



Philippine Coffee Advancement and Farm Enterprise (PhilCAFE) Project

Outcome Harvest Report

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PhilCAFE Outcome Harvest Report

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Implemented by: ACDIVOCA

Evaluation Authored by: Capacity Building Service Group (CBSG)

Joyanta Roy, Team Leader

Other Key Evaluation Team Members:

Shafia Tahmida: Data Analyst

Rabiul Islam: Data Visualization Specialist

Aminur Rahman: Qualitative Data Analyst

Mamta Maher: Gender and Women Development Specialist

Abi Samonte-Quijano: Field Operation Manager

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ACRONYMS

ATI	Agricultural Training Institute
BACOFA	Balutakay Coffee Farmers Association
BPI	Bureau of Plant Industry
CBSG	Capacity Building Service Group
CQI	Coffee Quality Institute
DA	Coffee Quality Institute
DA-PRDP	DA- Philippine Rural Development Project
DAR	Department of Agrarian Reforms
DTI	Department of Trade Institution
FDA	Food and Drug Administration
FDA-LTO	Food and Drug Administration License to Operate
FFPr	Food for Progress
FGD	Focus Group Discussion
GAP	Good Agricultural Practices
GYSI	Gender, Youth, and Social Inclusion
GMP	Good Manufacturing Practices
Ha	Hectare(s)
IEC	Information, Education, and Communication
IGD	Initiative for Global Development
Kg	Kilogram(s)
KII	Key Informant Interview
LGU	Local Government Unit
M&E/MIS	Monitoring and Evaluation/Management Information System
MinPACT	Mindanao Productivity in Agricultural Commerce and Trade
MoU	Memorandum of Understanding
MSA	Market System Actor
MPC	Multi-Purpose Cooperative
PCG	Philippine Coffee Guild
PCQC	Philippine Coffee Quality Competition
PEF	Peace and Equity Foundation
PhilCAFE	Philippine Coffee Advancement and Farm Enterprise
PHP	Philippine Pesos
RAPID	Rural Agro-enterprise Partnerships for Inclusive Development and Growth Project
SHSC	Sacred Heart Saving Corporation

SO	Sub-Outcome
SUC	State University and College
TESDA	Technical Education Skills and Development Authority
ToT	Training of Trainers
USDA	United States Department of Agriculture
WCR	World Coffee Research

EXECUTIVE SUMMARY

Project Background and Purpose

Philippine Coffee Advancement and Farm Enterprise (PhilCAFE), a project of USDA Food for Progress Program, was implemented by ACDI/VOCA between October 2018 and June 30, 2024. The project intervened to enhance the Philippine coffee sector by targeting 13,700 farmers to substantially increase conventional and specialty coffee production, with a target of boosting national output by over 50% and expanding coffee exports tenfold. The project aimed at fostering inclusive economic opportunities for marginalized groups, potentially benefiting around 54,800 people indirectly.

PhilCAFE was implemented in key regions of Mindanao, Luzon, and Visayas to strengthen the capacity of 350 value chain actors, including financial institutions, universities, producer groups, and retailers. Its eight activities focused on improving governance, agricultural techniques, input suppliers, producer cooperatives, post-harvest processes, financial services, investment leverage, and buyer-seller relationships. In 2023, CBSG conducted an outcome-harvesting exercise alongside the Final Evaluation of the PhilCAFE project to assess its impact in the targeted regions.

Evaluation Questions, Design, Methods and Limitations

The outcome harvesting exercise for the PhilCAFE project used a participatory approach to gather evidence of achievements in complex market environments, particularly in the coffee sector in the Philippines. It captured a wide range of outcomes—positive and negative, direct and indirect, expected and unexpected—across the three targeted regions. The methodology followed six steps, starting with a review of project documents and a workshop with PhilCAFE staff to identify key outcomes. Staff interviews were analyzed using thematic software, and a matrix was created to map outcomes to stakeholders. Data from 66 key informant interviews (KIIs) and 21 focus group discussions (FGDs) were transcribed, translated, and coded, with a systematic analysis applied to both predefined and emerging themes. A dual-team strategy streamlined data collection, and local moderators facilitated interviews to overcome language barriers. Nineteen potential outcomes were initially identified, later refined to 12 outcomes and 3 sub-outcomes. These outcomes were assessed using a scoring methodology to measure systemic change, with the final report compiled and reviewed for further feedback and dissemination.

Findings and Conclusions

Outcome #1: Improved linkages between buyers and sellers/Increased access to markets to sell agricultural products

PhilCAFE significantly strengthened buyer-seller linkages in the Philippine coffee sector through initiatives, such as sponsoring international expos, organizing cupping courses, and facilitating market-matching activities. These efforts improved farmers' understanding of coffee quality and market demands. Key events like the PCQC and auctions set quality and price standards, attracting global interest in Philippine coffee and enabling producer organizations to engage with specialty coffee markets both locally and internationally.

Through PhilCAFE's efforts, 184 buyer-seller agreements were formed, surpassing project targets by 204%. The project's support enabled producer organizations to build relationships with buyers, securing higher prices and better market access for quality coffee. Coffee competitions and expos, along with marketing and communication training, contributed to these linkages, helping stakeholders navigate both local and international markets. Notably, home brewing initiatives during COVID-19 sustained demand and promoted Philippine coffee despite café closures.

PhilCAFE's approach emphasized information flow, branding, and skills transfer, with collaboration and government support crucial for sustainability. By strengthening vertical and horizontal linkages, PhilCAFE helped create a robust network of stakeholders, driving growth and resilience in the Philippine coffee sector.

Outcome #2: Improved capacity of key groups in the agricultural trade sectors/increased capacity of government institutions/Improved management of buyer/seller groups within the trade sector

PhilCAFE focused on strengthening institutional capacity in the coffee sector by empowering key entities such as producer organizations, government agencies, and private firms. It collaborated with 791 institutions and trained over 18,000 individuals, including farmers, government employees, and private sector participants. The project provided technical support, equipment, and training on coffee production, processing, and management, while also supporting universities with coffee nurseries, cupping labs, and research grants. PhilCAFE significantly improved the management and capacity of buyer-seller groups, including regional coffee councils, by providing training on strategic planning, financial systems, and business management. It also introduced "coffee mentors" to enhance knowledge transfer, leading to better market access, improved organizational skills, and higher-quality services, contributing to the sector's sustainability and competitiveness.

Outcome #3: Increased Availability of and Access to Improved Inputs and Technologies

PhilCAFE identified key challenges in the coffee sector, such as the lack of access to quality inputs, including seedlings, fertilizers, and pest management resources. Prior to the project, most farmers used poor-quality seedlings, leading to low productivity. To address this, PhilCAFE collaborated with agro-dealers and input suppliers to improve the availability of high-quality planting materials and organized coffee appreciation tours, visits to nurseries, and training on nursery management. The project supported nurseries with a capacity of 1.42 million seedlings, provided grants for materials, and trained farmers in organic fertilizer and pesticide production. Additionally, PhilCAFE improved market information access for producer organizations, helping farmers better understand quality requirements, pricing, and market demands. It strengthened 129 enterprises to ensure a continued supply of inputs and utilized "coffee mentors" to provide guidance on production and financing, fostering sustainability and resilience in the sector.

Outcome #4: Increased Use of Improved Agricultural Techniques and Technologies

PhilCAFE's implementation of advanced agricultural technologies, including farm diversification, soil fertility management, pest control, and climate risk reduction, has significantly improved coffee production. Key practices like proper planting distances, pruning methods, organic fertilizer use, and selective harvesting ("pick red") have had a positive impact on yields, with farmers seeing increased production from 200-300 grams to 500-700 grams per hectare. The project also introduced new coffee varieties, rejuvenation techniques, and promoted the adoption of biocontrol agents. Over 300 coffee mentors played a vital role in disseminating these technologies, providing hands-on training and market access guidance. PhilCAFE's support, including resources like coffee moisture meters and partnerships, has fostered sustainable farming practices and ensured that the adoption of these technologies will continue through training materials, manuals, and embedded coffee mentors, paving the way for long-term growth in the coffee sector.

Outcome #5: Increased Use of Financial Services

PhilCAFE significantly improved access to financial services for farmers and producer organizations in the coffee value chain by partnering with financial institutions, cooperatives, and banks to address barriers like high interest rates and complex loan requirements. The project facilitated agricultural lending, provided low-interest loans, and connected stakeholders to financing opportunities, enabling farmers to expand production, adopt new technologies, and improve post-harvest practices. PhilCAFE also supported nurseries, created loan programs, and offered guidance on securing funds, fostering long-term financial sustainability in the coffee sector. The initiative highlighted the importance of digital literacy and streamlined financing procedures to enhance farmers' access to modern agricultural systems.

Outcome #6: Increased Value Added to Post-Production Agricultural Products/ Improved Post-harvest Infrastructure/Use of Post-Production Processing and Handling Practices

In the baseline survey, a third of coffee farmers experienced post-harvest losses due to rain exposure and indiscriminate harvesting, with over 70% lacking essential post-harvest tools like dryers and pulpers, limiting their ability to produce high-quality coffee. To address this, PhilCAFE implemented a comprehensive Training of Trainers program on post-harvest handling, collaborating with various stakeholders and benefiting 5,440 individuals, far surpassing its original target. The program focused on improving processing methods like fermentation, roasting, and coffee cupping, resulting in higher coffee quality and increased demand in domestic and international markets. PhilCAFE also provided post-harvest equipment and machinery, enhancing infrastructure for producer organizations and promoting long-term sustainability through regional coffee mentors and educational materials. The initiative has significantly transformed coffee production practices, ensuring lasting improvements in post-harvest processes and value addition.

Outcome #7: Increased Leverage of Public & Private Sector Resources/ Improved Policy and Regulatory Framework

PhilCAFE has significantly leveraged public and private sector resources to improve the coffee sector's policy and regulatory framework, facilitating investments in post-harvest facilities, training, and FDA certifications. National agencies like the DA, PRDP, and DAR have provided financial support for cooperatives and technical assistance, though there is room for increased investment. PhilCAFE has influenced 31 policies and built 150 partnerships across sectors, enhancing agricultural productivity and post-harvest processes. Strategic collaborations with government and private stakeholders have garnered \$8.1 million in contributions, fostering stronger networking and educational outreach. PhilCAFE's initiatives, such as regional coffee competitions and training programs, have promoted a collaborative environment that supports long-term growth and sustainability in the coffee industry.

Outcome #8: Improved Quality of Land and Water Resources

PhilCAFE has improved the management of 9,442 hectares of land through practices and technologies that enhance climate risk reduction and natural resource management. However, the decline in coffee yields is due to unpredictable weather, pests, and nutrient-depleted soils. To address this, PhilCAFE introduced sustainable practices such as agroforestry, biodiversity conservation, optimized planting schedules, and the use of nitrogen-rich fertilizers. PhilCAFE also enhanced resilience through innovations like solar-powered water systems and wastewater management training, improving both water and natural resource management. These efforts led to the widespread adoption of agroforestry, soil restoration, and efficient fertilizer use, fostering sustainable farming. PhilCAFE's initiatives have empowered farmers to practice regenerative agriculture, reducing reliance on agro-chemicals and promoting long-term soil health and productivity.

Outcome #9: Increased Pricing Due to the Rise of Quality & Specialty Coffee in the Philippines

In the past five years, coffee prices in the Philippines, particularly for Robusta, have declined due to various factors such as poor-quality coffee, competition from imports, and inadequate post-harvest practices. PhilCAFE addressed these issues by improving coffee quality through training, certifications, and competitions like PCQC, which significantly boosted farmgate prices. Farmers learned proper harvesting and post-harvest techniques, increasing the value of their coffee, particularly specialty varieties, and raising their incomes. Key initiatives included providing quality certification to 41 firms, organizing cupping classes, and fostering partnerships with both public and private sectors. These efforts resulted in improved market access, higher prices for specialty coffee, and increased household income for farmers.

Outcome #10: Increased Agricultural Productivity

Coffee yields in the Philippines, at 300 kg/ha, are significantly lower than neighboring countries like Indonesia and Vietnam. However, PhilCAFE's interventions—such as improving farming techniques, rejuvenating aging trees, increasing access to quality seeds, and facilitating credit—have positively impacted productivity. The endline survey showed an average yield of 352.88 kg/ha, with selected project sites achieving 500 kg/ha, an 11.11% increase from the baseline. PhilCAFE's initiatives, including climate-resilient strategies and optimized plant spacing, have enhanced agricultural productivity and food security. Farmers reported significant income increases, and producer organizations acknowledged the critical role of coffee

mentors in delivering training despite pandemic challenges. These efforts have led to increased production and improved economic outcomes for coffee farmers.

Outcome #11: Expanded Trade of Coffee Products Domestically in the Philippines & Internationally

PhilCAFE has significantly advanced the status of coffee as a priority commodity by addressing barriers to expanding the coffee trade in the Philippines. Key challenges included competition from low-priced imports and quality issues due to poor traceability and handling. In response, PhilCAFE collaborated with the DTI and organized initiatives like GMP training to help producers and exporters meet international food safety standards, including FDA requirements. The project facilitated the export of over \$570,000 worth of green coffee beans, exceeding its target, and contributed to \$36.7 million in Philippine coffee sales. Through efforts like coffee quality competitions, cupping sessions, and enhanced seed traceability, PhilCAFE has improved coffee quality and market access, leading to higher prices for specialty coffee. These initiatives have positively impacted domestic production and international competitiveness, while fostering sustainable practices and creating direct market linkages between cooperatives and coffee shops, boosting farmers' incomes. The project's influence on updating national coffee standards and expanding trade underscores its lasting impact on the coffee industry.

Outcome #12: Increased Participation and Engagement of Women and Youth in the Coffee Industry

PhilCAFE integrated Gender, Youth, and Social Inclusion (GYSI) across its initiatives, promoting equal participation of men, women, and youth in the coffee sector. It addressed barriers such as women's time burdens, lack of leadership opportunities, and youth disinterest by offering gender-responsive training and designing inclusive post-harvest equipment. PhilCAFE's GYSI analysis guided these efforts, leading to increased women's leadership roles, particularly in coffee processing and Q Grading, and heightened youth engagement in farming, coffee shops, and roasting. Programs like the Young Farmer Challenge encouraged young women and mothers to participate, while off-farm employment opportunities for women boosted their income and influence. PhilCAFE's holistic approach, emphasizing sustainable development and key interventions, drove its success. It promoted best farming practices, climate-resilient strategies, and improved seed varieties, while strengthening market linkages across the value chain. Public-private partnerships, quality standardization through competitions, and capacity-building efforts for stakeholders like roasters and faculty further enhanced the project's impact and sustainability, addressing regional needs and fostering a more inclusive and resilient coffee industry.

