



PHILIPPINE COFFEE ADVANCEMENT AND FARM ENTERPRISE (PhilCAFE)

MIDTERM EVALUATION REPORT

December 2022 (Revised Draft Report)

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Table of Contents

1	Executive Summary	1
1.1	Background	1
1.2	Evaluation Questions, Design, Methods, and Limitations	1
1.3	Findings and Conclusions	2
1.4	Recommendations	4
2	Background, Context and Rationale	6
2.1	Background	6
2.2	Philippine Coffee Industry Roadmap	6
2.3	MinPACT: A USDA Intervention on Coffee, Cocoa, and Coconut	7
2.4	PhilCAFE Project	7
3	Purpose of the MTE	9
4	Methodology	10
4.1	Introduction	10
4.2	Study Methodology	10
4.3	Sampling and Sample Size	10
4.4	Data Collection Tools and Techniques	11
4.5	Training and Pre-Test	11
4.6	Conduct of Survey	12
4.7	Data Analysis and Presentation	12
4.8	Limitation of the Study	13
4.9	Constraints in the Data Gathering	13
4.10	Other details	13
5	Primary/Learning Questions	14
6	Results and Discussion	16
6.1	Profile of Respondents and Participants	16
6.1.1	Project Beneficiary Sample Validation	16
6.1.2	Respondents/Participants Information	16
	A. Farmer Respondents Information	16
	B. MSA Respondents Information	17
	C. Firm Respondents Information	17
	D. Key Informants Information	18
	E. FGD Participants Information	18
6.1.3	Practicing MSAs	19
6.1.4	Farm Characteristics	19

6.2	Technology and Adoption	20
6.2.1	Farm Technologies	20
6.2.2	Harvest, Post-Harvest, Processing, and Management Technologies.....	21
6.2.3	Change in Technology Adoption	22
6.2.4	Perceived Influence of Technology on Coffee Quality and Price.....	22
6.3	Production	23
6.3.1	Production Cost	23
6.3.2	Yield.....	23
6.3.3	Post-Harvest Losses.....	24
6.4	Sales, Pricing, and End-Market	24
6.5	Market Systems and Supports	25
6.5.1	Access to Facilities and Inputs.....	25
6.5.2	Coffee Farm Certification	26
6.5.3	Farm Labor and Employment.....	26
6.5.4	Buying Agreements	26
6.5.5	Marketing and Access of Market Information	26
6.5.6	Access to Credit and Financing.....	27
6.5.7	Access to Agricultural Extension Services	27
6.5.8	Access to Technology and Trainings	27
6.6	Income.....	28
6.7	Other Key Findings	28
6.7.1	Beneficiary Participation and Attitude towards the Project	28
6.7.2	Cultural Issues	29
6.7.3	Impacts of COVID-19.....	29
6.8	Outcomes and Impact	29
6.8.1	Production Cost	29
6.8.2	Coffee Yield	29
6.8.3	Post-Harvest Losses.....	30
6.8.4	Coffee Sales.....	31
6.8.5	Employment.....	31
6.8.6	Annual Income.....	31
6.9	Key Observations (Using Evaluation Criteria)	32
6.9.1	Evaluations Question	32
	A. <i>Relevance of the Project</i>	32
	B. <i>Efficiency of the Project:</i>	32
	C. <i>Effectiveness of the Project</i>	33
	D. <i>Impact of the Project</i>	34
	E. <i>Sustainability of the Project:</i>	35
6.9.2	Learning Question.....	36

7	Summary of Findings	38
8	Lessons Learned	41
9	Recommendations and Proposed Actions	42

List of Annexes

Annex 1: PhilCAFE Results Framework
Annex 2: PhilCAFE Market System Approach
Annex 3: Summary of PhilCAFE Activities from Sept 2018-Oct 2021
Annex 4: Methodology
Annex 5: Tables and Other Diagrams
Annex 6: Pre-Test Reports with Questionnaires
Annex 7: Survey Data, FGDs and KIIs Recordings, and Qualitative Analysis Codebook of the 15 FGDs and 50 KIIs

List of Tables

Table 1: Action Programs and Key Result Areas of the Philippine Coffee Industry	7
Table 2: Number of Project Beneficiaries by June 30, 2021, disaggregated by region and type.....	10
Table 3: Summary of Data Collection vis-à-vis Study Population (Participants, Comparison)	10
Table 4: Population and Sample Size.....	11
Table 5: Distribution of FGD by Region	11
Table 6: Distribution of KII by Type	11
Table 7: Data Collection Method and Mechanics	12
Table 8: Number of Groups and Participants by Region, Gender, and Representation (i.e., adult, youth, IPs)	18
Table 9: The DID estimation results of Annual Cost per Hectare in PhP, Treatment (n=219) and Comparison (n=219).....	29
Table 10: The DID estimation results of converted GCB yield per hectare, Treatment (n=219) and Comparison (n=219).....	29
Table 11: The DID estimation results of annual post-harvest losses, Treatment (n=219) and Comparison (n=219).....	30
Table 12: The DID estimation results of annual coffee sales in PhP, Treatment (n=219) and Comparison (n=219)	31
Table 13: The DID estimation results of annual employment, Treatment (n=219) and Comparison (n=219)	31
Table 14: The DID estimation results of converted GCB yield per hectare, Treatment (n=219) and Comparison (n=219).....	31
Table 15: Adoption rate and effectiveness rating of coffee technologies and practices (summary).....	33
Table 16: Support distribution across the MSAs and disaggregated by gender amongst respondents of the farmers survey and MSA survey	35
Table 17: PMP Indicators (does not include indicators from routine data collection as indicated by PhilCAFE), Year 3 Targets and Mid-term Values	66

Table 18: Percentage of farmers who confirmed their participation or they received assistance due to PhilCAFE, per type of intervention	67
Table 19: Distribution of Respondents by Gender, and by Region, Treatment (n=724) and Comparison (n=219)	67
Table 20: Average Age of Respondents, by Region, Treatment (n=724) and Comparison (n=219)	67
Table 21: Distribution of Respondents by Marital Status and by Region, Treatment (n=724) and Comparison (n=219)	68
Table 22: Average Number of Years of Formal Education of Respondents, by Region, Treatment (n=724) and Comparison (n=219)	68
Table 23: Distribution of Respondents by Ethnicity and by Region, Treatment (n=724)	68
Table 24: Distribution of Respondents by Ethnicity and by Region, Comparison (n=219)	69
Table 25: Distribution of Respondents by Organizational Affiliation of Household Head, by Region, Treatment (n=724) and Comparison (n=219)	70
Table 26: Average Household (HH) size, distribution of members per age and sex, Treatment (n=724) and Comparison (n=219)	70
Table 27: Average of the count of household members involved with on-farm work, by age and sex, Treatment (n=724) and Comparison (n=219)	70
Table 28: Average of the count of household members involved with off-farm work, by age and sex, Treatment (n=724) and Comparison (n=219)	71
Table 29: Average of the count of household members involved with non-farm work, by age and sex, Treatment (n=724) and Comparison (n=219)	71
Table 30: Average household income (PhP) and share of coffee to total income (%), Treatment (n=724)	71
Table 31: Average household income (PhP) and share of coffee to total income (%), Comparison (n=219)	72
Table 32: Average annual expenditure and savings (in PhP) of household, by region, Treatment (n=724)	72
Table 33: Average annual expenditure and savings (in PhP) of household, by region, Comparison (n=219)	73
Table 34: Average total farm size, cultivate farm, and area planted devoted to coffee, by region, Treatment (n=724) and Comparison (n=219)	73
Table 35: Average farm size per coffee specie, by region, Treatment (n=724) and Comparison (n=219)	74
Table 36: Average Number of Coffee Hills per coffee specie, by region, Treatment (n=724) and Comparison (n=219)	74
Table 37: Average planting distance (in square meters) per coffee specie, by region, Treatment (n=724) and Comparison (n=219)	75
Table 38: Average age of coffee plants (in years) per specie, by region, Treatment (n=724) and Comparison (n=219)	75
Table 39: Percentage of respondents who changed their area planted with coffee since 2019, by region, Treatment (n=724) and Comparison (n=219)	75
Table 40: Distribution of respondents who practice intercropping system, by region, Treatment (n=724) and Comparison (n=219)	75
Table 41: Average volume of production, yield per tree and hectare, per species, from October 2020 to September 2021, Treatment (n=724)	76
Table 42: Average volume of production, yield per tree and hectare, per species, from October 2020 to September 2021, Comparison (n=219)	76
Table 43: Average volume of production and yield per hectare, converted to GCB, Treatment (n=724) and Comparison (n=219)	77
Table 44: Average volume sold (Kgs), converted to GCB, Treatment (n=724) and Comparison (n=219)	77
Table 45: Volume sold per type of buyer/market (domestic), in kgs, Treatment (n=724) and Comparison (n=219)	78
Table 46: Number and percentage of farmers who attended trainings, per type of technologies, Treatment (n=724) and Comparison (n=219)	78
Table 47: Recall of trained farmers to introduced coffee production technologies, Treatment (n=724)	78

Table 48: Recall of trained farmers to introduced coffee post-harvest technologies and other processing and value addition technologies, Treatment (n=724).....	79
Table 49: Recall of trained farmers to introduced related to promoting improved climate risk reduction and/or natural resources management, Treatment (n=724)	79
Table 50: Recall of trained farmers to introduced farm management practices, Treatment (n=724)	80
Table 51: Adoption rate of coffee production technologies, and effectiveness rating, Treatment (n=724)	80
Table 52: Adoption rate of coffee production technologies, and effectiveness rating, Comparison (n=219).....	81
Table 53: Adoption rate of coffee post-harvest technologies and other processing and value addition technologies, and effectiveness rating, Treatment (n=724) and Comparison (n=219)	81
Table 54: Adoption rate of technologies related to promoting improved climate risk reduction and/or natural resources management, and effectiveness rating, Treatment (n=724)	82
Table 55: Adoption rate of technologies related to farm management practices, Treatment (n=724) and Comparison (n=219).....	82
Table 56: Adoption rate of common technologies, baseline versus midterm survey, Treatment (n=724) and Comparison (n=219).....	83
Table 57: Probit model average marginal effects farmers adoption rate to coffee production technologies	83
Table 58: Probit model average marginal effects farmers adoption rate to coffee post-harvest technologies	84
Table 59: Probit model average marginal effects farmers adoption rate to climate risk reduction management technologies	85
Table 60: Probit model average marginal effects farmers adoption rate to farm management practices.....	85
Table 61: Perception of percentage of respondents on influence of coffee post-harvest technologies and other processing and value addition technologies on the quality of coffee production, per region, Treatment (n=724) and Comparison (n=219)	86
Table 62: Estimated change in percentage (%) in the quality of coffee production, per region, Treatment (n=209) and Comparison (n=25)	86
Table 63: Number and percentage of respondents by responses on change in price of improved quality of coffee (due to adoption of technologies and practices), Treatment (n=126).....	87
Table 64: Average amount of price changes due to change in quality of coffee, per region	87
Table 65: Percentage of farmers who preferred method of trainings (modality) that is seen more effective, Treatment (n=724) and Comparison (n=219)	87
Table 66: Percentage of farmers who applied introduced technologies/ techniques/practices applied to conservation/protected areas, average hectares, Treatment (n=724) and Comparison (n=219)	88
Table 67: Percentage who shared technology practices to other farmers (and who then decided to apply it), Treatment (n=724) and Comparison (n=219)	88
Table 68: Coffee production technologies copied/applied by other farmers, Treatment (n=724)	88
Table 69: Coffee post-harvest technologies and other processing and value addition technologies copied/applied by other farmers, Treatment (n=724).....	89
Table 70: Technologies promoting improved climate risk reduction and/or natural resources management copied/applied by other farmers, Treatment (n=724)	89
Table 71: Farm Management Practices copied/applied by other farmers, Treatment (n=724)	90
Table 72: Percentage of respondents who know any farmer that is newly farming coffee from oct 2020 to sep 2021 because they have observed your coffee farm or you shared technologies, Treatment (n=724) and Comparison (n=219).....	90
Table 73: Percentage of farmers with access to warehouse/storage space, Treatment (n=724)	90
Table 74: Percentage of farmers who did purchase/access additional coffee equipment/facility, Treatment (n=724).....	90
Table 75: Type of equipment/facility, Treatment (n=724)	91
Table 76: Percentage of farmers with difficulty accessing specific coffee inputs or technology in the past production year (October 2020 to September 2021), Treatment (n=724) and Comparison (n=219)	91

Table 77: Percentage of farmers with access to inputs or technology for coffee farm due to PhilCAFE or external assistance (comparison) in the past production year (October 2020 to September 2021), Treatment (n=724) and Comparison (n=219)	91
Table 78: Average cost of coffee production per hectare per year, in PhP, for October 2020 to September 2021, Treatment (n=724).....	91
Table 79: Average cost of coffee production per hectare per year, for October 2020 to September 2021, Comparison (n=219).....	92
Table 80: Change in production cost since 2019 (% of the farmer respondents), Treatment (n=724) and Comparison (n=219).....	92
Table 81: Percentage of farmers who have experienced post-harvest losses (%), Treatment (n=724) and Comparison (n=219).....	92
Table 82: Typical reasons/causes of losses, in percentage, by type and region, Treatment (n=724) and Comparison (n=219).....	93
Table 83: Volume sold (in Kgs) per type of coffee produce, by market outlet, Treatment (n=724) and Comparison (n=219).....	93
Table 84: Reason for market outlet selection, market development due PhilCAFE assistance, Treatment (n=724)	94
Table 85: Reason for market outlet selection, market development due to external assistance, Comparison (n=219).....	94
Table 86: Perceive changed in total coffee production since 2019, % of respondents and perceived % of change, Treatment (n=724) and Comparison (n=219)	95
Table 87: Perceive changed in sales since 2019, % of respondents and perceived % of change, Treatment (n=724) and Comparison (n=219)	95
Table 88: Perceived changed in type of market actors, Treatment (n=724) and Comparison (n=219)	96
Table 89: Average perceived changed (%) in the number of market actors since 2019, Treatment (n=724) and Comparison (n=219).....	96
Table 90: Percentage of farmers satisfied with their end-market for coffee, Treatment (n=724) and Comparison (n=219).....	96
Table 91: Percentage of farmers who participated in coffee cupping since 2019, and the average cupping score, Treatment (n=724) and Comparison (n=219)	96
Table 92: Number of farmers who perceived that coffee cupping grade influence coffee sales, Treatment (n=26)	97
Table 93: Number of farmers who perceived that coffee cupping of a Q grade is the basis to classify the coffee sold as specialty or fine, Treatment (n=26)	97
Table 94: Percentage of farmers who sold specialty coffee. Treatment (n=26)	97
Table 95: Volume and selling price of specialty coffee, CAR and Region 13	97
Table 96: Causes for not attaining volume and sales target (% of respondents), Treatment (n=724).....	97
Table 97: Percentage of farmers who are satisfied with the average price received for their coffee in October 2020-September 2021.....	98
Table 98: Percentage of farmers who want to certify their coffee farm, Treatment (n=724) and Comparison (n=219).....	98
Table 99: Percentage with family labor and hired labor in coffee farming, by region, Treatment (n=724) and Comparison (n=219).....	99
Table 100: Average number of family labor involved in coffee farming by category, Treatment (n=724) and Comparison (n=219).....	99
Table 101: Details of family labor/participation in coffee farming, adult male and female, Treatment (n=724) and Comparison (n=219).....	99
Table 102: Details of family labor/participation in coffee farming, youth male and female, Treatment (n=724) and Comparison (n=219).....	99
Table 103: Average number of hired labor involved in coffee farming by category, Treatment (n=724) and Comparison (n=219).....	100

Table 104: Details of hired labor/participation in coffee farming, adult male and female, Treatment (n=724) and Comparison (n=219).....	100
Table 105: Details of hired labor/participation in coffee farming, youth male and female, Treatment (n=724) and Comparison (n=219).....	100
Table 106: Change in labors/Did the number of hours and/or the number of persons working on your coffee farm change in this fiscal year (Oct 2020 to Sept 2021), compared to the previous year (Oct 2019 to Sept 2020), Treatment (n=724) and Comparison (n=219)	101
Table 107: Percentage of farmers who actively market their coffee products, Treatment (n=724) and Comparison (n=219).....	101
Table 108: Frequency of accessing agricultural market/price information (percentage), Treatment (n=724) and Comparison (n=219).....	101
Table 109: Percentage of farmers who are optimistic about coffee, Treatment (n=724) and Comparison (n=219).....	101
Table 110: Percentage who has accessed to external support for coffee production capital, Treatment (n=724) and Comparison (n=219).....	101
Table 111: Percentage of farmers who perceived that their production capital is enough for their current operations, Treatment (n=724) and Comparison (n=219)	102
Table 112: Percentage of farmers who have existing savings/share capital with the organization that they are a member of, Treatment (n=724) and Comparison (n=219).....	102
Table 113: Percentage of farmers who have an existing credit/loan from a microfinance institution or bank, Treatment (n=724) and Comparison (n=219)	102
Table 114: Percentage of farmers who have difficulty in accessing credit, Treatment (n=724) and Comparison (n=219).....	103
Table 115: Are these challenges common to all famers in the community?	103
Table 116: Percentage of farmers who have additional/future need to borrow money, Treatment (n=724) and Comparison (n=219).....	103
Table 117: Purpose of additional needed borrowing, Treatment (n=724) and Comparison (n=219).....	103
Table 118: Amount needed for borrowing, and maximum rate of interest willing to pay, Treatment (n=724) and Comparison (n=219).....	104
Table 119: Percentage of farmers who have an existing credit/cash advance from input suppliers or traders, Treatment (n=724) and Comparison (n=219)	104
Table 120: Percentage of farmers who have access to external capacity-building activities (training, exposure trips, industry-wide gatherings), Treatment (n=724) and Comparison (n=219)	104
Table 121: External sources of capacity-building activities of farmers (training, exposure trips, industry-wide gatherings), Treatment (n=724) and Comparison (n=219)	104
Table 122: Relevance and effectiveness of external capacity-building activities.....	105
Table 123: Activities of household members, treatment and comparison group, by sex category, in percentage, Treatment (n=724) and Comparison (n=219)	105
Table 124: Household Decision Making Dynamics, Treatment (n=724)	106
Table 125: Household Decision Making Dynamics, Comparison (n=219)	107
Table 126: Opinions on farm and household decision-making, in percentage, Treatment (n=724) and Comparison (n=219).....	108
Table 127: Average time spent (in hours per week) on coffee farming, domestic work and care work, Treatment (n=724) and Comparison (n=219)	108
Table 128: Household members with access to agricultural extension services (i.e. direct interaction with extension staff from different organizations), in percentage, Treatment (n=724) and Comparison (n=219).....	109
Table 129: Percentage of farmers who shared learnings from extension trainings and average number of influenced household and community members, Treatment (n=724) and Comparison (n=219).....	109
Table 130: Percentage of household members who attended/participated to training on coffee farming, processing and marketing, Treatment (n=724) and Comparison (n=219)	109

Table 131: Percentage of farmers who shared learnings trainings related to coffee farming, processing and marketing with other household and community members, Treatment (n=724) and Comparison (n=219).....	109
Table 132: Percentage of household members who affiliated/member of producer organizations, Treatment (n=724) and Comparison (n=219)	110
Table 133: Opinions on Access to Information, Participation in Groups, and Leadership Treatment (n=724) and Comparison (n=219).....	110
Table 134: Who else within the household is interested in continuing or expanding coffee farm activities?.....	110
Table 135: Organizational risk management plan.	111
Table 136: Percentage of farmers who are willing to attend training on risk assessment and management	111
Table 137: Percentage of MSA respondents confirmed their participation in PhilCAFE facilitated/organized activities, by classification (n=328)	111
Table 138: Distribution of MSA respondents by sex and average age (n=328).....	111
Table 139: Distribution (%) of MSA respondents by ethnicity, by classification (n=328)	112
Table 140: Number and percentage of respondents (practicing MSAs) against services provided.....	112
Table 141: Percentage of MSA respondents recall of agricultural production technologies and nursery-related technologies, by technology, by classification (n=249)	113
Table 142: Percentage of MSA respondents recall of post-harvest technologies and other processing and value addition technologies, by technology, by classification (n=249).....	113
Table 143: Percentage of MSA respondents recall of Climate Risk Management, by technology, by classification (n=249).....	114
Table 144: Percentage of MSA respondents recall of management practices by technology, by classification (n=249).....	114
Table 145: Coffee-related techniques, technologies, and practices provided/supported by PhilCAFE against target participants.....	115
Table 146: Number and percentage of MSA with nursery operation and those who adopted nursery related technologies, by technology, by classification	115
Table 147: Adoption rate of nursery related technologies amongst those who recalled applying/adopting the technology, by technology, by MSA beneficiary type, n=43	115
Table 148: Number and percentage of MSA _p respondents MSA Beneficiaries providing MSA services as inputs (seedling) suppliers, academic/technical providers, and policy and government support (n=170).	116
Table 149: Average number of coffee trees applied with nursery related technologies, by technology, by classification	116
Table 150: Number and percentage of MSA respondents who were trained and applied coffee production technologies learnings; by MSA beneficiary type; and by Practicing, Non-Practicing or Inactive MSAs	117
Table 151: Adoption rate of agricultural production technologies amongst those who recalled practicing/applying, by technology, by MSA beneficiary type, n=94	117
Table 152: Number and percentage of MSA _p respondents MSA Beneficiaries providing MSA services as providers, academic/technical providers, and policy and government support (n=208).....	118
Table 153: Number and percentage of MSA respondents who were trained and applied coffee production technologies learnings; by MSA beneficiary type, amongst MSA _p s who are producers, academic/technical providers, or government personnel	118
Table 154: Average number of coffee trees applied with agricultural production technologies, by technology, by classification	118
Table 155: Number and percentage of MSA respondents who were trained and applied coffee post-harvest technologies and other processing, and value addition technologies learnings; by MSA beneficiary type; and by Practicing, Non-Practicing or Inactive MSAs	119
Table 156: Adoption rate of post-harvest with technologies and other processing and value addition technologies, by technology, by MSA beneficiary type, n=8.....	119

Table 157: Average number of coffee trees applied with post-harvest technologies and other processing and value addition technologies, by technology, by MSA beneficiary type, n=8.....	120
Table 158: Number and percentage of MSA respondents who were trained and applied Climate Risk Reduction and Natural Resources Management learnings; by MSA beneficiary type; and by Practicing, Non-Practicing or Inactive MSAs.....	120
Table 159: Adoption rate of climate risk reduction and/or natural resources management/technologies amongst those who recalled practiced/adopted/promoted, by technology, by MSA beneficiary type, n=17	120
Table 160: Average number of coffee trees applied climate risk reduction and/or natural resources management related technologies, by technology, by classification	121
Table 161: Percentage of MSA who applied introduced technologies/techniques/practices applied to conservation/protected areas.....	121
Table 162: Number and percentage of MSA respondents who were trained and are practicing Business-Level Practices and Technologies; by MSA beneficiary type; and by Practicing, Non-Practicing or Inactive MSAs	121
Table 163: Adoption rate of business-level practices and technologies, by technology, by classification (n=328)	121
Table 164: Percentage of Respondents who have influenced other organizations and other coffee producers, by MSA beneficiary type, amongst MSA respondents and amongst practicing MSA respondents	121
Table 165: Technologies promoted, by classification	122
Table 166: Percentage of respondents who confirmed the influence of PhilCAFE with their interaction to coffee sectors in terms of producers, by MSA beneficiary type, amongst MSA respondents and amongst practicing MSA respondents.....	122
Table 167: Percentage of respondents who confirmed the influence of PhilCAFE with their interaction to coffee sectors in terms of firms that support producers such as input providers, technical service providers, or processing/value addition firms.....	122
Table 168: Percentage of MSA who perceived that PhilCAFE's assistance somehow changed how they market/advertise these services or programs.....	122
Table 169: Percentage of MSA who are currently engaging in local cooperatives, coffee associations, POs, SUCs, and local intermediaries to expand stakeholder reach in terms of coffee services	122
Table 170: Service reach by MSAs, per type of engagement.....	123
Table 171: Distribution of MSA (amongst with engagement) in terms of currently engage organizations in expanding reach of coffee services	123
Table 172: Percentage of MSAs perceived that Philcafe contribute/assist in these initiatives	123
Table 173: Percentage of MSAs confirmed that PhilCAFE contributed in expanding your shareholders reach in terms of coffee services	123
Table 174: Percentage of MSAs among who perceived that the engagement has a significant impact on their organizations reach at the local, regional or international level.....	124
Table 175: Average number of stakeholders that had been reached due to Philcafe assistance	124
Table 176: Percentage of MSAs perceived changes in stakeholders reach (increased, decreased, or remained the same) since 2019, the percentage of change.....	124
Table 177: Estimated percentage change in stakeholders reach by category	124
Table 178: Percentage of MSAs perceived that Philcafe's assistance somehow influenced the quality of the services they offer to stakeholders.....	124
Table 179: Percentage of MSAs with risk management plan in the areas planted with coffee.....	124
Table 180: Percentage of MSAs perceived that their organization identified risk related to the business, and on coffee and related services.....	125
Table 181: Percentage of MSAs perceived that their organization been affected by any other type of external shock (lack of transport, etc.) from October 2019 to September 2020	125
Table 182: Percentage of MSAs perceived that their organization already asked for some type of assistance in support to coffee business in their area	125

Table 183: Percentage of MSA respondents confirmed their participation in PhilCAFE facilitated/organized activities, by classification (n=235)	125
Table 184: Average age of the firm representative (treatment n= 214, comparison n=21)	125
Table 185: Distribution of firm respondents based on gender, per firm type (in %) (treatment n= 214, comparison n=21)	125
Table 186: Distribution of ethnicity of firm representatives, per firm type (%) (treatment n= 214, comparison n=21)	126
Table 187: Percentage of firms that involves in any form of cultivation (have own/communal farm) (treatment n= 214, comparison n=21)	127
Table 188: Firms with coffee farms	127
Table 189: Average total farm size, size of cultivated farm, and area devoted to coffee (in has) (n=64) (treatment n= 58, comparison n=6).....	127
Table 190: Average area devoted to coffee per specie (in has) (treatment n=58, comparison n=6).....	128
Table 191: Average number of coffee trees per species (treatment n=58, comparison n=6)	128
Table 192: Average planting distance per specie, in sq m. (treatment n=58, comparison n=6).....	129
Table 193: Average age of coffee trees per specie, in years (treatment n=58, comparison n=6)	129
Table 194: Percentage of firms that grow other crops in their farm (treatment n=58, comparison n=6).....	129
Table 195: Percentage of firms that is practicing intercropping system (treatment n=58, comparison n=6).....	130
Table 196: Average quantity of inputs, and annual coffee production cost per year, in PhP, (n=58)	130
Table 197: Average quantity of inputs, and annual coffee production cost per year, in PhP, (n=6)	131
Table 198: Average volume of production and yield per hectare by end-product, treatment.....	132
Table 199: Average volume of production and yield per hectare by end-product, Comparison	132
Table 200: Average Domestic Price Selling, in PhP (treatment n=58, comparison n=6)	133
Table 201: Average Domestic Revenue by end-product and by region, in PhP (treatment n=58, comparison n=6).....	133
Table 202: Average volume of production (in kgs) and yield per hectare (in kg/ha), in GCB, by firm type (treatment n=58, comparison n=6).....	133
Table 203: Since 2019, is there a change total coffee production? (in % among with coffee farm) (treatment n=58, comparison n=6)	134
Table 204: Average increase/decrease (%) in total coffee production (treatment n=58, comparison n=6)	134
Table 205: Average % post-harvest losses from the last cropping season of firms (among those with coffee farms) from Oct 2020 to Sep 2021 (treatment n=58, comparison n=6).....	134
Table 206: Reasons why they think they experienced post-harvest losses from October 2020 to September 2021 (% among with coffee farms) (treatment n=58, comparison n=6).....	134
Table 207: Average estimated cost per ton per year for coffee acquisition for October 2020 to September 2021, (in PhP) (treatment n=214, comparison n=21).....	135
Table 208: Percentage of firms that applied technologies, per firm type (among with coffee farms) (treatment n=58, comparison n=6)	136
Table 209: % of firms that is involved with nursery related activities (Among with coffee farms) (treatment n=24, comparison n=3)	136
Table 210: Adoption Rate in terms of Nursery Related Technologies.....	136
Table 211: Adoption Rate in terms of coffee production technologies	137
Table 212: Adoption rate in terms of climate risk reduction and/or natural resource management	138
Table 213: What Business-Level Practices and Technologies Do You Practice In The Firm? (treatment n=214, comparison n=21)	138
Table 214: Average area in protected areas that these technologies were applied (treatment n=214, comparison n=21)	139
Table 215: Did Any of the New Technologies That You Applied Due To Philcafe Assistance Influence Your Organizations Sales Or Profitability (treatment n=214, comparison n=21)	139

