minimum price was used by the farmers to help fund the plot maintenance labor and cover much of their repayment requirements.

While the Ivorian government instituted a ban on replanting in 2018 from concern of oversupply, the project was able to help 55 farmers fully renovate 1 ha each before the ban took place. The renovations stand as the first large scale (relative to farm size) renovations for three cooperatives and many other farmers are watching closely with interest to renovate when the ban lifts.

With the new minimum price in place to provide a good minimum ROI, and the clear evidence from 55 hectares of replanted plots (that have another 3 years of technical support ahead from the partnership) there is an excellent foundation to scale renovation, breaking the aging trees poverty trap and improving resilience for many farmers in the cooperatives.

Private Sector Engagement

The two private companies in the initiative – Ben & Jerry's and Barry Callebaut – launched this project for two main reasons:

- 1** **Alignment with business interests – Both companies feel a business imperative to ensure the sustainability of their cocoa supply.**
- 2** **Alignment with sustainability focus – Both companies are committed to sustainable sourcing and have commitments to support thriving farmer livelihoods, preventing deforestation and adaptation to climate change.**

Unlike many Climate Smart Cocoa projects in the region, borne of NGOs and researchers, this initiative was created by the companies themselves to advance their business, social, and environmental interests, and specifically to follow through on their commitments to climate resilience and living income. The Sustainable Food Lab then worked with the companies to leverage the Climate Change, Agriculture and Food Security (CCAFS) [Climate Exposure Maps](#) and other tools devel-



oped in the Feed the Future Learning Community on Supply Chain Resilience, to facilitate the design of the project in line with climate-smart principles. A key factor in getting this project off the ground was creating the right partnership, with each stakeholder playing a unique and appropriate role given their assets and interests:



Ben & Jerry's has a mandate and funding to dedicate to farmer livelihoods, but is far from the field, and needed a field partner who is closer to cocoa farmers.



Barry Callebaut works directly with cocoa farmers and cooperatives, is acutely aware of the challenges they face, and is actively investigating different renovation models through a research facility; their ability to scale the training, renovation loans and technical assistance alone is limited however, and customer partnerships to cost-share help to reduce costs.



Fairtrade International offers a ready risk sharing mechanism through its minimum price, and has a cooperative strengthening program for the cocoa cooperative leadership.



Sustainable Food Lab, with its expertise in systems modeling, living income and climate smart programming, was able to support the design of the PDI program and contribute key scientific resources from the Feed the Future Learning Community on Supply Chain Resilience.

Success Factors

Market Commitments

The conventional business practice of tendering suppliers on annual contracts proves a disincentive for multi-year investments. Without the long-term commitment of a customer like Ben & Jerry's, it would have been challenging for farmers, cooperatives and trading houses to invest in a long term program.

Agronomic Expertise

Barry Callebaut has a research team that runs tests on demonstration sites and with farmers on various models of agroforestry, underplanting, replanting and renovation. The models are tested for various outcomes of cost vs. benefit, disease resistance, soil fertility and socioeconomic goals such as maintaining ownership of one's farms (traditionally granted through the existence of trees), women's economic leadership and food security. Their ability to iteratively test new approaches to renovation and replanting in both their research farm and with farmer partners is central to the continuous improvement of the technical assistance packages to farmers.

Farmer Voice

Understanding the particular incentives and disincentives for different farmers in any particular



Companies need to have a long-term relationship with farmers to bring down the risks of renovation. Few microfinance organizations will make loans to the farmer, so companies need to help take on this responsibility.

– David Favre,
Barry Callebaut

region is critical for the design of technical assistance programs. The combined knowledge of Fairtrade, the cooperative leadership and Barry Callebaut's country team was fundamental to the successful design.

Financing

Barry Callebaut is providing the farmer loans for the renovation package at much lower interest rates than the industry norm in Cote d'Ivoire at approximately 5.5% versus the typical 20% local interest rate.

Stability & Decent Minimum Return on Investment

For farmers to undertake a major investment such as renovation that includes short term income loss, the support for a minimum price based on a minimum decent return on the renovation was a key factor in the value proposition to farmers. In the first year, the market prices (750 CFA) stayed substantially below the minimum needed for a return on investment (900 CFA) and the differential was used to pay the needed maintenance expenses and to cover loan costs. The ROI minimum price supported by Ben & Jerry's represented tangible price risk sharing with the farmers that gave the farmers the confidence to invest.

Recommendations for USAID

Partners in the PDI program were interviewed about possible roles and recommendation for USAID in this work. All actors acknowledge the critical role that the public sector can play in creating a successful enabling environment for climate adaptation. The value of open access climate tools were seen as valuable but the most prominent recommendations were in regards to financing and public institutions, such as:

- 1 **Providing blended finance such as first loss guarantees to lower the risk and cost of financing**
- 2 **Strengthening public institutions to be able to enforce regulations on forest protection and land tenure**

De-risking climate adaptation and livelihoods programs is a priority for the private sector. There is no question for these actors of the need nor their interest and commitment to supporting better livelihoods and resilience, but the risks for farmers of pursuing renovation without support are too high; USAID and other public actors can play a critical role in enabling farmers, especially the majority who lack investment capital, to renovate, by sharing in the costs and risks with farmers. The lesson from this experience is that farmers need a sufficient minimum price and affordable financing to be able to get on a pathway of renovation — where they are able to have sufficient returns within 4 to 5 years from the first renovation to be able to proceed to the next portion of their farm. The market rate is often 25-30% which cannot be supported by either farmers or private actors. USAID can partner with companies to match private contributions and/or cost-share in some other way, such as through first loss guarantees.