Recommendations

The outcome harvest of PhilCAFE provides key recommendations to enhance and sustain the Philippine coffee industry. One major suggestion is to improve financial inclusion and literacy by providing farmers with better access to affordable financial services and targeted financial education. Strengthening capacity-building efforts across stakeholders and fostering trust-driven collaboration is also essential for the sector's long-term growth. Expanding mentorship programs, especially in agricultural practices like fertilizer use and crop variety selection, would further enhance localized knowledge and support. Sustainable labor practices and job creation within the coffee sector are crucial, alongside investment in research and development for climate-resilient coffee varieties and sustainable farming techniques. Encouraging the inclusion of women and youth in the industry through targeted programs will also promote diversity and help sustain the sector. To further boost the international presence of Philippine coffee, the report recommends expanding marketing efforts and partnerships through global expos and campaigns. Promoting adherence to Good Agricultural Practices (GAP) is essential to improving both the quality and sustainability of coffee production, ensuring environmental responsibility. Addressing market challenges and post-harvest losses can be tackled by investing in advanced storage and processing technologies and using digital platforms to provide farmers with up-to-date market information.

I. INTRODUCTION

I.1. Activity Background

In September 2018, ACIDI/VOCA was awarded the five-year, 17 million Philippine Coffee Advancement and Farm Enterprise (PhilCAFE) project by the Food for Progress Program (FFPr) of the United States Department of Agriculture (USDA). PhilCAFE is a follow-on project to the Mindanao Productivity in Agriculture Commerce and Trade (MinPACT) project which focused on coffee, cacao, and coconut, though PhilCAFE focuses exclusively on coffee. The goal of the project is to increase the incomes of 13,700 smallholder coffee farm families and the availability and sustainability of services provided by 350 market actors. PhilCAFE aims to:

- 1) To increase coffee production and productivity in the Philippines by improving access to high quality seedlings and other inputs, increasing adoption of good agricultural practices, and facilitating the renovation and rehabilitation of existing coffee farms.
- 2) To strengthen Philippine research planning and capacity and industry institutions and organizations in the coffee sector, such as public and private universities, regional coffee councils, and producer organizations, to offer extension and marketing services to producers.
- 3) To expand access to domestic and international markets for Philippine produced coffee by improving marketing and branding skills, facilitating direct linkages to buyers, and increasing access to premium markets.

ACIDI/VOCA worked in strategic regions and provinces of Mindanao, Luzon, and Visayas to build the capacity and expand service provision of 350 value chain actors, including financial institutions, colleges and universities, producer organizations, input suppliers, roasters, and retailers. PhilCAFE has eight key activities: 1) governance and educational institutions, 2) improved agricultural production techniques, 3) develop agro-dealers and/or other input suppliers, 4) capacity building: producer groups/cooperative, 5) post-harvest handling and processing, 6) financial services: facilitate agricultural lending, 7) leverage private and public investment, and 8) facilitate buyer-seller relationships. All project activities were designed and implemented to reinforce local climate change adaptation; gender, age, and cultural equality; and promote youth engagement in agriculture through training, instilling entrepreneurship, and emphasizing information technologies.

In 2023, the Capacity Building Service Group (CBSG) conducted an outcome-harvesting exercise to gain insights into the project's impact in the targeted regions.

I.2. Organization of Document

Section 1 introduces the program overview, program activity, outcome harvest objectives, and the scope of the study. Section II explains the outcome harvest methodology. Section III contains the findings and descriptions for the final set of 12 outcomes and three sub-outcomes. These descriptions include an exploration of evidence supporting the outcome, an analysis of how project activities contributed to its emergence alongside other contributing factors, the significance of gender and youth involvement, and the scale and sustainability of the change.

Lessons learned and ways forward are described, where appropriate. Where relevant, the outcome write-ups also include influences on or from other outcomes. Section IV details an outcome harvesting map used to detect and make sense of systemic outcomes among the 19 outcomes identified during analysis. Section V is a conclusion that includes a description of critical activity success factors and key recommendations on lessons learned and ways forward. Section VI is the Annex, which contains information on who was interviewed and references.

I.3. Outcome Harvest Objectives

Outcome harvesting is a participatory, qualitative approach in which the harvester facilitates the collection of evidence to identify project changes or achievements in complex environments. The method is particularly useful for market systems projects that take a facilitative approach to achieving their objectives.¹

The outcome harvest aims to account for positive or negative, direct and indirect, as well as expected and unexpected outcomes of the project in the coffee sector in the Philippines. The study's scope was geographically limited to the three targeted project regions.

II. OUTCOME HARVEST METHODOLOGY

The outcome harvest methodology follows six key steps² outlined in the table below.

Table 1: Steps of Outcome Harvesting

Step 1	The outcome harvest began with an analysis of existing literature and PhilCAFE documents, shaping the study's design. A workshop with PhilCAFE staff followed, focusing on identifying crucial outcomes and their interconnections. This laid the groundwork for formulating key research questions to evaluate the project's effectiveness.
Step 2	Ten staff interviews were conducted to explore key research questions, with recordings transcribed for analysis. Thematic analyses were conducted using NVIVO and MAXQDA software, respectively. This led to the development of a matrix, mapping outcomes to stakeholders (See Annex A2 Table 6).
Step 3	The review, matrix, and insights from staff interviews were utilized to draft survey questions for each of the stakeholders and were used in key informant interviews (KIIs) and focus group discussions (FGDs) (See Annex 1 Tale 4 and Table 5).
Step 4	<p>Data from KIIs and FGDs, initially collected in local languages, were recorded, transcribed verbatim, and translated into English for coding. A specialized transcription team transformed all interviews into text, and manual translations were performed to capture the authenticity of the responses. This approach ensured the fidelity of the data to its original expression.</p> <p>The codes were created considering the relevant outcome for each stakeholder identified in Step 2 and were iteratively adjusted during the coding process.</p> <p>The evaluation team analyzed the data using themes that resonated with both pre-defined outcomes from the outcome harvest process and those identified by stakeholders. The evaluation team designed a specialized electronic spreadsheet for a systematic process, ensuring a coherent analysis of the qualitative data collected.</p>

¹ Himmelstein J. (2018). Outcome Harvesting Report: Resilience and Economic Growth in the Arid Lands-Accelerated Growth (REGAL-AG). Technical Report, Sep. 2018.

² Wilson-Grau, R., & Britt, H. (2012). Outcome Harvesting. Cairo: Ford Foundation.
[https://www.outcomemapping.ca/download/wilsongrau_en_Outome%20Harvesting%20Brief_revised%20Nov%202013.pdf](https://www.outcomemapping.ca/download/wilsongrau_en_Outcome%20Harvesting%20Brief_revised%20Nov%202013.pdf),
accessed on May 20, 2024.

Step 5	The outcome harvest report was compiled using data triangulated from primary qualitative data coded to outcomes, program documents (mainly progress reports), and previous evaluation reports (e.g., baseline, midline, and final evaluation results).
Step 6	The report and brochure/brief shall be iteratively reviewed (and subsequently adjusted by the firm based on feedback) by relevant PhilCAFE and ACIDI/VOCA Home Office staff. Information from this outcome harvest will be shared with other stakeholders and development implementers at learning events and through other outreach materials.

During the data collection stage, the evaluation team adopted a dual-team strategy to efficiently manage both the preparatory and execution tasks of data collection. PhilCAFE provided a list of respondents and stakeholder groups. One team was responsible for arranging appointments, while another conducted the interviews. The evaluation team hired local moderators to eliminate language barriers, and each session was supported by a notetaker and a technical specialist for thorough documentation. The field data collection team used either traditional audio recording or Zoom. The team employed a hybrid approach for FGDs and KIIs, ensuring flexibility in accommodating respondents through face-to-face and online methods.

The outcome harvest identified an initial 19 potential outcomes based on PhilCAFE's results framework, each carrying diverse significance for the different stakeholders actively involved with PhilCAFE (See Table 2). These outcomes span a spectrum of relevance, tailored to meet the specific needs and interests of the various individuals and groups collaborating within the PhilCAFE initiative. After reviewing the information and evidence gathered during the KIIs and FDGs, the outcomes were reduced to 12 (a few outcomes had overlapping characteristics and were merged), along with three sub-outcomes.

The scoring methodology was built upon the framework by Adrienne N. Gifford,³ an adapted version of the Initiative for Global Development (IGD) Systemic Change Maturity Model. It includes a set of criteria for assessing outcome descriptions within the context of systemic change, measuring change on a scale of 1 to 5.

III. FINDINGS

3.1. Overview

This section presents detailed findings for each outcome, structured into three areas:

1. **Problem Context:** Analyzes the situation at program inception using baseline surveys and secondary data.
2. **Project Contribution:** Details key activities related to each outcome and their impacts, drawing from program reports, primary qualitative and quantitative data collected for the final evaluation, and project monitoring and evaluation data.
3. **Change Significance:** Discusses the extent of change for each outcome (e.g., scale), significance, and implications in terms of sustainability. Lessons learned and future directions are also described as applicable.

³ Gifford A, DeVries A, Knott A, Mant H (2016). Pioneering New Operating Models and Measurement Techniques for Private Sector-Led Development: Assessing Impact in Nigeria's Niger Delta. Initiative for Global Development. Available at <https://beamexchange.org/resources/1173/>. Accessed on Nov. 23, 2023.

The below narrative provides details for 12 out of 19 outcomes substantiated through this study. The remaining three outcomes were identified as sub-outcomes of the main outcomes.

Outcome related to agent-level and relationship-level improvement

1. Improved linkages between buyers and sellers/Increased access to markets to sell agricultural products (FFPr 2.2.2)
2. Improved capacity of key groups in the agricultural trade sectors/Increased capacity of government institutions/Improved management of buyer/seller groups within the trade sector (FFPr 1.4.4/2.4.4)
 - **Sub-outcome:** Improved quality and availability of extension services and research skills/initiatives (or capacities) in the Philippines coffee sector

Outcomes related to awareness, access, and adoption of improved practices

3. Increased availability of and access to improved inputs and technologies (FFPR 1.2.1)
 - **Sub-outcome:** Increased access to improved market information (FFPr 1.4.3/ 2.4.3)
4. Increased use of improved agricultural techniques and technologies (FFPr 1.2.4)
5. Increased use of financial services (FFPr 1.2.3 /2.2.3.1/2.3.1.2)
6. Increased value added to post-production agricultural products/Improved post-harvest infrastructure/Use of post-production processing and handling practices (FFPr 2.1/2.1.2.2 /2.1.2.1)

Outcome related to system and policy changes

7. Increased leverage of public and private sector resources/Improved policy and regulatory framework (FFPr 1.4.5/2.4.5)
8. Improved quality of land and water resources (FFPr 1.1)

Outcome related to end/ultimate results

9. Increased pricing due to the rise of quality and specialty coffee in the Philippines
 - **Sub-outcome:** Increased household income/profits of farmers and coffee value chain market system actors (MSAs)
10. Increased agricultural productivity (FFPr SO1)
11. Expanded trade of coffee products domestically and internationally (FFPr SO2)

Cross-cutting Outcome

12. Increased participation and engagement of women and youth in the coffee industry

Additionally, the PhilCAFE team ensures the integration of responsible environmental stakeholders and activities in their training and field-level operations, considering the region-specific climate issues and the prevalence of climate-related projects.

3.2. Outcome-wise Findings

Outcome #1: Improved linkages between buyers and sellers/Increased access to markets to sell agricultural products

PhilCAFE activity (#8) **Facilitate Buyer-Seller Relationship** has focused on enhancing horizontal and vertical market linkages, considering the diversity of coffee market system actors and project participants. By organizing farm visits for buyers and exposing farmer leaders to specialty coffee shops, the initiative has introduced the buyers to coffee consolidators or seller producer organizations that raised awareness of the

volume and quality requirements. Farmers were educated and increased their appreciation for coffee preparation, by-products, and market outlets. PhilCAFE facilitated numerous market visits for producer organizations and organized public events for farmers, coffee shop owners, coffee consumers, baristas, and Q graders.⁴ These events included coffee cupping sessions and a celebration of International Coffee Day. Stakeholders mentioned benefitting from the marketing and communication training, particularly in social skills and market access to enhance the capacity of producer organizations and market system actors in utilizing social media platforms, building their understanding of what constitutes coffee quality, what it means to buyers and how to produce it, including processing.

PhilCAFE both funded and facilitated numerous coffee competitions at national and regional levels. The coffee lots from the top 10 winners of PCQC were auctioned online through a bidding process, garnering interest from buyers and markets worldwide. The PCQC initiated by PhilCAFE acts as a game-changer by providing a platform for establishing norms and standards for coffee quality and prices. Participants who submitted entries in collaboration with the Department of Trade Institution (DTI) and Department of Agriculture (DA) were linked to markets and buyers. Furthermore, partnerships were forged with the Department of Tourism for initiatives related to coffee farm tourism. For the online auctions of winning coffee lots at PCQC, PhilCAFE assisted sellers in the shipment and sale of coffee to London, United States Japan, and Canada.

According to a coffee cupper, *“With the assistance of PhilCAFE, farmers have connected with buyers and sellers. It creates many opportunities to participate in international expositions and exhibitions and promote Philippine coffee locally through Philippine Coffee Quality Competitions and the Philippine Coffee Expo.”*

The project actively promoted local coffee through home brewing competitions, particularly during COVID-19, when cafes were closed and could only provide coffee pick up or delivery. Home brewing was aimed at maintaining demand when everything was shut down, which was helpful in selling brewing equipment that outlasted COVID-19. It also included live streams on coffee sustainability and traceability, aiming to increase the value of coffee for both farmers and consumers through social media. Producer organizations confirmed that PhilCAFE has helped them connect to traders in specialty coffee and bridge gaps with buyers.

“PhilCAFE has greatly helped us by connecting us to coffee buyers and sellers. In fact, many are interested in buying high-quality coffee, but we didn't have a product to offer [before].”

They also mentioned that previously, their business centered around consolidation and marketing, while farmers sold their produce to local traders or brokers and very few directly to institutional buyers rather than maximizing the cooperative's coffee consolidation/buy-and-sell service.

With PhilCAFE support, they now engage with numerous buyers. A producer organization leader said, *“At the moment, our linkages have improved because PhilCAFE has led us to buyers who are willing to buy our coffee at higher prices.”*

Buyers confirmed that PhilCAFE has created many coffee business opportunities and linkages through international expositions, exhibitions, and promotion of Philippine coffee at both local and international levels, including events like the PCQC, PCE, Specialty Coffee Expo, World Coffee Expo, and the PCQC Online Auction.

Highlights of PhilCAFE Initiatives

- Sponsored the trip of the 2019 Philippine Coffee Quality Competition (PCQC) winner to the 2019 Global Coffee Expo in Boston.
- Co-organized a series of cupping courses and market matching activities among coffee producers and buyers within and outside of the Philippines.
- Facilitated PCQCs (2019, 2021, 2022, 2023) by bringing together international judges in Singapore, Indonesia, and Taiwan.

⁴Q graders are professionals skilled in the sensory evaluation of green coffee and are employed throughout the industry. <https://www.coffeeinstitute.org/certification/people/q-graders>. Accessed on April 9, 2024.