Table 216: Average number of organizations who have seen the beneficiaries applying these Technologies/Practices (treatment n=214, comparison n=21)	139
Table 217: What Coffee Production Technologies Did They Copy? (treatment n=214, comparison n=21)	140
Table 218: What Coffee Post-Harvest Technologies and Other Processing and Value Addition Technologies Did They Copy? (treatment n=214, comparison n=21)	140
Table 219: What Climate Risk Reduction and/or Natural Resource Management Did They Copy? (treatment n=214, comparison n=21)	141
Table 220: What Business Related Practices and Technologies they Copy? (treatment n=214, comparison n=21).....	142
Table 221: Average number working on-farm, Treatment (n=58)	142
Table 222: Average number working non-farm, Treatment (n=171)	143
Table 223: Details of family labor/participation in coffee farming, by gender, adult/youth, Treatment	143
Table 224: Change in labors, from oct 2019-sep2020 to oct2020-sep2021, % among with coffee farms (treatment n=64)	143
Table 225: Have You Accessed Warehouse/Storage Space Due To Philcafe Assistance? (treatment n=214, comparison n=21)	143
Table 226: Average size (in cubic meters) of new facility dry storage, treatment	144
Table 227: Purchased/Accessed Additional Coffee Equipment/Facility From October 2020 to September 2021 (treatment n=58, comparison n=6).....	144
Table 228: Acquired equipment and Facility, Treatment	144
Table 229: Percentage of firms and organization actively market their coffee products (treatment n=58, comparison n=6)	144
Table 230: Distribution of firms by methods of marketing used in October 2020 to September 2021	145
Table 231: Average effectiveness rating marketing methods used in October 2020 to September 2021 in increasing market reach and sales	145
Table 232: Distribution of firms by frequency of accessing agricultural market and price information (treatment n=58, comparison n=6)	146
Table 233: Percentage of firms and organization involved in purchasing and consolidating coffee products from October 2020- September 2021 (treatment n=214, comparison n=21).....	146
Table 234: Average of Total Volume Purchased/ Consolidated, in kilo, by coffee farm (treatment n=43, comparison n=3)	146
Table 235: Average of buying price (PhP/Kg) of Purchased/ Consolidated Coffee (treatment n=43, comparison n=3)	146
Table 236: Average number of farmers and middlemen/ aggregators purchased/consolidated	147
Table 237: Average number of new farmers purchased coffee from	147
Table 238: Percentage of firms and organization sell coffee products from October 2020- September 2021 (treatment n=214, comparison n=21).....	147
Table 239: Percentage of firms and organization that does domestic and international marketing, Treatment (n=66).....	148
Table 240: Average of Volume Sold, in kilo, by coffee farm (treatment n=66, comparison n=7)	148
Table 241: Average selling price, PhP/Kg, by coffee farm (treatment n=66, comparison n=7)	148
Table 242: Average sales (PhP), by coffee form	149
Table 243: Percentage of firms and organization who achieved their targets (coffee) sales in Oct 2020-Sept 2021 (treatment n=66, comparison n=7).....	149
Table 244: Reasons for not attaining the target sales (treatment n=37, comparison n=3).....	149
Table 245: Percentage of firms and organization satisfied with the received average price in October 2020- September 2021 (treatment n=66, comparison n=7)	150
Table 246: In October 2020 to September 2021 to whom does the organization sell the coffee?	150
Table 247: Volume sold to those markets per coffee forms (in %)	150

Table 248: Percentage firms and organization selling coffee products by selling platform (treatment n=66, comparison n=7)	151
Table 249: Percentage of firms and organizations satisfied with the average price received for their products or services in October 2020-September 2020 (treatment n=66, comparison n=7).....	151
Table 250: Percentage of firms and organizations with external sources of agricultural market/price information	151
Table 251: Distribution of respondents (in %) in terms of their frequency of access to agricultural market/price information (treatment n=214, comparison n=21).....	151
Table 252: Percentage of firms and organization satisfied with the end markets that they are accessing/selling (treatment n=214, comparison n=21).....	152
Table 253: Percentage of firms and organization who had their coffee cupped since 2019 (treatment n=214, comparison n=21)	152
Table 254: Average cupping score of the most recent coffee cupping (treatment n=19, comparison n=2).....	152
Table 255: Percentage of firms and organization with coffee cupping score perceived that grade/score coffee influence the sales price or other aspect of sales (treatment n=19, comparison n=2)	153
Table 256: Percentage of firms and organization with coffee cupping score perceived that cupping score of a q grader is basis to classify the coffee sold as specialty or fine (treatment n=19, comparison n=2)	153
Table 257: Percentage of firms and organization with coffee cupping score who are selling specialty coffee (80 and above cupping score) (treatment n=19, comparison n=2).....	153
Table 258: Average volume (in kg) and price (PhP/Kg) of specialty coffee (treatment n=19, comparison n=2)	153
Table 259: Percentage of firms and organization with difficulty accessing specific coffee inputs or technologies in the past production year (October 2020 to September 2021) (treatment n=214, comparison n=21)	153
Table 260: Percentage of firms and organization who accessed inputs or technologies for coffee farm due to PhilCAFE assistance in the past production year (October 2020 to September 2021) (treatment n=214, comparison n=21)	154
Table 261: Percentage of firms and organization who supply Improved Inputs and/or services (treatment n=214, comparison n=21)	154
Table 262: Type of Improved Inputs and/or services supplied by the firms and organizations (treatment n=63, comparison n=5)	154
Table 263: Average quantity of farm inputs in stocks.....	155
Table 264: Average quantity of farm inputs allocated for members of the organization.....	155
Table 265: Average quantity of farm inputs allocated for General public/other buyers	155
Table 266: Average quantity of farm inputs sold	155
Table 267: Average selling price of farm inputs in PhP per unit.....	156
Table 268: Percentage of firms and organization who provide In-Kind Loans to Farmers Or Other Stakeholders due to Philcafe (external assistance for comparison group) Assistance In October 2020-Sept 2021 (treatment n=214, comparison n=21).....	156
Table 269: Percentage of firms and organization who have access to the capital or financing it needs for business operations and or growth (treatment n=214, comparison n=21).....	156
Table 270: Percentage of firms and organization who have receive increased investment/financing from an external firm due to PhilCAFFE facilitated assistance between October 2020 to September 2021 (treatment n=214, comparison n=21).....	156
Table 271: Percentage of firms and organization who think that they influenced other organizations to start providing/producing similar coffee-related services or products due to their organizations' success (treatment n=214, comparison n=21).....	157
Table 272: Percentage of firms and organization with nursery (treatment n=214, comparison n=21).....	157
Table 273: Percentage of firms and organization who start their business due to PhilCAFE facilitation assistance (for Treatment) or external assistance (for Comparison) (treatment n=214, comparison n=21).....	157

Table 274: Percentage of firms and organization who developing a new approach or strategy due to Philcafe facilitated assistance (for Treatment) or external assistance (for comparison) (treatment n=214, comparison n=21)	158
Table 275: Percentage of firms and organization who influenced individuals that newly started farming coffee between October 2020 to September 2021, due to their organization's trainings or Services (treatment n=214, comparison n=21).....	158
Table 276: Percentage of firms and organizations who received capacity-building assistance (training, technical assistance, exposure trips, industrywide gatherings) (treatment n=214, comparison n=21)	158
Table 277: Relevance and effectiveness ratings of capacity building activities in terms of improving production and sales by sources	158
Table 278: Percentage of firms and organizations signed a formal agreement with buyers between October 2020 to September 2021 due to PhilCAFE facilitated assistance (for Treatment) or external assistance (for comparison) (treatment n=214, comparison n=21)	159
Table 279: Percentage of firms and organizations want a Formal Agreement with Buyers (treatment n=214, comparison n=21)	160
Table 280: Percentage of firms and organizations who perceived that formal agreement is worthwhile (treatment n=214, comparison n=21).....	160
Table 281: Percentage of firms and organizations who obtained any quality management certifications through PhilCAFE facilitated assistance (for Treatment) or external assistance (for comparison) between October 2020 to September 2021 (treatment n=214, comparison n=21).....	160
Table 282: Percentage of firms and organizations who passed/approved policies, regulations, and/or administrative procedures for coffee since 2019 due to PhilCAFE's intervention (treatment n=214, comparison n=21)	161
Table 283: Average share of coffee in terms of income contribution to the organization (treatment n=214, comparison n=21)	161
Table 284: Change in organizational cost since 2019 (treatment n=214, comparison n=21)	161
Table 285: Percentage change in organizational cost since 2019 (treatment n=214, comparison n=21)	161
Table 286: Change in organizational sales since 2019 (treatment n=214, comparison n=21).....	162
Table 287: Percentage of firms and organizations with risk management plan in the areas planted with coffee (treatment n=214, comparison n=21).....	162
Table 288: Organization who assisted you in making the Risk Management Plan.....	162
Table 289: Percentage of firms and organizations who Identified Risk Affecting the Business, On Coffee and Other Services (treatment n=214, comparison n=21)	163
Table 290: Percentage of firms and organization who are optimistic or pessimistic about coffee in the next 3-5 years considering their earnings in 2021 and other factors (treatment n=214, comparison n=21).....	163
Table 291: Percentage of firms who are affected by any other type of external shock (lack of transport, etc) from October 2020to September 2021 (treatment n=214, comparison n=21)	164
Table 292: Percentage of firms and organization who perceived that PhilCAFE (external projects for comparison group) influenced its ability to cope with the effects of COVID-19 (treatment n=214, comparison n=21)	164
Table 293: Determinants of technology adoption, by production technology, 2021	164
Table 294: Determinants of technology adoption, Harvest, processing, operational management, 2021	165
Table 295: Regression analysis on coffee yield (converted to GCB), 2021	166
Table 296: Correlation analysis of post-harvest losses and adoption post-harvest practices/ technologies, 2018-2021	167
Table 297: Correlation analysis on coffee sales, 2018-2021	168
Table 298: Changes in price due to change in Coffee Quality due to Adoption of Technologies and Practices, per region	168
Table 299: Perceive changed in coffee sales since 2019	169
Table 300: Average perceived changed (%) in coffee sales since 2019	169

Table 301: Correlation analysis on credit availability/access, 2018-2021	169
Table 302: Correlation analysis on Household Income, 2021	170
Table 303: Correlation of adoption to yield and farm coffee production sales of the firm	171

List of Figures

Figure 1: Volume of Production, Area Planted, and Number of Bearing Trees for Coffee: Philippines, 2016-2020 (Source: 2016-2020 Crop Statistics of the Philippines)	6
Figure 2: Summary of Interventions Across the Coffee Supply Chain (Source: 2017-2022 Philippine Coffee Industry Roadmap)	7
Figure 3: Number and percentage of farmer survey respondents who received (i) technical assistance or training, (ii) some form of financing or resources, and/or (iii) participated in any event that is provided or supported by PhilCAFE.	16
Figure 4: Number and percentage of MSA survey respondents who received (i) technical assistance or training, (ii) some form of financing or resources, and/or (iii) participated in any event that is provided or supported by PhilCAFE. (n=328)	16
Figure 5: Number and percentage of firm survey respondents who received (i) enterprise growth, improvement training, or technical assistance, (ii) some form of financing or resources, and/or (iii) participated in any event that is provided or supported by PhilCAFE. (n=215)	16
Figure 6: Number of Respondents by Beneficiary Group	17
Figure 7: Average Age by Gender	17
Figure 8: Number of Firms Respondents by Beneficiary Group and Gender, Treatment Group	17
Figure 9: Percentage of Firm Respondents involved in Coffee Cultivation, Purchase/Consolidation, and Sell Coffee, by beneficiary type, Treatment Group	18
Figure 10: Percentage of Firm Respondents involved in Coffee Cultivation, Purchase/Consolidation, and Sell Coffee, by beneficiary type, Comparison Group	18
Figure 11: Number of Key Informants by Group and Gender.	18
Figure 12: Farmers Survey Number and percentage of Practicing Farmer MSAs, non-practicing MSAs, and non-coffee industry MSAs respondents	19
Figure 13: MSA Survey Number and percentage of Practicing MSAs, non-practicing MSAs, and non-coffee industry MSAs respondents	19
Figure 14: Firms Survey Number and percentage of Practicing Firm MSAs, non-practicing MSAs, and non- coffee industry MSAs respondents	19
Figure 15: Adoption rate of farm production technologies amongst farmers, by technology, 2021	20
Figure 16: Adoption rate of farm production technologies amongst firms involved in coffee cultivation, by technology, 2021	20
Figure 17: Adoption rate of farm production technologies amongst farmers, by technology, 2018	21
Figure 18: Percentage of farmers who achieved target sales of their coffee by Region, Treatment and Comparison	25
Figure 19: Annual Cost per Hectare DID Analysis (converted GCB)	30
Figure 20: Coffee Yield per Hectare DID Analysis (converted GCB)	30
Figure 21: Post-Harvest Losses DID Analysis	30
Figure 22: Coffee Sales in PhP DID Analysis (converted GCB)	31
Figure 23: Employment DID Analysis	32
Figure 24: Annual Income DID Analysis	32
Figure 25: PhilCAFE Results Framework Mid-Term Results (Assessed based on responses and feedback of sampled respondents and participants.)	40

Figure 26: Distribution of Age of Respondents (top = upper extreme, top box = upper quartile, mid box = median, bottom box = lower quartile, bottom = lower extreme, outliers not included; T = Treatment, C = Comparison).....	67
Figure 27: Distribution of Number of Years of Formal Education (top = upper extreme, top box = upper quartile, mid box = median, bottom box = lower quartile, bottom = lower extreme, outliers not included; T = Treatment, C = Comparison).....	68
Figure 28: Distribution of Farm Size (in hectares) of Respondents (top = upper extreme, top box = upper quartile, mid box = median, bottom box = lower quartile, bottom = lower extreme, outliers not included; T = Treatment, C = Comparison)	74
Figure 29: Distribution of Farm Size (in hectares) Devoted to Coffee of Respondents (top = upper extreme, top box = upper quartile, mid box = median, bottom box = lower quartile, bottom = lower extreme, outliers not included; T = Treatment, C = Comparison)	74
Figure 30: Distribution of responses on change in price (increase or decrease) of coffee (in PhP) due to improve in quality of coffee (top = upper extreme, top box = upper quartile, mid box = median, bottom box = lower quartile, bottom = lower extreme, outliers not included; T = Treatment)	87
Figure 31: Distribution of estimated post-harvest losses (in % of production) by region (top = upper extreme, top box = upper quartile, mid box = median, bottom box = lower quartile, bottom = lower extreme, outliers included; T = Treatment, C=Comparison)	93
Figure 32: Distribution of perceived estimated change in sales (increase, decrease) of those who perceived to have a change (n=359), by region, (top = upper extreme, top box = upper quartile, mid box = median, bottom box = lower quartile, bottom = lower extreme, outliers not included; T = Treatment, C=Comparison).....	95
Figure 33: Number and percentage of MSA _P respondents providing MSA services as inputs (seedling) suppliers, academic/technical providers, and policy and government support (n=170).....	116
Figure 34: Number and percentage of MSA _P respondents providing MSA services as producers, academic/technical providers, and policy and government support (n=208).....	118
Figure 35: Perception on the effect of COVID-19 in the coffee industry (treatment group and comparison group).....	164

List of Acronyms and Abbreviations

BACOFA	Balutakay Coffee Farm Association
BPI	Bureau of Plant Industry
CQI	Coffee Quality Institute
DA	Department of Agriculture
DA-ATI	DA-Agricultural Training Institute
DA-RAFIS	DA-Regional Agriculture and Fisheries Information Section
DAR	Department of Agrarian Reform
DENR	Department of Environment and Natural Resources
DTI	Department of Trade and Industry
FGD	Focus Group Discussion
FFPr	Food for Progress Program
GCB	Green coffee beans
ICO	International Coffee Organization
IEC	Information, Education, and Communication
ISED	Institute for Socio-Economic Development Initiatives
KII	Key Informant Interview
LGU	Local Government Unit
M&E	Monitoring and Evaluation
MinPACT	Mindanao Productivity in Agricultural Commerce and Trade
MSA	Market System Actors
MTE	Mid-Term Evaluation
PhilCAFE	Philippine Coffee Advancement and Farm Enterprise
PO	Producer Organization
SOAP	School-On-Air Program
SUCs	State Universities and Colleges
USDA	US Department of Agriculture

1 Executive Summary

1.1 Background

The **Philippine Coffee Advancement and Farm Enterprise (PhilCAFE) project** is an investment in the coffee sector under the Food for Progress Program (FFPr) of the USDA. It is a 5-year project in 25 coffee-rich provinces in the Philippines. It aims to increase the production of conventional and specialty coffee, increase coffee exports, and build the capacity and expand service provision of coffee value chain actors by leveraging private and public capital to put the Philippine Coffee Industry Roadmap into action. Specifically, the goals of the project are (i) to directly support 13,700 farmers to triple their coffee production, (ii) to boost the national coffee production by over 50%, and (iii) to increase by ten-fold the Philippines' coffee export.

To achieve this goal, PhilCAFE targets to develop the capacity and expand the service provision of about 350 value chain actors (i.e., financial institutions, colleges and universities, producer organizations (POs), input suppliers, roasters, and retailers). With the synergy created by the project's economic opportunities and social inclusion processes, the project anticipates that, besides the target beneficiaries, at least 54,800 individuals will indirectly benefit from the project.

By June 30, 2021, a total of 9,498 individuals and 463 organizations/firms have directly benefited from the project.

1.2 Design, Methods, and Limitations

The MTE aims to assess whether the project is on track in achieving its stated objectives, outcome, and impact, and to test the assumptions and logical pathway of the project results framework. Specifically, the MTE is to (i) assess the project's progress against its targets, while taking COVID-19 effects into account for the 2021 production season; (ii) assess the effectiveness and efficiency of implementation approaches used by the project in service delivery via evaluation and learning questions; (iii) assess the project's impact in mitigating COVID-19 effects for project participants, versus non-project participants; (iv) document impacts the COVID-19 pandemic had on project implementation (for example, delays to trainings or change in format (in-person to virtual), etc); (v) assess how the project is integrating women and youth in its interventions all along the market system and whether both men and women are benefiting equally from project interventions; (vi) provide suggestions and recommendations on areas the project should focus in its remaining year of implementation; (vii) identify measures/mechanisms for sustainability put in place by the project; (xi) generate lessons learned by the project during the first period of implementation; and (xii) provide succinct recommendations on areas of improvements based on evaluation findings.

The MTE is based on the reach of the project by June 30, 2021. The study used and analyzed primary and secondary data to address the study objectives and answer the questions in the Terms of Reference. The primary data consist of sample surveys (i.e., farmers survey, MSA participants/representatives survey (individuals), and firms survey), key informant interviews (KIIs), and focus group discussions (FGDs). The sample size for the sample survey was calculated such that a confidence level of 95%, a margin of error of 5%, and an equal sample proportion of 0.5 is achieved. The sample size for each survey (i.e., farmers, MSAs, firms) was adjusted based on the finite population of the respective surveys, and a design effect of 2 was applied to compensate for the reduction in precision due to clustering for the farmers survey. A comparison group was also included in the farmers' survey and firms survey to enable comparison of with and without project. Given these parameters, a sample of 720 treatment farmers, 321 MSAs, and 210 firms in the treatment areas were surveyed. The comparison group consists of 244 farmers and 21 firms. Additionally, a total of 15 FGD sessions and 50 KII were sources of qualitative data.

The MTE is limited by the following: (i) it relied extensively on self-reported data¹ and by recall; and (ii) gauging and quantifying post-harvest losses experienced by farmers are based on the respective farmer's perception² and recall (which is further limited by the farmer's grasp and appreciation of post-harvest losses).

¹ Answers/responses of respondents, key informants, and FGD participants were accepted at face value. While probing was done and hard evidence to support claims were asked, such documents are not readily available.

² Unlike yield and sales where quantities are regularly and frequently used in various transactions (thus, respondents are keener on these values), determining and quantifying post-harvest losses is not.

1.3 Findings and Conclusions

TECHNOLOGY ADOPTION. The improved agricultural techniques and technologies introduced and provided by PhilCAFE to the farmers as well as academe and technical service providers (including mentors) have been significant and much appreciated by the project beneficiaries. However, adoption of technologies is still not progressing as expected. This seems to confirm the overall midterm accomplishment as reflected in Figure 5 (Project's Results Framework Midterm Results) – particularly the cause-and-effect between improved use [or adoption] of improved agricultural techniques and technologies and its dependencies (increased knowledge + increased availability of improved inputs + increased use of financial services). Several FGD participants mentioned not receiving the expected farm input/support as a reason for failing to apply the technologies learned. There is also a low percentage of respondents accessing financial services, despite their dire need for farm capital/funding and their awareness of available financial services in their area.

YIELD AND SALES. The level of coffee yield is significantly and positively influenced by the adoption of harvest, post-harvest, and coffee processing technologies. The study, however, revealed that only a small number of farmer respondents have accessed post-harvest facilities. Coupled by slow and partial adoption of technology and Good Agricultural Practices (GAP) on coffee farming, coffee yield by mid-term is lower than what was targeted (PMP target 0.65 MT/Ha vs actual at 0.38 MT/Ha), despite its slight positive performance against the comparison group (according to the DID analysis on yield).

The level of coffee sales by the farmers is correlated with the yield mainly from dried and green coffee beans. The adoption of technologies including farm management, genetic improvement, pest management, harvest and post-harvest technologies, and processing and operational management practices positively correlates with the level of coffee sales. The number of workers, including both family labor and hired labor, as well as the time spent by women and men in farming also correlates with the level of coffee sales. Furthermore, sales also correlated with farmers' interest to undergo certification and with their business strategies.

MARKET SYSTEM SUPPORT. Areas with active coffee councils tend to have stronger and more resilient coffee market systems. Areas with established buying agreements between the farmers and the firms tend to have higher market satisfaction levels. This is besides the noticeable positive outlook and responses of those respondents and participants with established buying agreements during the interview. Farmers' access to warehouse and storage spaces is very low (1.2%, Table 73) amidst availability of services. So far, only very few farmer respondents (3.2%, Table 89) perceived a change in market actors – even with PhilCAFE's networking and interventions. Access to credit for coffee farming is very low, notwithstanding the availability of financial services (i.e., banks, cooperatives). This was validated during the presentation of results with the project beneficiaries who responded that amongst the reasons for not accessing these financial services include (i) difficulty in producing documentary requirements, (ii) the need to be an organized group to access financial services, and (iii) some banks require proof of buying agreements.

SUSTAINABILITY OF INTERVENTIONS. Amongst the often-repeated messages of the farmer respondents is that there has been continued support and interventions from PhilCAFE, particularly on training and provision of inputs. Survey results showed that while the capacity building activities received by the respondents from State Universities and Colleges (SUCs) were significantly fewer in number by the midterm as against the other training providers (i.e., national government agencies (NGAs), local government units (LGUs), fellow coffee farmers, and non-government organizations (NGOs)) between October 2020 to September 2021, the trainings by SUCs received higher positive remarks from most respondents (i.e., extremely relevant and extremely effective). Influential roles of coffee mentors have also been cited by some FGD participants – particularly on helping train other coffee farmers, re-echoing GAP and improved technologies, and in encouraging technology adoption.

CAPACITY BUILDING: CONTENT AND DELIVERY. Some FGD participants had difficulty answering questions about the impact of adopted technologies on yield, income, and related variables. There were participants who are yet to see the impact as they have adopted learned technologies only recently, while others are yet to initiate adoption, due to the unavailability of inputs. It is suggestive of the need for farmers to acquire know-how on input and output tracking (i.e., non-adoption of technologies effects on yield and quality of coffee, which impacts income) towards determining workable or effective farming practices relative to his/her circumstances (i.e., available resources) and background (i.e., cultural beliefs and practices). The FGDs revealed that some associations had no gender policy or were unable to participate in gender-related learning sessions. Most of the FGD participants failed to answer questions related to financing, despite being able to easily enumerate the training sessions they attended. The medium of training preferred by 88.7% of the treatment farmer respondents is face-to-face, however, during the heights of the Covid-19 pandemic, PhilCAFE's innovative strategies and approach to reach and train farmers also left inspiring memories and recall.

DID: COFFEE YIELD. A comparison on the yield per hectare in the baseline and for this MTE is not statistically significant but showed a nominal, positive DID coefficient which indicates a positive change in terms of yield amongst PhilCAFE farmer beneficiaries. It is worth noting that while both the treatment and comparison group experienced a decline in yield (which may be attributed to effects and outcomes of the COVID-19 pandemic) the treatment group somewhat showed some resilience that lessened the declined trajectory of the comparison (Figure 20). While not all planned activities of PhilCAFE during the peak of the COVID-19 pandemic were implemented as scheduled, some FGD participants shared the continued efforts of PhilCAFE to provide support and training amidst the limitations brought about by the pandemic. Some training and capacity building initiatives are still pushed through, including use of innovative strategies such as through virtual trainings and online forums. Where face-to-face training and field activities were done, PhilCAFE implemented COVID-19 related health protocols (e.g., the use of facemasks, provision of sanitizers, maintaining social distancing), while echoing health and safety measures to its beneficiaries. The visible persistence and resilience of PhilCAFE in its project implementation amidst the challenging times of COVID 19 somewhat trickled down and inspired the beneficiaries to maintain a positive attitude and outlook. Thus, some FGD participants, particularly those who were early beneficiaries of PhilCAFE, shared that they continued to produce and sell coffee as if COVID-19 did not interfere with their activities.

DID: ANNUAL PRODUCTION COST. The DID analysis on the annual production cost per hectare between the baseline and this MTE also indicated a nominal positive change in terms of reducing the annual production cost per hectare, as shown in the trajectory of the treatment group data against the comparison group data trajectory (see Figure 19). The DID estimator for the annual cost per hectare for this midterm, however, is not yet significant.

DID: POST-HARVEST LOSSES. Although the post-harvest losses declined overall from 2019 to 2021 for both treatment and comparison groups, the DID estimator for the post-harvest losses is positive and statistically significant at the 5% significance level – implying that the treatment group has statistically greater post-harvest losses as compared to the comparison group (Figure 21). Amongst the potential contributing factors for this result is the small number of farmer respondents (1.2%, Table 73) accessing post-harvest facilities. It should be noted, however, that these data on post-harvest losses are neither computed nor measured from records of production, deliveries, nor how much is sold, but are only rough estimates given by the respondents based on perception and recall. It is also possible that the efficacy of trainings and exposures provided by PhilCAFE have significantly improved the farmers' capacity to properly recognize post-harvest losses and that the estimates provided during the baseline may be understated, though this conjecture may not be possible to prove.

DID: COFFEE SALES. A DID analysis for coffee sales was also done – comparing the 2019 baseline data with this midterm data. The DID coefficient is positive, however it is not yet statistically significant. This is an indication that there is a positive change in terms of sales but not enough to be statistically different compared to the comparison group. From the comparison on yield per hectare using converted green coffee beans (GCB) on both the treatment and the comparison groups of the Quasi-Experimental Design Sample, both reflected a decrease in production. Both the treatment and comparison group also have almost the same experiences that attributed to perceiving an increase or decrease in sales (as discussed in the section above). And both groups are in the same regions – experiencing similar COVID-19 related impact and under the same local health protocol restrictions. Given these settings, the treatment group was able to somewhat sustain selling coffee amidst the challenging times of COVID-19 that somewhat slowed the trajectory of the comparison group. This is consistent with the feedback of some FGD participants, as mentioned above, who continued to produce and sell coffee – as if COVID-19 did not interfere with their activities – thanks to PhilCAFE.

DID: EMPLOYMENT. In terms of employment, the DID estimator is positive but insignificant at the 5% level, with the treatment having a positive effect. This is illustrated in Figure 23 where the trajectory of the treatment is an improvement in comparison to the trajectory of the comparison group from 2019 (baseline) to 2021 (midterm).

DID: ANNUAL INCOME. The DID analysis on the annual income revealed a positive DID coefficient by mid-term of the project, however, the value is not yet statistically significant at the 5% level (Figure 24). Annual incomes for beneficiary farmers increased from baseline to mid-term, while the incomes for comparison groups declined. The positive DID coefficient for the beneficiary farmers indicates this positive change, however the value is not great enough to be statistically different compared to that of the comparison group.

OVERALL FINDING. PhilCAFE is a very ambitious project given its nature (i.e., various interventions across a network of market system actors), coverage area (the Philippine setting/geography), interventions at different levels (national, regional, local), objectives and targets, and 5-year only timeframe. Despite the onset of the pandemic during its early stage (as the project was gathering its momentum), PhilCAFE made substantial efforts and accomplishments by its midterm. This is reflected in its progress against the PMP targets on various indicators, as well as emerging outcomes with the Difference-in-Difference analysis of matched samples (treatment and comparison groups) using propensity score

matching (PSM). Besides the DID for post-harvest losses, all (production cost, yield, employment, sales, income) revealed a positive outcome for the treatment group in contrast to the comparison group. The conditions and circumstances brought about by the pandemic at the early stage of the project, however, have disrupted the project's momentum as well as significantly affected its delivery mechanism and reach (geographic; national, regional, local MSAs). Consequently, some project interventions for various coffee MSAs (directly and indirectly supporting coffee farmers/ producers) did not have enough gestation period yet to stimulate substantial change that is expected to trigger and produce significant results/outcomes at the farmers'/producers' end. As such, MTE values of DID analysis on farmers' production cost, yield, sales, and income showed positive coefficients that are not yet enough to be statistically significant.

In terms of its 34 performance indicators³, a third achieved and even exceed its midterm targets. This includes the indicators on number of individuals participating in USDA food security programs (108%), number of farmers and firms adding value to postproduction agricultural products (975%), and number of individuals benefiting indirectly as a result of USDA assistance (4,761%) – all accounted including by gender, age, other project disaggregation of interest. Half of the indicators, however, only reached 9% to 77% of its mid-term targets. These indicators include number of individuals in the agriculture system who have applied improved management practices or technologies with USDA assistance (23%), number of farmers able to mention at least three farm management practices (52%), number of PO and enterprises who are using at least three improved practices (10%), yield of targeted agricultural commodities (58%), and volume of commodities sold by farms and firms receiving USDA assistance (9%), as well as indicators supporting market systems (i.e., number of registered firms (including POs and Enterprises) in target sectors that obtain certification (53%), number of host government or community derived risk management plans formally proposed, adopted, implemented, or institutionalized with USDA assistance (11%), number of agreements signed between buyers and sellers as a result of project facilitation (62%)). Looking at the performance of the treatment group per region vis-a-vis presence/status of coffee council and market system actors in the area, it was apparent that those regions with active coffee council and local coffee programs performed better. Data from the treatment areas show that in Region 12, where there is strong presence of regional market systems with all its actors actively supporting and complementing each other, farmers consistently have higher sales satisfaction rate at 28.3% which is considerably higher than the 17% overall satisfaction rate. Moreover, farmers from Region 12 also posted a 73.8% satisfaction rate on their end-market as opposed to the 45.3% overall end-market satisfaction rate for all sites. Strong presence of market systems includes the crucial establishment and strengthening of Regional Coffee Councils and active participation and involvement of Provincial and City/Municipal LGUs, which set the policies and enabling environment for the regional market system to thrive. Recognizing and supporting coffee sector market system actors at all levels in the project regions is very crucial to sustain and for the regional market system to grow and thrive. Alignment to local coffee programs and efforts are equally important – not just provincial, regional, and national – to ensure the sustainability of investments made to the market system. This alignment of projects to local programs and efforts has been reaffirmed by LGU respondents who were very appreciative of the close coordination and collaboration they experienced from PhilCAFE, as well as by respondents from other LGUs who felt a lack of PhilCAFE's coordination and collaboration with them (thus, the respondents adamantly flagged the need for it during interviews).

LESSONS LEARNED. The uneven interventions across regions as well as across market system actors have been observed. While there is the keen active monitoring of diverse cultural representation, localized cultural integration in interventions seems to be missing.

The observation about that the tendency of most FGD participants to provide 'generic' or broad answers without clearly attributing some specific activities to PhilCAFE or the difficulty of some survey respondents to recall trainings supported by PhilCAFE highlights the need to revisit PhilCAFE's communication plan and strategy. Attribution is essential to gauge the project's results and perceived impact, even qualitatively.

1.4 Recommendations

Reinforce Technology Adoption with Improved Access to Inputs. There is a need to ensure the availability and/or accessibility of farm inputs, tools, as well as facilities that complement the trained technologies and techniques. PhilCAFE needs a precise mechanism to track or monitor the support given (e.g., training sessions, seedlings, farming tools) to the different beneficiaries or target areas. PhilCAFE also needs to ensure clear messaging of commitments to manage expectations and avoid misinterpretations, such as conditions for the delivery of expected seedlings.

Reinforce Technology Adoption with Use of Needed Financial Services. There is a need to revisit the training program specific to the process of accessing financial services and fund management. During the multi-stakeholders' research

³ Computed with PhilCAFE; includes routine indicators.

presentation, some participants from farmer's associations shared that they did not access some financial services because of burdensome procedures and requirements required by the financial institutions.

Market System Support. There is a need to prioritize strengthening of the Coffee Councils, or its establishment/ organization where there is none. Further activities to expedite support towards strengthening regional market systems are imperative and cannot be understated. This includes proactive establishment of buying agreements; optimizing use of storage facilities/warehouse, post-harvest facilities; improving access to financial services; strategic building of market linkage; and improved marketing assistance.

Capacity Building: Content and Delivery. PhilCAFE can provide additional learning sessions to its partner associations on the essentials of tracking yield, income, and post-harvest losses. This knowledge will enable the farmers to make sound decisions on inputs and adopt effective farming practices. PhilCAFE can also identify the specific groups and provide the necessary organizational support for conducting gender-related training sessions and creating the gender policy.

Continued use of innovative strategies to deliver training and capacity building activities with comprehensive Information, Education, and Communication (IEC) Plan may also be explored – including adoption of the School-On-Air Program (SOAP); collaborate with DA-ATI, DA-RAFIS, and other Agri-based radio programs in the respective regions; and enhancing promotions of Good Agricultural Practices through multi-media (radio plugs, social media, etc.).

Sustainability of Interventions. To sustain the country's momentum of coffee education, teaching coffee farming technologies may be more sustainable if it is integrated into the teaching curriculum of agriculture schools – such as with SUCs. Coaching and mentoring systems may also be established and anchored in the SUCs and agriculture schools. Maximizing the role of coffee mentors, especially in areas with recent engagements, may also be explored. This may be complemented with supplemental capability-building sessions for coffee mentors in areas with observed technology adoption issues or difficulties.

2 Background, Context and Rationale

2.1 Background

The global trend of coffee consumption has been increasing. World coffee consumption in coffee year 2020/21 is estimated at 167.68 million bags⁴, a 2.0% increase from coffee year 2019/20. Exports of all forms of coffee in December 2021 is up by 8.9% in comparison to December 2020 data – driven by Asia & Oceania with 37.4% increase at 4.71 million bags.⁵ In the January 2022 Coffee Market Report of the International Coffee Organization (ICO), for 16 months in a row, the ICO Composite price revealed a continuous month to month increase with coffee price reaching as high as 204.29 US cents/lb by January 2022. With an increasing global demand, however, the Philippine's footprint in the coffee global value chain is relatively small amidst its pronounced strength in terms of its geographical conditions.⁶

Domestically, the Philippines' coffee consumption has been increasing. The ICO reports that Philippine coffee consumption (in 60kg bags) in crop year 2020/21 is at 3,312,000 with a compound annual growth rate of 1.4% from 2017/18 to 2020/21 (crop year). A report⁷ prepared by USDA Staff for the Global Agricultural Information Network attributed the increasing coffee consumption in the Philippines not just due to the overall food and beverage consumption with the rise of population and income but with the booming Business Process Outsourcing (BPO) industry – operating longer than the normal workforce in the Philippines (i.e., 8:00am to 5:00pm) and with varying workforce shifts (i.e., night shift, graveyard shift).

Local coffee production, however, declined at an average annual rate of -3.0%⁸ from 2016 to 2020 as per Philippine Statistics Authority (PSA). Amidst the strategic location of the Philippines (between the Tropic of Capricorn and the Tropic of Cancer) as well as the availability of suitable terrain to grow coffee, the Philippines remain a net importer of coffee. By 2017 (from 1990), the cumulative coffee imports of the Philippines have already reached the PhP4.5 billion mark⁹.

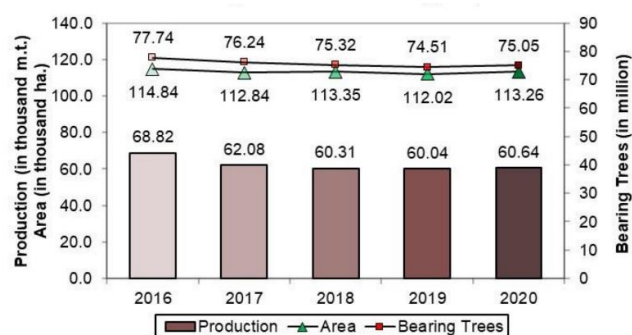


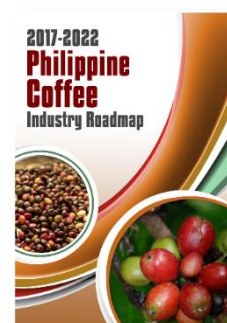
Figure 1: Volume of Production, Area Planted, and Number of Bearing Trees for Coffee: Philippines, 2016-2020 (Source: 2016-2020 Crop Statistics of the Philippines)

2.2 Philippine Coffee Industry Roadmap

In 2016, the Department of Agriculture (DA) and the Department of Trade and Industry (DTI), with the industry stakeholders, formulated an integrated and harmonized Philippine Coffee Industry Roadmap for 2017-2022. The roadmap (i) provided a comprehensive assessment of the Philippine coffee industry by 2016; (ii) analyzed market trends and identified opportunities; (iii) defined goals and formulated strategies in increasing yield, lessening importation, and improving farmer's income; and (iii) recommended plans using the coffee value chain framework for 2017 to 2022 for a competitive and vibrant Philippine coffee industry.

From the numerous consultations with key coffee stakeholders, the following are the agreed vision, mission, and industry goals of the 2017-2022 Philippine Coffee Industry Roadmap:

- **VISION:** An industry that is cost-competitive, aligned with global quality standards, reliable and environment-friendly; and provides sustainable benefits to farmers, processors, traders, and exporters.
- **MISSION:** Development of a cost-competitive, quality-driven, supply-reliable, product-diversified value chain from farming to coffee products manufacturing under sustainable practices and consumer safety in compliance to food safety and environmental requirements.



⁴ <https://www.ico.org/documents/cy2021-22/cmr-0122-e.pdf>

⁵ World coffee consumption 2017/18-2020/21, International Coffee Organization (<http://www.ico.org/prices/new-consumption-table.pdf>)

⁶ <https://industry.gov.ph/wp-content/uploads/2017/11/DTI-Policy-Brief-2017-10-The-Philippines-in-the-Coffee-Global-Value-Chain.pdf>

⁷ Coffee Annual: Philippine Coffee Situation and Outlook

(https://apps.fas.usda.gov/newgainapi/api/report/downloadreportbyfilename?filename=Coffee%20Annual_Manila_Philippines_4-26-2011.pdf)

⁸ 2016-2020 Crop Statistics of the Philippines, Philippine Statistics Authority ([Crops Statistics of the Philippines 2016-2020.pdf \(psa.gov.ph\)](https://psa.gov.ph/Crops-Statistics-of-the-Philippines-2016-2020.pdf))

⁹ <https://mb.com.ph/2019/09/01/ph-coffee-importation-hits-4-5-billion/>

- GOALS: (i) Increase yield of GCBs by 0.3 MT/ha to 1 MT/ha by 2022 and production by 5% per annum; (ii) Lessen dependence on coffee bean and coffee products importation; (iii) Improve farmers' standard of living from poverty level of 15% per annum through diversified sustainable agribusiness farming systems; and (iv) Increase employment by 3% in the coffee industry.

Figure 2 illustrates the summary of interventions across the coffee supply chain – from the 2017-2022 Philippine Coffee Industry Roadmap. The 2017-2022 Philippine Coffee Industry Roadmap also included Action Programs and Key Result Areas for the Coffee Industry which are categorized as presented in Table 1.

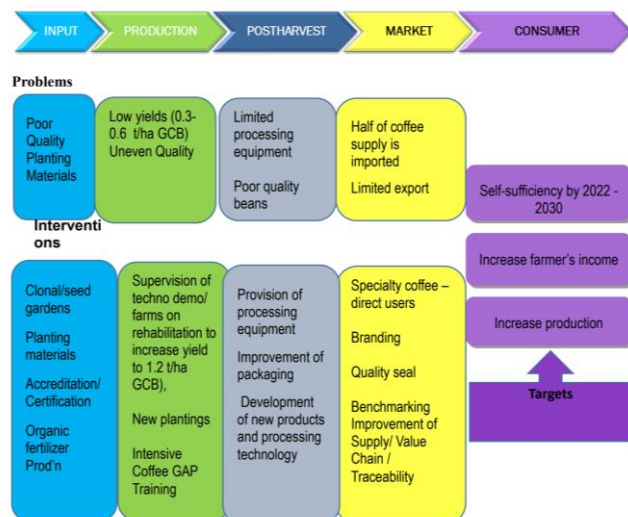


Table 1: Action Programs and Key Result Areas of the Philippine Coffee Industry

Inputs	Improve quality and availability of planting materials
Farm Production	Enhance farm efficiency and investments
Processing	Improve competitiveness
Market	Improve market price and coffee standards
Support Services	Financing: Access to long-term funds
	Logistics: Reduce logistics cost to processors/market
	R & D: Improve research and extension services
	Policies: Appropriate investment incentives
	Market Intelligence: Reliable industry data
	Organization: Industry unity in diversity

Figure 2: Summary of Interventions Across the Coffee Supply Chain (Source: 2017-2022 Philippine Coffee Industry Roadmap)

Source: 2017-2022 Philippine Coffee Industry Roadmap

2.3 MinPACT: A USDA Intervention on Coffee, Cocoa, and Coconut

The Mindanao Productivity in Agricultural Commerce and Trade (MinPACT) project (from 2014 to 2018) was a USDA Food for Progress project which focused on coffee, cocoa, and coconut. The project was implemented by ACDI/VOCA and achieved the following:¹⁰

- Trained smallholder coffee, cacao, and coconut farmers in improved production and resource management technologies, with 8,480 adopting improved technologies over the life of project; assisted 6,360 farmers to create and implement farm plans.
- Facilitated improved organizational capacity, management practices, and access to markets for 24 POs, including cooperatives and associations, representing 10,600 farmers.
- Supported private enterprises in providing improved services, including at least 72 enterprises selling improved inputs and other services, like technical assistance and training, 26 enterprises improving infrastructure for production, and 18 enterprises providing financial services.
- Facilitated the development of market information sources and systems and supported 8,480 producers to have ready and frequent access to current agricultural market information.
- Supported 1,248 coffee, cacao, and coconut farmers, producers, and enterprises to access formal cash loans to finance production and processing, with a total value of \$1,134,545.

2.4 PhilCAFE Project

RATIONALE. In support the 2017-2022 Philippine Coffee Industry Roadmap and building on the success of the MinPACT project, the **Philippine Coffee Advancement and Farm Enterprise (PhilCAFE)** project is an investment in the coffee sector under USDA's FFPr. PhilCAFE is a 5-year project in 25 coffee-rich provinces in the Philippines to increase the production of conventional and specialty coffee, increase coffee exports, and build the capacity and expand service provision of coffee value chain actors by leveraging private and public capital to put the Philippine Coffee Industry Roadmap into action. Capitalizing on ACDI/VOCA's extensive network and reputation from working in tree crops and other sectors in the

¹⁰ <https://www.acdivoca.org/projects/mindanao-productivity-in-agricultural-commerce-and-trade-minpact-project/>

Philippines for over 25 years, PhilCAFE was awarded to ACDI/VOCA and commenced implementation in September 2018. The activities and results of the PhilCAFE are designed around two integrated Strategic Objectives (SOs).

S01 Increase agricultural productivity	S02 Expand trade of agricultural products
Activities under S01 will be centered on improving productivity through training of farmers, POs, and agribusiness service providers, and the provision of grants.	Activities will be based on identification of market system constraints; and by improving post-harvest management, improving product quality, adding value to smallholder agriculture products, providing grants, and increasing access to markets.

Annex 1 illustrates the logical path of the project's results framework which also uses USDA FFPr indicators. All project activities also integrate ACDI/VOCA's principles and policies on social inclusion, gender equity and environmental stewardship.

PROJECT TARGETS. The goal of PhilCAFE is to (i) directly support 13,700 farmers to triple their coffee production, (ii) boost the national coffee production by over 50%, and (iii) increase by ten-fold the Philippines' coffee export. To achieve this goal, PhilCAFE targets to develop the capacity and expand the service provision of about 350 value chain actors (i.e., financial institutions, colleges and universities, POs, input suppliers, roasters, and retailers). With the synergy created by the project's economic opportunities and social inclusion processes, the project anticipates that at least 54,800 individuals will indirectly benefit from the project.

APPROACH. The project empowers legacy institutions such as the Philippines Coffee Council, SUCs, private universities, and industry actors to support the sustained development of the coffee sector. Its market system approach (illustrated in Annex 2) provides interventions across various coffee market system actors through eight (8) key activities.

ACCOMPLISHMENT AS OF JUNE 2021. By June 2021, the project has reported a total of 9,961 direct project beneficiaries – 9,498 individuals and 463 organizations. Annex 3 provides a tabulated summary of activities done by the project from September 2018 to October 2021.

Impact of COVID-19 on Project Implementation. With the outbreak of COVID-19 in late 2019 and cases of COVID-19 found in Metro Manila by February 2020, the Philippines, Metro Manila in particular, was placed under lockdown (also referred to as community quarantine) starting 12 March 2020. The rest of the cities and municipalities gradually followed as the COVID-19 exposure in their respective areas increased and worsened.

Just building its momentum after a year of implementation, the project's progress was significantly hampered and decelerated. Innovative strategies in project implementation were developed and effected to mitigate the impact of COVID-19 on project implementation. Due to the nature of the project (i.e., working with a network of diverse coffee market system actors) and the impact of COVID-19 pandemic to everyone (from access to basic needs of households to country-wide economy), those innovative strategies could hardly negate the impact of COVID-19. This was visible in the slow progress of the project starting in 2020.

To be able to adapt to the pandemic setting, the project shifted to work from home arrangements. All coffee stakeholders nationwide were engaged and mobilized virtually through online and digital platforms. Training and workshops as well as learning and coaching sessions were conducted online. Pre-recorded lectures were produced for radio and TV broadcast for distance learning to have a wider reach and more inclusive for areas without access to a stable internet connection. The use of social media platforms was also maximized, and training provided on social media skills for marketing and communication. One of the best examples of this is the virtual coffee forum Kape't Kwentuhan that had 12 sessions and reached 31,400 accounts, with 17,000 viewers, 247 reactions, 204 comments, and 86 shares on Facebook.

3 Purpose of the MTE

Consistent with the Monitoring and Evaluation Policy on Food Assistance Program of the USDA, the project undertakes an MTE with the overall aim to assess whether the project is on track in achieving stated objectives, outcome, and impact, and to test the assumptions and logical pathway of the project results framework. The MTE is:

- to review and take stock of the project and the implementing environment
- to assess whether targeted beneficiaries are receiving services and benefiting as expected
- to assess whether the project is meeting its goals and objectives
- to review the project-level results frameworks and assumptions
- to document initial lessons learned
- to discuss modifications or course corrections that may be necessary

Specifically, the MTE shall:

- assess the project's progress relative to expected results and the likelihood of attaining defined outcomes and impacts (See the project PMP), taking COVID-19 effects into account for the 2021 production season
- assess the effectiveness and efficiency of implementation approaches used by the project in service delivery via evaluation and learning questions
- assess the project's impact in mitigating COVID-19 effects for project participants, versus non-project participants
- document impacts the COVID-19 pandemic had on project implementation (for example, delays to trainings or change in format (in-person to virtual), etc.)
- assess how the project is integrating women and youth in its interventions all along the market system and whether both men and women are benefiting equally from project interventions
- provide suggestions and recommendations on areas the project should focus in its remaining year of implementation
- identify measures/mechanisms for sustainability put in place by the project
- generate lessons learned by the project during the first period of implementation
- provide succinct recommendations on areas of improvements based on evaluation findings

The evaluation will be retrospective, predominantly outcome-oriented, and both quantitative and qualitative in nature, and will focus on learning and adaptive management. Emphasis will be placed on knowledge and generation of learning to inform adaptation at the project's midpoint. The MTE is also to provide answers to a number of evaluation and prioritized, targeted learning questions.

4 Methodology

4.1 Introduction

The MTE is based on the reach of the project by June 30, 2021. The list of the project beneficiaries by June 30, 2021¹¹ consists of 9,498 individuals and 463 organization/firms. Table 2 disaggregates the beneficiaries by region.

4.2 Study Methodology

The MTE used and analyzed primary and secondary data to address the study objectives and answer the questions in the Terms of Reference. Secondary data sources include the PhilCAFE Baseline Study, PhilCAFE Semi-Annual Progress Report from April 2019 to October 2021, and various Philippine coffee-related documents made available by the PSA and DA on their respective websites. Primary data done includes sample surveys, KIIs, and focus group discussions (FGDs). The MTE was designed to capture both the participant group and the comparison group. The comparison group used is from the baseline study. Propensity score matching was further utilized zeroing in on a comparison group for the difference-in-difference (DID) analysis. Overall, the MTE used mixed-methods research (triangulation) design. Summary of primary data collection vis-à-vis study population and grouping is tabulated in Table 3.

Table 2: Number of Project Beneficiaries by June 30, 2021, disaggregated by region and type

Region	Individuals	Firms
I	32	7
II	53	9
III	3	1
IV-A	97	13
IV-B	2	1
V	1	0
VI	90	28
VII	20	6
VIII	1	0
IX	6	0
X	2,961	92
XI	2,863	104
XII	1,779	87
XIII	709	33
BARMM	36	4
CAR	735	51
NCR	110	25
Total	9,498	461 ¹¹

Table 3: Summary of Data Collection vis-à-vis Study Population (Participants, Comparison)

Data Collection	Group	Subgroup	Population*
Farmer Survey	Participant		5,614
	Comparison		
MSA Survey	Participant	civil society, government agency, laborer, and private sector	1,942
Firm Survey	Participant	NGOs or Civil Societies, private sector firms including private universities and colleges, producers' organizations, and public sector firms including SUCs.	463 ¹²
	Comparison		
Focus Group Discussion	Participant	adult male farmers, adult female farmers, young male farmers, young female farmers, adult male IP/indigenous community coffee farmer members, and adult female IP/indigenous community coffee farmer members	
Key Informant Interview	Participant	Academe, coffee influencers and private firms, National Government Agencies, Provincial Government Units and Civil Society/Non-Government Organization, and financial sector	

*Project reach as of June 30, 2021

4.3 Sampling and Sample Size

Sample Survey | Participant Group. A multistage/clustering sampling was used to determine the samples for the farmers, MSA representatives, and firm-level sample surveys. The samples were calculated to produce a 95% confidence level, a 5% margin of error, and a 0.50 equal sample proportion. Adjustments to finite population correction using the population of each survey were also applied. For the farmers survey, the sample was further increased by 200%¹³ to compensate for the reduction in precision due to clustering – which is needed for generating the metrics for the PMP indicator values. The MSA representative survey will be the source of data for adoption related indicators and learnings with people in firms, people in the government and people in civil society.

Sample Survey | Comparison Group. The inclusion of the comparison group in the MTE is to examine indication of initial impact the outcomes (technology adoption, increased yield, increased sales) the project identified in its theory of change. The target participants for the comparison group were taken from the baseline survey¹⁴ – these are the coffee farming communities identified in the baseline where no project intervention has been introduced. For the MTE, only control groups in Mindanao were surveyed. Thus, the DID analysis of matched samples using propensity score matching (PSM)

¹¹ Updated value provided on 14 December 2021

¹² Two (2) of the project beneficiaries in the list are residing outside the Philippines, thus, the total in Table 2 is only 461.

¹³ Applied design effect of 2.

¹⁴ Referred also by PhilCAFE as 1st wave

for the outcomes at the farmer level used survey data from Region XI and XII. A total of 224 farmer-participants were selected as the comparison group. For the firms' survey, a comparison group of 10% of the sample size was taken from the areas not covered by PhilCAFE.

Table 4: Population and Sample Size

Survey	Group	Population	Sample				Quasi-Experimental Design Sample
			Sample Size	Clustering			
				Source	Region	Per Cluster	
Farmers	Participant	5,614	720	Using probability proportional to size (PPS).	CAR	144	
					X	144	
					XI	144	80
					XII	144	144
					XIII	144	
	Comparison		224	As per baseline study	XI	80	80
					XII	144	144
MSA	Participant	1,942	321				
Firms	Participant	461	210				
	Comparison		21				

The sample is further stratified as defined by PhilCAFE. Details of the sampling are further discussed in Annex 4.

Key Informant Interview (KII). The key informants for the KII are leaders or heads of civil society groups, government agencies, NGOs, academe, and other coffee industry actors. The participants are selected from the list of project beneficiaries within the study area.

Focus Group Discussion (FGD). Participants of the FGD were selected from project beneficiaries belonging to producers' organizations, IP communities, and youth who are within the study area.

Table 5: Distribution of FGD by Region

Region	Producers Organization	Total Number of Participants
CAR	3	17
10	3	17
11	2	11
12	4	21
13	1	7
BARMM	2	11
Total	15	84

Table 6: Distribution of KII by Type

Region	No. of Informants/Sessions
Civil Society and NGOs	10
NGAs	8
PLGUs	10
Academe	5
Regional Coffee Council	8
Coffee Influencers and Private Sector	9
Total	50

4.4 Data Collection Tools and Techniques

The quantitative data collection was done through structured surveys using KoboCollect¹⁵. KoboCollect allows for more efficient data gathering, although given the uneven access to Internet in remote areas there were instances when conventional pen and paper were used. The qualitative data collection used pen and paper plus a recording device.

4.5 Training and Pre-Test

The Training of Enumerators was a 2-day online training conducted on 24-25 February 2022. After the online training, coaching, and re-tooling of enumerators were done by their respective field supervisors – either one-on-one or by groups. The training was followed by the Pre-Test of the Farmers Surveys and FGD from 26 to 28 February 2022. The pre-test of farmer survey treatment group as well as the FGD was done in Barangays Alegre and Managa, Municipality of Bansalan, Davao del Sur. The farmer survey comparison group, on the other hand, was the baseline comparison group in Barangays Tibolo and Sibulan, Municipality of Santa Cruz, Davao del Sur. Annex 6 is the Pre-Test Report for the Farmers Survey and FGD.

¹⁵ <https://www.kobotoolbox.org/>

The Pre-Test of the MSA and Firms Survey was done from 10 to 16 March 2022 in the CAR, Region 10, Region 11, and Region 12. Annex 6 is the Pre-Test Report for the MSA and Firms Survey. During the updating and finalization of the quantitative questionnaires, an online retooling was again provided to the enumerators.

4.6 Conduct of Survey

The mechanics used for the primary data gathering vary depending on the type of respondent, data collection method, and location. Table 7 briefly presents the mechanics used by data collection method.

There were very rare cases during the latter part of the field work that face-to-face interviews were done through online/telephone. This was considered at the request of those respondents/participants who were willing-to-participate but were either out-of-town during the survey or does not prefer face-to-face interview due to health (pandemic) or personal reasons. Measures were also taken when the list of remaining potential respondents/replacements became insufficient in achieving the target sample size.

The study area was divided into 5 areas, (i) CAR and NCR, (ii) Region X, (iii) Region XI, (iv) Region XII and BARMM, and (v) Region XIII – that is one for each field team. Each team consisted of 3 to 7 enumerators – depending on the number of respondents or informants to be covered in an area. The office staff of ISED extended financial, administrative, logistical, and technical/IT support.

During the actual data gathering, the daily process of interviews was being supervised and/or monitored by the respective Field Supervisors. Weekly progress by area was provided by each Field Supervisor by updating the team's active GoogleSheet where field information is taken for the weekly progress report (on the ongoing data collection). Daily progress of uploaded forms was monitored by the Survey Specialist via the KoboToolbox Dashboard. Access to the KoboToolbox Dashboard was also provided to PhilCAFE's Monitoring and Evaluation (M&E) Director for quick updates on the progress of uploaded forms. Random audits were also implemented for content completeness, range, and consistency – and to immediately call the attention of the concerned Field Supervisor if there were inconsistencies. The recorded KIIs and FGDs were transcribed with the interviewers notes and later translated (to English from local dialect). The audio recordings and processed files (i.e., transcribed, translated) were uploaded in an online shared folder using GoogleDrive for easy access and storage. Recording of the KIIs and FGDs are uploaded and accessible at GoogleDrive¹⁶. Annex 7 has the 15 FGDs and 50 KIIs which were transcribed and translated.

4.7 Data Analysis and Presentation

Quantitative Data: Descriptive Analysis. Descriptive analysis of data was done in Stata V.10 software and Microsoft Excel. Graphical presentation of the data was conducted in Excel.

Quantitative Data: Regression and Probit Analysis. Regression and Probit analysis was used to help understand how the typical value of the dependent variable (or “criterion variable/outcomes”) changes when any one of the independent variables is varied, while the other independent variables are held fixed. Logistic analysis was also used to understand the factors of production and post-production technology adoption.

Table 7: Data Collection Method and Mechanics

Data Collection	Group	Mechanics
Farmer Survey	Treatment, Comparison	Face-to-face interview
MSA Survey	Treatment	For those respondents within the region with farmer survey, as much as possible face-to-face interview. For those respondents outside the region of farmer survey, use blended or combination approach
Firm Survey	Treatment Comparison	Face-to-face interview Through online and/or telephone/mobile phone
Focus Group Discussion	Treatment	Face-to-face interview
Key Informant Interview	Treatment	For those respondents within the region with farmer survey, as much as possible face-to-face interview. For those respondents outside the region of farmer survey, use blended or combination approach

¹⁶ Permission to access needs to be acquired from PhilCAFE.

Quantitative Data: DiD Analysis. The DiD analysis was used to determine the initial impact of the PhilCAFE project at the farm level. PSM¹⁷ was utilized to control for possible causes of differences in trajectory ensuring that parallel assumption holds.

Qualitative Data (KII and FDG) Analysis. Qualitative data analysis from FGDs and KIIs observed the thematic analysis technique using thematic analysis worksheets (MS Word files). The worksheets contain the text segments from the transcriptions, emergent themes, concepts, and analytical notes. The Qualitative Analysis Codebook of the 15 FGDs and 50 KIIs is in Annex 7.

4.8 Limitation of the Study

Self-Reported Data, By Recall. The study also relied extensively on self-reported data – that is answers or responses of respondents, key informants, and FGD participants were accepted at face value. While probing was done and the purpose of our study and requirements were explained, not all have or can provide hard evidence to support their claims (e.g., assets, income, and sales, official documents). Like the treatment areas, self-reported data shared by the comparison households were also accepted at face value.