In the words of a coffee roaster and shop owner, *“PhilCafe assisted in making connections with farmers, cooperatives, suppliers, and other private actors that make linkage[s] with buyers as well.”*

Sustainability and Scale

The main goal of the PhilCafe was to enhance agricultural productivity, with buyer-seller linkages serving as a pivotal catalyst. The increasing participation of various stakeholders indicates the potential sustainability of these linkages. Notably, PhilCafe assistance has facilitated the establishment of 184 buyers and sellers’ agreements, which is 204% of the project target’s life.

Producer organizations and stakeholders have significantly embraced collaboration, linkage, and agreements with market partners, drawing insights from PhilCafe to propel growth in their industry. The PCQC, PCE, and online auction efforts not only enhance their capacities but also contribute to the greater good, laying the foundation for a more robust and expansive sector. Furthermore, they acknowledge the crucial role of government support in various forms, including policy, infrastructure, and research, to complement marketing strategies on the sustainability of PCQC, PCE, and online auctions beyond PhilCafe. This fusion of internal cooperation and external governmental assistance constitutes a proactive and holistic approach to sustainable development, underscoring the importance of collective action and support to ensure the coffee industry’s long-term success and resilience.

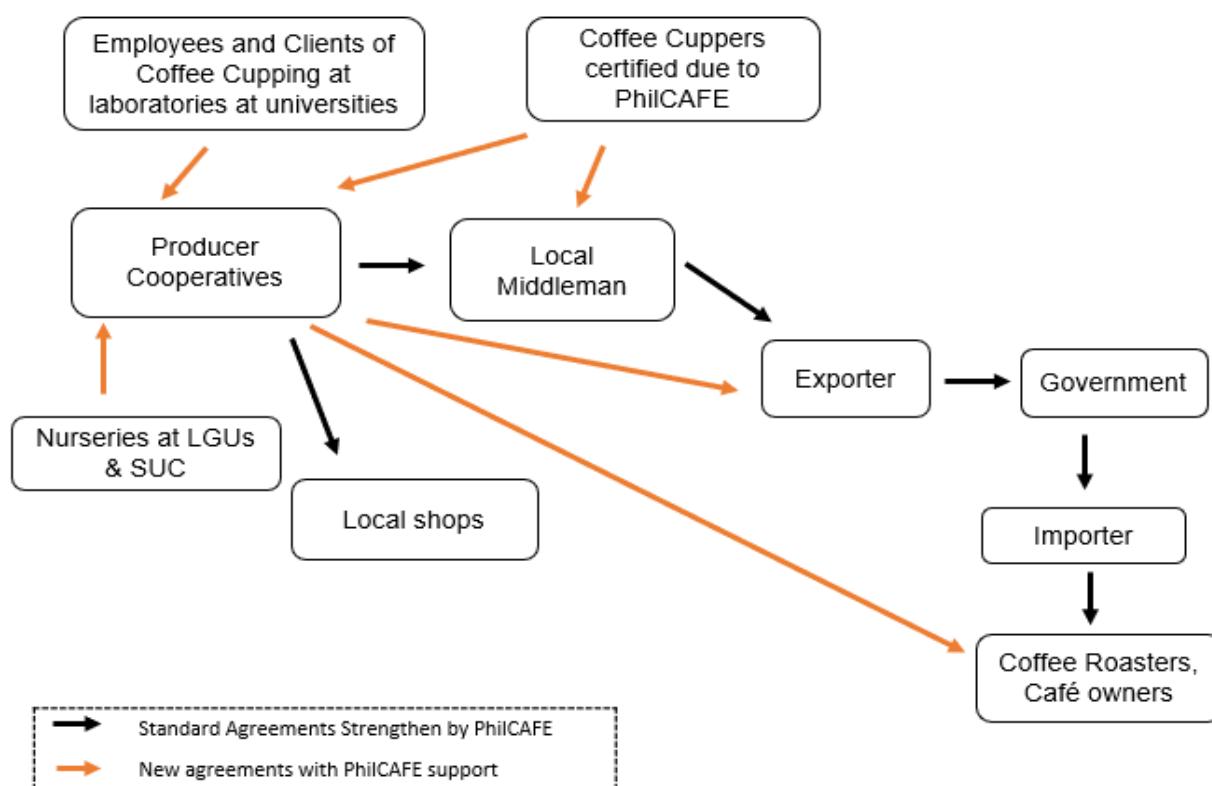


Figure 1: Coffee Buyer-Seller Linkages

Lessons Learned and Ways Forward

Beyond trust and formal commercial relationships, a few cases underscore the vital lessons learned from project support in establishing vertical and horizontal buyer-seller linkages. One key insight is the recognition of the crucial role of information flows and channels within the linkages. With access to relevant market information and various platforms and opportunities for relationship building and business transactions, as well as branding and awareness raising of the quality of Philippine coffee among buyers and sellers, can make improvements that better align with each other’s needs. Also, a fundamental contributing factor is the transfer of knowledge and skills needed to access markets that seek higher quality coffee. Another trend that emerged

in the promotion of Philippine coffee is that cafes that previously sold mostly imported coffee, aggressively began to source quality coffee in the Philippines, driving prices higher than international quality market prices.

Outcome #2: Improved capacity of key groups in the agricultural trade sectors/increased capacity of government institutions/Improved management of buyer/seller groups within the trade sector

PhilCAFE's primary objective was to strengthen institutional capacity within the coffee sector. Its efforts were centered on empowering key entities like regional and provincial coffee councils, the Philippine Coffee Guild (PCG), academia, and industry stakeholders. This approach was designed to enhance the capabilities of producer organizations, government bodies, and agricultural trade managers, fostering sustainable development in the coffee sector. PhilCAFE collaborated with a total of 791 institutions, including 359 producer organizations, 184 government agencies (including state universities and colleges [SUCs]), 216 private sector firms (including private universities and colleges), and 32 civil society organizations involved in coffee production, processing, and trade. The project provided training on coffee technologies to 18,759 individuals (16,120 farmers/producers, 1,120 from the private sector, 804 from the government, and 715 from the civil society). This represents 133.52% of the life of project target for training of individuals.

Table 2: PhilCAFE Support Shared by Different Stakeholders—Inputs from KIIs and FGDs

Stakeholder	PhilCAFE Support
Academe SUC Faculty and Extension Agents from the Research, Development, and Engineering Department) PhilCAFE targeted SUCs are located in coffee growing regions.	<ul style="list-style-type: none"> - Provided funding and technical support to establish a coffee nursery. - Provided coffee cupping laboratory equipment/facilities, post-harvest facilities, and demonstration farms, and funded many coffee researchers through grant support. - Provided technical support for capacity building of staff and coffee researchers. - Provided training on good agricultural practices (GAP), monitoring and evaluation (M&E)/management information systems (MIS), and gender and development related topics. - Funded two SUCs on soil laboratory improvement as well as coffee colorimetric and profiling. - Provided funds and conducted numerous training sessions for faculty and students on coffee production, cupping, and coffee grain grading. - Trained individual employees to specialize in coffee-related aspects, including production and processing.
Financial Service Provider	<ul style="list-style-type: none"> - Helped identify market clientele and capacitated on the basics of coffee production that will help them in identifying financial support for coffee farmers, producer organizations, and firms and include services targeted at coffee market actors.
Government Agent/Employee (Extension/Technician)	<ul style="list-style-type: none"> - Provided technical support to training on organic compost making and implementing demonstration farms. - Conducted training on cupping, roasting, planting, harvesting, etc.
Employees of Coffee Cupping and Soil Laboratories at the University	<ul style="list-style-type: none"> - Conducted training on coffee production, from nursery planting, varieties, and harvesting to post-harvest practices. - Collaborated to establish field demonstration trials.

Stakeholder	PhilCAFE Support
	<ul style="list-style-type: none"> - Facilitated visits to PhilCAFE sites and educated farmers on how to balance household nutrition requirements with sales opportunities for crop plantings.
Coffee Cuppers Trained by PhilCAFE	<ul style="list-style-type: none"> - Facilitated Q Grading course. - Conducted training for post-harvest handling and pest management in coffee production.
Roaster and Coffee Shop Owners/Staff	<ul style="list-style-type: none"> - Conducted training on Q Grading, roasting, and cost/profit/account management. - Provided resources, such as coffee moisture meters to be used for training farmer org., funds for research on coffee. - Shared knowledge on water system improvement. - Facilitated agreements for partnership with other agencies, helped establish coffee nurseries, and assisted with certification for fair trade and food safety regulation.
Clients of Coffee Laboratories at the Universities	<ul style="list-style-type: none"> - Conducted training of trainers and farmer training with a focus on enhancing their technical expertise in coffee production. - Provided coffee seedlings and supported in establishing demo farms. - Facilitated the linkage of coffee farmers/clients to tap and maximize nearby coffee laboratories to test and enhance coffee production.
Regional and Provincial Coffee Council	<ul style="list-style-type: none"> - Conducted training on coffee processing and planting, both virtual and face-to-face. - Assisted connecting them with financial institutions and the Peace and Equity Foundation (PEF). - Provided coffee seedlings and assisted with establishing demo farms. - Collaborate with them to organize PCQCs, online auctions, and PCEs.
Producer Organizations	<ul style="list-style-type: none"> - Provided inputs such as seedlings, booklets, tools, and fertilizer. - Provided hands-on field-related training on rejuvenation and cultivation, pruning and grafting for faster fruit-bearing, nursery care, plant spacing, fertilizing, nurturing, and harvesting and post-harvest. - Facilitated capacity-building workshops/activities like strategic planning, business plan development, M&E/MIS, and coffee farming as a business and provided innovation grant support for digitization and financial systems. - Assisted select producer organizations in establishing coffee nurseries and demo farms and organized visits to demo farms and coffee competitions. - Linked them with financial service providers to increase capital for coffee consolidation, improved production, and accessibility of inputs, tools, and equipment.

In addition to the stakeholders enlisted in the above table, PhilCAFE introduced a novel role called ‘coffee mentors’ who are farmers from producer organizations, primarily. These mentors undergo training (especially six modules of GAP) and receive stipends from PhilCAFE to educate other farmers, allowing for more effective outreach to a broader audience. PhilCAFE has successfully trained over 300 coffee mentors from producer organizations, the government sector, and the private sector to conduct training sessions and extension services.

A KII participant of a producer organization said, *“The capacity of our co-op changed. Because of PhilCAFE, we were more exposed to training and markets that we didn't think we would meet along the way, and then we were given the opportunity to present our coffee to other people and sell it. We also price our coffee higher.”*

The PhilCAFE team has been instrumental in delivering diverse training and technical support to producer organizations and key coffee stakeholders nationwide (Table 2). This support encompasses business and strategic planning, risk management, M&E/MIS, and the facilitation of farm tours for knowledge exchanges. The initiative has significantly enhanced the organizational capacity of producer groups and universities, assisting in the establishment of nurseries and formulation of business plans for organic inputs. In certain instances, the project has organized workshops for producer organizations to create business plans for various coffee enterprises, thereby improving their operational and analytical skills.

A produced organization leader noted, *“Our organization really changed because it became active after PhilCAFE's involvement. Many projects followed because the members became active in participating in our organization due to what was provided [by PhilCAFE].”*

Stakeholders have noted a direct impact on the organizational capacity, particularly in the financial aspects, attributed to the training received on the accounting system. A financial institution KII said, *“PhilCAFE focused on the capacity building of the organization, particularly in cooperative management. So, it seems like the development's focus at producer organization level was on organization management and engaging their market products.”*


They believe that the project has also enhanced the range and quality of services offered to farmers by the trained stakeholders. As an SUC faculty member expressed, *“Now the faculty and researchers train farmers for high-quality products, specifically specialty coffee, covering all aspects from nursery management to how to produce organic fertilizer, plant management, coffee processing, and packaging.”*

Moreover, PhilCAFE has significantly influenced the management and capacity of buyer and seller groups, including the provincial and regional coffee councils. Many government technicians and other stakeholders have become qualified Q graders and are actively participating in coffee cupping competitions. This skill enhancement is being leveraged to update the Philippine National Standard for Coffee, reflecting the project's influence on government capacity in the sector. Additionally, it has empowered processors and exporters to register with the Food and Drug Administration (FDA), enabling them to compete in international markets.

Sub-Outcome: Improved quality and availability of extension services and research skills/initiatives (or capacities) in the Philippines coffee sector

PhilCAFE has also positively impacted the technical abilities of government personnel at the national and local levels, private sectors, academe, and civil society, including coffee councils, by providing support to various coffee activities and engaging them in major coffee development projects, the project has fostered collaboration with government agencies, private sector, producer organizations, and civil society to advance coffee education and marketing activities. This support has resulted in the establishment of coffee nurseries with a nationwide capacity of around one million seedlings managed by select SUCs and producer organizations. The SUC faculty interviewed stated that PhilCAFE is the first project that has supported legal/certified introduction and evaluation of new coffee varieties, as well as building capacity of Filipino researchers, especially the students. PhilCAFE established a total of 39 nurseries with a combined capacity of 1.42 million seedlings aimed at producing high-quality coffee seedlings to support coffee expansion and increase production. SUCs and producer organizations were the recipients of these nurseries through in-kind provision of inputs, tools, materials, technologies, and management practices. Managers, leaders, and staff assigned to these nurseries underwent training in nursery management technologies, maintenance, as well as marketing and business plan development.

The outcome harvest interviews revealed this outcome was realized through different initiatives, such as:

 PhilCAFE has trained 1,225 government staff, including university employees and extension agents, on coffee production, processing, and trade

- Collaborating with universities and research organizations and providing them with grants for establishing demonstration farms and coffee nurseries, good manufacturing practices (GMP)⁵ manuals, and technologies (including seedlings).
- Establishing coffee labs at different universities across regions.
- Providing training to students and faculty/teachers at universities and schools, as well as government staff, including extension officers on GAP, pollination, and how to maintain coffee quality.
- Providing training and resources to coffee mentors. (PhilCAFE has provided training of trainers to more than 300 coffee mentors from producer organizations and government and private sectors to conduct training and extension services.)
- Facilitating research on soil characterization and equipment upgrading at national laboratories, as well as engaging with international research institutes such as Indonesia Coffee and Cocoa Research Institute, World Coffee Research (WCR), and the Coffee Quality Institute (CQI).