Gauging and Quantifying Post-Harvest Losses by Perception and Recall. The study also relied on farmer's perception and recall in gauging and quantifying post-harvest losses. Unlike yield and sales where values (quantities) are regularly and frequently used in various transactions (thus respondents are keener on these values), determining and quantifying post-harvest losses, however, are not.

Concurrent Mixed-Method Study Design. The MTE study was designed to be concurrent mixed-methods research. The quantitative and qualitative data were gathered simultaneously. As such, the quantitative and the qualitative data were independent from each other and the quantitative data (from farmers survey, MSA survey, firms survey) were not informing the qualitative data collection (i.e., KII and FGD). Thus, where there are gaps between the findings from the qualitative data (FGD and KII) and quantitative data (surveys), it is difficult to substantiate or, at sometimes, reconcile.

Analysis Limitations. Striving to stay on schedule, the team could not perform all possible types of analysis. Additionally, since this study was conducted during the midterm, all results were not expected to be significant as of yet, but rather nominal indicative of patterns/trends.

4.9 Constraints in the Data Gathering

Scheduling with respondents/participants. FGD and KII activities are taking longer than anticipated. Some firms/target respondents are scheduling their interviews on a later date due to ongoing activities and earlier set appointments. Besides the FGD and KII, the MSA and Firms Survey are experiencing some delay as employees of firms/organizations or government offices/agencies are asking to reschedule the interviews due to earlier appointments/schedules as well.

Locating respondents/equivalent replacements. Locating respondents was challenging and time consuming. This is not to mention travel time to remote places only to learn that the person is not there anymore, or no one knows the person. There were target respondents who relocated, provided inaccurate or incomplete address, or provided work address. There were also target respondents who provided work addresses but already left the firm/organization. Finding equivalent replacements for the farmers survey was challenging (i.e., gender, age, farm size – if defined, products type – if defined). The limited number of potential respondents in the area (e.g., male PhilCAFE beneficiary in CAR) impels the team to find replacements in other neighboring municipalities. Besides the difficulty of locating identified respondents, some respondents were not available for interview or were not interested in participating. Some target respondents even stopped communicating or did not respond to follow-up text messages and/or calls. The difficulty in data gathering is further intensified with the very limited number of potential respondents for replacements (by category). During the latter part of the field work, potential respondents were getting fewer since some were already covered in FGD, KII, Firms, or MSA; and sometimes as replacements for either KII, firms, or MSA.

4.10 Other details

Annex 4 provides the detailed methodology that includes the study team organization and a map showing the location of actual interviews.

¹⁷ Perfect matching would require matching each individual or unit in the treatment group with a person or unit in the comparison group that is identical on all relevant observable characteristics, such as age, education, religion, occupation, wealth, attitudes to risk, and so on. This is not possible; but nor is it necessary. There are other matching methods, however, which are practical and do ensure balance – one of the most common approaches is propensity score matching. In propensity score matching, matching is not on every single character but a single number: the propensity score.

5 Primary/Learning Questions

The MTE for the PhilCAFE project is to review and take stock of the project and the implementing environment; to assess whether targeted beneficiaries are receiving services and benefiting as expected; to assess whether the project is meeting its goals and objectives; to review the project-level results frameworks and assumptions; to document initial lessons learned; and to discuss modifications or course corrections that may be necessary.¹⁸ It is expected to contribute evidence towards answering select FFPr Learning Agenda questions, specifically PhilCAFE custom learning questions as provided in the TOR:

Market Linkages:

- To what extent does increasing the horizontal and vertical market linkages among agricultural actors at various levels, such as [SUC's, PO's], companies, SMEs, smallholders, and intermediaries, promote economic benefits for actors and market expansion overall?
- Do [coffee] cooperatives, associations, federations, or collectives impact producers' abilities to optimize sales to markets at the local, regional, or international level? What particular services provided by cooperatives lead to results?

Risk and Uncertainty:

- What are the most effective methods to educate and train agricultural actors on risk management?
- What interventions [and types of incentives] are effective in reducing risk to encourage the adoption of innovative methods, [good agricultural] practices, technologies, and climate-smart agriculture?

Quality and Standards:

- [How effective is PhilCAFE at facilitating] a context [where] is it profitable for [coffee sector] actors, particularly producers and processors, to adopt higher product quality standards for sales in higher-value markets, including international markets?

Resilience to COVID-19 Question:

- Has PhilCAFE contributed to the resilience of assisted coffee market actors to COVID-19, compared to non-assisted actors? How and to what extent? What more can be done to further mitigate the effects of COVID-19?

Gender & Social Inclusion Questions:

- In what ways have youth been positively impacted? Where are there still challenges to improve youth engagement?
- How have project interventions increased women's participation in the coffee sector? Has increased participation affected women at the household (HH) and/or community level? How?
- How have project interventions engaged indigenous populations/ethnic minority groups? What has contributed to promoting equitable opportunities for these groups within the coffee sector?
- How has the COVID-19 pandemic differentially impacted women, youth, and indigenous populations/ethnic minorities that work in the coffee sector? How have project interventions supported women, youth, and indigenous people/ethnic minorities in response to the COVID-19 pandemic?

The learning questions also included the five¹⁹ OEDC standard evaluation criteria (on relevance, effectiveness, efficiency, impact, and sustainability) – indicated in the TOR as Cross-Cutting Evaluation Questions and emphasis is to be placed on relevance, effectiveness, and efficiency.

¹⁸ Terms of Reference

¹⁹ The 1991 OECD DAC Principles for Evaluation of Development Assistance laid out the five (5) evaluation criteria (relevance, effectiveness, efficiency, impact, and sustainability). This was later improved with the OECD DAC Network on Development Evaluation (EvalNet) defining six evaluation criteria – relevance, coherence, effectiveness, efficiency, impact, and sustainability – and two principles for their use.

Determine the Relevance of the Project

- To what extent are the project approaches relevant in the evolving context of the coffee sector, especially in the new (non-MinPACT) regions?
- To what extent do the project activities correspond to the coffee farmers and other key value chain actors and institutions' needs?
- To what extent do the objectives and activities of the project align with the objectives of key stakeholders (DA, Department of Trade and Industry, Philippine government strategy, USDA)?

Determine the Efficiency of the Project

- To what extent is PhilCAFE efficient in allocating the project resources compared to the so far achieved objectives?

Determine the Effectiveness of the Project

- To what extent have the implemented activities contributed to achieving the project's expected results?
- Which inputs, improved techniques, technologies, and farm management practices proved to result in farmers' increased yields and sales the most? Which ones were the least effective?
- To what extent have the capacity-building activities implemented by the project increased the capacity of the SUCs and the PCC?
- What incentives exist in the labor market to attract women and youth as agricultural actors?
- To what extent do the project's interventions towards increasing horizontal and vertical market linkages among agricultural actors at various levels, such as companies, SMEs, smallholders, and intermediaries, promote economic benefits for actors and market expansion overall?
- To what extent has the project contributed to empowering women?
- What are the most effective methods to educate and train the coffee value chain actors on risk management?

Determine the Impact of the Project

- To what extent had farmers' yields and sales increased compared to baseline? To what extent are these changes attributable to the project's interventions?
- To what extent have the firms supported by PhilCAFE to establish direct-buying relationships increased their sales and outreach?
- What is the support distribution, disaggregated by gender, across value chain actors (including farmers)?
- Are there any potential unintended consequences due to project implementation?

Determine the Sustainability of the Project

- How sustainable are the governance aspects of PhilCAFE, including Philippine Coffee Quality Competition, coffee quality standards, GAP protocols?
- To what extent have the quality and reach of the SUCs extension-related services improved?
- How likely are the private and public sectors to continue to increase their capital investment in the coffee sector?
- What are the threats to the sustainability of beneficial project impacts? How can these threats be mitigated?

6 Results and Discussion

6.1 Profile of Respondents and Participants

6.1.1 Project Beneficiary Sample Validation

Farmers Survey. The farmers survey covers a total of 724 respondents for the treatment group – those benefited from PhilCAFE interventions (i.e., technical assistance, training, funding/financial assistance, and/or goods/resources provided by PhilCAFE) or from PhilCAFE-facilitated assistance (i.e., events supported, trainings). All reported to have benefited from PhilCAFE (see Figure 3).

MSA Survey. The study team interviewed a total of 328 randomly sampled respondents amongst the MSA Project Beneficiaries. Of the 328 respondents, 324 (98.8%) said that they benefited from at least one the PhilCAFE interventions (i.e., technical assistance, training, funding/financial assistance, goods/resources) or participated in any PhilCAFE-facilitated assistance (i.e., events supported, trainings) (see Figure 4).

Firms Survey. The study team interviewed a total of 215 randomly sampled respondents amongst the MSA Firms Project Beneficiaries, 214 (91.1%) of which said that they benefited from at least one of the PhilCAFE interventions (i.e., technical assistance, training, funding/financial assistance, goods/resources) or participated in any PhilCAFE-facilitated assistance (i.e., events supported, trainings) (see Figure 5).

6.1.2 Respondents/Participants Information

A. Farmer Respondents Information

The treatment area covers 5 regions with an almost equal number of respondents by region. About 88% of the respondents are adults, with adult females representing the dominant sex group. The comparison group, on the other hand, is from Regions 11 and 12 with two-thirds of the respondents coming from Region 12 and adult males representing the dominant sex group. The average age of the treatment and comparison respondents are 47 and 48 years old, respectively. Most of the respondents in both treatment (77.9%) and comparison (81.7%) groups are married.

The treatment group represented a total of 31 Philippine ethnic groups where more than half are Cebuano (19.1%), Tagabawa (17.0%) and Igorot (15.1%). The comparison group, on the other hand, represented 20 Philippine ethnic groups where more than half are Manobo/Ubo (35.1%) and Tiduray (19.63%).

The mean total annual income of both treatment and comparison groups are roughly similar. In terms of sources of income, the comparison group has slightly higher average annual income in total from combined on-farm and off-farm sources than the treatment group, with 29.4% of its annual income from coffee farming. The treatment group, on the other hand, has higher non-farm income, with only 13.4% of its annual income from coffee farming.

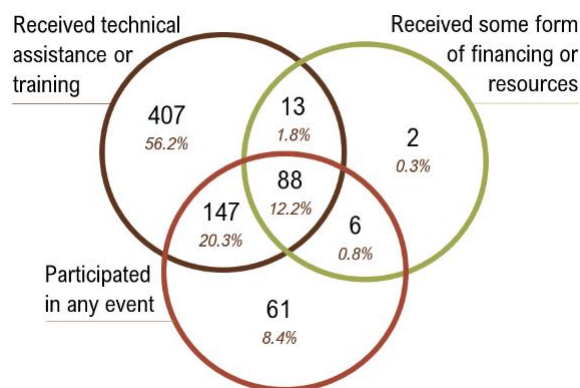


Figure 3: Number and percentage of farmer survey respondents who received (i) technical assistance or training, (ii) some form of financing or resources, and/or (iii) participated in any event that is provided or supported by PhilCAFE.

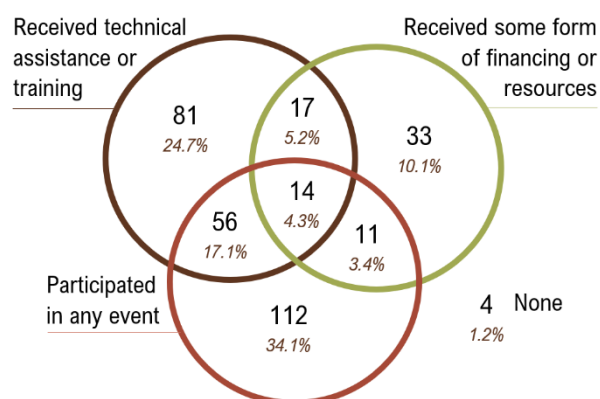


Figure 4: Number and percentage of MSA survey respondents who received (i) technical assistance or training, (ii) some form of financing or resources, and/or (iii) participated in any event that is provided or supported by PhilCAFE. (n=328)

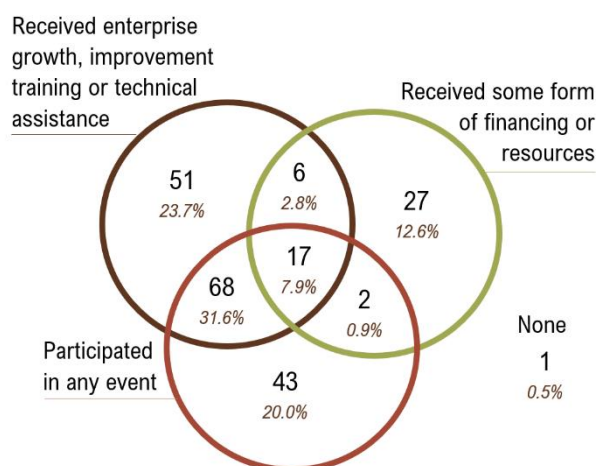
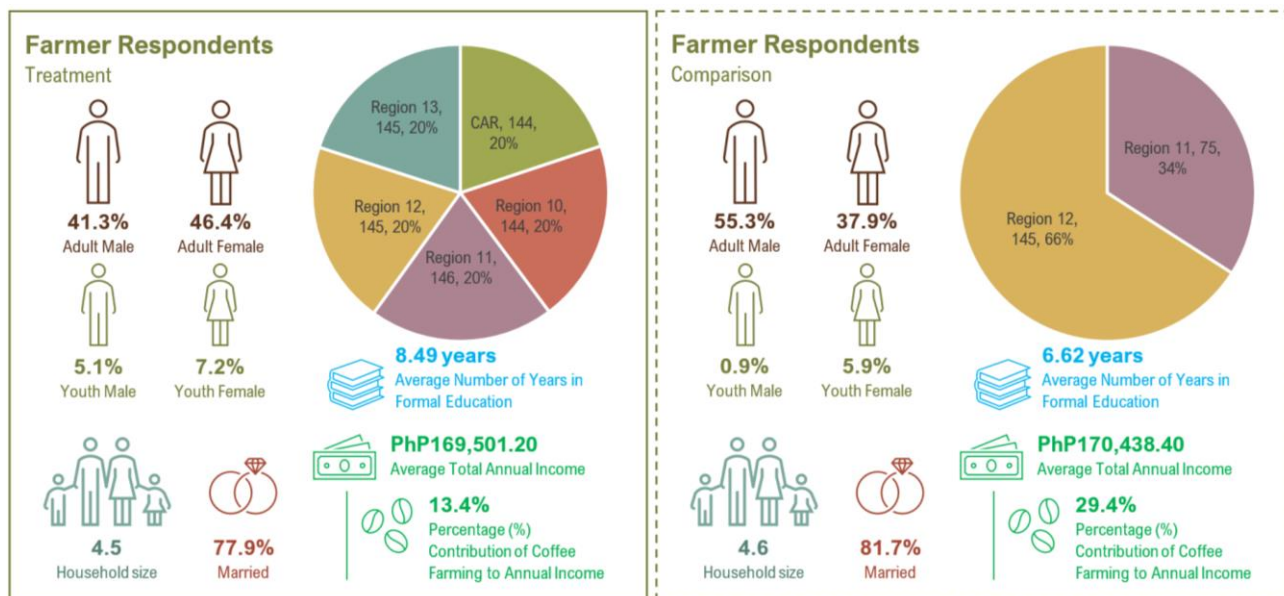


Figure 5: Number and percentage of firm survey respondents who received (i) enterprise growth, improvement training, or technical assistance, (ii) some form of financing or resources, and/or (iii) participated in any event that is provided or supported by PhilCAFE. (n=215)



B. MSA Respondents Information

Almost half (48.5%) of the MSA respondents belong to the Private Sector beneficiary group. In terms of gender, more than half (55.2%) are male respondents. There is no to minimal difference in average age of respondents by gender across beneficiary group except for the private sector. Most of the respondents are Cebuano (36.9%), Higaonon (11%) and Ilonggo (11%).

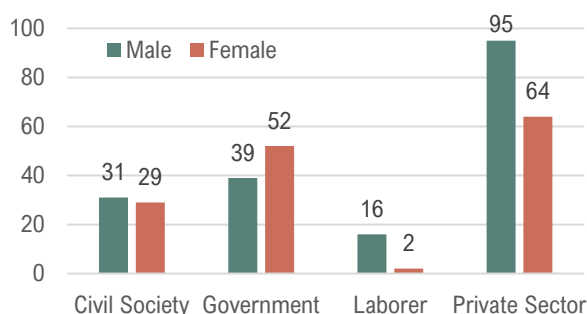


Figure 6: Number of Respondents by Beneficiary Group

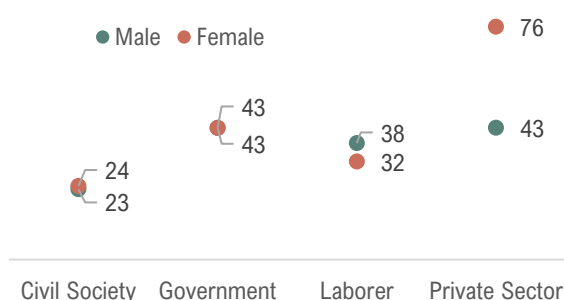


Figure 7: Average Age by Gender

C. Firm Respondents Information

Amongst the treatment group, almost half (46.5%) of the Firm respondents belong to the Producer's Organization beneficiary group and 61.4% are male. Average age (in years) of respondents in treatment and comparison are 45.9 and 50, respectively. Both treatment group and comparison group consist of mostly Cebuano. Producer's Organizations and Private Sector Firms (including Private Universities and Colleges) represents most of the respondents - treatment and comparison group. More than a quarter of the respondents on both treatment and comparison group are into coffee cultivation/production.

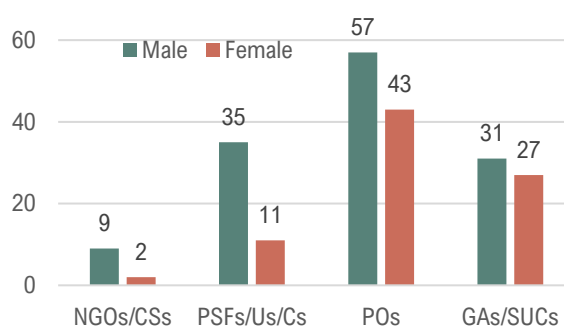


Figure 8: Number of Firms Respondents by Beneficiary Group and Gender, Treatment Group

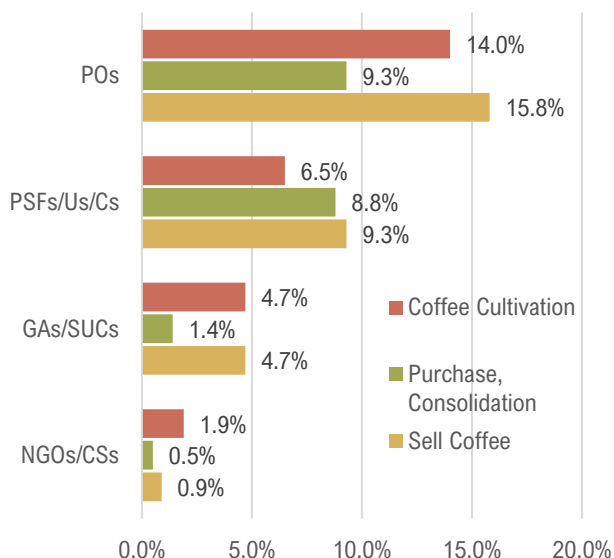


Figure 9: Percentage of Firm Respondents involved in Coffee Cultivation, Purchase/Consolidation, and Sell Coffee, by beneficiary type, Treatment Group

Legend: NGOs/CSs - Non-Government Organization or Civil Societies PSFs/Us/Cs - Private Sector Firms (Include Private Universities and Colleges)
Pos - Producer's Organization GAs/SUCs - Public/Government Agencies (include SUCs)

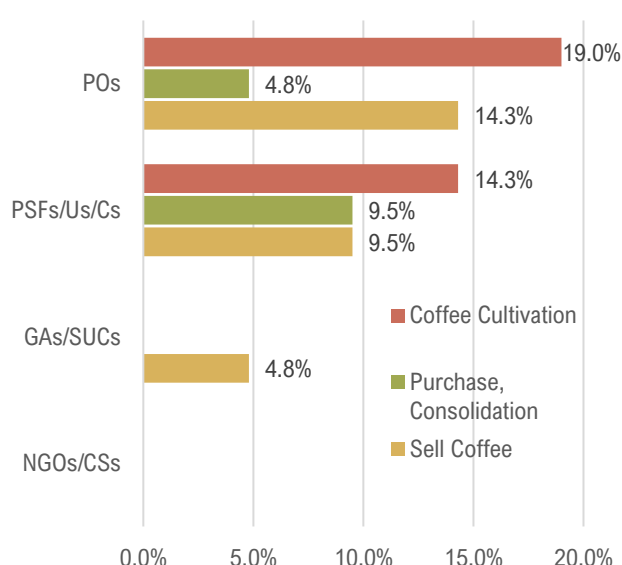


Figure 10: Percentage of Firm Respondents involved in Coffee Cultivation, Purchase/Consolidation, and Sell Coffee, by beneficiary type, Comparison Group

D. Key Informants Information

Key informants for the KII were selected from project beneficiaries representing civil society/NGOs, national government agencies (NGAs), local government (provincial, city/municipal), academe, regional coffee council, financial institutions, and coffee influencers. Gender representation is almost equal.

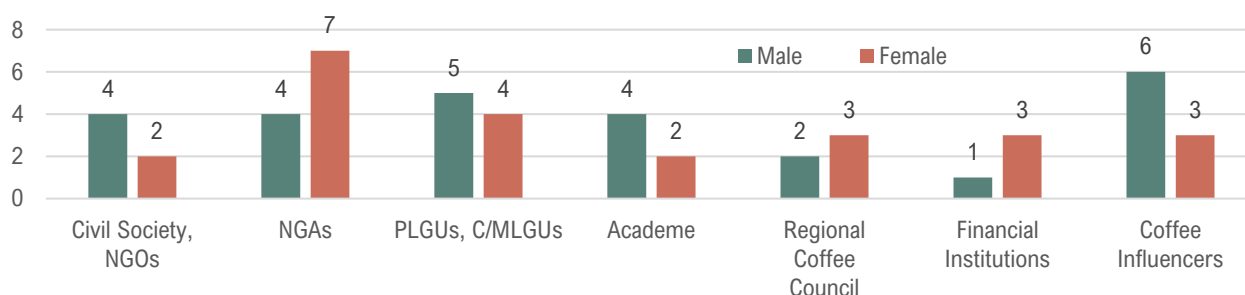


Figure 11: Number of Key Informants by Group and Gender.

E. FGD Participants Information

The 15 groups who participated in the FGDs were selected across the 6 regions and represent groups of adult men, adult women, male youth, female youth, male Indigenous People (IP), and female IPs.

Table 8: Number of Groups and Participants by Region, Gender, and Representation (i.e., adult, youth, IPs)

Region	Number of Producers Organization	Number of Participants						
		Total	Adult		Youth		IP	
			Male	Female	Male	Female	Male	Female
CAR	3	17			6		6	5
10	3	17		12				5
11	2	11	6					5
12	4	21			6	10	5	
13	1	7			7			
BARMM	2	11	6				5	
Total	15	84	12	12	19	10	16	15

6.1.3 Practicing MSAs

During the interview, some respondents were found to be either non-practicing²⁰ MSAs or were not in coffee industry MSAs anymore²¹ – thus, not influencing or contributing to the coffee market system. As such, while these respondents have attended training, seminars, or events of or supported by PhilCAFE, they cannot answer most questions (such as adoption or application of the technologies introduced by PhilCAFE) simply because their current circumstances do not require them to apply or adopt those learnings. The practicing MSAs amongst the survey respondents are: 706 (97.5%) in farmers survey, 249 (76.9%) in MSA survey, and 211 (98.6%) in firms survey.

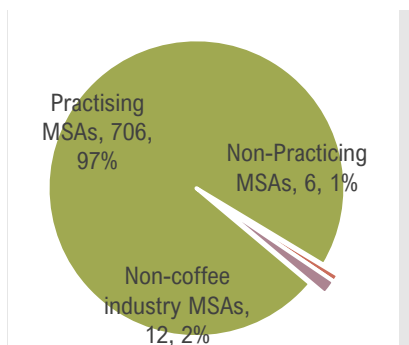


Figure 12: Farmers Survey | Number and percentage of Practising Farmer MSAs, non-practicing MSAs, and non-coffee industry MSAs respondents

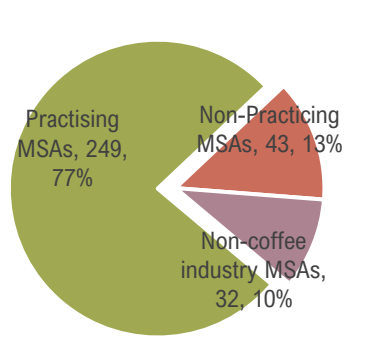


Figure 13: MSA Survey | Number and percentage of Practising MSAs, non-practicing MSAs, and non-coffee industry MSAs respondents

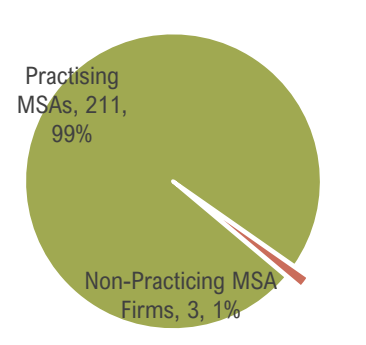
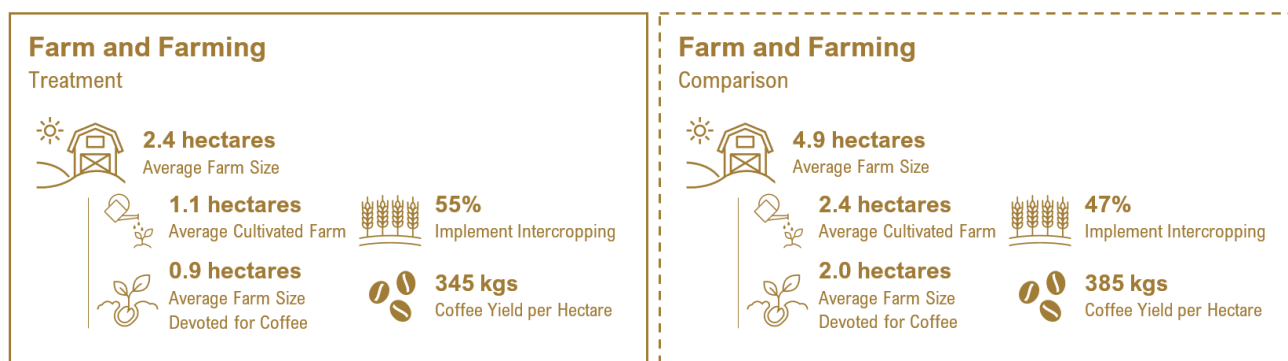


Figure 14: Firms Survey | Number and percentage of Practising Firm MSAs, non-practicing MSAs, and non-coffee industry MSAs respondents

6.1.4 Farm Characteristics



Amongst the treatment group, the average farm size devoted for coffee is 0.9 hectares, in which 0.8 hectares are planted with Robusta and less than 0.1 hectare with Arabica and Excelsa. The predominant coffee variety planted by the farmers is Robusta, with an average of 1,670 hills per hectare, relatively higher than the comparison group with 1,258 hills per hectare. The planting area in square meters per tree between the two groups is similar. The average age of Robusta coffee trees is 13 years for the treatment group, and 16 years for the comparison group. Excelsa and Arabica are newly planted varieties in both groups. Around 20% of the farmers in the treatment group perceived an increase in area planted in coffee since 2019, while 9% reported a decline.

²⁰ Refers to an individual who was part of an MSA firm/organization before but is either (i) not active or not connected with the MSA firm/organization anymore or (ii) the MSA firm/organization he/she is working with is either not operational anymore or does not support the coffee industry anymore.

²¹ Respondents (i) who are already retired (not working anymore) and/or (ii) whose current work is not directly supporting the coffee industry (i.e., cacao producer, does not have any no coffee-related activities, those who happen to be invited and join the training/event with his/her colleague, but his/her work is not directly supporting the coffee industry).

6.2 Technology and Adoption

6.2.1 Farm Technologies

Technology adoption rates among those who participated in trainings and can recall the technologies introduced were higher, ranging from 19% to 48%, than for those not participating in trainings; soil related fertility and conservation were the most popular technologies adopted. From the total sample, 29% adopted pest management practices. Probit regression was used to determine factors of farm technology adoption. Results revealed that farmers' participation in PhilCAFE technology training significantly influenced coffee production technology adoption. This is consistent across technology types. The level of farm activity proxied by the number of farm workers including family labor influenced the adoption of disease, pest management, and soil-related technology and conservation. Farmers interested in undergoing farm certification have a higher probability of adopting farm management, pest management, and soil-related practices. Amongst the MSA respondents with nursery operations, 64.6% said they practiced, adopted, and/or promoted nursery-related technologies October 2020 to June 2021 (Table 146). Of the MSA respondents who were trained on agricultural production technologies, 34.2% adopted coffee production technologies in coffee production or into their training curricula (Table 150).

Farmers with access to PhilCAFE inputs and technologies tend to adopt farm management and diversification. Conversely, the IP women FGD participants from Region 10 revealed that they could not adopt the practices taught to them because they did not receive the expected assistance from PhilCAFE, specifically the seedlings, fertilizers, and sprayers. Even though they received saws and scissors²², without the other farming inputs and tools, it wasn't easy to practice what they learned. A similar response came from the IP male FGD participants from Region 12 and the female FGD participants from Region 10. They were waiting for the seedlings. Some key informants (e.g., Region 10) shared a similar concern about the delivery of seedlings but, to some extent, followed the technologies taught to them by PhilCAFE. The key informant from Region 10, a coffee influencer and one of the coffee mentors, claimed the same. The technologies learned were essential because they were tried and tested, however, complementing farming inputs and tools are equally crucial for adoption.

Amongst the firm respondents who are involved in coffee cultivation, soil related technology and conservation, and pest management are the most adopted farm production technologies, while disease management is the least adopted. Amongst MSAs, training participation is high for farm preparation related technologies such as proper planting distance, digging hole, and application of organic fertilizer. Proper pruning and picking fruit while ripe were also popular in training. The participation of the farmers in these training courses is reflected in their adoption of technologies. An adoption rate of 20% is recorded for proper planting distance, followed by proper pruning, and digging holes with 17% and 15% adoption rates, respectively.

Some FGD participants expressed their positive regard for the assistance they received from PhilCAFE, especially the training activities. For instance, the young male FGD participants from Region 13 shared that they are grateful for the seedlings they received and the coffee farming technologies they learned. They claimed they adopted what they learned, such as seedling selection, land preparation, digging a hole, planting, and maintenance. Similarly, the women FGD participants from Region 12 claimed that they learned the proper way of planting, cutting, rejuvenating, and using

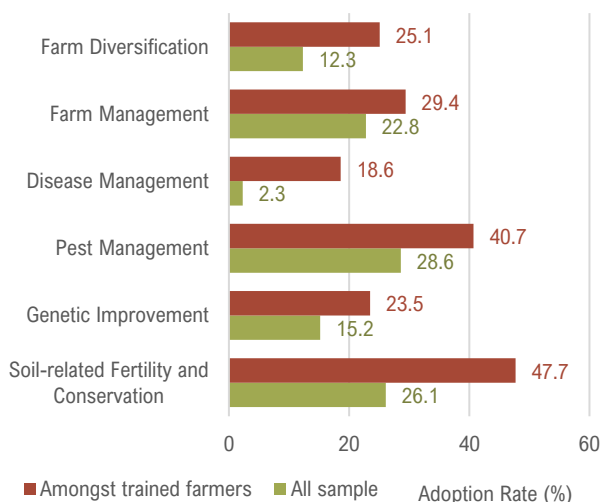


Figure 15: Adoption rate of farm production technologies amongst farmers, by technology, 2021

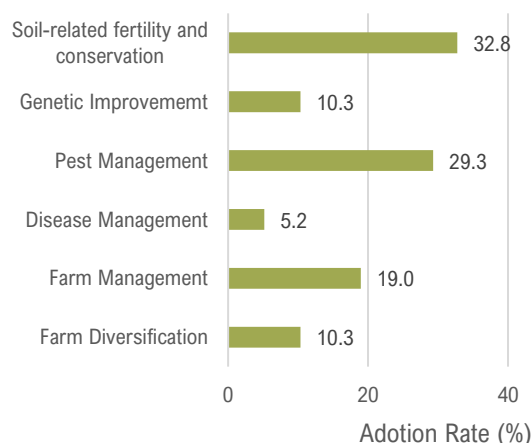


Figure 16: Adoption rate of farm production technologies amongst firms involved in coffee cultivation, by technology, 2021

²² Respondent used the word scissors instead of pruning shears.

fertilizers on coffee plants. This technical know-how was helpful in their coffee farming. A recurring observation from the FGD participants is that the learning and technologies they accessed through PhilCAFE helped them address the challenges they faced in coffee farming before their PhilCAFE engagement.

The women FGD participants from Region 10 shared that they were all trained by PhilCAFE. The fact that those who attended the training activities could plant coffee, they opined, was proof that they adopted the inputs from PhilCAFE. Specifically, besides the training, their nurseries greatly benefited from the Catimor and Arabica seeds provided by PhilCAFE. The male FGD participants from Region 11 cited the training of coffee mentors who eventually trained other coffee farmers to adopt the technology shared with them by PhilCAFE.

The trend and momentum on farm (production, coffee cultivation) technology adoption is already noticeable and growing, however, during the evaluation period, influence of technology adoption on farmers yield and sales are still too early to show²³. Likewise, analysis of the firms shows that technology adoption is not yet correlated with yield of the firms with coffee cultivation and the sales of the coffee produced in the farms (Table 303).

6.2.2 Harvest, Post-Harvest, Processing, and Management Technologies

Those who attended the PhilCAFE training on harvest, post-harvest, processing, climate risk and natural resource management, operational practices and technologies tend to adopt the introduced technologies (Table 294). The level of yield per hectare positively influenced the adoption of harvest and post-harvest technologies. Other determinants of adoption include their satisfaction in terms of achieving their target coffee sales, and their satisfaction with the coffee price. The probability of harvest and post-harvest technology adoption is also higher among farmers with willingness to undergo certification. The number of workers as well as the time dedicated by women in coffee farming and women's membership in producers' organizations

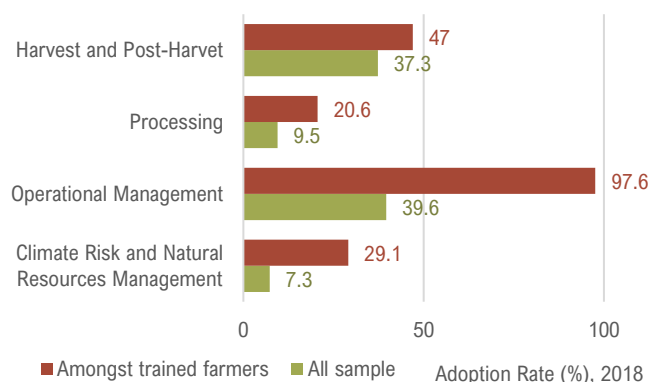


Figure 17: Adoption rate of farm production technologies amongst farmers, by technology, 2018

positively influenced adoption of harvest and post-harvest technologies (Table 294). The result of probit analysis shows negative but insignificant effect of the level of losses to the probability of adopting harvest and post-harvest technologies (Table 294), while correlation analysis between losses and adoption of harvest and post-harvest technologies is negative but also insignificant (Table 296). Regression on yield shows that farmers adopting harvest and post-harvest technologies have significantly higher yield (Table 295). Around 98% of those treatment farmers who attended training on operational management adopted at least one of the operational management technologies introduced. The adoption rate of farm management practices is higher in the treatment areas compared to the comparison areas in terms of record keeping (28.7% treatment vs. 8.2% comparison) and financial planning (4.7% treatment vs. 0.5% comparison). However, in terms of marketing/trading, the comparison areas seem to fare a little better than the treatment areas (1.5% comparison vs. 0.4% treatment).

Adoption of coffee post-harvest technologies and other processing, and value addition technologies amongst those trained MSA respondents is quite low at 3.9% (Table 155). Adoption of climate risk reduction and natural resources management amongst the trained MSA respondents, on the other hand, is at 19.3% (Table 158).

Amongst the firm respondents, the treatment group has adopted many (12) practices on climate risk and natural resource management, however the rate of adoption is low (ranging from 1.7% to 19%). In contrast to the comparison group's two (2) adopted climate risk and natural resource management practices (i.e., biodiversity conservation, restoration of organic soils and degraded lands), adoption rate amongst the comparison group is higher (Table 212).

The adoption rate of processing technologies among farmers who claimed they attended training on processing is at 21%, as compared to the average adoption rate of the total sample of 9.5% (Figure 17). Coffee farmers who experienced coffee cupping, with higher income, with enough capitalization, and with access to external capacity building have higher probability of adopting processing technologies. Adoption of coffee processing is also influenced by women participation in training, and women's membership in producers' organizations (Table 294). Adoption of coffee processing technology taught by PhilCAFE was confirmed by the claims of some key informants. Some also expressed that they were willing to

²³ During the conduct of MTE, the age of PhilCAFE supported coffee trees are just around 18 months or less. At this stage, flowering is still at the onset and fruiting is still expected on the 27th month. Hence, technologies could have been adopted and applied but the effect and/or results of such to yield and sales are yet to be seen.

undergo gender-related training. However, the pandemic disrupted the plans for this training. Nonetheless, they highlighted that the other training activities facilitated by PhilCAFE were open to men and women participants (FGD, IP Males, CAR Region). In some associations like in BARRM, the male FGD participants said they attended online training instead.

The IP female FGD participants from CAR Region shared that the training sessions of PhilCAFE were gender inclusive. However, some could not attend these activities because their husbands disapproved of their participation. Interestingly, the majority of the officers of their association were women. On the other hand, the young male FGD participants from Region 12 said that the training participants in their areas were primarily women. However, these training sessions were gender inclusive. Women were said to be easier to approach and encouraged to attend the training activities. However, it was good that men and women equally benefited from the training provided by PhilCAFE (FGD Women, Region 10).

6.2.3 Change in Technology Adoption

A comparison of the adoption rate of common technologies solicited in the baseline and the midterm surveys from regions 11 and 12, and the DiD estimates are presented in Table 56. There was a notable decline in the rate of adoption of several farm introduced technologies from 2019 to 2021.

For production technologies, the adoption of pick ripe is higher in the comparison area, while the same level of adoption is observed between the treatment and comparison for stumping/rejuvenation technology during the baseline (2019). Adoption of these technologies declined in the treatment and comparison areas during the midterm survey. However, the DiD estimates show that the decline in technology adoption is deeper in the comparison areas relative to the treatment areas (Table 56).

In terms of post-harvest and processing technologies, the generated differences between the two periods show a positive effect of the treatment group on the adoption of technologies, except for drying, hulling, polishing, pulping, sorting, and storing. It is worth noting that there are already some farmers in the treatment areas who adopted floatation, and processing technologies during the midterm survey, as well as cupping, grinding, measuring sugar content, packaging, roasting, and size grading. These technologies were not practiced in the comparison areas. The adoption of farm management technologies increased in the treatment relative to the comparison areas, in which record-keeping, financial planning, and marketing/trading are the most popular.

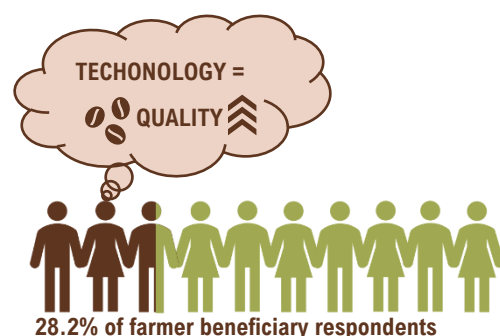
The preference of some farmers for not-adopting-a-technology is also validated in the FGDs. An example is the “pick ripe”: despite being amongst the top 3 most recalled topics in Production Technologies Training (Table 47) and regarded as ‘very effective’ in terms of increasing coffee yield and increasing coffee quality (Table 51), several FGD participants mentioned that they are not fully adopting “pick ripe”. The common reason given by those FGD participants is that it is too tiresome to go back just to pick the remaining few ones. A women’s FGD group also mentioned that men are impatient: during harvest, men indiscriminately harvest coffee cherries – including the unripe ones. A similar but more elaborative reply was given by a member of a Women’s Organization in Region 12, as quoted below:

“What we can’t apply is the harvesting where we should do it one by one. Our usual practice in harvesting is all-in, not picking the red ones, one by one. I think it is so tiresome – like if I have 100 coffee trees and if I must come to the coffee farm every day, I don’t know if I can finish it up to the last tree.”

-Women’s Organization in Region 12

6.2.4 Perceived Influence of Technology on Coffee Quality and Price

The perception that the grade/score of coffee influences the sale price is higher among firms than among farmers. Most respondents from the firm treatment group (84.2%) and firm comparison group (100%) perceive that the grade/score of coffee affects the sales price and other aspects of sales (Table 255). However, in the farmers’ survey, only 28.2% of the treatment group perceive that post-harvest technologies, processing methods and value-addition technologies have had a positive influence on the coffee quality. The percentage is higher than the comparison group at 11% (Table 61). Notably, perception among the farmers’ survey treatment group varies significantly among regions (i.e., Region 12 at 51.7%, Region 11 at 7.5%). Among the farmers in the treatment



group who acknowledge an increase in coffee quality (with a mean perceived increase in quality of 33.3% – with CAR at 45.6% and Region 10 at 14.5%) due to the adoption of technologies and practices, only 28.6% reported an increase in price (Table 64). The remaining 69% stated that the price did not change.

6.3 Production

6.3.1 Production Cost

The average change in the cost of coffee production per hectare per year since 2019 varied from region to region. Based on farmers survey, 19.4% of the treatment respondents experienced an increase in cost of production as compared to 29.2% of the respondents from the comparison group (Table 80). The average annual cost of coffee production per hectare for treatment and comparison group is PhP6,737 (Table 78) and PhP6,914 (Table 79), respectively.

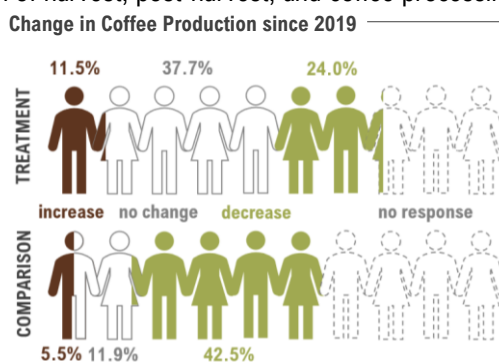
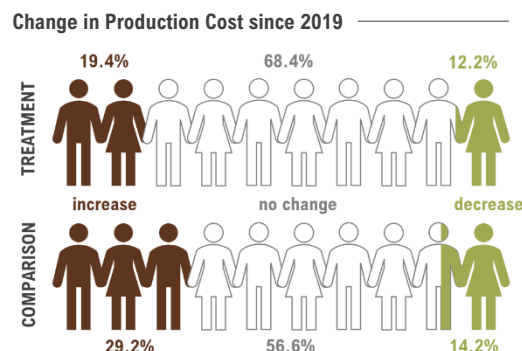
According to the firms' survey, the overall average net annual production cost for treatment group is PhP65,487.30. This includes planting materials, labor, fertilizers, and pesticides. The overall average gross annual production cost (which includes other costs such as equipment, transport, loans, taxes, and rentals) is PhP71,390.80.

6.3.2 Yield

The average total volume of fresh cherries produced per coffee tree is higher amongst the farmers treatment group (1.5 kgs per tree, Table 41) as compared to the farmers comparison group (0.90 kgs per tree, Table 42). Amongst the firms with coffee farms, on the other hand, the average yield of fresh cherries per tree is higher at 1.7 kgs.

In terms of yield per hectare, a direct comparison between the mean values of the farmers treatment group and comparison (see farm characteristics above) shows that the comparison group has a higher yield, probably because of the wider average farm area devoted for coffee (Table 35) and higher average number of coffee hills (Table 36) of the comparison group and some coffee trees of the treatment group are yet to bear fruit. A closer look at yield data from the DiD Analysis (which compared matching samples between the treatment group and the comparison group using Propensity score matching) revealed that, the yield per hectare (in terms of green coffee bean)²⁴ of the treatment group (396.48 Kgs/Ha, converted GCB) is higher than the comparison group (323.08 Kgs/Ha, converted GCB). This difference is not statistically significant at the 5% level. Regression analysis is used to determine significant determinants of coffee yield (Table 295). Results shows that men coffee farmers have significantly higher coffee yield than women farmers. The level of coffee yield is significantly and positively influenced by the adoption of harvest, post-harvest, and coffee processing technologies. Adoption of these technologies are influenced by the PhilCAFE trainings (Figure 17). Adoption of technologies on farm diversification, and climate risk and natural resources management, however, revealed lower yield amongst respondents. Enough capitalization in coffee production and the interest of farmers to undergo farm certification, on the other hand, positively influenced coffee yield.

A look at the DID results on production cost (annual cost per hectare) against yield per hectare revealed that the production cost of the treatment group decreased more while its yield performed slightly better than the comparison group. While both DID results are yet not statistically significant, the positive coefficient of both indicators suggest an emerging positive trend not just in production cost and yield but on the efficacy of treatment farmers in optimizing resources (production cost). Given the diverse interventions of PhilCAFE, the farmers' associations also have different claims on how their adopted technologies influenced their yield. The IP male FGD participants from BARMM expressed that the technology from PhilCAFE resulted in improved production, higher selling price, and the capacity of the association's members to sell finished products. For the young males FGD from region 12, the use of fertilizers that they adopted from PhilCAFE boosted their sales because the coffee trees were healthier. There



²⁴ Converted using the following parameters: 1 kg dried cherries = 0.5 GCB; 6kgs fresh cherries = 1 GCB; 1 kg parchment = 0.8 kg GCB; 1 kg roasted coffee = 1.19 GCB: source from ICO

was an apparent difference in the quality of coffee when applying the correct pruning and drying process, which are adopted technologies from PhilCAFE (women FGD, Region 10).

With the other FGD groups (e.g., IP males CAR Region, young males BARMM) with less than two years engagement with PhilCAFE, however, they cannot yet gauge the impact on sales or yield even though they claimed they adopted PhilCAFE's technology. It was common for most FGD participants to enumerate and make claims about the technology they adopted. Still, they could not specify if these impacted sales or yield (young females, Region 10). Almost all FGD participants recommended the continuation of PhilCAFE's training activities. Also, the need for finance is a recurring thought among the participants.

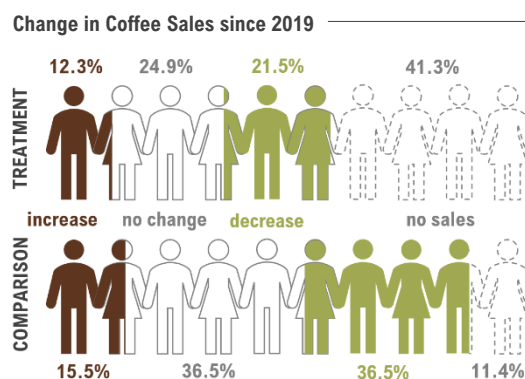
6.3.3 Post-Harvest Losses

Amongst the respondents, 41.7% from the treatment group and 60.3% from the comparison group said they experienced post-harvest losses. Average perceived post-harvest loss of the treatment group against the comparison group is estimated to be slightly higher at 21.8% against 18.4% (Table 81). Range and distribution of estimated post-harvest losses by respondents across regions varies (Figure 1). Both treatment and comparison group identified, disease attack, exposure to rain, and strip harvesting of coffee as the top three main causes of losses in coffee farming (Table 82).

The level of post-harvest losses shows negative and significant correlation to the adoption of farm management practices, pest management, soil related fertility and conservation, farm diversification, and operational management practices (Table 296). It is also negatively correlated with the area planted with arabica, but positively correlated with the area planted with Robusta.

6.4 Sales, Pricing, and End-Market

The level of coffee sales by the farmers is correlated with the yield mainly from dried and GCB (Table 297). The adoption of technologies including farm management, genetic improvement, pest management, harvest and post-harvest technologies, processing and operational management practices positively correlates with the level of coffee sales. The number of workers both family labor and hired labor, as well as the time spent by women and men in farming correlates with the level of coffee sales. Furthermore, the long-term outlook of the farmers proxied by their interest to undergo certification and with succession plan in mind also correlates with sales.



Cooperatives/associations and local traders are the top buyers of all types of coffee produce of the treatment group while the comparison group's top buyers are local traders (Table 45). The reason for market selection by majority of the treatment group and comparison group is the same – (i) closest market, (ii) strengthened end-market, and (iii) not due to PhilCAFE assistance or other external assistance (Table 84). In terms of volume sold (in Kgs) per type of coffee produce, by market outlet, respondents from the treatment sites have more market outlet options compared to the respondents from the comparison sites. A possible explanation for the expanded market options are the market outlet selection and market development due to the project's assistance. PhilCAFE assistance has some influence on product marketing especially with the sales of fresh cherries (5.4% of the sales attributed to PhilCAFE by respondents) and on green bean coffee (7.7% of the sales attributed to PhilCAFE by respondents).

Perceived change in coffee sales since 2019 vary from region to region. Against the comparison group, however, the perceived increase in sales is lower in treatment group (Table 299). It is interesting to note that 41.3% of the respondents from the treatment sites said that they had no sale yet. The overall increase in the treatment site is at 18% while the comparison sites posted 15.2% increase (Table 300). The decrease in sales is inversely parallel to the increase with a 38.7% decrease from the treatment group and a 43.7% decrease from the comparison group. This situation may have some relation to the perceived changes in the type of market actions. The respondents from the treatment site showed 1.4% change in market actors while the comparison registered only 0.5% change. On the other hand, the average perceived change in the number of market actors since 2019 in the treatment sites increased by 1.5% while the comparison sites posted 1.8% change.

The majority of the treatment (71.95) and comparison (71.87%) respondents said they did not achieve their target coffee sales. The top common causes between the treatment and comparison groups for not attaining volume and sales are climate/weather issues, post-harvest losses, and poor/limited markets (limited buyers/low market demand) (Table 96).

Besides these reasons, some of the respondents from the treatment group have no harvest yet to sell due to the following reasons a) they just planted coffee, b) they are in the process of rehabilitating their farms and 3) they just adopted plant rejuvenation technologies promoted by PhilCAFE. It is interesting to note, however, that majority (87.8%) of the treatment group firms (Firms Survey) achieved their target coffee sales as against the comparison group firms (12.1%, Table 243).

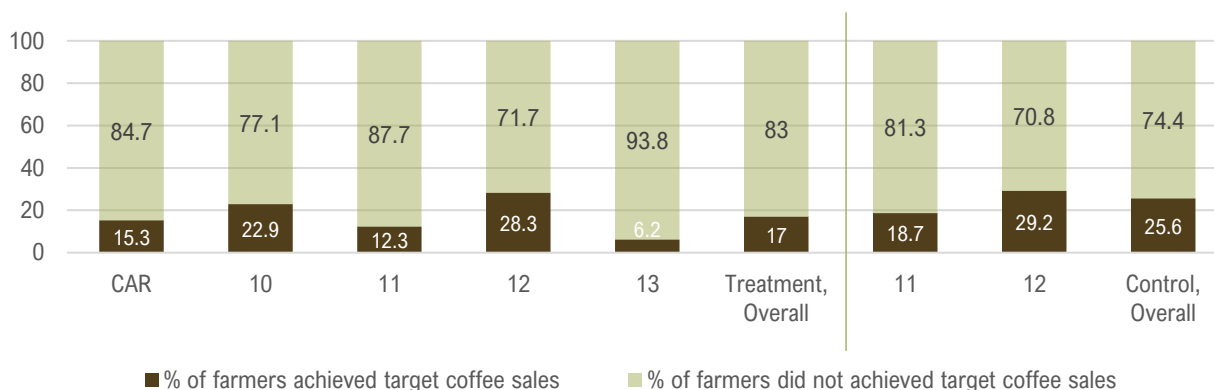


Figure 18: Percentage of farmers who achieved target sales of their coffee by Region, Treatment and Comparison

Sales pricing satisfaction is slightly higher in the comparison group (62.5%) compared to the treatment group (59.7%) – with the average price received between October 2020 to September 2021 (Table 97). While some respondents have more satisfying remarks regarding price received (i.e., good/best/high price, fair enough, profitable), there are those respondents who vented that “they don’t have other choice or options on whom to sell”, “[there is] not much market”, and “[they have] no comparison over the price”. Amongst the strategies used to ensure a good price for their coffee are adoption of post-harvest techniques and proper farm management (such as picking ripe and sorting the beans well to produce and maintain good quality beans).

Changes in price due to changes in coffee quality (due to adoption of technologies and practices) per region seem to have some correlation on the rate of technology adoption. Farmer Survey results showed that 17.4% of the respondents (Table 298) in the treatment areas experienced price changes as compared to only 7.3% of the respondents from the comparison sites who experienced changes in coffee price. Of all the regions surveyed, Region 13 posted the highest rate of prices changes at 13.5% while region 10 posted the lowest at 0.6% (Table 64).

There is quite a difference in the end-market satisfaction rate between the treatment and the comparison sites. The percentage of farmers satisfied with their end-market for coffee is 45.3% in the treatment group against 68.9% amongst the comparison group (Table 90). The highest satisfaction rate from the treatment site is in Region 12 at 73.8% while lowest is region 13 at 22.1%.

Among the firms and organization that sell coffee products, 24.2% from the treatment group do domestic marketing and only 6.1% exports coffee products (Table 239). The roasted coffee accounts the highest coffee product sold by both treatment group and comparison group firms but with the treatment group having significantly higher average volume sold of 2,873.1 kilos (comparison group at 1,562.5 kilos, Table 240). Average selling price of roasted coffee, however, is higher from the comparison group at PhP 800 per kilo (treatment group at PhP 340 per kilo, Table 241).

6.5 Market Systems and Supports

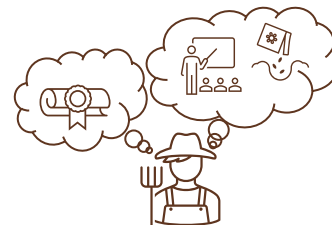
6.5.1 Access to Facilities and Inputs

Coffee farmers from the treatment sites have limited access to warehouses/storage facilities while the comparison site respondents have none (Table 73). Farmers who did purchase/access additional coffee equipment/facility increased by 1.9% in the treatment site while the comparison site did not show any increase (Table 74). Amongst the firm respondents, however, access to warehouse/storage space is slightly higher amongst the comparison group (4.8%) against the treatment group (4.2%).

The percentage of farmers with difficulty accessing specific coffee inputs or technology in the past production year (Oct 2020 to Sep 2021) increased by 16% while the comparison sites increased by 17.8% (Table 76). The inputs from PhilCAFE may have some effect on the rate of difficulty in accessing technology in the treatment sites. The percentage of farmers with access to inputs or technology for coffee farm due to PhilCAFE or external assistance (comparison) in the past production year (Oct 2020 to Sep 2021) increased 18.5% in the treatment sites as compared to that of the comparison site with only 0.9% increase (Table 77).

6.5.2 Coffee Farm Certification

Only four (4) farmer treatment group respondents and nine (9) firm treatment group respondents have their coffee farm certified. Majority (70.7%, Table 98) of the treatment group farmers want to certify their coffee farm (comparison group, 85.8%). The common reasons why the treatment group respondents did not yet certify their farms are: (i) they don't know about it or don't have any idea about it, (ii) they are new to coffee farming and either they do not have coffee plant yet or their plant is still small, and (iii) they perceive a difficulty in requirements (including perception of it being expensive) and they don't have time for it. The Probit model used to examine factors of technology adoption (Table 57) revealed a higher probability of technology adoption amongst farmers with intention to apply for farm certification.



6.5.3 Farm Labor and Employment

Farmers from the comparison group employs more family members (85.8%) and outside labor (37%) as compared to the treatment group (family members at 70.7%, outside labor at 24.7%, Table 99). Both treatment and comparison site respondents engage family members across different demographics at more or less the same rate (Table 100 and Table 102), however, the comparison group have more full-time family worker (70.4%) compared to the treatment group (51.5%, Table 101). In terms of hiring part-time family workers, however, the treatment group is higher (48.5%) than the comparison group (29.6%). Family worker's average days worked per month is higher in the comparison group (16.1 days) as compared to the treatment group with only 13.5 days. Moreover, more female family workers seem to be getting paid in the comparison group (2.7%) as compared to the treatment group (0.6%). Male family workers who are getting paid, on the other hand, are almost the same in the treatment and comparison groups, at 1.3% and 1.1%, respectively.

Part-time hired workers are more popular on both treatment and comparison groups (Table 104 treatment: adult male 87.7%, adult female 96%; comparison: adult male 92.9%, adult female 91.3%), including youth (Table 105); and almost all (91.3% to 100%) with pay.

Amongst the firm respondents, the Non-Government Organization and Civil Societies Firms from the treatment group have more on-farm workers while in the comparison group the Producer's Organization have more on-farm workers (Table 221). More adult males are working for NGO or Civil Societies as full-time with 20 days (average) per month. Youth males are also found working for NGO and Civil Societies with 12.1% full time and working 21 days (average) per month (Table 223)

6.5.4 Buying Agreements

Only 2 out of 724 farmers (0.72%) declared having formal agreement/contract with buyers with 25% of the gross sales covered by the formal agreements among farmers, while 6.5% among firms have formal buying agreement. Based on the FGDs, most participants said they sell directly to prospective buyers. There were also no significant answers about the impact of their buying relationships on the prices of their products. For instance, the IP female participants from Region 13 lamented the low price of their coffee. Although some participants identified their buyers, they did not specify whether they had formal buying agreements (e.g., Region 12, Young Females).

6.5.5 Marketing and Access of Market Information

There is very little difference between the percentage of farmers in the treatment group (22.4%) who actively market their coffee products and that of the comparison group (16.1%) (Table 107). Treatment farmers are more active in accessing agricultural market price information, around 33% accessed information on a weekly, monthly, and quarterly basis, and 66.8% accessed in an annual basis, while 92.2% of the comparison farmers accessed information in an annual basis. (Table 108). Based on the statements of the participants during the stakeholders' workshops, most of the coffee farmers from the comparison group have been producing coffee longer than those from the treatment group. They already have established market information systems through the coffee councils and LGUs in their areas (not supporting).