PhilCAFE had a series of exploratory meetings with the Technical Education Skills and Development Authority (TESDA) on the development of the ‘Coffee 101’ vocational skills curriculum that includes hands-on training and farm visits,⁶ as well as with the Agricultural Training Institute (ATI). The farmers are also aware of coffee-related education programs. Producer organization extension services were developed and strengthened through the identified coffee mentors and coffee technicians that delivered extension services to member farmers and collaboration with government agencies and industry stakeholders. A producer organization representative mentioned, *“The continuity of coffee education, particularly in universities, is further facilitated by the presence of equipment provided through collaborations with the University. The establishment of a cupping lab and a demo farm at the university ensures ongoing learning opportunities.”*

PhilCAFE has influenced the improvement of SUCs, government agencies, coffee cuppers, coffee council technical expertise, coffee research initiatives, and the quality of extension services they can offer to the farmers, *“We have this extension department. So, I guess we are obliged to conduct training, as we have also graduated as coffee mentors with the six modules, followed by the PhilCAFE protocol. So, we could extend our help to farmers. PhilCAFE provided them to implement the projects like the in-kind grants and capacity building of staff and coffee researchers that increased our quality and research skills.”*

Sustainability and Scale

PhilCAFE support for capacity building among diverse stakeholders has, in turn, influenced the provision of “embedded services” to farmers and other stakeholders. Producer organizations, for instance, embedded coffee mentors as part of their technical pool to provide technical assistance and services to coffee farmer members. The creation of coffee mentors has proven invaluable and sustainable, as they have demonstrated the capacity to offer customized advice tailored to specific farms and their associated climate conditions. The timeline for realizing the effects of the enhanced capacity will vary depending on the type of support provided by PhilCAFE. For instance, the benefit of providing quality inputs (such as fertilizers, improved seed varieties, and post-harvest technologies) will only be realized once coffee is at a productive stage and after harvesting yields and completing the associated sales.

Moreover, the benefits of supporting activities such as obtaining planting material certification, Q Grading certification, and securing capital for post-harvest technologies will take more time to materialize and require sustained trust in commercial relationships, as addressed in PhilCAFE’s sustainability planning.

Lessons Learned and Ways Forward

⁵ Note: GMP training is one requirement for applying for FDA’s License to Operation (FDA-LTO) to comply with Republic Act No. 10611 or the Food Safety Act of 2013.

⁶ This has been added to the National Certification 1 and 2 programs of TESDA.

The capacity building of stakeholders and institutions is an inclusive and gradual process rooted in the trust developed through collaborative efforts. Resources such as funds, coffee technologies, and knowledge can be shared for optimal utilization. To ensure sustained engagement of stakeholders, action plans should clearly outline the 'who, what, when' aspects. Extension workers and researchers should provide the necessary information, appropriate technologies, and research results to key individuals and stakeholders.

Outcome #3: Increased Availability of and Access to Improved Inputs and Technologies

The prevalent issues identified for the coffee sector, as highlighted in the baseline survey by key informants from producer organizations, include challenges related to the access and availability of inputs in general. Specific problems mentioned encompass seedling issues, such as their unavailability or poor quality, insufficient inputs for managing pests and diseases, absence of input subsidies, and the high cost of fertilizers.

According to PhilCAFE staff, *"Before PhilCAFE, 80-90% of farmers were purchasing poor-quality seedlings, which were typically 50-60% cheaper, and they were not adhering to PhilCAFE standard practices."*

The elevated cost of seedlings is attributed to high nursery input costs and transportation expenses for seeds, as reported by DA in its 2025 report. Another contributing factor to low productivity is the absence of true-to-type planting materials.

PhilCAFE collaborates with agro-dealers and input suppliers to enhance the availability of quality planting materials, inputs, tools, equipment, and machinery in targeted and underserved areas. To support these stakeholders, PhilCAFE organized coffee appreciation tours, arranged visits to demonstration farms and nurseries, and established linkages with nurseries producing certified, high-quality seedlings. The program has aided coffee nurseries with a collective capacity of 1.42 million seedlings nationwide, covering both Arabica and Robusta varieties.

Nurseries established by PhilCAFE operate under the in-kind and small in-kind grants program, where materials and inputs, such as steel poles, nets, seeds, polyethylene bags, fertilizers, soil media, etc., are provided to establish the nurseries. PhilCAFE has conducted training on nursery management and maintenance to ensure the production of quality seedlings. Subsequently, support is extended to connect these nurseries with potential markets.

As part of an incentive program, farmers trained in coffee technologies are encouraged to provide 50 coffee quality seedlings each. These coffee seedlings are then purchased by PhilCAFE from these nurseries. Furthermore, other projects like DTT's Rural Agro-enterprise Partnerships for Inclusive Development and Growth Project (RAPID), DA's Philippine Rural Development Project (PRDP), local government units (LGUs), Department of Environment and Natural Resources, and the Department of Agrarian Reforms (DAR) have been linked to the purchase of seedlings from these nurseries.

KIIs with representatives of input provider companies revealed that they have undergone various training sessions conducted by PhilCAFE. These training sessions include, but are not limited to, topics such as nursery planting of improved varieties, insect pest and disease management, nutrient management, harvesting, and post-harvest practices. The representatives mentioned that they have actively provided feedback to PhilCAFE, contributing to the project's ongoing efforts to enhance its assistance. The PhilCAFE staff mentioned that, in response to the doubling of input prices (especially fertilizers during COVID-19), they

Highlights of PhilCAFE Activities

- PhilCAFE assisted producer organizations that own coffee nurseries in processing their Bureau of Plant Industry (BPI) accreditation.
- PhilCAFE mobilized fertilizer companies, LGUs, and SUCs to contribute to the coffee demonstration farms and showcase proper fertilization and GAP adoption in selected areas.
- Conducted a joint nursery and seed lot management training in collaboration with BPI.
- Facilitated participation of input supply companies at the PCE.
- Set business planning for Bayanihan Millenium Multi-purpose Cooperative organic fertilizer in 2022.
- Seedlings were distributed under the "plant now pay later" program that cooperatives offered to farmer members or sold for cash to non-members.

conducted training for farmers on producing organic pesticides (*Beauveria bassiana*⁷ pesticide) and organic fertilizer.

Farmers who participated in FGDs mentioned receiving assistance in obtaining grants to purchase inputs. They also reported receiving inputs such as seedlings, post-harvest handling support, booklets, and a limited quantity of fertilizers. In the FGDs, farmer participants highlighted that PhilCAFE has played a role in improving land and water management, including soil testing activities as part of the improved technologies promoted by PhilCAFE. The coffee farmers in the intervention areas have received technical assistance, including mentoring and coaching covering various aspects of good coffee production, harvest and post-harvest technologies and practices, and business practices. PhilCAFE staff and coffee mentors have been actively involved in guiding farmers on topics such as quality coffee planting materials, coffee production input requirements and maintenance, nursery establishment and management, germination, sowing, fertilizing, insect pest and disease management, farm diversification, water management, inventory management, and business planning, among other relevant areas.

PhilCAFE has supported:



17,468 hectares under improved management practices/technologies



15,965 individuals applying improved management practices/technologies

A producer organization leader said, *"The project has introduced the seedling process, the farm maintenance, the nutrients of the coffee and then the diseases, the process of harvesting, the green grading, the sorting of the beans, sizing, in the specialty then the process of the honey process, washed, naturals in coffee, fermentation before drying then after the bean sizing, different shape and pricing."* A producer organization leader said, *"The project has introduced the seedling process, the farm maintenance, the nutrients of the coffee and then the diseases, the process of harvesting, the green grading, the sorting of the beans, sizing, the specialty then the process of the honey process, washed, naturals in coffee, fermentation before drying then after the bean sizing, different shape and pricing."*

Sub-outcome: Increased access to improved market information

Because of PhilCAFE activities, producer organizations have increased their access to information on where to sell their products, including the price and quality requirements and specifications.

According to a producer organization leader, *"Due to the project, the farmers received training to produce premium quality coffee, and now we have information about where to sell their coffee."*

Through different communication platforms, including social media, they could also better promote their products and services to buyers and could better link to and create partnerships with the buyers. *"[Because of PhilCAFE's activities] the access to market information has improved because about 50% of our customers are institutional buyers, roasters, large coffee shops, and big coffee traders"*.

Finally, based on the project's efforts, farmers will also be informed as to the buying price per product type for a given period, as well as other market-related information.

Sustainability and Scale

Establishing nurseries to address issues of seedling availability and quality, coupled with training for preparing organic fertilizers, holds the promise of sustainability for PhilCAFE's efforts. This strategic initiative not only tackles immediate concerns but also contributes to the long-term viability and self-sufficiency of PhilCAFE. By fostering practices that empower farmers to produce their quality coffee seedlings and organic fertilizers, the project lays the groundwork for a sustainable and resilient agricultural ecosystem. With the increased demand for quality coffee seedlings, nurseries that PhilCAFE assisted are continuing the production of coffee

PhilCAFE has supported:



12,046 agricultural producers reported access to at least one source of current agricultural market information.



265 enterprises used improved media in marketing their products

⁷ For details refer to https://en.wikipedia.org/wiki/Beauveria_bassiana

seedlings as part of the organization's program and services. A total of 129 enterprises were established and strengthened to supply improved inputs to farmers even beyond the life of the project.

PhilCAFE's coffee mentors have proven invaluable and sustainable, as they have demonstrated the capacity to offer customized advice on specific coffee production input requirements and climate conditions to farmers on market updates like the current buying and selling prices. With the availability of capital or financing, farmers applied the appropriate inputs and technologies to their coffee plants. This led to the importance of continuity of linkage to financial service providers for the inclusion of coffee loan programs as part of their services, as well as reducing or streamlining procedures and processes and requirements for farmers' eligibility for financing.

Lessons Learned and Ways Forward

The personalized guidance provided by the coffee mentors, particularly concerning fertilizers, quality planting materials, and crop varieties, plays a crucial role in enhancing agricultural practices. This underscores the importance of localized knowledge, biocontrol, and mentorship in optimizing farming techniques with appropriate inputs and technologies, adapting to diverse climates—ultimately, fostering sustainable and resilient agricultural systems.

Outcome #4: Increased Use of Improved Agricultural Techniques and Technologies

Implemented technologies include farm diversification, soil fertility, crop genetics, pest and disease management, harvesting, post-harvest practices, processing, and climate risk reduction. Technological advancement has significantly impacted coffee production. Most of the farmers emphasized that adopting proper planting distances (27.37%), hole-digging techniques (23.79%), pruning methods (20.75%), shading practices (17.96%), rejuvenation approaches (13.59%), organic fertilizer applications (13.35%), and seedling selections (8.98%) have had the most significant positive impact on coffee production. A few farmers mention that the expansion of perennials (0.73%), practices that promote methane reduction (0.49%), and biocontrol agents (0.61%) have positively impacted coffee production. Thirty percent of farmers (30.83%) have adopted proper planting distance, while less than 2 percent (1.46%) have adopted the use of biocontrol agents.

A laboratory client said, "With PhilCAFE support, production technologies such as pest, disease, and nutrition management, and pruning rejuvenation have been adopted by many farmers."

Trained participants received various resources, such as a coffee moisture meter, funds for a coffee nursery, improvements to wastewater management at coffee washing stations, support for coffee research, and partnership assistance from PhilCAFE. The adoption of advanced technologies, including internet-based monitoring of climate and environmental factors, was also well-received.⁸

Additionally, participants benefited from visits to markets and demonstration farms, along with guidance from coffee mentors.

PhilCAFE actively engaged more than 300 coffee mentors, with 169 of them actively involved in GAP training. The support provided by these mentors played a crucial role in enhancing market access for farmers who interact with an average of 100 coffee farmers per year. Participants learned new planting and pruning techniques, received funds for inputs, and established connections with financial organizations.




A farmer pointed out, "Previously, without knowledge of new technology, their skill was focused on an all-in harvest, regardless of the coffee being raw or ripe. Harvesting was done all at once. However, with PhilCAFE, farmers adjusted to adapt to "pick red." Initially, the technology seemed difficult, but when they learned that picking ripe cherries yielded more income, they were convinced to adopt the technology."

The success of these activities in achieving the desired outcomes was affirmed by various stakeholders. According to a government employee, "PhilCAFE's assistance has increased farmers' awareness and improved their

⁸ Internet of things technology helps Filipino coffee farmers boost productivity. <https://bit.ly/3OdC61x>

production methods, particularly in advocating for picking red cherries. This has significantly impacted our yield. Coffee farms that used to produce only 200-300 grams per hectare are now producing 500 to 700 grams or even a kilo per hectare."

PhilCAFE has impacted:

-  1,779 individuals (42% female) that participated in group-based savings, microfinance, or lending activities
-  4,240 individuals (44% female) accessed agriculture related financing
-  \$4.59 million total value of agriculture related financing

Experts SUCs and laboratories have observed that PhilCAFE's technology transfer has broadened pest management strategies. This includes incorporating both organic and synthetic methods and fostering a growing inclination towards organic practices among farmers. PhilCAFE's influence extends beyond the immediate practices, contributing to a more holistic and sustainable approach to coffee cultivation.

A producer organization leader stated that, *"The PhilCAFE now provides varieties that yield significantly more. They assist in rejuvenation or grafting to extend the life of our old coffee trees by grafting new plants onto them for increased fruit production. They also taught us pruning and fertilization techniques for coffee, as well as the introduction of new varieties."*

Sustainability and Scale

The distribution of coffee manuals, PowerPoint presentations, brochures, and recordings that lay out the step-by-step ways of each promoted technology will serve as the coffee stakeholders' reference beyond the life of the project. The training, coupled with hands-on activities, the identification of coffee point persons or technicians, and the embedding of coffee mentors within the organization structure, promises the sustainability of PhilCAFE.

The creation of coffee mentors within PhilCAFE has proven to be a valuable contribution to technology dissemination, application, and adoption, as they have demonstrated the capacity to offer technical assistance and coaching.

Lessons Learned and Ways Forward

The customized technical assistance provided by the coffee mentors and technicians on various coffee technologies and practices, as well as farmers' willingness and capacity to practice and apply the new technologies, plays a crucial role in scaling up the application and adoption of agricultural technologies and practices. This is needed to propel forward the upgrading of equipment, practices, and procedures, financial assistance, and access to agricultural inputs.

Highlights of PhilCAFE Financing Initiatives

- Oct. 2018-March 2019
 - Reviewed and revised MinPACT's financial assessment tool
 - Initial meeting with banks.
- April 2019-Sep 2019
 - PhilCAFE signed an MoU with Rizal MicroBank.
- Oct. 2019-March 2020
 - Facilitated a tripartite agreement with Rizal MicroBank, Balutakay Coffee Farmers Association (BACOFA), and Equilibrium Intertrade to improve market access for agriculture.
- April 2020-Sep 2020
 - Collaborated with Sacred Heart Savings Cooperatives (SHSC).
- Oct 2020-March 2021
 - Facilitated credit matching sessions with Rizal MicroBank and 2 implementing partner producers and trained 50 farmers to submit loans to LandBank.
- April 2021-Sep 2021
 - Facilitated the development of the policies, systems, and procedures of the coffee loan product customized for each of the conduit agrarian reform beneficiary organizations.
- Oct 2021-March 2022
 - BACOFA accessed PHP 0.5 million from Rizal MicroBank under DA's Agricultural Credit Policy Council's Agri-Negosyo Loan program.
- April 2022-Sep 2022
 - The PhilCAFE team facilitated Mediatrix's multi-purpose cooperative (MPC)'s Coffee Loan Policy Review and Coffee Loan Rehabilitation and Recovery Program, approved Jan 2022.

Outcome #5: Increased Use of Financial Services

This outcome statement refers to the increasing access to, availability of, and use of formal financial services by the farmers or producer organizations⁹ and other actors¹⁰ in the coffee value chain.

A significant majority of the farmers interviewed in the baseline (98.4%) reported that they reinvested their earnings from the previous year's production and sales or utilized their savings. They reported facing challenges in accessing credit due to various factors, including cumbersome documentation and collateral requirements for loans, along with high interest rates.

PhilCAFE has actively addressed this issue through a dedicated initiative: Activity 6—Financial Services: Facilitate Agricultural Lending. This involved engagement with various financial institutions to enhance the availability and accessibility of agricultural loans. During outcome harvest interviews with project staff, key forms of finance were identified, including:

- The project has engaged in collaboration with various banks, including Rizal MicroBank, Land Bank, and First Valley Bank, to explore the possibilities and execute coffee-related loan programs in various regions of the country. PhilCAFE facilitated the connection between these banks and cooperatives. This strategic partnership ensured that funds were distributed by the cooperatives to their members, creating a system where cooperatives would oversee the disbursement of funds and hold farmers accountable for repayment.
- The project has established connections with savings and credit cooperatives such as Sacred Heart Savings Cooperative, Taloy Norte Farmers Multi-Purpose Cooperative, Abra Diocesan Teachers and Employees Multi-Purpose Cooperative, Mediatrix's MPC, MAGSIGE MPC, Progressive Agrarian Reform Beneficiaries Multi-Purpose Cooperative, and conduits like PEF and Equilibrium Intertrade Corporation. This collaboration aims to assess the strengths and weaknesses of producer organizations and design training programs to support loan applicants in navigating the loan procedures. A producer organization member mentioned during KIIs that, *"Working with PhilCAFE not only facilitated access to credit or money lending but also included education and guidance on how to engage with financing institutions."*
- The PhilCAFE business development and support team's proactive measures have had a substantial impact on various project outcomes. The implicit financial support measures implemented by PhilCAFE have contributed significantly to the success of several initiatives:
 - **Establishment of Nurseries:** The initiative to provide manuals and financial support through grants has increased the availability of and access to improved inputs, particularly through the establishment of nurseries. The seedlings produced in the nurseries were financed through a coffee loan program designed to help farmers expand or establish their coffee farms. Farmers were expected to repay the loans once their coffee reaches the productive stage.
 - **Provision of Low-Interest Loans:** PhilCAFE's support in facilitating low-interest loans (from an average of 7.9% to an average of 5.9% per annum) has made it easier for farmers to access the necessary capital for their agricultural activities. PhilCAFE worked with all parties to ensure the required conditions existed for loans to make sense.
 - **Finance for Logistics:** Making training and other project-related meetings and events more accessible has relieved the financial burden on participants, allowing them to focus on training. Participants continued attending training based on topics raised, and knowledge gained contributing to the overall success of the project.

⁹ Farmers and producer organizations required credit for their recurring farm expenses, such as buying inputs (fertilizers, pesticides, farm tools, etc.), paying for farm labor outside of the family members, for other rental dues, rentals, and taxes.

¹⁰ Other actors such as nursery operators, processors/roasters, and traders require capital to procure major equipment or buildings for storage, to plan for expansion, for major efficiency improvements etc.

- **Financing Q Grading and Processing Certification Training:** PhilCAFE's assistance in distributing free seedlings and technologies to farmers and other actors in the value chain aligns with the promotion of advanced agricultural practices and technologies, stimulates additional seedling sales, and encourages financing institutions to include coffee loan programs in their portfolio to support coffee expansion.

Distribution of Free Seedlings and Technologies: PhilCAFE's assistance in distributing free seedlings and technologies, not only to farmers but also to other actors in the value chain, aligns with the promotion of advanced agricultural practices and technologies. PhilCAFE was able to use free seedlings as a training tool to show farmers how to properly plant them, and understand the difference between old varieties, and incentivize them to invest. To ensure the nurseries' sustainability, they were linked to various coffee seedling buyers, including like government-assisted projects and programs, commercial coffee plantations and firms, and other coffee organizations without nurseries. Additionally, coffee seedlings were included in the coffee loan program, allowing members to plant them and pay later. An employee of a coffee cupping laboratory mentioned, *"PhilCAFE lead us with the government agencies and other agencies who give and provide us funding like for example funds for proposed projects for research."*

While the impact on farmers' access to financial services may appear limited from their perspective and final evaluation results, PhilCAFE's indirect facilitation of connections with other financial institutions has been instrumental.

A producer organization representative indicated, *"PhilCAFE connected us to financial institutions that provide capital and lending services."*

The identified barriers to financial access, such as collateral challenges and insufficient income for loan repayment, are acknowledged, and PhilCAFE's role in providing advice on accessing funds from the government and financing institutions has been highlighted.

According to a coffee champion, *"PhilCAFE linked us with the government agencies and financial institutions. [Before] we felt embarrassed to approach financial institutions like banks. It was hard to convince farmers to seek help or access financial aid from banks. But now, banks approach us."*

The initiative's success extends beyond financial access, significantly contributing to the achievement of Outcome #2 (improved management of buyer/seller groups), Outcome #3 (increased use of inputs), Outcome #4 (improved agricultural techniques), and Outcome #6 (adoption of post-harvest technologies). The secured financial means empower coffee farmers to procure essential inputs, equipment, and tools, enhancing their capacity to produce high-quality coffee, expand coffee production areas, adopt coffee-improved technologies and practices, payment for labor and services, and additional capital for producer organizations to consolidate/procure coffee from farmers. The positive feedback from members and leaders of producers' organizations further validates the effectiveness of PhilCAFE's interventions in the three regions. There are significant differences between receiving financing and the adoption of technology ($p=0.016$). Respondents who received financing are significantly more inclined to adopt new technologies (87.67%) compared to those who did not receive any financing (78.32%).

Sustainability and Scale

PhilCAFE's involvement in 2021 to 2023 contributed to shaping the procedures for financial institutions and systems for coffee loans, as well as in training loan applicants; the tangible outcomes of these efforts are expected to emerge over time. The observable changes in the policies of financial institutions, the adoption of financial manuals, and the burgeoning inter-linkages and collaborations with banks, savings and credit cooperatives, and producer organizations all underscored the potential for sustainable impact. The training provided to farmers further reinforced this prospect and fostered a long-term positive effect on the sector's financial stability and accessibility.

Lessons Learned and Ways Forward

Key lessons that emerged from the project's activities highlight several critical areas for future focus. Integrating digital literacy training into government programs could significantly bolster farmers' abilities to engage effectively with modern agricultural and financial systems due to the importance of compliance with requirements, documentation, and criteria for access to credit. There is also a promising opportunity to explore innovative asset-based financing schemes. These schemes could provide farmers, including individuals and members of producer organizations, with access to specific technologies that are otherwise financially out of reach, and reduce and streamline procedures, processes, and requirements in financing eligibility.

Outcome #6: Increased Value Added to Post-Production Agricultural Products/ Improved Post-harvest Infrastructure/Use of Post-Production Processing and Handling Practices

In the baseline survey, a third of coffee farmers reported experiencing post-harvest losses, primarily attributed to rain exposure and indiscriminate harvesting practices. More than 70% of these farmers lacked essential post-harvest techniques, such as access to solar dryers, dehullers, pulpers, or fermenters. This limitation significantly impacted their capacity to market high-quality coffee to discerning buyers. To address this challenge, PhilCAFE initiated a Training of Trainers (ToT) program on post-harvest handling and processing. This program involved collaboration with the DA, DTI, LGUs, CQI, and the Barista Coffee Academy. The training was extended to coffee mentors, farmers, and firms, benefiting a total of 5,440 individuals. The focus was on enhancing value addition through practices like fermentation, processing including roasting, and green coffee production. Notably, this outcome surpassed the project's originally set target by an impressive 1,804%, or 7,575 farmers and firms that are adding value to the post-production of their coffee products. Select firms and producer organizations have received post-harvest and processing facilities and equipment from PhilCAFE to promote quality value-added products. This initiative also aimed at making processing more accessible and efficient for local communities.

Highlights of PhilCAFE Initiatives

- PhilCAFE's technical team drafted information, education, and communication (IEC) material on specialty coffee production and post-harvest handling processes.
- Conducted several ToT in partnership with ATI that focused on post-harvest handling, processing, and sensory appreciation of coffee.
- Aired episodes of coffee post-harvest handling over the radio station and Facebook.
- Organized CQI training courses.
- Training on post-harvest and processing practices.
- Provision of post-harvest and processing facilities, including a cupping laboratory.



Picture Description: Isometric view of machine design of 1) coffee demucilager, 2) dryer, 3) huller, and 4) sorter

The producer organizations interviewed have affirmed that, following assistance from the project, they have adopted various harvesting methods and processing techniques. These include elevated drying, sorting, bean grading, sensory evaluation, and coffee cupping methods, encompassing aroma perception, calibration, sensory skills, and roasting. These practices are implemented to distinguish their coffee as specialty, premium-grade produce.

According to an employee of an SUC, *“Post-harvest practices have improved, with more farmers using selective harvesting and different processing methods promoted by PhilCAFE.”*

These value-adding activities and increased use of coffee cuppings through training, development of laboratories, and coffee quality competitions are some of the major changes in terms of value addition that PhilCAFE facilitated that resulted in increased pricing and demand of Philippine coffee in domestic and international markets.

A coffee cupper stipulated, *“Many of the farmers saw that there is a big difference from PhilCAFE’s technology transfers like post-harvest handling. If you handle your coffee properly, it will give additional value to produce price, so a lot of us appreciated that.”*

The producer organizations also expressed gratitude for the project's support in acquiring machinery that reduces workload, enhancing infrastructure in their area, and providing technologies such as de-pulpers and de-hullers. Stakeholders and farmers alike have recognized PhilCAFE's significant impact in enlightening farmers about the higher value of their produce, challenging and surpassing their previous perceptions.

A coffee council member mentioned, *“Farmers who received training through PhilCAFE have significantly changed their approach, not just in producing coffee but also in ensuring quality through post-production processes.”*

Sustainability and Scale

PhilCAFE has successfully disseminated methods through training sessions and the engagement of coffee mentors, SUCs, academe, producer organizations and their coffee farmer members, and private firms like coffee shops, roasters, baristas, and manufacturers. These mentors, strategically selected at the regional level, are well-positioned to exert influence over a wide geographic area, benefiting numerous farmers. Importantly, their impact is expected to persist even after the conclusion of the project.

This resulted in the widespread use of coffee cupping for quality assessments and improvements, the willingness of buyers to pay for high-quality coffee, and platforms such as the spreading of coffee quality competitions/events for these types of sales to happen (i.e., where buyers will pay an increased price for high-quality coffee).

The IEC materials developed by PhilCAFE, specifically focused on specialty coffee production and post-harvest handling practices, have been recognized as crucial for sustaining the learned practices among farmers and stakeholders. This underscores the project’s commitment to promoting lasting positive changes within the coffee sector.

Lessons Learned and Ways Forward

The baseline survey identified the lack of post-harvest technologies as a significant factor contributing to post-harvest losses. In response, the project has taken a comprehensive approach by involving all actors in the coffee supply chain from harvest onwards. To further promote the availability and adoption of post-harvest technologies, future strategies may include:

- **Market Information:** Providing farmers with relevant market information can empower them to make informed decisions regarding the adoption of post-harvest technologies. This can include data on current market trends, demand, and pricing.
- **Improved Storing Facilities:** Enhancing the facilities for storing harvested coffee can contribute to minimizing post-harvest losses. This may involve introducing better storage infrastructure and practices to maintain the quality of the harvested coffee beans.
- **Social Networks** (Facebook, etc.): Leveraging social networks, especially platforms like Facebook, to connect farmers with suppliers of post-harvest technologies and potential buyers can be a valuable strategy. This can facilitate efficient communication and collaboration within the coffee community.

By incorporating these strategies, the coffee programs can address the identified challenges and create a more resilient and efficient coffee supply chain.

Outcome #7: Increased Leverage of Public & Private Sector Resources/ Improved Policy and Regulatory Framework

To address the challenges faced by coffee farmers and producer organizations, national agencies provide support in line with their official mandates. The DA, through its High-Value Commercial Crops Program, and PRDP provide funds to cooperatives engaged in coffee production. PRDP funding, for instance, is utilized for activities outlined in the Commodity Investment Plan, including the development of post-harvest facilities, training programs, and assistance in obtaining FDA-License to Operation (FDA-LTO). BPI focuses on providing technical advice related to fertilization and pest and disease management, although it operates with a limited budget. Despite these funds and schemes, there is room for improvement for investment. PhilCAFE has assisted 31 policies, regulations, and/or administrative procedures, with 12 in the analysis stage and 19 in the consultation stage.

An SUC employee verified, *“Our university agenda for research and extension has incorporated coffee due to PhilCAFE contributions. It redirected our manpower to focus not just on other commodities but also to specialize in coffee. Additionally, it allocated resources for upcoming projects like coffee shops and processing centers.”*

In response to fill these gaps PhilCAFE has played a facilitating role by leveraging financing for equipment and facilities dedicated to post-harvest handling and processing. This initiative has generated investments from both producer organizations and government agencies. Notable partners include DTT's RAPID, DA-PRDP, and DAR's Convergence on Value Chain Enhancement for Rural Growth and Empowerment, which have provided financing for ongoing projects. A total of 150 partnerships have been established, 101 of which cover diverse focus areas across various sectors. Thirteen additional collaborations were specifically aimed at enhancing post-harvest processes in agriculture, while 36 partnerships were dedicated to increasing agricultural productivity. These partnerships involved a wide array of stakeholders, including producer groups, SUCs, multiple government agencies, and local government units.

A producer organization leader shared, *“PhilCAFE's influence extends beyond the cooperatives they directly engage with; they work to foster partnerships and cooperation among various entities, including government agencies and NGOs. This collaborative approach aims to create a synergistic effect, ensuring that the efforts of multiple stakeholders contribute collectively to the development of groups and communities.”*

PhilCAFE's strategic collaborations with various government agencies and stakeholders have resulted in a total documented leverage contribution of \$8.1 million. Major coffee events inspired by PhilCAFE, such as regional coffee quality competitions, have garnered contributions from both the private and public sectors.

Insights from KIIs with representatives from both the government and private sectors underscore a tangible strengthening of collaboration between these entities. PhilCAFE-led initiatives, including the PCE 2022 event and the establishment of the PCQC platform, have emerged as catalysts for this enhanced collaboration.

A coffee academy member mentioned, *“Through activities in collaboration with PhilCAFE, coffee associations, and businesses, people got to know each other and sought opportunities for different collaborations in the coffee industry.”*

The efforts driven by PhilCAFE have not only fostered a more robust partnership between private and public sectors but have also yielded substantial dividends in terms of increased networking opportunities. The collaborative environment created by these initiatives extends beyond mere connectivity; it has become a platform for extensive educational outreach, benefiting a diverse array of organizations and individuals involved in the coffee industry.