In terms of farmers who are optimistic about coffee farming in the next 3-5 years, farmers from both the comparison and treatment sites show high confidence level with the comparison site at 80.8% and the treatment sites at 74.4% (Table 109). The degree of pessimism on both the comparison and the treatment sites seems to be almost even at 2.3% for the comparison site and 2.6% for the treatment sites.

When asked to elaborate about their optimism, the replies of farmer respondents are captured as follows:

"Coffee is a booming industry". "There is future in coffee" – being "an essential need" and the "demand is increasing". "We see people buying coffee". With the 'training', exposure, and guidance provided to them, the respondents are

confident that about their coffee farm, their efforts, and their investments will not go to waste. By ‘*continuously adopting*’ and ‘*applying all*’ those ‘*trainings and techniques*’ (i.e., coffee production, processing, sales, management, risk reduction), ‘*proper maintenance*’ and management can be done, “*good harvest*” can be expected, “*quality coffee*” products are guaranteed, and “*better price*” can be secured. The “*demand for quality coffee*” and ‘*new variety*’ is already growing. “*Prices will go up*”. With the ‘*growing demand*’ and an expected “*increase in production*” (i.e., several respondents are “*expecting to start harvesting by 2024*”), there will be a “*sustainable market*” and ‘*income*’, and “*future in coffee*”.

“*We will produce and make profit*”. The “*future of my daughter and son are secured because of coffee farming*” – “*thanks to PhilCAFE*”.

From the firms’ survey, considering their respective 2021 earnings, 75.3% of the firm representatives/respondents (treatment group) said they are optimistic about coffee farming in the next 3-5 years.

6.5.6 Access to Credit and Financing

There is a positive and significant correlation between access to and availability of credit and factors like years of formal education, the adoption of introduced technologies, production cost, number of workers in the farm, and the number of hours spent by women in coffee farming (Table 301).

Access to external support for coffee production capital is low amongst the respondents – with only 8.6% amongst treatment group and 3.7% amongst comparison group accessing the services (Table 110). This is amidst the relatively low percentage of respondents who perceived they have enough production capital (treatment group 33.0%, comparison group 17.4%, Table 111) and a high percentage of respondents signifying they need to borrow money for future needs (treatment group 50.7%, comparison group 63.9%, Table 116). Besides the put off to farmers on accessing finance due to their predicament (i.e., inability to meet the requirements, no collateral, low income and profit, and no one wants to lend to them and high interest rate), the percentage of respondents with experience in getting and having a loan/credit is low (12.0% amongst treatment group and 3.2% amongst comparison group, Table 113). Availability of credit facility seems to be higher within treatment area since the perceived difficulty in accessing credit is lower amongst the treatment group (14.6%) as against the comparison (31.5%) (Table 114). The common responses on the reasons why they had difficulty in accessing credit are, (i) lots of requirements, (ii) not enough income, and (iii) declined application.

According to the key informant from 1st Valley bank, there was only one farmer who applied for financing – and the bank has no Memorandum of Understanding (MOU) with ACDI/VOCA. Similarly, the key informants from Land Bank Region 11 and Bureau of Plant Industry (BPI) NCR shared that they have not financed any coffee-related projects. In contrast, Rizal Microbank 11 has had an MOU with PhilCAFE since 2017. The key informant added that they had assisted seven POs in Davao del Sur, Davao del Norte, South Cotabato, and Bukidnon. Other financial institutions, such as Oro Integrated Cooperative, explained that they had limited financial packages because they still needed to learn more about coffee farming.

Project intervention towards access to financial services from the farmers’ point of view seems to be lacking. When asked about availed services or assistance from PhilCAFE, usually the FGD participants cited the training (e.g., organizational planning, educational tours, nursery, harvest, and post-harvest practices) and other inputs such as seedlings, fertilizers, and garden tools). They did not provide specific answers related to financing and marketing (e.g., FGD Adult Females, Region 10, FGD Young Males, Region 13), except for some answers about PhilCAFE linking them to potential buyers (FGD, Adult Women, Region 10).

Almost all the respondents are willing to pay interest, with the comparison group having higher percentage (treatment 91%, comparison 97.1) (Table 118). The average maximum interest rate that the group is willing to pay is higher amongst the comparison group at 2.3% (treatment at 1.8%).

6.5.7 Access to Agricultural Extension Services

The treatment group has significantly higher access to agricultural extension services in contrast to the comparison group. Agricultural extension services include direct interaction with extension staff from different organizations. In the treatment group, both adult male and female had the most access to extension services with 54.1% and 39.1%, respectively (Table 128).

6.5.8 Access to Technology and Trainings

The treatment group has significantly higher access to external capacity building activities (27.9%) than the comparison group (7.8%) (Table 120). Majority of these external capacity building activities (i.e., training, exposure trips, industry-wide gatherings) are from LGU/national government (27.5%), fellow coffee farmers (25.2%) and NGO (23.1%) (Table 121). It is

interesting to note that while only 9.5% indicated SUC extension staff as external source capacity-building provider, the relevance and effectiveness of capacity building activities by SUC extension staff is acknowledged by all respondents to be significantly high (very relevant: 21.4%, extremely: 78.6%; very effective: 21.4%, extremely relevant: 78.6%) (Table 122). The FGD responses corroborated these findings. Other than PhilCAFE, they attended capacity-building activities facilitated by the Water District (Region 12, IP Males), Nestle (Region 11, Adult Males), NGOs (Region 12, Young Males), and DTI (BARMM, Young Males). In terms of mode of capacity building activities, almost all the respondents from the treatment group (88.7%) and comparison group (96.8%) preferred face-to-face meetings/trainings (Table 65).

A higher percentage of respondents in the treatment group (17.4%) have echoed and shared their learnings/technology practices to other farmers (comparison group at 11.0%, Table 67). This seems to have attributed to a higher percentage of respondents in the treatment group (11.3%) who knows newly engaged coffee farmer due to shared information and coffee farming practices (comparison group at 2.3%, Table 72).

Both treatment and comparison groups had adult males with the most percentage of attendance to trainings with 55.8% and 48.4%, respectively (adult females at 43.6% and 31.5%, respectively). Generally, the FGD participants described coffee-related training activities to be gender inclusive. The IP Male FGD participants from SACGPO even emphasized that both men and women equally gained knowledge from the training activities. Nonetheless, some female FGD participants revealed that even though the training activities were gender inclusive, women's attendance was relative to their husbands' approval of their participation (e.g., CAR Region IP Females, Region 10 Females).

6.6 Income

The level of farmers income is positively correlated with farm size, sales from coffee, as well as adoption of technologies and cost of production (Table 302). Coffee cupping and access to credit positively and significantly correlates with income. It also shows that income is correlated with household size and the number of years of formal education of the farmers.

6.7 Other Key Findings

6.7.1 Beneficiary Participation and Attitude towards the Project

The PhilCAFE's intervention in the coffee industry in the Philippines brought about two types of beneficiary participation: (i) participation in project-related interventions (i.e., trainings, events, being recipients of grants/resources), and (ii) participation (or improved participation) as market system actors to PhilCAFE's intervention to the coffee industry – which includes individuals that benefitted from these market system actors' improved capacity and participation in the market system.

In terms of participation in PhilCAFE interventions (indicated by the attendance during the training or events, or by being recipients of grants or resources), the approach of the project has yielded high participation. Besides the expected coffee industry MSAs to be direct beneficiaries of the project, a few respondents/ participants of the study were found to be individuals who are not into coffee business (i.e., not into production, processing, roasting, brewing, marketing, etc.) or, in technical terms, are not coffee industry MSAs. The number of indirect project beneficiaries by mid-term is estimated at 1,532,965 (target by midterm is 17,800). The project has rolled a network of interventions and supports various coffee-related interventions that reached a wide base of project beneficiaries to the point that PhilCAFE seems to be spread too thinly. There are project beneficiaries who commented that PhilCAFE just provided training then left – have not yet returned with the “promised” assistance/support. While difficulties during project implementation have been intensified by the effects of the COVID-19 pandemic, various feedbacks from project beneficiaries in some areas say otherwise (i.e., respondents saying that PhilCAFE has been continuously supporting them and business is ok, like there is no pandemic). The wide reach of PhilCAFE has also encouraged or inspired non-coffee farmers or non-coffee-industry-MSA to enter coffee business, and this is apparent with both the sample and qualitative surveys.

In terms of actively participating in the overall intervention of PhilCAFE to the country's coffee industry, the numbers of non-practicing MSA amongst the list of project beneficiaries indicate the decline of coffee MSAs in the study area. Most of the reported inactivity or non-operational MSAs were because of the pandemic. Many MSAs could hardly sustain their coffee business due to low demand and decided to close shops. Other reported inactivity of MSAs, however, were due to conflict within the organization. While both are not caused by PhilCAFE, it is worth noting that amongst the beautiful stories of some beneficiaries of PhilCAFE is about their thriving businesses amidst the pandemic – thanks to PhilCAFE. It seems that in some areas, PhilCAFE has been able to not just support the producers but a network of MSAs with complementing services. In effect, the network of MSAs was able to maintain and sustain its market and demand during the height of the pandemic in 2020-2021. For other coffee businesses with no or still weak MSA network, the impact of

the pandemic was crippling and devastating. Various MSA could hardly provide the expected services that caused a domino effect across its subsequent markets.

The general attitude of the project beneficiaries is positive. This is reflected in the thankfulness and appreciation of the respondents on their comments and remarks prior to the end of the interview.

6.7.2 Cultural Issues

There were no reported cultural issues with regards to project implementation and project-related activities of PhilCAFE in Indigenous Peoples (IP) communities. Project-related activities were well coordinated with the respective Barangay LGUs and Tribal Leaders, and the data gathering activity did not experience issues. This, however, was not the case with the comparison group. The absence of interventions and the need to conduct a survey in an IP community led to some concerns, and entry to the *purok* was prohibited until clarifications were settled with the Tribal Leader.

6.7.3 Impacts of COVID-19

There were a variety of responses when the respondents were asked about the impact of COVID-19 on their coffee production and sales. The negative impacts were mostly a domino effect of the imposed community quarantine or lockdown. Most markets closed because of increased costs of transportation and farm inputs. Buyers were limited due to travel restrictions, hence making it difficult for farmers to sell their coffee, resulting in decreased sales and low income. The pandemic also caused low buying prices of coffee products. Some of the respondents' sentiments on coffee production were: *"There is a huge effect on production during the pandemic in which we have not maintained and cared for our coffee plants because of restrictions to go out"*. *"We have not visited and abandoned our farms because of strict guidelines and lockdowns"*. *"It is difficult to visit the farm because it is forbidden to leave the house"*. Sentiments on coffee sales were: *"The purchase price of our coffee should have been high, but it was lowered because of the high transportation cost of the buyers coming to the area as a result of the fuel price hike"*. *"Coffee was not sold timely because of many protocols that we have to follow"*, and *"Difficulty in selling coffee because the market outlets/ buying stations/stores were closed"*. Overall, the limited mobility of farmers negatively affected their coffee farming activities. Alternatively, limited mobility also had advantages for some coffee farmers, especially for those with farms near or within their homes. Most farmers were able to focus on their farms as mentioned in these sentiments: *"Our coffee production was not affected because my farm is close to home"* and *"Positive in a way, that most of the time farmers are in their own farms because of lockdowns"*.

6.8 Outcomes and Impact

6.8.1 Production Cost

The DID analysis was done on the annual production cost per hectare between the baseline and this midterm survey. While there is an indication of a positive change in terms of reducing the annual production cost per hectare, as shown in the trajectory of the treatment group data against the comparison group data trajectory Figure 19, the DID estimator for the annual cost per hectare for this midterm is not yet significant.

Table 9: The DID estimation results of Annual Cost per Hectare in PhP, Treatment (n=219) and Comparison (n=219)

Outcome Variables	2019 (Baseline)		2021 (Midterm)		DID estimator*
	Treatment	Comparison	Treatment	Comparison	
Annual Cost per Hectare	7,742	5,989	4,338	3,463	-878.57 ^{ns}

* ns = not statistically significant (Details of the estimation can be found in the annexes)

6.8.2 Coffee Yield

Using converted GCB yield per hectare, a comparison on the yield per hectare in the baseline and for this midterm survey showed a positive DID coefficient (see Table 10) – however, the value it is not yet statistically significant. This is an indication that there is already a positive change in terms of yield amongst PhilCAFE farmer beneficiaries, but the value for now is not yet enough to be statistically different compared to the comparison group.

Table 10: The DID estimation results of converted GCB yield per hectare, Treatment (n=219) and Comparison (n=219)

Outcome Variable	2019 (Baseline)		2021 (Midterm)		DID estimator*
	Treatment	Comparison	Treatment	Comparison	
Yield per hectare (converted GCB Kgs/Ha) ²⁵	455.17	400.94	396.48	323.08	19.17 ^{ns}

²⁵ Conversion: 1 kg dried cherries = 0.5 GCB; 6kgs fresh cherries = 1 GCB; 1 kg parchment = 0.8 kg GCB; 1 kg roasted coffee = 1.19 GCB: source from ICO

* ns = not statistically significant (Details of the estimation can be found in the annexes)

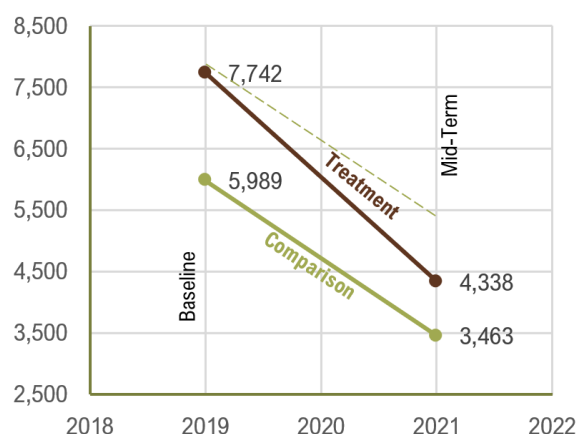


Figure 19: Annual Cost per Hectare DID Analysis (converted GCB)

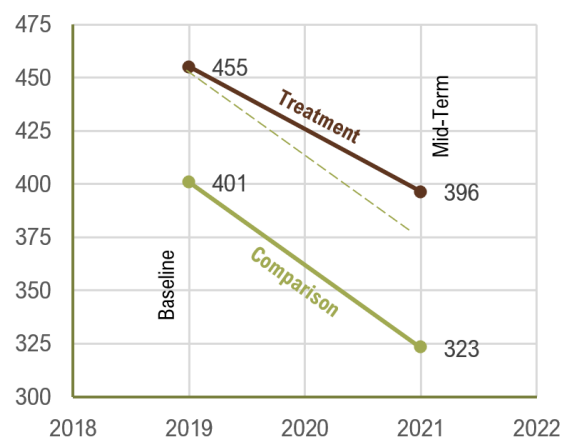


Figure 20: Coffee Yield per Hectare DID Analysis (converted GCB)

It is worth noting that while both the treatment and comparison groups experienced a decline in yield, which may be attributed to effects and outcomes of the COVID-19 pandemic, the treatment group showed some resilience that lessened its declined trajectory. While not all planned activities of PhilCAFE during the peak of the COVID-19 pandemic were implemented as scheduled²⁶, some FGD participants shared the continued efforts of PhilCAFE to provide support and training amidst the limitations brought about by the pandemic. Some training and capacity building initiatives are still pushed through, including use of innovative strategies such as virtual trainings and online forums. Where face-to-face training and field activities were done, PhilCAFE implemented COVID-19 related health protocols (e.g., the use of facemasks, provision of alcohol, maintaining social distancing), while echoing health and safety measures to its beneficiaries. The visible persistence and resilience of PhilCAFE in its project implementation amidst the challenging times of COVID-19 trickled down and inspired the beneficiaries to maintain a positive attitude and outlook. Thus, some FGD participants, particularly those who were early beneficiaries of PhilCAFE, shared that they continued to produce and sell coffee – as if COVID-19 did not interfere with their activities.

6.8.3 Post-Harvest Losses

The DID estimator for the post-harvest losses is positive and statistically significant at the 5% significance level. This implies that the treatment group has statistically greater post-harvest losses when compared to the comparison group. Figure 21 shows that while the trajectory of both the treatment and comparison data were decreasing (from 2019 to 2021), indicating a decline in post-harvest loss overall, the trajectory/performance of the comparison group is better than the treatment group from 2019 (baseline) to 2021 (midterm). Amongst the potential contributing factors for this result is the small number of farmer respondents accessing post-harvest facilities. It should be noted that these data on post-harvest losses are neither computed nor measured from records of production, deliveries, nor how much is sold, but instead are only rough estimates given by the respondents based on perception and recall. It is also possible that the efficacy of trainings and exposures provided by PhilCAFE have significantly improved the farmer's capacity to properly recognize post-harvest losses and the estimates provided during the baseline may have been understated, though this conjecture may not be possible to prove.

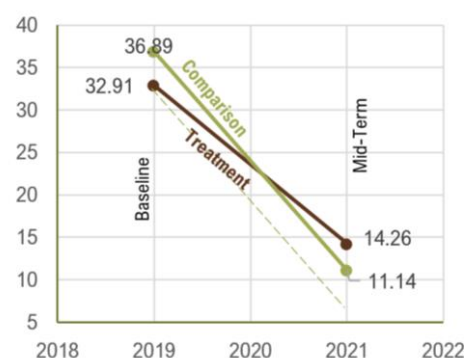


Figure 21: Post-Harvest Losses DID Analysis

Table 11: The DID estimation results of annual post-harvest losses, Treatment (n=219) and Comparison (n=219)

Outcome Variables	2019 (Baseline)		2021 (Midterm)		DID estimator*
	Treatment	Comparison	Treatment	Comparison	
Post-Harvest Losses (in percentage)	32.91	36.89	14.26	11.14	7.20**

*Inference: *** p<0.01; ** p<0.05; * p<0.1. Details of the estimation can be found in the annexes.

²⁶ Reflected in Semi-Annual Progress Report and validated by some FGD participants who were affected by the change in schedule of training.

6.8.4 Coffee Sales

A DID analysis for coffee sales was also done – comparing the 2019 baseline data with this midterm data. The DID coefficient is positive, however, it is not statistically significant yet. This is an indication that there is a positive change in terms of sales but not enough to be statistically different compared to the comparison group.

Table 12: The DID estimation results of annual coffee sales in PhP, Treatment (n=219) and Comparison (n=219)

Outcome Variables	2019 (Baseline)		2021 (Midterm)		Difference-in-difference estimator*
	Treatment	Comparison	Treatment	Comparison	
Coffee Sales (in PhP)	40,835	61,970	32,444	50,540	3,039 ^{ns}

*Inference: ns = not statistically significant (Details of the estimation can be found in the annexes)

From the comparison on yield per hectare using converted GCB on both the treatment and the comparison groups of the Quasi-Experimental Design Sample, both reflected a decrease in production. Both the treatment and comparison group also have almost the same experiences that attributed to perceiving an increase or decrease in sales (as discussed in the section above). And both groups are in the same regions – experiencing similar COVID-19 related impact and under the same local health protocol restrictions. Given these settings, the treatment group was able to somewhat sustain selling coffee amidst the challenging times of COVID 19 that somewhat slowed the trajectory of the comparison group. This is consistent with the feedback of some FGD participants, as mentioned above, who continued to produce and sell coffee – like COVID-19 did not interfere with their activities – thanks to PhilCAFE.

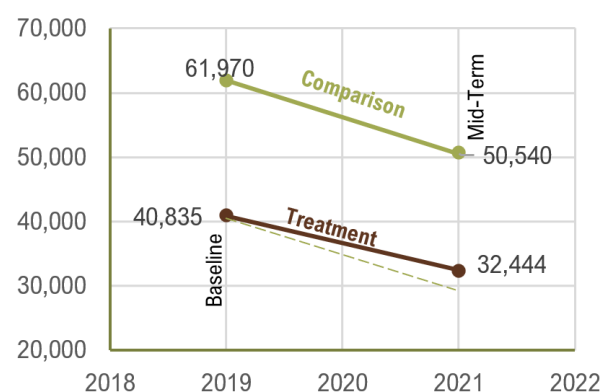


Figure 22: Coffee Sales in PhP DID Analysis (converted GCB)

6.8.5 Employment

In terms of employment, the DID estimator is significant at a 10% level, though not at the 5% level, with the treatment having a positive effect. In other words, while total employment declined for both the treatment and control groups from 2019 to 2021, the decline was slightly less severe for the treatment group. This is illustrated in Figure 23 where the downward trajectory of the treatment group is less steep in comparison to the trajectory of the comparison group from 2019 (baseline) to 2021 (midterm).

Table 13: The DID estimation results of annual employment, Treatment (n=219) and Comparison (n=219)

Outcome Variables	2019 (Baseline)		2021 (Midterm)		DID estimator ^a
	Treatment	Comparison	Treatment	Comparison	
Employment (Total Labor)	6.79	7.90	2.28	2.40	0.99*

^a Inference: *** p<0.01; ** p<0.05; * p<0.1. Details of the estimation can be found in the annexes.

6.8.6 Annual Income

The DID analysis on the annual income revealed a positive treatment effect of the project, however, the value is not statistically significant. This indicates a positive change in terms of annual income of beneficiary farmers, though the value is not enough to be statistically different compared to that of the comparison group.

Table 14: The DID estimation results of converted GCB yield per hectare, Treatment (n=219) and Comparison (n=219)

Outcome Variables	2019 (Baseline)		2021 (Midterm)		DID estimator*
	Treatment	Comparison	Treatment	Comparison	
Total Annual Income (in PhP)	187,561	220,244	201,643	194,819	39,507 ^{ns}

* ns = not statistically significant (Details of the estimation can be found in the annexes)

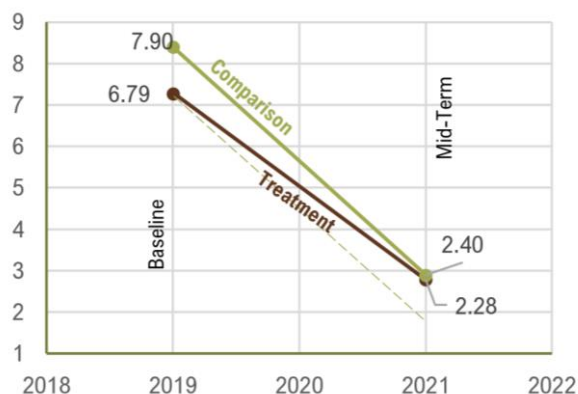


Figure 23: Employment DID Analysis

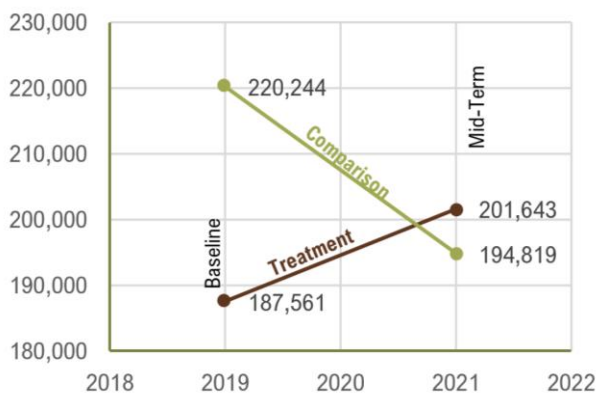


Figure 24: Annual Income DID Analysis

6.9 Key Observations (Using Evaluation Criteria)

6.9.1 Evaluations Question

A. Relevance of the Project

The project was built from MinPACT's coffee intervention in the Philippines. To date, PhilCAFE has already provided support and assistance beyond the MinPACT regions, and the project approaches remain to be relevant and responsive to the needs of the coffee farmers and coffee market system actors in the evolving and growing coffee industry of the Philippines. The project introduced coffee industry-related international standards and practices; opened opportunities to MSAs to not only produce better and more profitable coffee products, but to provide coffee products that are viable to international markets; and delivered participant-responsive trainings and capacity building activities through state universities and colleges, and local coaches/training providers.

Most of the FGD participants expressed that the training activities were relevant, wherein they learned the appropriate practices in coffee farming (MKGC, Young Males) that helped improve the quality and price of their products (KUDEN, Young Females). The IP female FGD participants from IAHTCO cited that PhilCAFE informed them during the training that it would support them in marketing.

Overall, PhilCAFE aligned itself with the coffee-related strategies and direction of the DA, DTI, Philippine government strategy, and the USDA. This has been reflected in the semi-annual progress reports, particularly on the various coordination meeting and collaboration activities with the various concerned agencies as well as Project accomplishments indicating its contributing to USDA goals and objectives. During the field survey, however, some respondents from the local governments repeatedly expressed the need for PhilCAFE to coordinate closely with the concerned line agency or to properly coordinate with the respective LGU of the project beneficiaries. Amongst the recommendations and suggestions received from an LGU respondent was to ensure "proper coordination with municipal agriculture office on the project implementation" and to "not direct your [PhilCAFE] intervention to the people's organization – always coordinate with the LGU". This message is consistent with other respondents from other LGUs. However, there are also LGUs with active and fruitful partnership with PhilCAFE that stated that activities supported by PhilCAFE are properly coordinated and aligned with the efforts of the LGU, the Region's Coffee Council, and local coffee alliance.

B. Efficiency of the Project:

Against the project's target by midterm, the project's overall achievement is below the target. Project output level accomplishment, such as number of individuals participating in or benefited the project, has surpassed its target, however, outcome/result level accomplishment, such as improvement of yield (in MT per hectare) or other performance indicators related to improvements brought about by project output are generally still below the targeted accomplishment. This difficulty in achieving the targeted results may be attributable to (i) the impact brought by the COVID-19 pandemic which entered the Philippines just a few months after the onset of the project, and (ii) the state of the coffee sector in the Philippines – which is still young, growing, learning, and evolving. The combination of the two at the early stage of the project drastically changed the basic premise and achievable targets for the project. While PhilCAFE has successfully rolled out relevant and responsive interventions to specific MSA service providers (i.e., training of farmers/producers), interventions across complementing and supporting MSAs within specific areas/regions to substantially improve the area's coffee market systems seems to be lacking still. The Project adopted innovative training modalities as well as modified internal office and project arrangements (including support from project staffing, management structures) to adapt during those early years of the pandemic. Nonetheless, the decelerated project implementation brought about by the health

protocols and restrictions due to the pandemic greatly affected the project's ability to achieve the targets set because of the very nature of the project (i.e., geographic coverage; support to national, regional, and local coffee MSAs; time for new coffee trees to bear fruit; time for application of new or improved practices and technologies to effect change; substantial gestation period of combined project interventions to cause significant results). The project, with the whole world, entered uncharted waters brought about by Covid-19, which unilaterally imposed urgent and groundbreaking modalities to the project. This altered the project framework assumptions, which also affected the project's efficiency.

C. Effectiveness of the Project

The various project interventions have shown a positive effect on the project area's market system as a whole. This is verified from the responses of the MTE participants and by the positive results in the DID analysis. The remarks on some DID analysis to be not statistically significant, however, may be attributable to the lack of substantial gestation period for the project to show significant results by its midterm due to the forced deceleration of project implementation with the entry and spread of the COVID-19 by early 2020 in the Philippines. An informant from OPAG claimed that there was a need for more assistance from PhilCAFE given the need to improve the quality of their coffee. However, due to PhilCAFE interventions, coffee farming technologies showed an apparent improvement. Similarly, some FGD participants from IAHTCO (IP Females) and KUDEN (Young Females) shared that the training from PhilCAFE was helpful in the maintenance of their 'small' coffee farms, which became cleaner and pest free. Even though the correct process in coffee farming was meticulous compared to their old practices, what they learned was helpful, especially in the rejuvenation process of older coffee trees. The top three coffee production technologies introduced or trained by PhilCAFE, which farmers and producers perceive to be highly effective (with mean rating from 4-Very effective to 5-Extremely effective), are as follows: (i) shading, (ii) application of basal fertilizer, and (iii) application of organic fertilizer.

In terms of climate risk reduction and natural resources management technologies to increasing coffee yield, use of drought and flood resistant varieties and agroforestry received the highest rating at 5 and 4.9, respectively. In terms of increasing sales value, the following are technologies and/or practices introduced and trained by PhilCAFE which are perceived by project beneficiaries to have increased the quality of their coffee products and increased their sales value.

Table 15: Adoption rate and effectiveness rating of coffee technologies and practices (summary)

Technologies and Practices	% of Adoption Rate	Mean Effectiveness Rating: Increasing Coffee Quality*
Coffee Production Technologies (from Table 51)		
Shading	9.4	4.6
Application of basal fertilizer	9.1	4.5
Capping	4.1	4.5
Coffee Post-Harvest Technologies and Other Processing and Value Addition Technologies (from Table 53)		
Grinding	0.4	4.7
Packaging	0.6	4.5
Fermentation	4.7	4.4
Storing	1.8	4.4
Promoting Improved Climate Risk Reduction and/or Natural Resources Management (from Table 54)		
Agroforestry	3.9	4.9
Stream bank management, restoration, re/afforestation	0.6	4.5
Woodlot management	1.2	4.4

Note: Effectiveness Rating* 4-Very effective, 5-Extremely effective

There is a big change because of the good quality of coffee that the farmers can now sell due to the adoption of the post-harvest technology provided by PhilCAFE.

-Region 13

PhilCAFE embedded training on gender and development as well as on youth leadership in their trainings and activities that attracted and supported women and youth in agriculture. In some areas, PhilCAFE's partnership with cooperatives and

private sector produced incentives to youth farmers or children of farmers. In Sultan Kudarat, a cooperative implemented a “piso bawat kilo” premium (extra peso²⁷ for every kilo sold) to youth selling coffee products to the cooperative.