Nonetheless, the collaborative spirit instigated by PhilCAFE initiatives has played a pivotal role in promoting various activities within the sector. The shared goals and concerted

Highlights of PhilCAFE Initiatives

- Participation of DA and GrainPro in PCQC.
- Signed an MoU with DAR to provide training on GAP.
- Collaborated with USAID Protect Wildlife to integrate conversation messages into training modules.
- Entered a tripartite MoU with DA, PRDP, and PCG to provide GAP training and coffee-related farm facilities in PRDP.

efforts resulting from this collaboration are indicative of a thriving partnership that goes beyond individual initiatives, contributing to the overall growth and sustainability of the coffee industry.

Outcome #8: Improved Quality of Land and Water Resources

The decrease in coffee yields is a result of the frequent and unpredictable occurrence of rainfall and typhoons, the deterioration in coffee quality due to the rise in pests and diseases, and the continuous depletion of soil nutrients after every harvest. PhilCAFE introduced specific technologies and practices such as the promotion of biodiversity conservation, the integration of agroforestry practices, the optimization of planting schedules, the strategic use of nitrogen-rich fertilizers, the establishment and growth of perennial crops (fruit-bearing and forest trees), the adoption of minimal or zero-tillage methods, the rehabilitation of organic soils and land that had been previously degraded, the restoration and management of stream banks, and the effective administration of woodlots.

As mentioned by a participant of FGDs of the coffee council, *“PhilCAFE assisted us in adapting to improved technology. They taught us how to conserve natural resources, like planting trees to reduce landslides, especially during the rainy season.”*

In a collaborative effort to enhance resilience against adverse weather conditions, PhilCAFE partnered with SUCs to introduce innovations in the nursery sector. This initiative involved implementing solar-powered water systems and constructing a diversion canal surrounding three sides of the nursery structures. These measures effectively mitigated water accumulation issues on the lower side. PhilCAFE also conducted a series of wastewater management training to minimize the effects and maximize the use of water from coffee processing.

An SUC faculty said, *“The wastewater for coffee processing, is usually thrown by the farmers to the canals; thus, PhilCAFE conducted training on wastewater treatment prior to the release of the wastewater from coffee processing, and with that, we can say that it was influential in conserving water.”*

The representative of an international research organization, acting as a technical advisor to PhilCAFE, mentioned their role in diagnosing challenges affecting the seed sector. They collected information from women-centered producer organizations and utilized scientific evidence, including conducting DNA analysis of sample leaves.

PhilCAFE has impacted:



9,442 hectares of land is under improved management practices or technologies that promote improved climate risk reduction and/or natural resource management

In the final evaluation quantitative survey with farmers, agroforestry emerged as the most adopted technology (55%), followed by restoration of organic soils and degraded lands, efficient nitrogen fertilizer use, adjustment of sowing/planting time, and woodlot management, etc.

Producer organization feedback during FDGs consistently highlighted that PhilCAFE has made significant improvements in water management systems, including proper drainage to address issues such as waterlogging. Furthermore, PhilCAFE provided substantial support in the effective management of natural resources, marking a crucial step toward sustainable environmental and agricultural practices. This support included:

- Training on steep slope farming on hills to avoid soil erosion and water logging, ensuring an even water supply to plants.
- Explanation and support for intercropping trees without cutting existing trees, emphasizing the importance of shading coffee plants with other trees, especially fruit trees.
- Guidance on the correct way of planting coffee plants at an appropriate distance,
- Training on wastewater management.
- Recommendations for the rejuvenation and optimal use of fertilizers.

A participant in the FGD with a PO shared, *"After receiving assistance from PhilCAFE, we only use fertilizer when necessary, a practice we learned in GAP training. Additionally, we learned that coffee plants require shading, so surrounding trees should not be cut."*

An employee of a coffee cupping laboratory also mentioned, *"Farmers have learned to use uncontaminated water for coffee processing, ensuring better coffee quality. Water quality has become a major contributor to coffee quality, and many farmers have shifted to using spring water for processing."*

Sustainability and Scale

PhilCAFE advocates sustainable farming by supporting and promoting inputs that can sustain soil fertility and soil microbiology. The farmers and other stakeholders interviewed expressed the view that the knowledge and practices gained will endure as coffee farming continues in their area. KIIs with international research institutes indicated that access to new genetic materials and the adoption of practices tailored to the farm and climatic context will lead to improved yields in the future, once those trees mature enough to produce fruits, a process typically taking two to three years. Moreover, PhilCAFE has facilitated the development of 31 community-derived risk management plans.

Lessons Learned and Ways Forward

Focus is crucial to promote regenerative farming practices that bring benefits to soil health and biodiversity in the field. This involves a shift from the use of agro-chemicals to organic inputs, implementing terracing, practicing inter-cropping, and planting coffee crops under tree canopies to provide shading and reduce soil erosion. Additionally, adjusting the planting date for new coffee crops based on meteorological data, thereby improving access to such data, and incorporating practices like pruning dead branches contribute to sustainable and regenerative farming.

Outcome #9: Increased Pricing Due to the Rise of Quality & Specialty Coffee in the Philippines

The overall farm gate prices of dry coffee beans for Robusta decreased in the last five years in the Philippines (DA report 2022).¹¹ Farmers in the baseline reported the average price of coffee-dried cherries of all types was very low¹² and varied depending on the volume, quality, form, and market. It may be due to several factors, including poor quality of coffee, availability of cheap and quality imported coffee, coffee turning

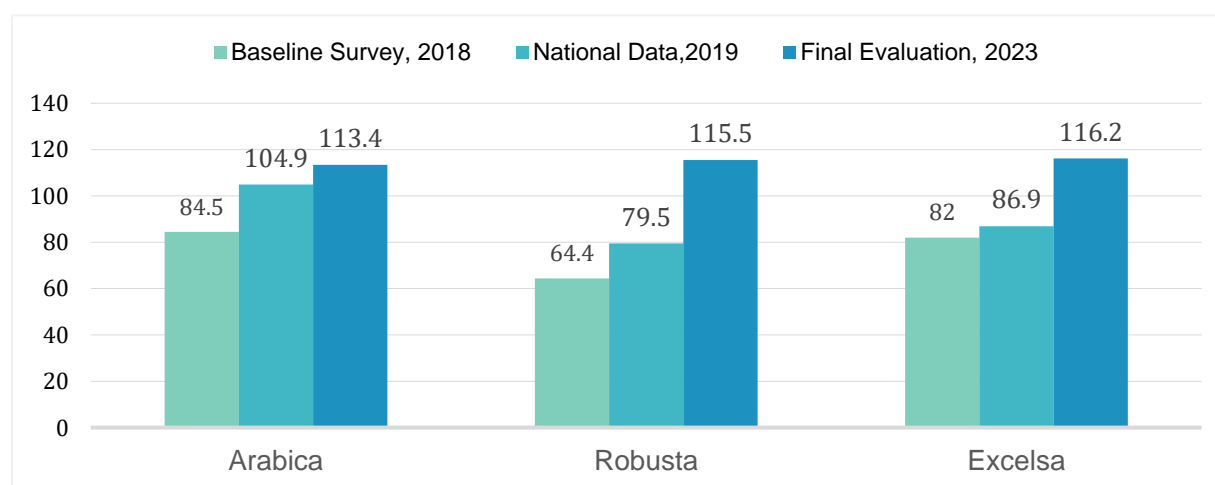


Figure 12: Average farm gate prices (PHP/kg) of dry coffee beans by coffee species

¹¹ DA report (2022). "Philippine Coffee Industry Roadmap 2021-25." Report published by Department of Agriculture-Bureau of Agricultural Research, Diliman, Quezon City, Philippines.

¹² Robusta (PHP 64.41/kg), Arabica (PHP 84.52/kg), and Excelsa (PHP 82.04/kg) in 2018.

black due to hailing days before drying, which implicitly suggests poor facilities of post-harvest and process technologies, poor quality of seedling with no traceability, etc. PhilCAFE has taken several initiatives to address these problems and, as a result, has had a direct impact on quality and price as discussed in some of the above outcomes. The price of dried coffee beans has increased remarkably in the endline.¹³

PhilCAFE has assisted 41 registered firms in target sectors that obtain coffee quality certification, including the Q graders and Q processors.

The proliferation of [coffee quality] competition has played a crucial role in elevating specialty coffee by improving market access and increasing the farmgate prices. As a result, [this increased] the competitiveness of Philippine coffee at the international level where cafes are [now] featuring Philippine coffees where they used to serve only imported coffee.

Notably, the online and other platform initiatives undertaken by the PCQC have had a profound impact on increases in prices. Some PCQC participants noted that coffee prices have increased 10 times due to competitions.

A roaster and coffee shop owner stated that, *“Before, around 2013, 2014, 2015, Arabica was around 200 or 300 [pesos per kg]. Now, it has increased, but there's a difference in quality from before and now. Now the quality is good.”*

A woman client of laboratories at the university mentioned that, *“Now [2023], Arabica coffee sells for around 900 to 1,200 [pesos per kg] roasted and around 700 [pesos per kg] for coffee beans. That's a huge leap from the 60 [pesos per kg] they earned before [2008].”*

In addition, a member of a government institution said, *“Before PhilCAFE came in, our Arabica farmers received around 150 to 200 pesos per kg. Now, after several years, it's ranging from 500 to 700 [pesos per kg] for green coffee beans. This significant price increase was due to the assistance provided by PhilCAFE, teaching farmers how to rehabilitate and process their coffee into specialty coffee.”*

Key participants in the coffee supply chain, including roasters, cafe owners, and cupping lab employees, have acknowledged the positive outcomes resulting from PhilCAFE's efforts in Q Grading, cupping, and CQI classes. There has been a noticeable increase in Arabica coffee production, coupled with enhancements in both quality and pricing. A representative from CQI highlighted that the exposure of the market to specialty Arabica or fine Robusta coffee through PCQC has led to the discovery of very high-quality, high-scoring, and uniquely delicious coffee, thereby pushing the price ceiling higher.

University faculty members shared changes in behavior among PhilCAFE-trained farmers, noting that they now actively seek cupping quality assessments as a basis for fair pricing. According to a client of a coffee cupping laboratory, *“With the assistance of PhilCAFE, now, buyers ask for the price based on the coffee's quality. The average price has increased from 70-80 pesos [per kg] to 250-400 pesos [per kg], depending on quality.”*

Supply chain representatives emphasized the substantial influence of coffee champions and mentors on coffee pricing. According to a coffee champion in an FGD, *“The assistance provided by PhilCAFE has equipped farmers with Q Grader certifications, enabling them to effectively price their products.”*

This, in turn, is expected to result in better prices for the cooperative and ensure its sustainability over the long term.

In partnership CQI, PhilCAFE conducted training sessions for farmers and various stakeholders in the coffee supply chain, providing them with fundamental knowledge and practical hands-on skills related to the establishment of coffee cupping. The training covered the purposes behind cupping, the proper techniques involved, as well as common mistakes to avoid. As stated by a representative from CQI, the goal was not to turn everyone into a professional coffee cupper but ensure that every stakeholder involved in the PhilCAFE had exposure to and an opportunity to explore the world of coffee cupping. This approach aimed to broaden the understanding of why cupping is conducted, how it is carried out, and the significance it holds in the

¹³ Robusta (PHP 115.5/kg), Arabica (PHP 113.4/kg), and Excelsa (PHP 116.2/kg) in 2023.

coffee industry. By providing this exposure, PhilCAFE aimed to empower participants with valuable insights into the sensory evaluation of coffee, enhancing their overall engagement and expertise in the coffee value chain.

A producer organization leader said, *“PhilCAFE has had a significant influence on those coffee farmers. Organizations are now able to buy their farmers' coffee at a higher price because of the quality of the coffee.” A Coffee Academy informant said, “The price for the specialty coffee has increased. In 2023, almost 92% of coffee purchased was specialty.”*

Sub-Outcome: Increased Household Income/Profits of Farmers and Coffee Value Chain MSA

Members of producer organizations, as confirmed during KIIs, have reported an increase in their income due to the assistance provided by PhilCAFE. The training and support for technology, particularly the guidance on the correct harvesting procedures to ensure the production of good-quality coffee, have played a crucial role in this improvement.

A producer organization leader said, *“The income increased due to the higher prices of coffee brought about by the good quality of the coffee beans produced. One of the reasons farmers are enticed to plant coffee is the utilization of technologies that streamline the coffee production process. When it comes to earnings, there's a substantial increase in our income due to the high price of our coffee.”*

A PCQC participant stated, *“In my own perspective, the income of our farmers is greater today. There are farmers today who no longer sell their coffee as commercial coffee but sell as specialty coffee at a higher price.”*

Some producer organizations have highlighted additional income streams generated from the nursery, where they received seedlings from PhilCAFE, *“We had sales for the sold seedlings, so we had additional income.”*

The income generated from the nurseries is distributed to their members.

Various stakeholders, including a coffee cupper from one region, have also acknowledged the unequivocal role of PhilCAFE in enhancing household income. The cupper noted a positive shift in farmers' practices, emphasizing that they now wait for coffee to ripen, selectively pick the right beans, segregate them into different grades, and sell them at varied prices. This strategic approach has resulted in a substantial increase in earnings.

In a cupper's words, *“Earlier farmers would take all the harvest and sell at, say 150 [pesos per kg]. Now they wait for coffee to ripen, pick the right ones, segregate in different grades, and sell at different prices. So earlier, if they were earning, say, 5,000 [pesos], now they are earning 20,000 or 30,000 [pesos].”*

Moreover, a producer organization leader emphasized, *“Lives have improved; income has increased. Farmers' lives are better, and they income to buy their household needs.”*

Lessons Learned and Ways Forward

PhilCAFE has been instrumental in providing training aimed at fostering the adoption of key agricultural technologies conducive to farm diversification, pruning and rejuvenation techniques, as well as the implementation of soil-related fertility and conservation practices. These initiatives have directly influenced market prices, positively impacting farmers' incomes. The adoption of these technologies has facilitated the production of new specialty coffee varieties, thereby bolstering farmers' economic prospects. Additionally, PhilCAFE has undertaken sustainable livelihood training programs, benefiting both seasoned farmers and youth, ensuring a continuum of support for agricultural sustainability and prosperity.

COVID-19 impacted training, the update of certain technologies, and the resulting impacts of adoption. In anticipation of future uncertainties, it is imperative for the project to implement precautionary strategies aimed at mitigating potential challenges.

Outcome #10: Increased Agricultural Productivity

The coffee yield across the country is only 300 kg/ha, which is quite low compared to neighboring countries like Indonesia, which has an average yield of 670 kg per hectare of green coffee bean, or Vietnam with a yield of 2,400 kg/ha.¹⁴ PhilCAFE has successfully addressed the productivity observed initially by implementing several positive interventions. These include aging trees, improving farming techniques, ensuring adequate rejuvenation, enhancing the availability of quality seeds, and facilitating better access to credit.

The PhilCAFE has successfully addressed these challenges and contributed to enhancing agricultural productivity and food security. This was achieved through increased access to inputs, particularly high-quality coffee plant varieties obtained from nurseries. Key activities included the adoption of climate-resilient strategies, rejuvenation of existing trees, and optimizing plant spacing. The project also played a crucial role in improving extension and research services.

The final evaluation shows a positive impact on yield, with a specific measurement of 500 kg/ha, representing an 11.11% rise from the baseline.

A SUC faculty member said, *"The farmers now have a lot of production as they are using new technology, enabling them to get higher prices for their products."*

A farmer from a producer organization in Bukidnon highlighted the transformative effect of PhilCAFE's training, saying, *"PhilCAFE's training helps to boost productivity. Before, they used to earn only around 50,000 pesos annually. However, with the knowledge gained from the training, even those with only two sacks of coffee now earn over 200,000 pesos. This assistance has fueled our continued expansion in coffee planting."*

These testimonials reflect the tangible and substantial benefits of the PhilCAFE in improving the economic outcomes of coffee farmers.

Producer organizations and staff have recognized and appreciated the substantial contribution of coffee mentors in effectively reaching coffee farmers through cascaded training despite the restrictions and challenges imposed by the pandemic. The acknowledgment highlights the invaluable role played by coffee mentors in ensuring that essential training and support are extended to farmers, demonstrating resilience and adaptability in the face of pandemic-related difficulties.

A producer organization leader shared, *"Coffee technologies cascaded by coffee mentors are very important. Farmers that receive this training from PhilCAFE seem to be happy as it is easier to harvest their coffee and the coffee plants are more resistant to dying. After PhilCAFE's intervention, coffee production volume was increasing here."*

Outcome #11: Expanded Trade of Coffee Products Domestically in the Philippines & Internationally

PhilCAFE has significantly advanced the status of coffee as one of the eight priority commodities. The project aimed to address key barriers hindering the expanded trade of coffee, working in tandem with the DTI to achieve positive outcomes.

Primary challenges affecting the growth of the coffee trade included:

- **Low Price of Imported Coffee:** The market faced competition from low-priced imported coffee from Vietnam and Indonesia,¹⁵ impacting the local industry's economic viability.
- **Quality Issues:** Low traceability, poor handling at the farm and processing levels, a weak coffee grading system, and the presence of small coffee roasters without a sustainable business model collectively contributed to low-quality coffee.

¹⁴ (DA report, 2022).

¹⁵ The prices are high in these countries due to the low cost of production, foreign investment, and scale for more efficient production of quality coffee.

These challenges posed difficulties for coffee producers, traders, processors, and exporters in obtaining FDA-LTO. Since 2018, the United States has mandated FDA-LTO registration for processors and exporters of green coffee beans to the country, extending to food companies intending to sell roasted products in various outlets.

In response to these challenges and the need to meet international food safety standards, particularly those set by the FDA, PhilCAFE took proactive measures. In 2020, the project organized a virtual training session on GMP specifically tailored for coffee exporters and producers. This initiative aimed to enhance understanding and implementation of GMP, addressing both the challenges faced by the industry and the requests from coffee exporters to align with international food safety standards.

Overall, PhilCAFE's collaboration with DTI, coupled with targeted initiatives like the virtual GMP training, showcases a commitment to overcoming trade barriers and ensuring compliance with global standards. These efforts contribute to the sustainable development and competitiveness of the Philippine coffee industry, domestically and in the international market.

PhilCAFE staff has reported that DTI, in collaboration with the DA, is currently in the process of reproducing the PhilCAFE coffee production manual. This manual is intended for use by farmers and government agencies, emphasizing a concerted effort to disseminate valuable knowledge and practices throughout the coffee industry.

During the World of Coffee event in Italy in 2022, representatives from PhilCAFE showcased Robusta coffee samples for cupping, which received appreciation and recognition from buyers representing various countries.

A KII participant of a government institution said, *"During the World of Coffee event in Italy, PhilCAFE's Robusta samples for cupping were appreciated and acknowledged by buyers from different countries. They liked the coffee produced here in the Philippines, and this exposure expanded our market."*

The positive reception expanded the market for Philippine coffee, demonstrating the quality and appeal of locally produced coffee. Additionally, representatives from CQI shared similar success stories, citing positive responses from coffee buyers in the United States during cupping events held in the Philippines.

A producer organization leader said, *"The exposure provided by PhilCAFE, especially at expos, revealed diverse coffee markets, ranging from specialty to premium and commercial. This exposure opened new opportunities, particularly in the American market."*

A coffee cupper trained by PCQC emphasized the impact of cupping, stating, *"Because of cupping, now specialty coffee entries in PCQC have increased, and the market has shifted into more premium markets."*

Several initiatives aimed at improving coffee quality were discussed earlier, including coffee quality competitions facilitated by PhilCAFE, training in coffee cupping, and assistance to extension agents providing training in practices that enhance coffee quality. These efforts have collectively contributed to an improvement in the quality of Philippine coffee. Coffee cupping events are now being conducted and opened at the municipal, provincial and regional levels, testing the coffee quality. Private institutions also pop up to stir cupping sessions as the demand rises.

One other notable improvement reported by government officials was the influence of the project on the DA to strengthen the registration of seed sources with the BPI and enhance traceability. Traceability is a key requirement to FDA-LTO for export purposes.

As shared by an employee interviewed from a government institution, *"PhilCAFE advocates for good choices of planting materials, including seed sources. These seed sources need to be registered with the Bureau of Plant Industries, and they require proper identification, accreditation, and registration of mother trees and planting materials."*

As part of the project's broader objectives which aimed to increase the country's coffee exports tenfold from the baseline, there has been notable progress. Green coffee beans, totaling \$570,547 in sales out of the project target of \$362,060, have been successfully exported from the Philippines to international markets over the life

of the activity. This achievement reflects positive strides toward the project's goal of significantly boosting the presence of Philippine coffee in the global market. PhilCAFE has contributed a total of \$36,762,700 to the Philippines' coffee sales.

Sustainability and Scale

The project beneficiaries strongly support the assertion that PhilCAFE has had a significant impact on demand, production, improved quality, and trade in the coffee industry. However, despite these positive changes, coffee production in the Philippines still falls short of meeting domestic demand. Coffee sellers continue to rely on imports from countries such as Vietnam and Brazil to sustain their businesses.

The sustainability and scalability of quality coffee production and export are contingent on the continuation of these positive changes and the adherence of industry participants to GAP guidance. The project has instilled a desire to enhance both the quality of coffee and value chain practices, resulting in noticeable increases in the prices received for coffee.

Stakeholders believe the project's impact on national coffee standards will influence future production.

According to a government official, *"The Philippine National Standards for coffee are being updated by the Bureau of Agriculture and Fisheries Standards because of advocacies like what the PhilCAFE is doing."*

Beneficiaries endorse the sustainability of policy changes, with government representatives noting that the project's learnings engage private sector stakeholders, leading to coffee congresses for youth awareness and local coffee support. Additionally, numerous small cupping competitions are now organized (copying PhilCAFE's PCQC model) by private and government agencies without PhilCAFE support.

A PhilCAFE staff member highlighted that ACIDI/VOCA, has recently received requests for technical assistance from Philippine coffee exporters. These exporters are shipping their coffee products to the United States and are required to submit the FDA-LTO certification to access the U.S. market. This demonstrates PhilCAFE's positive impact not only on local practices but also on the ability of Philippine coffee products to meet international standards and market requirements.

Lessons Learned and Ways Forward

The key lesson learned is the recognition of the need for dedicated efforts in marketing strategies, including effective labeling and advertising. These initiatives are seen as essential for generating future demand for Philippine coffee products. By focusing on these aspects, future programs can contribute to the continued growth and sustainability of the coffee industry, ensuring that the positive changes initiated by PhilCAFE have a lasting impact on the market and consumer perception.

A noteworthy success of the project is highlighted in the quote: *"[The] project did well because it linked cooperatives and farmer's associations to coffee shops, bypassing traders, so they [farmers] can earn more income."*

This statement, derived from a KII with an input provider, underscores the positive impact of the project's approach. By establishing direct connections between cooperatives or farmer's associations and coffee shops, bypassing traditional traders, the project has enabled these stakeholders to increase their incomes. This success demonstrates the effectiveness of innovative and direct market linkages in enhancing the economic outcomes for coffee producers.

Outcome #12: Increased Participation and Engagement of Women and Youth in the Coffee Industry

The integration of gender, youth, and social inclusion (GYSI) is a cross-cutting approach of PhilCAFE in all the eight activities. In the baseline, it was mentioned that women play an essential role in plant maintenance, harvesting, sorting, processing, packaging, and labeling. Given this finding, PhilCAFE targeted an equal number of male and female farmers in cascade training on post-harvest handling and processing and the consideration of gender-responsive post-harvest equipment design. Moreover, PhilCAFE's formative Gender,

Youth and Social Inclusion (GYSI) Analysis was a crucial document for the project as it identified the prioritized gender- and age-based constraints which served as the basis on inclusion-focused initiatives and GYSI integration into Activities 1–8. PhilCAFE tried to address the barriers to women's and youth's participation and leadership in producer associations, women's disproportionate time burden as a key barrier to engagement in the coffee sector, disconnect between stated policy commitments and the responsiveness of extension and research for development activities to the needs of women and youth, and youth disinterest in pursuing opportunities in the coffee sector.

The GYSI capacity-building activities that PhilCAFE delivered to SUC partners' and producer organizations' strategic plans focused on how to more effectively promote inclusion within their organizations by expanding the participation of women and youth and raising awareness on the business case for developing more inclusive leadership models. PhilCAFE also involved indigenous people groups in project activities, including securing free and informed consent to ensure cooperation. These initiatives were integral to supporting the greater engagement and leadership of women and youth in the coffee sector.

There has been a significant rise in the involvement of women organizations and youth clubs within agriculture-focused settings and the application and adoption of improved technologies by women and youth.

According to a producer organization leader, *"Because of [increased] coffee demand, it created an ecosystem for the involvement of men, women, and youth."*

Interviewed government employees mentioned that there is an increase in women's leadership positions in the coffee sector. In processing for example, a significant number of women are involved in sorting coffee for Q Grading where they can bring their children along, creating a gender- and family-friendly environment. It has been observed that women are stepping forward and taking on leadership positions within producer organizations and/or sharing information and advice on coffee production, marketing, and processing with other producers.

A faculty member of an SUC said, *"Before, women were not so active in the coffee industry. Now they are more active, which should also increase their incomes."*

In partnership with the government, PhilCAFE rolled out the Young Farmer Challenge. This program aimed to encourage young women and mothers to engage in the expansion, care, and management of existing coffee production area, coffee production cycle, nurseries, processing, and to seek employment in the barista sector. PhilCAFE supported several youth who had participated in GAP and other training activities to attend the challenge, with several supported-youth winning and/or receiving other recognitions.

A government official shared that initiatives such as the Young Farmer Challenge have significantly highlighted and enhanced the roles of young farmers and women in the coffee industry. This shift not only reflects increased coffee awareness but also marks a positive move towards gender inclusivity and youth involvement in agriculture. Input providers recognized how women's participation in PhilCAFE's seedling and marketing training enabled them to pursue off-farm employment opportunities and generated more income for themselves and for their families. This, in turn, increased the efforts of providers to engage more women and youth in their business operations, thereby providing more opportunities for women and increase household income. Coffee suppliers reported increasing participation of youth in farming, opening coffee shops, and becoming roasters. They also mentioned that youth consider international avenues more seriously by using social media such as Facebook.

Producer organizations acknowledged the significant and inclusive participation of men, women, and youth with their involvement in trainings, coffee production, harvesting, postharvest handling and processing.

A producer organization leader said, *"Female and youth inclusively participated in this project and got trained on the technology and process."*

However, banking representatives noted that they receive few loan applications from women and youth. This limited engagement in loan applications may be influenced by banking policies that include requirements

of legal documents, such as land ownership or land agreements, which are often in the name of the head of household (who are mostly senior males).

Coffee mentors (composed of youth, women, and men implementing partners) were also an invaluable resource in promoting messaging linked to raising awareness of women's and youth's contributions to the coffee sector.¹⁶

IV. OUTCOME HARVEST SYSTEM CHANGE MAP AND SCORING

This section offers a brief overview of how the project successfully attained its outcomes. PhilCAFE achieved the goal of increased utilization of financial resources (Outcome 5) through strategic collaborations with financial institutions and savings and credit organizations. The project worked towards expanding the client base of these institutions, encompassing farmers and various actors in the coffee supply chain. This was accomplished by actively engaging with these organizations to revise their policies and protocols for loans. PhilCAFE further encouraged these institutions to collaborate with other organizations dedicated to the welfare of Filipino households. In addition, PhilCAFE played a pivotal role in assisting and training farmers or loan applicants in completing applications for individual or farm business loans. This concerted effort has strengthened farmers' access to loans, thereby enhancing their capacity to acquire and adopt improved agricultural technologies (Outcomes 3, 4, and 6).

Furthermore, PhilCAFE has contributed to achieving Outcome 9 by providing Q Grading certification training to different stakeholders. This training, which would otherwise be costly, has had a positive impact on enhancing the quality of coffee, aligning with broader project objectives.

PhilCAFE successfully achieved increased agricultural productivity (Outcome 10) by introducing and promoting improved agricultural practices. This includes enhancing the availability and access to improved inputs (Outcome 3), particularly focusing on improved seed varieties and organic fertilizer. The project also contributed to increased adoption of improved agricultural techniques and technologies (Outcome 4) and added value to post-production agricultural products through improved post-harvest infrastructure and the use of processing and handling practices (Outcome 6).

In addition, PhilCAFE played a crucial role in assisting agro-dealers and input sellers to expand their services, fostering connections with buyers at various local, national, and international coffee events. These efforts had a notable impact on both the quality and price of coffee. These outcomes, in turn, significantly influenced the project's objective of expanding the trade of coffee products in the Philippines and internationally (Outcome 11).

Furthermore, the project facilitated support and funding to exporters and processors, enabling them to obtain FDA-LTO for export. This not only contributed to improved product quality but also influenced the policy and regulatory framework (Outcome 7) in the sector, reflecting a holistic approach towards enhancing the entire coffee value chain.

PhilCAFE prioritized inclusive participation, particularly emphasizing the involvement of women in the sorting, processing, and post-harvest stages of coffee production. The project's technical team conscientiously integrated gender equity and social inclusion considerations into almost all activities. This concerted effort

¹⁶ ACDI/VOCA commentary: PhilCAFE intentionally recruited and trained women and youth to become coffee mentors in their community and equipped all coffee mentors (men, women, and youth) with gender-responsive training and extension approaches. These initiatives were critical in promoting greater recognition of women's and youth's engagement in and contribution to the coffee sector.

aimed to achieve the outcome of enhancing women's and youth's participation and involvement in the coffee industry (Outcome 12).

The interconnection and interdependence of these outcomes are visually represented in Figure 16, illustrating the holistic approach adopted by the project to promote gender equity, social inclusion, and increased participation of women and youth throughout the various stages of the coffee value chain.