Beyond the enticement on trainings and capacity building, there were women respondents who were very excited in sharing how they were able to complement their husband’s coffee-related work as well as significantly increase their household income. Specifically, the women beneficiaries seem to have found their niche in the coffee industry, particularly in doing practices and technologies to improve quality (and sales) that are often not being done by or of no interest to men (i.e., pick ripe, time consuming and meticulous processing activities, sorting/selecting GCB, etc). With PhilCAFE’s interventions, the women respondents shared that they saw the value of coffee farming/production which have high potential of getting better earning if done right. This has shown the cooperative, not just the husbands, the value added by women that improved their coffee production, coffee quality, and sales. Women in cooperatives are also remarked as easy to call and actively participates in meetings. Thus, women are most often seen in meetings. As a result, this experience and setting also empowered women in coffee production – not just in their respective households but in their cooperative.

“Through the intervention of PhilCAFE project, the awareness of on the involvement of women and young males on coffee farming was broadened.”

- Region 13

“Normally in our meetings, we see mostly women because we can easily call them for the meeting.”

- Region 10

The project’s interventions towards increasing horizontal and vertical market linkages have been visible with the diversity of coffee MSAs in the list of project beneficiaries. The growing and evolving coffee sectors of the project areas, however, has resulted in having a list of project beneficiaries with fluid coffee sector service providers that targeting MSA services-specific interventions has been challenging. As a result, efforts and interventions towards increasing horizontal and vertical market linkages are also developing and being refined.

At the early stage of project implementation, PhilCAFE re-strategized its training delivery mechanism to cope with the pandemic-related restrictions and limitations. The innovative strategies implemented by PhilCAFE garnered positive feedback on PhilCAFE’s visible efforts and dedication amidst the challenging times. Nonetheless, when asked the preferred and most effective method to educate and train coffee MSAs, most of the respondents still say face-to-face training. Besides the preferred face-to-face mode of training, respondents highlighted the extensive use of photos in learning materials is helpful. While some prefer the use of mother tongue or local dialects, there are those who appreciate the use of English or materials in English as it also helps them improve their English. They also prefer actual or practical experiences that they can easily relate to and keep in mind.

D. Impact of the Project

Due to COVID-19 pandemic, coffee yield of both comparison and treatment group experienced a decline. It is worth noting, though, that the DID analysis showed some resilience amongst the treatment group lessened the declined trajectory of the comparison. This resilience may be attributable to the visible persistence and resilience of PhilCAFE during the pandemic that somewhat trickled down and inspired the beneficiaries of having a positive attitude and outlook. There were FGD participants who even shared that they continued to produce and sell coffee – like COVID-19 did not interfere with their activities.

While many farmer/producer respondents shared that there is no significant experience in coffee-related sales yet since their coffee farm/production has just started, there are already coffee producers/processors who attributed their increase in income because of PhilCAFE. Specifically, the introduction of and invitation to the Philippine Coffee Quality Competition (PCQC) has broaden their coffee-appreciation and learnings, as well as market. This PhilCAFE support event became their catalyst in getting direct-buyer offers which forged the direct-buying relationships and increased their sales as well as introduction of other processing methodologies specifically requested by direct buyers.

PhilCAFE’s support is classified as (i) training or technical assistance, (ii) provision of financing or resources, and (iii) support to events. Support distribution across the MSAs and disaggregated by gender amongst respondents of the farmers survey and MSA survey are provided in Table 16.

²⁷ Not necessarily one (1) Philippine Peso but sometimes may be more.

Table 16: Support distribution across the MSAs and disaggregated by gender amongst respondents of the farmers survey and MSA survey

Market System Actors	Received training or technical assistance		Received some form of financing or resources		Participated in an event facilitated by PhilCAFE	
	Female	Male	Female	Male	Female	Male
Nursery (Seedlings)	39	52	16	14	31	37
Input Supplier (Fertilizer, supplies, etc.)	2	4	0	1	1	4
Producer/Farmer (Cherries)	15	16	14	12	6	15
Farmer/Producer	422	384	88	93	207	227
Farmer Survey	353	302	48	61	157	145
MSA Survey	69	82	40	32	50	82
Processor (GCB)	12	14	10	8	8	16
Roaster	6	8	2	0	8	14
Brewer	1	5	0	2	2	14
Financer	1	1	40	32	0	6
Academic and Technical Provider	36	38	20	12	15	24
Policy and Government Support	11	14	4	4	20	16
Consolidator/Trader	3	4	0	1	4	2

During the conduct of the study, the negative feedback which may have potential unintended consequences due to project implementation is the demand for proper coordination with some of the LGUs or staff of line agencies who flagged the feedback and made suggestions. If not addressed, this may have significant repercussions which may have negative effects to the emerging benefits and, ultimately, legacy of the Project and of USDA.

E. Sustainability of the Project:

Amongst the supports and interventions of PhilCAFE is the establishment and capacity building of Regional Coffee Councils, public-private sector partnerships, support to the DA and the DTI, and inputs to coffee-related learning materials and policies. These coffee-related governance interventions are multiple entry points towards the sustainability of what the USDA through PhilCAFE has introduced to the Philippines coffee industry.

“One of the things that we consider in order to have a sustainable plan for the progress of the coffee industry is the creation of the Regional /Provincial coffee councils. We hope that PhilCAFE will be able to assist in the formation of the coffee councils.”

- Region 13

“That is why when PhilCAFE organize the program we make sure that their program is part of the overall development program of the coffee industry in Misamis Oriental. Our role is that we are also the service delivery of the agricultural program and other programs of the national government and other programs with other government agencies including the private sectors, we consolidate all programs so they will create a positive impact to the famers. We consolidate, we spearhead and set direction, say 2% reduction poverty as a result of, including contributions of other sectors in the province.”

- Region 10

Some of the notable responses of the respondents on the likeliness of increasing their investment of resources or capital into the coffee sector in the next 5-10 years were:

“For the next 5-10 years, the organization will increase its investment by having branches in some other town, and coffee production will increase its produce to cater to the needs of local and foreign tourists.”

“I am optimistic about the increase in capital with my mobile coffee. I was really thinking of building a coffee shop and coffee roaster. I am a small business, so it was really hard to grow with all the hindrances coming in like lack of supply, but I still survive. Maybe in the future all my hardships will be a success. I'm positive about it because now I am making a blog to support local farmers. I market with stores, resort and others places.”

“In the next years there is a possibility that members will increase investment to coffee because they see that it has a huge capability to elevate the lives of the growers.”

“The long-term plan of SKSU is to make it the center of technology and there is also a plan to have a short course that will showcase what coffee is all about like barista, this can happen with the invention of the government like TESDA and in partnership with some NGOs like ACDI/VOCA.”

Amongst the primary problems and challenge of the farmers/producers face is having regular and guaranteed income. There were potential farmer respondents who have limited resources to invest in coffee farming have already left coffee farming in favor of crops that are easier and faster to grow and sell. Other coffee-MSAs then are now inactive – with their businesses not operational due to low demand/market (mostly due to the effect of the pandemic). These threats may be mitigated with a healthy and thriving coffee market system in an area and for coffee farmers/producers to practice multi-cropping or other sources of income.

“We cannot take care of the coffee farm only as we need to have another source of income.”
-Region 13

6.9.2 Learning Question

MARKET LINKAGES. The extent to increasing the horizontal and vertical market linkages among agricultural actors to promote economic benefits for actors and market expansion overall could not yet be quantified given the status of the project. The absence or weak horizontal and vertical market linkages among coffee MSA at various levels, however, has significant (or detrimental) effect for coffee-related business' operations and sustainability.

RISK AND UNCERTAINTY. Regarding effective methods for education and training (including subjects like risk management), in addition to the preferred mode of face-to-face training, respondents highlighted that the extensive use of photos in learning materials is helpful. While some prefer to use their mother tongue or local dialects, there are those who appreciate the use of English or materials in English, as it also helps them improve their English. They also prefer actual or practical experiences that they can easily relate to and keep in mind.

The training materials used were very effective because we actually saw the beautiful growth of the coffee trees and the good harvest.”
-Region 13

“For me, it is better in Ilonggo. I like a jolly speaker, feel free and the discussion will be on the actual and practical so it can easily be instilled in our minds. We can picture out what the speaker meant but if it is purely talking we can hardly remember everything.”
-Region 12

There is also the risk and uncertainty of beneficiary farmers not adopting technologies learned from the training. FGD participants also mentioned the absence of seedlings, farm inputs, tools, and facilities (i.e., post-harvest, storage) needed to complement technology and technique training, which can make technology adoption difficult and unappealing.

QUALITY AND STANDARDS. It was apparent that PhilCAFE provided many opportunities and exposure to the project beneficiaries such that producers and processors realized the profitability of adopting product quality standards for sales in higher-value markets, including international markets. Given the current state of the coffee industry in various areas, however, there are still producers and processors who do not see the profitability or immediate demand and sales of it.

RESILIENCE TO COVID-19. As discussed in the difference-in-difference analysis on coffee yield, PhilCAFE somehow contributed to the resiliency of assisted coffee market actors to COVID-19 compared to non-assisted actors. More that providing trainings using innovative strategies (including virtual trainings and online forums), implementing prescribed COVID-19 related health protocols (i.e., use of facemask, provision of alcohol, maintain social distancing), or echoing health and safety measures to its beneficiaries, it seems the visible persistence and resilience of PhilCAFE in its project implementation amidst the pandemic inspired the beneficiaries to maintain a positive attitude and outlook – making them resilient during the difficult times.

“PhilCAFE has been helpful for example, training continues for as long as health protocols are followed, health accessories are also provided such as alcohol and face mask, PhilCAFE gave allowance to the coffee mentors – it will be used for succeeding trainings on coffee technology production and other coffee concerns, and continuous implementation of the PhilCAFE project despite the covid 19 or pandemic”
-Region 11

GENDER & SOCIAL INCLUSION. Both treatment and comparison group had “Men and women feel comfortable speaking up and expressing their opinions in the group” and “A woman can be a leader, just like a man can” as the statement with

the most percentage that they agree on (Table 133). The FGD participants express the same. Their organization was inclusive and open to all who wanted to lead, where women were encouraged to speak up and lead (CAR Region, IP Males). Also, because of the inclusiveness of their association, there was collaborative participation among all stakeholders. Specifically, according to the adult female FGD participants of Region 11, they had an open forum system. The IP females of CAR Region even claimed that most of their officers were women. Majority of respondents from both treatment and comparison group also agrees on “a man should help his wife with household chores and taking care of the family” (Table 126). FGDs in the treatment areas revealed different answers to this question. For instance, the young female FGD participants from KUDEN observed no changes in their decision-making set-up because they had been helping their husbands before they were exposed to PhilCAFE training. Men and women are expected to work together (Region 10, IP Females) because the couple's farm work is equally divided, except if it involves heavy lifting (WAO, Adult Males).

The youth are engaged, but their voice is limited. They want to be officially part of their organization and have proper representation to be able to voice out their concerns and be heard by the adults. To encourage more engagement, a partnership between the private and public sector incentivized the youth by adding premium to their coffee products when they are the ones who sell the coffee.

“Our voice as the youth is limited only to giving suggestions whether they listen to us or not. As far as coffee production is concerned, there are only a few youth representatives because others are either in school or have other work in other places. Their parents rely on them for additional income to finance their farm.” -Region 13

“Through PhilCAFE we increased our knowledge, and we gained opportunity as youth leaders and representatives of the project with a voice within the organization. Having trained with PhilCAFE we are the second liners to the old farmers, and we will be able to convince other young people as we teach them the right coffee production technology.” -Region 13

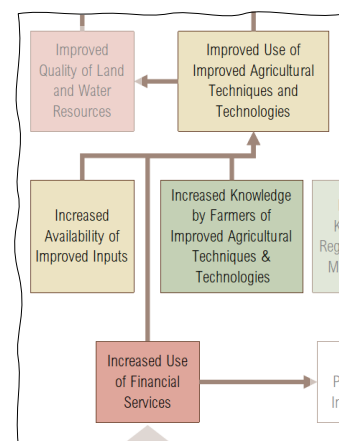
Women found their niche in the coffee industry. While men are more involved in coffee planting, it was observed that women are more suitable in post-harvest processing activities such as pick ripe due to patience and meticulousness in selecting cherries. As a result, the quality of coffee significantly increased as well as its price which means high sales and more income. Women also became aware of critical issues that involve decision-making and made them realize that their decision also matters.

“We recognize the capacity of women to do farming. As far as leadership of the cooperative is concerned, we believe that either man or woman may lead the organization as long as he/she is knowledgeable.” -Region 13

The project area includes communities of indigenous peoples (IPs) and ethnic minority groups. Some are even recognized quality coffee producers in various regions in the Philippines. With the innovative strategies implemented to cope with the health and travel restrictions brought about by the pandemic, PhilCAFE remains inclusive in its implementation.

7 Summary of Findings

Technology Adoption. The adoption of improved agricultural techniques and technologies introduced and provided by PhilCAFE to the farmers as well as academic and technical service providers (including mentors) has been significant and much appreciated by the project beneficiaries. However, the adoption of technologies is not progressing as expected. Some technologies such as disease management, farm diversification, and genetic improvement are not being adopted as widely as others. Difficulties in fully adopting the techniques and technologies have also been observed. Several FGD participants expressed that they did not receive the expected farm input/support from PhilCAFE, such as coffee seedlings, fertilizers, and sprayers. Some attributed their failure to apply the technologies learned from PhilCAFE training to this lack of support. Additionally, there is a low percentage of respondents accessing financial services despite their urgent need for farm capital and funding, and the availability of financial services in their area.



Yield and Sales. The adoption of post-harvest technologies has a positive effect on yield. However, only a small number of farmers respondents have been able to access post-harvest facilities. Combined with the slow and partial adoption of technology and Good Agricultural Practices (GAP) in coffee farming, the coffee yield by the mid-term is lower than the target (PMP target 0.65 vs actual at 0.38) despite its slight positive performance against the comparison group (DID analysis on yield).

Market System Support. Areas with active coffee councils tend to have stronger and resilient coffee market systems. Moreover, areas with established buying agreements between farmers and firms tend to have higher levels of market satisfaction. This observation is reinforced by the positive outlook and responses of respondents and participants who have established buying agreements during the interviews. However, farmers' access to warehouse and storage spaces remains very low, despite the availability of services. So far, only a very small number of farmer respondents have perceived changes in market actors, even with PhilCAFE's networking and interventions. Access to credit for coffee farming is also very limited, despite the availability of financial services such as banks and cooperatives. Some key informants from financial institutions mentioned the absence of an MOU with PhilCAFE and noted that coffee farmers seldom avail financial packages, except with Rizal Microbank in Region 11. Among the factors deterring farmers from accessing credit are perceived high interest rates, cumbersome requirements, and the need for collateral. Additionally, a low percentage of participant farmer respondents actively market their coffee products in comparison to the counterfactual group. Moreover, access to agricultural market price information among the treatment group participants farmers also access agricultural market price information among the treatment group is significantly lower than in the comparison group. Some FGD groups and key informants (Region 12, 11, SUC, Region 10) shared that they did not receive assistance from PhilCAFE on marketing or establishing market linkages.

Sustainability of Interventions. One recurring message from farmer respondents is the continued support and interventions provided by PhilCAFE, particularly in terms of training and input provision. Survey results revealed that while the capacity- building activities conducted by SUCs were significantly limited compared to those by NGAs/LGUs, fellow coffee farmers, and NGOs between October 2020 and September 2021, the trainings received were highly regarded by most respondents as extremely relevant and effective. The influential role of coffee mentors has also been highlighted by some FGD participants, particularly in their assistance with training other coffee farmers, reinforcing GAP and improved technologies, and encouraging technology adoption. In some areas FGD participants had limited recall of PhilCAFE activities, it was noted that respondents did not mention coffee mentors in the area.

Capacity Building: Content and Delivery. Some FGD participants encountered difficulties when asked about the impact of adopted technologies on yield, income, and related variables. This suggests the need for farmers to gain knowledge and understanding of input and output tracking. The non-adoption of technologies can have a significant impact on the yield and quality of coffee, which in turn affects income. Therefore, it is crucial for farmers to determine effective farming practices based on their specific circumstances, including available resources and consider their cultural beliefs and practices. Although many survey respondents, including non-practicing MSAs and non-coffee industry MSAs, participated in and appreciated PhilCAFE's training on gender and development, the application of association policies related to gender is very limited. The FGDs revealed that some associations either lacked gender policies or were unable to participate in gender-related learning sessions. Additionally, despite being able to recall the training sessions they attended, most of the FGD participants failed to answer questions related to financing. The preferred medium of training, as indicated by nearly

all respondents is face-to-face interaction. Some FGD participants noted disruptions in the schedule of some training activities because of the pandemic. However, even during the height of the Covid-19 pandemic, PhilCAFE's innovative strategies and approaches to reach and train farmers have left inspiring memories and recollections. For example, FGD participants from associations such as WAO reported attending online training sessions during the pandemic. Despite challenges related to mobility, limited access to services, and weakened market demand, participants from associations like MAMPCO and MKCGC continued to persevere and remained productive.

Overall Finding. PhilCAFE is an ambitious project due to its multifaceted interventions across a network of market system actor,) wide coverage area within the Philippines, interventions at the various levels (national, regional, and local), objectives and targets, and the limited timeframe of five years. Despite the project facing challenges posed by the pandemic during its early stages, PhilCAFE has made substantial efforts and achieved significant accomplishments by its midterm. This progress is evident in its advancement towards the PMP targets on various indicators, as well as emerging outcomes indicated by the DID analysis of matched samples (treatment and comparison groups). The DID of post-harvest losses, production cost, yield, employment, sales, and income revealed a positive coefficient – indicating an emerging positive change in the treatment group. However, the conditions and circumstances brought about by the pandemic at the early stages of the project disrupted its momentum and significantly affected its delivery mechanisms and reach (geographic; national, regional, and local MSAs). Consequently, some project interventions for various coffee MSAs (directly and indirectly supporting coffee farmers/ producers) did not have sufficient gestation period to achieve the changes expected to influence farmers'/producers' results/outcomes. Thus, while the MTE values of the DID analysis on farmers' production cost, yield, sales, and income showed a positive coefficient, they are not yet statistically significant. The project's reach in terms individuals benefiting indirectly as a result of PhilCAFE (USDA assistance) has significantly exceeded midterm targets with an accomplishment of 8,612% (PMP). Looking at the progress by region, it is apparent that the success of the project is highly dependent on having a strong regional market system with all its actors actively supporting and complementing each other. This includes the crucial establishment and strengthening of Regional Coffee Councils and active participation and involvement of Provincial and City/Municipal LGUs which allows the regional market system to thrive. Alignment with local coffee programs and efforts is equally important, extending beyond the provincial, regional, and national levels. This alignment is crucial to ensure the sustainability of investments made in the market system.

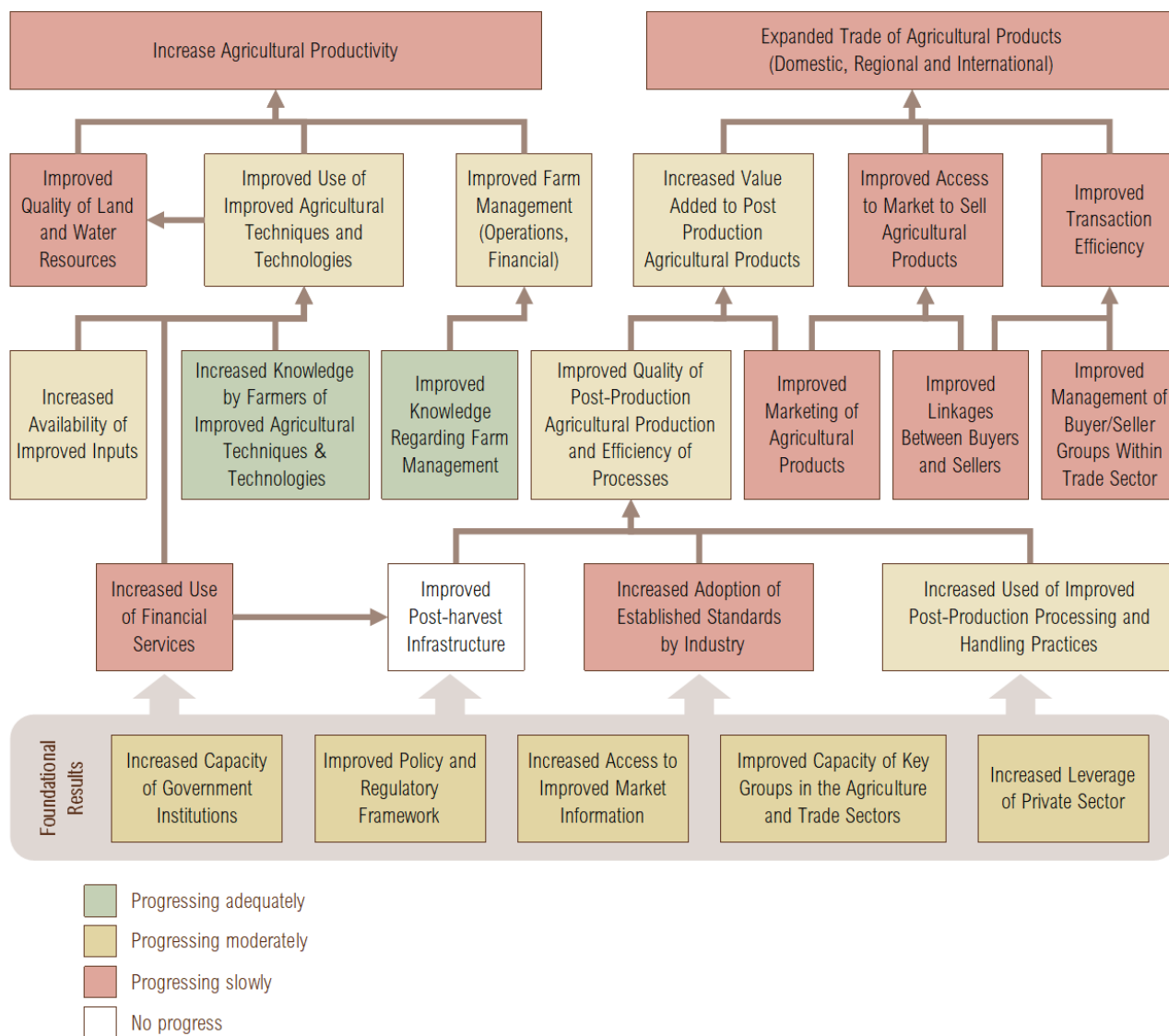


Figure 25: PhilCAFE Results Framework Mid-Term Results (Assessed based on responses and feedback of sampled respondents and participants.)

8 Lessons Learned

Observed uneven intervention across regions. Some areas have more prolonged engagement with PhilCAFE than others, thus, FGD participants could quickly identify PhilCAFE activities. Any attempts to assess PhilCAFE 's efforts or identify interventions in specific areas need to consider this temporal dimension to avoid inappropriate comparisons of different areas with different duration of exposure to PhilCAFE activities. It is also possible that PhilCAFE 's engagements were more intensive in some areas; hence, the need to bolster efforts to make their presence noticeable in other areas (e.g., some associations in Luzon).

Observed uneven intervention across market system actors. It has been observed that interventions among farmers and producers as well as those into nursery has been specific, recognizable, and persistent. This, however, indirectly exposed intervention for other market system actors to be somewhat generic and secondary. The unevenness of interventions and progress across interlining project activities seems to have contributed to the overall slow progress of the project in terms of achieving its project goals.

The need for localized cultural integration in interventions amidst active monitoring of diverse cultural representation. The localization or indigenization of development programs, interventions, and strategies is essential to its adoption and sustainability. Thus, it is cogent to ask how PhilCAFE attempted to indigenize its engagement framework, including its theory of change, specifically among the IP communities. For instance, were there deliberate efforts to understand and integrate the beneficiaries' local knowledge about coffee farming?

Importance of attribution. The observation about that the tendency of most FGD participants to provide 'generic' or broad answers without clearly attributing some specific activities to PhilCAFE or the difficulty of some survey respondents to recall trainings supported by PhilCAFE highlights the need to revisit PhilCAFE's communication plan and strategy. Attribution is essential to gauge the project's results and perceived impact, even qualitatively.

9 Recommendations and Proposed Actions

Reinforce Technology Adoption with Improved Access to Inputs. There is a need to ensure availability and/or accessibility (i.e., project support, information on where to get/buy, how to access) of farm inputs, tools, as well as facilities (i.e., post-harvest, storage/warehouse) to complement the trained technologies and techniques. For unsettled commitment with beneficiaries, PhilCAFE needs to review its database concerning areas catered and other areas with unfinished deliverables, then initiate the necessary actions. Given the remaining months of PhilCAFE's engagement, it is essential to ensure the delivery of expected support (e.g., seedlings, fertilizers, among others) to help ensure technology adoption. PhilCAFE also needs to ensure clear messaging of commitments to manage expectations and avoid misinterpretations, such as conditions for the delivery of expected seedlings.

Reinforce Technology Adoption with Use of Needed Financial Services. There is a need to improve the training programs to include access to financial services and fund management. This needs to be packaged such that farmers will have a better appreciation of financial services and how they can take full advantage and benefit from the services.

Market System Support. There is a need to prioritize strengthening of the Coffee Councils, or its establishment/organization where there is none. Further activities to expedite support towards strengthening regional market systems are imperative and cannot be understated. This includes proactive establishment of buying agreements; optimize use of storage facilities/warehouse, post-harvest facilities; availability of appropriate financial services; strategic building of market linkages; and improved marketing assistance.

PhilCAFE can review its partnerships with financial institutions, including credit cooperatives, and identify issues that hamper the delivery of financial packages (e.g., absence of MOU) and hinder farmers from availing of these packages. Micro-banks that offer value chain-based financing may explore expanding coverage.

Marketing support is essential to PhilCAFE's assistance package, especially for the farmers' associations. Thus, PhilCAFE needs to identify gaps in the delivery of its marketing assistance. PhilCAFE can focus on selected associations that still need support, with a more relaxed atmosphere post-pandemic for establishing market linkages.

Sustainability of Interventions. To sustain the country's momentum of coffee education, teaching coffee farming technologies may be more sustainable if it is integrated into the teaching curriculum of agriculture schools. The strong feedback on SUCs' delivery of training performance suggests that continuing and maximizing partnership with SUCs will sustain PhilCAFE's legacy momentum and positive gains. Coaching and mentoring systems may also be established and anchored in the SUCs and agriculture schools. Explore the possibilities of connecting with TESDA to integrate Arabica Coffee into their program. Expand Coffee mentors to include TESDA Provincial Training Centers.

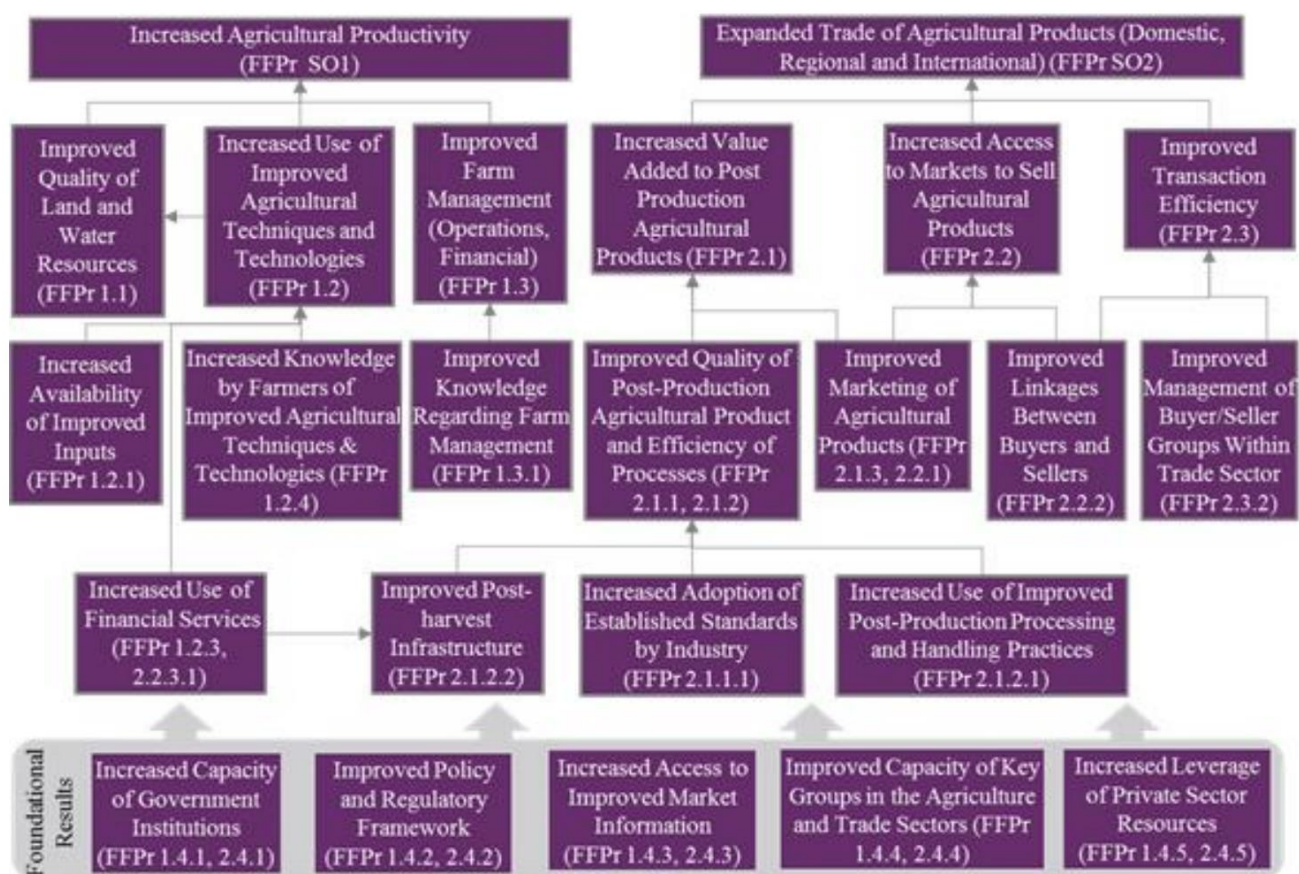
Maximizing the role of coffee mentors, especially in areas with recent engagements, may also be explored. This may be complemented with supplemental capability-building sessions for coffee mentors in areas with observed technology adoption issues or difficulties.