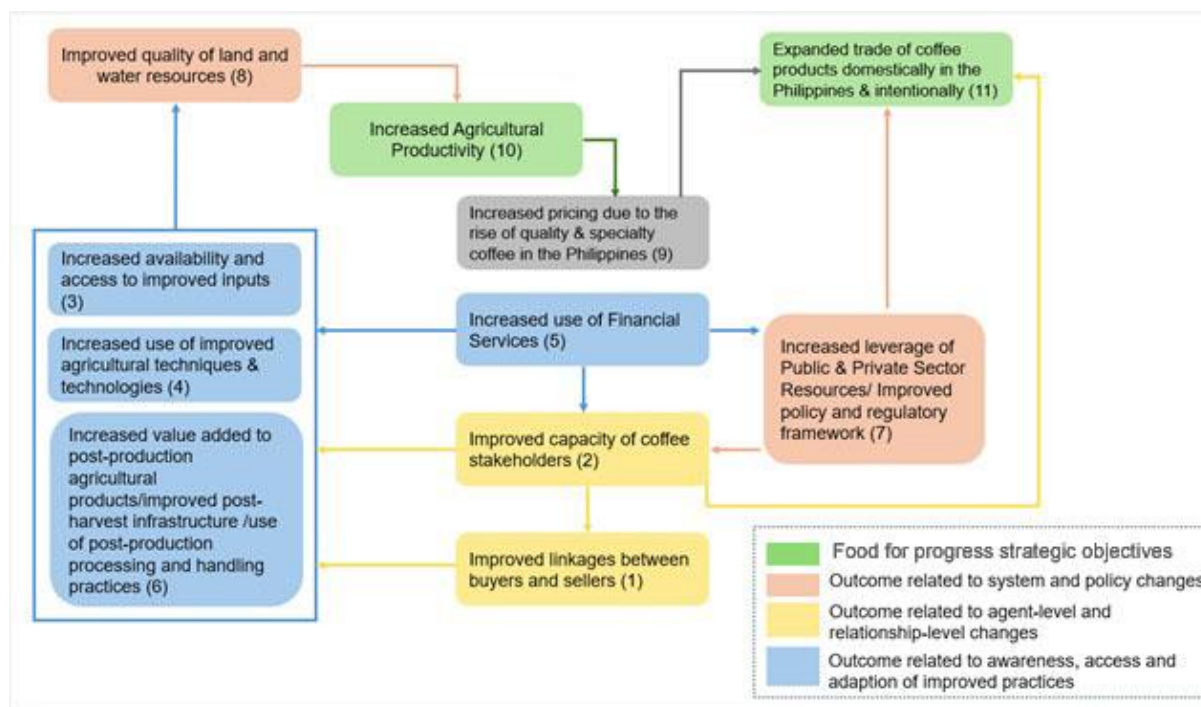


Figure 3: Outcome Harvest Systems Change Map

Outcome Scoring Framework

Table 3 displays the impact scores categorized according to the IGD scale. Each outcome was individually assessed against the Maturity Categories. The scores for each outcome within each Maturity Category were then averaged to calculate the Total Maturity Score, as presented in the corresponding column. This comprehensive scoring approach provides a holistic evaluation of the project outcomes based on the IGD scale.

Table 3: Summary of Maturity Scores Assigned to Each Outcome

Outcome #	Outcome Description	Total Score
1	Improved linkages between buyers and sellers/Increased access to markets to sell agricultural products	3
2	Improved capacity of key groups in the agricultural trade sectors/ Increased capacity of government institutions/Improved management of buyer/seller groups within the trade sector	4
3	Increased availability of & access to improved inputs and technologies	4
4	Increased use of improved agricultural techniques & technologies	5
5	Increased use of financial services	4

Outcome #	Outcome Description	Total Score
6	Increased value added to post-production agricultural products/ Improved post-harvest infrastructure/Use of post-production processing and handling practices	2
7	Increased leverage of public & private sector resources/Improved policy and regulatory framework	3
8	Improved quality of land and water resources	2
9	Increased pricing due to the rise of quality & specialty coffee in the Philippines	3
10	Increased agricultural productivity	5
11	Expanded trade of coffee products domestically in the Philippines & internationally	3
12	Increased Participation and engagement of women and youth in the coffee industry	4

The IGD Systemic Change Model provided a set of criteria for evaluation of outcome descriptions within a context of systemic change. The IGD Innovation and Systemic Change Maturity Model qualifies change on a score of 1 to 5, with the following criterion.¹⁷

Ad Hoc—Stage of preliminary activity occurring on an experimental or uncoordinated basis without a clear plan for project activities, stakeholders and participants, funding, and/or monitoring. The associated score for this level of maturity in all categories = “1” point.

Pilot—Stage of activity when experimentation becomes controlled as plans begin to shape around specific activities, actors come together and engage, funding is identified, and/or monitoring methods are identified and tested. The associated score for this level of maturity in all categories = “2” points.

Stickiness—Stage of activity where experimentation ceases and plans become clearly defined or “sticky” leading to the buy-in, consistency and strategy related to stakeholders, funding and/or monitoring which helps program’s reach the “tipping point” required to take off and build to large numbers quickly. The associated score for this level of maturity in all categories = “3” points.

Scale—Stage when desired activity and behaviors are widespread, internally driven involvement leads programming, and scope of adoption, investment, and new social norms expand significantly. The associated score for this level of maturity in all categories = “4” points.

Systemic Change—Stage of activity when new practices and ideas spread independently and sustainably without further need for intervention to prop up the market. The associated score for this level of maturity in all categories = “5” points.

V. CONCLUSION

5.1. Critical Success Factors

PhilCAFE’s critical success factors encompass a range of interventions, emphasizing sustainable approaches for the development of the coffee sector. These factors include:

Facilitating Awareness, Availability, Accessibility, and Adoption of Best Practices:

¹⁷ Gifford A, DeVries A, Knott A, Mant H (2016). Pioneering New Operating Models and Measurement Techniques for Private Sector-Led Development: Assessing Impact in Nigeria’s Niger Delta. Initiative for Global Development. Available at <https://beamexchange.org/resources/1173/>, Accessed on Nov. 23, 2023.

- Addressing practices at various stages of coffee farming, including inputs such as improved seed varieties and organic fertilizer.
- Focusing on factors like appropriate plant distance, climate-resilient strategies, improved harvest technologies, and enhanced post-harvest and processing practices.

Market Linkages:

- Engaging all actors in the coffee value chain, spanning from seedling to cupping.
- Addressing key constraints and generating impactful benefits for all beneficiaries.
- Delivering specific advantages to each group while strengthening linkages to fortify the interconnected value chain and enhance its sustainability.

Collaboration with Different Stakeholders and Development of Private-Public Partnerships:

- Playing a crucial role in facilitating the implementation of the PhilCAFE.
- Observing successful government initiatives collaborating with PhilCAFE on various projects.

Standardization of Coffee Quality and Prices:

- Facilitating competitions and events like PCQC, PCG, and others, creating platforms for interaction between buyers and sellers to build a common understanding of coffee quality.
- Utilizing online auctions of PCQC and emphasizing certification for exports (FDA-LTO) to effectively establish standard prices for specialty coffee.

Capacity Building:

- Layering capacity-building interventions with activity grants to ensure the success of investments and improve grantees' business management capacity.
- Targeting diverse groups such as roasters, cafe owners, employees of coffee cupping laboratories, and SUC faculty.

Adaptability to Regional Context and Needs:

- Addressing challenges in the complex environment of coffee farming, particularly recurring climatic changes and communication limitations.
- Collaborating with Philippine regional coffee councils and the PCG while empowering locals as coffee mentors.
- Facilitating nursery demonstration visits, international visits by coffee champions, and learning visits to other farms to enhance project success.

These factors collectively showcase PhilCAFE's holistic and adaptable approach, which contributes to its success in the coffee sector's dynamic and challenging landscape.

5.2. Summary Recommendations

The comprehensive findings from the outcome harvest of PhilCAFE provide a solid foundation for formulating forward-looking recommendations to enhance and sustain the Philippine coffee industry. Based on the insights drawn, the following major recommendations are proposed:

- **Enhance Financial Inclusion and Literacy:** Given the low utilization of credit, it's essential to improve access to affordable financial services and financial management skills among Filipino coffee farmers. This includes tailored financial literacy programs and streamlined credit access to empower farmers to make informed financial decisions.

- **Strengthen Capacity Building and Stakeholder Engagement:** Emphasize the importance of continued capacity building for all stakeholders, including farmers, cooperatives, and institutions. This involves not only training and education but also ensuring that collaborative efforts are rooted in trust and mutual benefit. Clear action plans detailing roles and timelines are crucial for sustained engagement and effectiveness.
- **Leverage Localized Knowledge and Mentorship:** The positive impact of mentorship, particularly in the use of fertilizers, quality planting materials, and crop varieties, highlights the need for ongoing localized support. Expanding the network of coffee mentors and enhancing their capacity to provide tailored guidance can significantly improve agricultural practices.
- **Promote Labor Efficiency and Sustainable Employment Practices:** Initiatives aimed at improving labor efficiency and creating sustainable employment opportunities within the coffee sector are critical. This could involve training programs focused on modern agricultural practices and efficiency enhancing technologies.
- **Advance Research and Development:** Invest in research and development, particularly for climate-resilient coffee varieties and sustainable farming techniques. This is vital for adapting to environmental challenges and ensuring the long-term viability of the coffee industry.
- **Foster Inclusivity and Diversity:** Encourage greater participation of women and youth in the coffee sector to promote diversity and inclusivity. This could be through targeted programs that provide training and resources, enabling these groups to contribute effectively to the coffee industry.
- **Expand International Marketing and Branding Efforts:** Amplify efforts to promote Philippine coffee globally through expos, partnerships, and marketing campaigns. This will help to enhance the international profile of Philippine coffee and open up new market opportunities.
- **Adopt and Promote GAP:** Encourage adherence to GAP among coffee producers to improve quality and sustainability. This includes practices that enhance soil health, reduce environmental impact, and ensure the quality of coffee production.
- **Strengthen Market and Post-Harvest Technologies:** Address the challenges related to market access and post-harvest losses by investing in technologies that improve storage, processing, and access to market information. Digital platforms can play a significant role in providing farmers with timely and relevant market insights.
- **Promote Regenerative and Sustainable Farming Practices:** Focus on regenerative agriculture practices that enhance soil health, biodiversity, and sustainability, including shifting towards organic inputs, implementing soil conservation techniques, and adjusting agricultural practices based on environmental data and forecasts.

Implementing these recommendations requires a collaborative effort among government agencies, industry stakeholders, and the farming community. By focusing on these strategic areas, relevant stakeholders can build on the successes of PhilCAFE to ensure a resilient, sustainable, and profitable future for the Philippine coffee industry.

VI. ANNEX

Annex A1: Details for surveyed respondents

The details of staff interviews are kept anonymous.

Table 4: KII respondents by type and cluster

Region	Sub-Region	Producer Org. & Cooperative Leaders	Financial Inst. & Savings & Credit Cooperative	SUC Faculty & Extension Agents	Employees of Coffee Cupping & Soil Labs.	Barista & Coffee Academy of Asia	Govt. Inst.-DTI, DA, Bureau of plant Industry	Input Providers/ Fertilizer Companies	Roasters & Coffee Shop Owners	Coffee Social Influencers/ social media	International Research Organization	Coffee Champions	Clients of Laboratories at the Universities	Coffee farmers linked to extension agents of the Universities	Coffee cuppers trained by PHILCAFE/ Partners	PCQC Participants
Luzon	CAR	3		1	1	1		1						1		
	NCR		1									1				
	Region I															1
	Region II															
	Region IV-A	2		1	1										1	1
Visayas	Region VI			1					1							
Mindanao	Region X	4	1	1	1								1	1	1	1
	Region XI	5	1	1	1	2	1	2	4	3		1	1			
	Region XII	4	1		1								1	1	1	
	Region XIII	2														
	BARMM															
Total	66	20	4	5	5	3	1	3	5	3	3	2	3	3	3	3

Table 5: FGDs by Type and Cluster

Regions	Sub-Regions	Treatment/Control/Coffee Council Members
Luzon	CAR	2
	Region 1	1
	Region IV-A	1
Visayas	Region VI	1
Mindanao	Region X	2
	Region XI	2
	Region XII	3
	Region XIII	1
	BARMM	1
Total Treatment Sample		14
Luzon	Region IV-A	1
Visayas	Region VI	1
Mindanao	Region XI	1
	Region 12	1
Total Control Sample		4
Mindanao	Region X	2
	Region XI	1
Total Coffee Council Member Sample		3
Total FGD Sample		21

Annex A2: Stakeholder/Outcome Mapping

Table 6: Stakeholder mapping of outcomes for tool development following staff interviews and prior to stakeholder verification

Outcome	Stakeholder/ Beneficiaries	Coffee Council members	Coffee Cuppers Certified by Philcafe	Producer Organization	Government Institutions-	International Research Organizations	Roasters & Café owners	PCQC and regional coffee competition participants/ winners	SUC & LGU faculty & extension agents	Employees of Coffee Cupping Laboratories at the Universities	clients of laboratories at the universities	Extension agents of LGU's & SCU's	Coffee champions	Financial institutions and savings & credit cooperatives	Nurseries	Input providers	Coffee social media influencers
Improved Linkages between buyers and sellers		X	X	X	X	X	X	X	X	X	X	X		X		X	X
Improved Capacity of Key coffee stakeholders		X	X	X	X	X	X	X	X		X	X	X	X	X	X	
Improved quality & availability of extension services & research skills/initiatives (or capacities) in the Philippines coffee sector		X		X	X	X	X	X	X	X	X	X	X		X	X	
Increased Availability of & Access to Improved Inputs & technologies		X		X	X	X		X	X		X	X	X	X	X	X	
Increased use of improved agricultural techniques & technologies				X	X	X	X	X	X	X	X	X	X	X	X	X	
Improved marketing of agricultural products		X	X	X	X	X	X	X		X	X	X			X	X	X
Increased adoption of established standards by			X	X	X		X	X		X	X	X	X		X	X	
Increased access to improved market information				X	X			X	X		X	X	X		X		
Increased value added to post-harvest practices				X	X	X	X	X	X	X	X	X	X				
Improved policy and regulatory framework		X		X	X				X				X	X		X	
Increased Leverage of Public & Private Sector Resources		X	X	X	X	X	X	X	X	X				X		X	
Increased Use of Financial Services		X		X	X	X	X		X		X	X	X	X	X	X	
Improved quality of land and water resources				X	X	X		X	X			X	X		X	X	
Increased Agricultural Productivity		X		X	X	X		X	X			X	X	X	X	X	
Expanded trade of coffee products domestically in the Philippines and internationally		X	X	X	X	X	X	X	X	X	X						X
Increased pricing due to the rise of quality & specialty coffee in the Philippines		X	X		X	X	X	X	X	X	X						X
Increased household income/profits of farmers				X				X		X	X	X	X	X			
Increased profitability of coffee market system actors				X	X		X		X			X				X	
Female and youth participation and involvement in the coffee industry		X	X	X	X	X		X	X		X	X	X	X			