Capacity Building: Content and Delivery. PhilCAFE can provide additional learning sessions to its partner associations on the essentials of tracking yield, income, and post-harvest losses. This knowledge will enable the farmers to make sound decisions on inputs and adopt effective farming practices. PhilCAFE can also identify the specific groups and provide the necessary organizational support for conducting gender-related training sessions and creating the gender policy.

Continued use of innovative strategies to deliver training and capacity building activities with a comprehensive IEC Plan may also be explored. This may include adoption of the SOAP from ACDI/VOCA CoCoPal experience with enhanced online features through DA-ATI, DA-RAFIS, and other Agri-based radio programs in the respective regions. The program may also include segments on technology tips, Youth in Coffee Farming-use youth champions as guests, and coffee-related updates. PhilCAFE may also revisit the line-up of disrupted capability-building sessions (e.g., growth sessions on gender) during the pandemic and identify ways to continue these sessions online. Some associations may have the necessary connectivity to participate in online learning sessions. Enhancing the promotions (i.e., dramatized plugs that can assist change of attitude of farmers) of Good Agricultural Practices to increase production per tree with emphasis on diversified farming/SALT farming system (agro-forestry) through multi-media (radio plugs, social media, etc.) may also be explored.

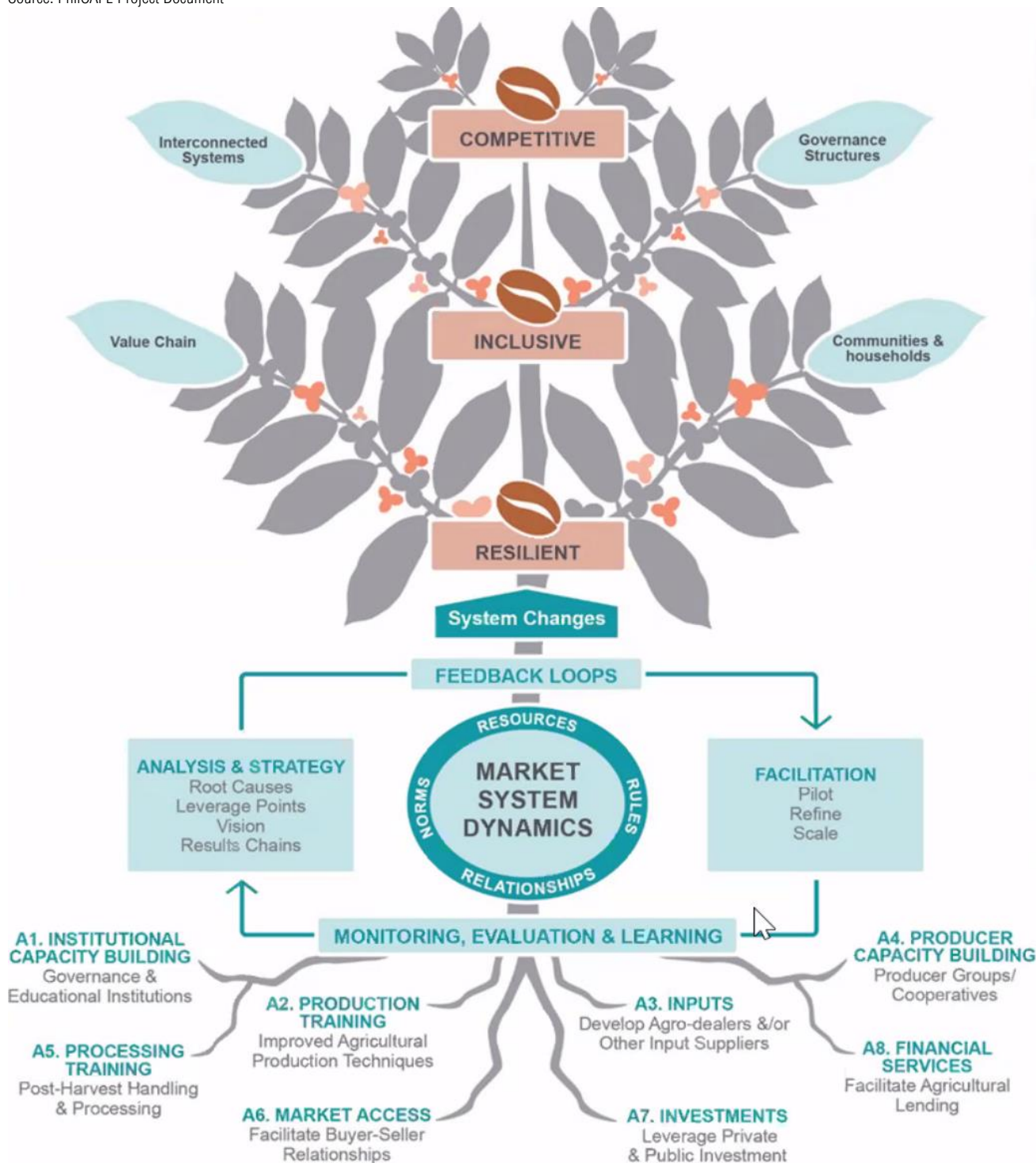
Annex 1: PhilCAFE Results Framework

Source: TOR



Annex 2: PhilCAFE Market System Approach

Source: PhilCAFE Project Document



Annex 3: Summary of PhilCAFE Activities from Sept 2018-Oct 2021

Data source: Summarized from PhilCAFE Semi-Annual Report

Sep 2018 – Apr 2019	May 2019 – Oct 2019	Sep 2019 – Apr 2020	May 2020 – Oct 2020	Sep 2020 – Apr 2021	May 2021 – Oct 2021
ACTIVITY 1: GOVERNANCE AND EDUCATIONAL INSTITUTIONS					
<ul style="list-style-type: none"> Individually met the leadership of the Philippine Coffee Council (PCC): DA Undersecretary for High Value Crops, DTI National Coffee Coordinator, the private sector representatives, and representatives of various Regional Coffee Councils Met with project stakeholders (including SUCs CavSU, BSU, CMU, and SKSU) and discussed partnership strategies and vision for coffee development initiatives at university level Conducted planning workshops with coffee stakeholders nationwide 	<ul style="list-style-type: none"> Supported the ongoing development of 4 regional coffee councils and 6 provincial coffee councils Convened a TWG in preparation for the 2020 PCQC which is scheduled to be held in Davao City Drafted a PCQC manual to guide participants and local organizers Had series of exploratory meetings with Technical Education and Skills Development Authority (TESDA) – Wangan National Agricultural School (WNAS) on development of a 'Coffee 101' vocational skills curriculum that includes hands-on trainings and farm visits Concurred in 4 MOAs with 4 SUCs (CMU, SKSU, CavSU, MPSPC) as key stakeholders in the development of the coffee industry regions envisioned to be regional CDCs 	<ul style="list-style-type: none"> Continued support to ongoing development of various regional coffee councils in the country Continued support on curriculum development on coffee of partner SUCs Established PhilCAFE Regional Offices at partner SUCs in Regions 10,12, and CAR Met with CMU executives for project briefing and assessment Organized the Regional Coffee Stakeholders Forum of Region 10 Supported the Provincial Coffee Commodity Planning of Misamis Oriental Opened and operationalized SKSU, MPSPC, CavSU regional offices Supported the 2nd National Coffee Education Congress hosted and organized by CavSU 	<ul style="list-style-type: none"> Due to the pandemic, PCQC 2020 was cancelled, and the project shifted to work-from-home arrangements and online or virtual means of engaging and mobilizing all coffee stakeholders nationwide (i.e., Kape't Kwentuhan Forum series) ACDI/VOCA prepared a position paper and comments to the draft bill on national program for Philippine coffee Facilitated a buyer-seller market matching Worked with PNC and GASDA for TESDA-accredited coffee production certificate course or diploma program Facilitated programmed activities either online or face-to-face with resource persons and specialists on GAP, access to finance, PO strengthening, gender and social inclusion, and IKG facilitation 	<ul style="list-style-type: none"> Facilitated the strategic plan development of Philippine Coffee Guild (PCG) Provided technical assistance during strategic planning workshops of Davao Regional Coffee Council and Sultan Kudarat Coffee Council Mobilized key stakeholders for the PCQC 2021 Facilitated programmed activities (including conduct of trainings) with resource persons and specialists on GAP, access to finance, PO strengthening, gender, social inclusion as well as provision of IKG Continued to work on coffee alliance building with various private and public actors Supported coffee research agenda and approved 6 research proposals Supported OFTT sites (10 in Luzon, 10 in Mindanao) 	<ul style="list-style-type: none"> Worked with PCG who commenced programming and networking with different institutions to advance coffee sector development Continued support to various provincial and regional coffee councils and their participation in major coffee development initiatives supported by government agencies Awarded fixed amount subaward (FAS) under the innovation grant to promote coffee sector investment Supported the successful PCQC 2021 Facilitated programmed activities (including conduct of trainings) with resource persons and specialists on GAP, access to finance, PO strengthening, gender, social inclusion as well as provision of IKG, FAS, and Post-Harvest Toolkit.
ACTIVITY 2: TRAINING: IMPROVED AGRICULTURAL PRODUCTION TECHNIQUES					
<ul style="list-style-type: none"> Worked on an inventory of existing coffee training materials and coffee nurseries Drafted a template for a coffee farm monitoring tool Reviewed and produced a revised draft version of the Arabica coffee manual Identified 4 SUCs; 3 NGAs; 2 farmer representatives as potential TWG composition Drafted the Arabica training session plan on nursery establishment and management, coffee establishment, care and 	<ul style="list-style-type: none"> Developed a curriculum for Basic Coffee Production (Coffee 101) for TESDA NC1 Met with DTI – RAPID Growth Project in Malaybalay and discussed potential activities for collaboration and funding support on coffee programs Met with DA Regional Research and Extension Offices (Southern and Northern Mindanao IARC) for potential collaboration on the establishment and funding of OFTTs Acquired seeds (Typica, Red 	<ul style="list-style-type: none"> Trained 25 SHS students to learn about Robusta coffee production, care and maintenance, pruning and rejuvenation in Kalinga Conducted a nursery establishment and management training for 26 members of SOFA in Malita, Davao Occidental Trained 31 trainers on Robusta production, farm management, IPDM, and pruning and rejuvenation in Surigao del Sur Trained 37 trainers on coffee 	<ul style="list-style-type: none"> Developed a COVID-19 adaptive training approach to facilitate distance learning to target coffee farmers and stakeholders Created pre-recorded lectures on GAP in coffee production for radio broadcast Launched coffee adaptive training approach and organizational strengthening at PTV channel television station Broadcasted Kapehan sa Kabarangayan and Café Talks over the radio Developed a whole-family approach 	<ul style="list-style-type: none"> Trained a total of 2965 PO coffee farmers on various coffee themes such as GAP, farm planning, farming as a business, coffee farm establishment, nutrient management, IPDM, pruning and rejuvenation Trained 15 potential coffee mentors of Paloc MPC on GAP in coffee production in partnership with DTI RAPID Growth Trained 12 members of TACOGA on coffee rejuvenation in partnership with DTI RAPID Growth Conducted a series of TOT on Farm 	<ul style="list-style-type: none"> Trained a total of 7010 project participants from the targeted partner POs and MSAs Issued Individual Contract Agreements (ICAs) to 324 coffee mentors Tasked 21 coffee mentor coordinators (CMCs) to provide technical support and coaching Supported 24 demonstration farms, 14 for new planting and 10 for rejuvenation Visited and monitored coffee farms that successfully adopted the

Sep 2018 – Apr 2019	May 2019 – Oct 2019	Sep 2019 – Apr 2020	May 2020 – Oct 2020	Sep 2020 – Apr 2021	May 2021 – Oct 2021
<p>maintenance, IPDM, pruning and rejuvenation, plant nutrition/fertilization harvesting and post-harvest handling processing and introduction to Cupping</p> <ul style="list-style-type: none"> Met with CIAT as a potential resource institution for improving coffee production through seasonal forecasting Identified potential partner cooperatives for the establishment of 15 OFTT sites Worked on guidelines for the selection of farmer beneficiaries and local coffee mentors Drafted criteria for the establishment of coffee demonstration 	<p>Bourbon, Yellow Bourbon, and Caturra) from BPI to be used for field training demonstrations</p> <ul style="list-style-type: none"> Listed coffee POs currently assisted under regular DA programs and other special projects together with DA-AMAD and WB PRDP Developed 5 model designs on coffee agroforestry farming systems Conducted an intensive 3-day training on coffee production for 48 trainers Visited 14 coffee farms and nurseries to get samples for genetic testing and DNA fingerprinting which was assessed by WCR 	<p>production, fertilization, IPDM, pruning and rejuvenation in Davao de Oro</p> <ul style="list-style-type: none"> Established 20 OFTT sites with the assistance of WCR 	<p>trainings that was conducted by coffee mentors (CMs)</p> <ul style="list-style-type: none"> Trained a total of 967 CMs, coffee farmers and stakeholders on various coffee themes in collaboration with DA, DTI and LGUs ACDI/VOCA provided the technical expertise, resource persons, training tools, supplies and materials including the production and distribution of IEC materials Provided technical recommendations to various farms across project sites Established coffee demonstration farms Conducted OFTT installation workshops with the help of WCR 	<p>planning and farming as a business</p> <ul style="list-style-type: none"> Implemented six demonstration farms in Davao Region which include new plantings and coffee rejuvenation Distributed 14,700 seedlings (5000 Arabica, 9700 Robusta) to 294 farmers Collaborated with Davao de Oro PAO for the implementation of the 8-million peso community-based coffee enterprise project Collaborated with DTI and DA Caraga to conduct TOT on farm planning and GAP training 	<p>recommended coffee farming methods and technologies</p>

ACTIVITY 3: DEVELOP AGRO-DEALERS AND/OR OTHER INPUT SUPPLIERS

<ul style="list-style-type: none"> Drafted session guides/training materials for business and marketing planning Discussions with Pacifica Agrivet as one of the agro-dealers and Rizal MicroBank to explore input supply financing customized for PhilCAFE beneficiaries 	<ul style="list-style-type: none"> Organized work planning workshops involving agro-dealers and other input suppliers Assessed existing accredited and non-accredited coffee plant nurseries together with BPI Visited nurseries, learning sites and input facilities which commonly handle 30,000 to 60,000 coffee seedling bags with WCR for assessment 	<ul style="list-style-type: none"> Approved 4 nursery proposals and facilitated business planning activities Continued engagement of manufacturers, distributors and retailers of agricultural inputs, tools, and equipment Provided technical assistance and supported the first batch of IKG applications Trained target recipients on the step-by-step set-up and maintenance of pre-germination beds Discussed with members of IMDALSA and BMMPC pre-germination process of coffee parchment Provided technical assistance and supervision in coffee nursery establishment to MAGSIGE MPC, BMMPC, IMDALSA and MILALITTRA WCR provided initial assessment of nurseries to identify key weaknesses 	<ul style="list-style-type: none"> Updated the MSAs directory Conducted a rapid assessment of agro-dealers in Davao del Sur Organized a virtual forum Kape't Kwentuhan: Lupain Pagyamanin that reached more than 31,400 accounts, 17,000 viewers, 247 reactions, 204 comments, and 86 shares Met with MAGSIGE MPC and Sagrex Corporation for the establishment of a potential agricultural input dealership Organized a coffee industry appreciation and learning visit for Sagrex Corporation Initiated the discussion between Yara Fertilizer Philippines and SOCCSKSARGEN Regional Coffee Council for the establishment of a coffee demonstration farm Organized appreciation tours for agri-input supplier and dealers 	<ul style="list-style-type: none"> Organized a coffee appreciation tour for Yara Fertilizers and Agway Chemicals to develop and expand input supply companies' services in coffee production areas Explored requirements for opening an agro-dealership business with the Fertilizer and Pesticide Authority (FPA) Trained 14 nursery workers and members of BMMPC on asexual plant propagation techniques including bud stick selection and preservation, cleft grafting technique, proper care, and maintenance to ensure grafting success 	<ul style="list-style-type: none"> Continued to work with various agro-dealers and input suppliers to facilitate improved access to quality farming inputs Facilitated coffee appreciation activity between Agway Chemicals which generated a mutually beneficial coffee farming collaboration Engaged Rizal MicroBank and Agway Chemicals to design a program for farmers to source input supply directly from Agway who have accessed loans from Rizal MicroBank financing Coordinated with FPA to enlist targeted POs as Accredited Safety Dispenser (ASD) Certified Sold 85,184 seedlings to 72 members and non-members of the nursery operator partners with a gross sales amounting to PhP 1,173,769
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Sep 2018 – Apr 2019	May 2019 – Oct 2019	Sep 2019 – Apr 2020	May 2020 – Oct 2020	Sep 2020 – Apr 2021	May 2021 – Oct 2021
		and recommend appropriate action	to provide "seed to cup" coffee experience		
ACTIVITY 4: CAPACITY BUILDING: PRODUCER GROUPS/ COOPERATIVE					
<ul style="list-style-type: none"> Reviewed and revised existing ACDI/VOCA tools Conducted a participatory assessment to measure the capacity and identifying development priorities of farmer organizations Developed the Coffee Organization Assessment Tool from the previous collaboration of MinPACT and SCOPEInsight Reviewed SCOPE BASIC and post-Sell More For More Training PO Assessments previously conducted by MinPACT Met with MinPACT coffee-based POs to determine the status and intervention strategies for PhilCAFE Amplified collaboration with financial institutions that services POs 	<ul style="list-style-type: none"> Completed assessment of 7 POs out of the target 45 POs Conducted field visits to MPCs which are established coffee POs in the coffee market system 	<ul style="list-style-type: none"> Assessed and strengthened POs using the M4 Assessment Tool of ACDI/VOCA Facilitated strategic planning workshops and review sessions with the target POs Established MOUs with identified POs and institutions 	<ul style="list-style-type: none"> Finalized alliance with NATCCO and AgriCoopPH for their support on strategic planning and business planning workshops Signed tripartite agreements between POs, financial organizations and ACDI/VOCA for production training Coordinated with NCIP for securing Free, Prior and Informed Consent (FPIC) in ancestral domain areas of IP based POs Assessed 2 POs to identify key intervention strategies to address gaps and enhance institutional strengths Organized a series of meetings with AgriCoopPH for institutional strengthening of coffee POs Established a tripartite agreement among ACDI/VOCA, OIC and MILFACO through an MOU to facilitate capacity building and organizational development of MILFACO Organized strategic planning workshops and review sessions with target POs 	<ul style="list-style-type: none"> Conducted a variety of capacity building activities with POs with support from DTI Virtually assessed POs using AgriCoopPH's Coop Health Check Facilitated an activity planning workshop for MIPTA Facilitated post-harvest investment planning for MAGSIGE MPC Organized a series of strategic planning workshops for MLLSCFO, TFA, TACOGA and SOFA Reviewed business operations of BACOFA Supported the virtual strategic planning workshop of Davao Region Coffee Council Supported the strategic planning of Sultan Kudarat Coffee Council 	<ul style="list-style-type: none"> Partnered with large multi-purpose cooperatives to help expand their agribusiness for the benefit of existing and potential coffee farmer-members Facilitated a workshop to key officers and management of partner cooperatives Conducted virtual learning sessions about ACDI/VOCA's coffee lending guide and risks to productivity in coffee Worked with NATCCO to expand services of savings and credit cooperatives to the coffee sector through one-year FAS Facilitated a virtual orientation to the PAKAPE (Producer-organizations' Advancement through Knowledge Attainment for increased Productivity and Economic growth) Facilitated PO strengthening activities and financial management training sessions for partner coffee POs
ACTIVITY 5: POST-HARVEST HANDLING AND PROCESSING					
<ul style="list-style-type: none"> Reviewed and drafted a revised version of the IEC material on specialty coffee production and post-harvest handling practices 	<ul style="list-style-type: none"> Conducted a TOT in partnership with DA-ATI that focused on harvesting, post-harvest handling, processing and sensory appreciation of coffee for 29 participants and followed by another batch of 28 participants 	<ul style="list-style-type: none"> Trained a total of 359 participants on coffee post-harvest handling, and processing and sensory appreciation Trained 22 participants on proper harvesting and different processing methods and protocols to produce high quality green coffee beans together with DA Region 11 Organized 2 TOT on post-harvest 	<ul style="list-style-type: none"> Trained 69 participants on coffee post-harvest handling and processing, and sensory appreciation Trained 17 farmer members of Talaingod Coffee Growers Association (CGA) and the Agongan Youth Association to improve quality of their green coffee bean Trained 21 members of BACOFA, 12 SKSU 	<ul style="list-style-type: none"> Trained a total of 454 participants in a series of TOTs on harvesting, post-harvest handling and processing in different project regions Organized a Community-based Green Grading and Sensory Analysis training and equipped coffee farmers with knowledge and skills for coffee quality evaluation Provided technical and logistical 	<ul style="list-style-type: none"> Responded to the PCQC 2021 result recommendations to focus on improving the quality of Robusta Trained a total of 898 participants on post-harvest and processing Organized a series of technical sessions at the community level to ensure that POs and other coffee stakeholders are equipped with knowledge and

Sep 2018 – Apr 2019	May 2019 – Oct 2019	Sep 2019 – Apr 2020	May 2020 – Oct 2020	Sep 2020 – Apr 2021	May 2021 – Oct 2021
		<p>handling and processing and sensory appreciation</p> <ul style="list-style-type: none"> Participated in the Coffee Regional Validation Workshop for DTI's RAPID Growth project in Region 10 Supported the Regional Coffee and Cacao Expo organized by DTI and DA of Region 6 Organized Coffee Quality Institute (CQI) training courses with BCAA, DTI and DA as co-organizers 	<p>staff and Sultan Kudarat PAO/MAO on GAP in coffee production</p> <ul style="list-style-type: none"> Aired 2 episodes of coffee post-harvest handling and processing over radio station and PTV Channel 48, and Facebook Conducted a virtual training on good manufacturing practices (GMP) for coffee exporters and producers Successfully graded green coffee beans, 30 Arabica and 42 Robusta bean samples, despite the cancellation of PCQC 2020 	<p>support in the evaluation of PCQC 2021</p>	<p>skills in evaluating coffee quality</p> <ul style="list-style-type: none"> Facilitated an in-person feedback session in CAR while online technical support was provided from Davao Organized a two-day roasting and sensory combo training together with DTI Quezon Trained 60 participants on post-harvest handling and processing in Regions 2, 6 and 10

ACTIVITY 6: FINANCIAL SERVICES: FACILITATE AGRICULTURAL LENDING

<ul style="list-style-type: none"> Reviewed and revised the Financial Institution Assessment Tool that was developed during MinPACT Tested the revised tool to 2 types of financial institutions – a bank and a savings and credit cooperative that are lending to individual farmers Met with Rizal MicroBank to discuss the potential collaboration on the E-PISO electronic payment system to be implemented for coffee farmer-clients Met with Landbank Davao to discuss the offtake of the Coffee 100 Loan Program Met with Peace and Equity Foundation (PEF) to identify the strengths and weaknesses of POs they invested in 	<ul style="list-style-type: none"> Drafted an MOU with Rizal Microbank that was then signed thereafter Facilitated credit matching and crafted financial agreements coffee organizations Supported the investment forum and market matching activity conducted by the Department of Agrarian Reforms' (DAR) ConVERGE Project in Surigao del Sur Facilitated a meeting between Purge Coffee Roaster and PEF Initiated exploratory meetings with other financial institutions 	<ul style="list-style-type: none"> Facilitated a tripartite agreement with Rizal MicroBank, BACOFA and Equilibrium Intertrade to improve market access for coffee Organized a cash flow planning workshop with officers and key members of BACOFA's management Met with a consultant of the ADB funded BSP-AVCF Project and discussed experience on investing in coffee value chain actors Facilitated a credit matching meeting between Matutum Coffee Growers Association (MCGA) and Rizal MicroBank Met with NATTCO to discuss collaboration activities in the development and scaling up of coffee financial products for its member savings and credit cooperatives Facilitated policy review and loan portfolio planning training for MAGSIGe MPC 	<ul style="list-style-type: none"> Developed and facilitated virtual coaching sessions despite limitations of the pandemic Ensured continued support to POs and uninterrupted technical assistance on access to finance Engaged partner institutions and facilitated online coaching sessions Reviewed and provided inputs to BMMPC nursery financial projections Facilitated credit matching session with Landbank Davao for MAGSIGe MPC and 4th Street Café Assisted Rizal MicroBank on its application to DA ACPC Discussed with First Valley Bank intention for a partnership and conducted a coffee appreciation training with its staff Collaborated with Sacred Heart Savings Cooperative (SHSC) Supported DAR ConVERGE Project's coffee appreciation training for ARBOs Established alliance and partnership with NATTCO through an MOU which will build the capacities of coffee- 	<ul style="list-style-type: none"> Facilitated a series of meetings between Landbank CDO and MILFACO Trained 50 farmers on farm planning in preparation for their farm plans to be submitted to Landbank Facilitated credit matching sessions between Rizal MicroBank and two IP POs, MILFACO and MANTALA Engaged Mediatix Multi-Purpose Cooperative as a financial service provider for coffee farmers in Kidapawan, Makilala, Magpet and Bukidnon areas Trained 40 participants on coffee appreciation with field visits to coffee nurseries, production areas and cupping laboratories in Davao del Sur and Bukidnon 	<ul style="list-style-type: none"> Ensured technical assistance for both the coffee enterprises and its farmers are embedded in their business plans are practical and sustainable Provided inputs on the selection of the conduit ARBOs through objective assessment of the ARBOs interest and capacity to lend to individual farmers Facilitated the development of the policies, systems, and procedures of the coffee loan product customized for each of the conduit ARBOs Facilitated access to finance for MAGSIGe farmers a Facilitated disbursing coffee and vegetable financing to MILFACO farmers who are members of the Talaandig tribe Continued with access to finance activities for the farmer-producers in Mt. Matutum, South Cotabato Assisted the first batch of loan applicants in filling out the application forms and the farm business plan that later on received their loans
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Sep 2018 – Apr 2019	May 2019 – Oct 2019	Sep 2019 – Apr 2020	May 2020 – Oct 2020	Sep 2020 – Apr 2021	May 2021 – Oct 2021
			producing cooperatives and communities throughout the country and extend digital financial solutions aimed towards providing convenient access and usage to various financial products and services		<ul style="list-style-type: none"> Organized strategic planning working with NATCCO for ADTEMPCO Met with Bacbacan MPC through NATCCO for potential collaboration

ACTIVITY 7: LEVERAGE PRIVATE AND PUBLIC INVESTMENT

<ul style="list-style-type: none"> Conducted a series of meetings with iFarms, Traxion, WWF and USAID Green Invest Asia to discuss areas of collaboration in agriculture and biodiversity conservation linked to coffee in the context of agroforestry Hosted the official visit of the New Zealand Ambassador and his Party to Mt Apo Agroforestry and CDC in Kapatagan, Digos City Won the support and participation of DA to the PCQC 2019 which also made GrainPro to sponsor PhP80,000 worth of GrainPro bags used for packaging green coffee beans 	<ul style="list-style-type: none"> Leveraged contributions from working with various government agencies, projects funded by IFAD, the World Bank, USAID, and JICA, local government units, financial institutions, and entrepreneurs amounting to PhP1,694,577 or USD 32,588 Participated in the USAID Green Invest Asia Coffee Forum which discussed sourcing, financing and scaling green coffee in the southeast asian region 	<ul style="list-style-type: none"> Engaged various organizations to pursue a vigorous coffee market system and further develop the coffee industry especially among smallholder coffee farmers and POs Signed an MOU with DAR Project ConVERGE to provide trainings on GAP, coffee production, post-harvest handling and processing Met with DTI Rapid Growth Project for potential project collaboration and cost leveraging 	<ul style="list-style-type: none"> Realized a total of PhP 3,181,662.27 (USD 63,633.24) in program leverage as a result of collaboration with both the public and private sectors on coffee related development activities Continued collaboration with DAR ConVERGE and DTI RAPID Growth Projects which are both funded by IFAD Continued partnership with USAID Protect Wildlife for coffee development program Continued engagement with Apex Mining Corporation for their corporate social responsibility program with coffee farmers Provided technical assistance to Davao del Norte and Misamis Oriental for coffee development programs Engaged agriculture input providers Sagrex Corporation and Yara Philippines 	<ul style="list-style-type: none"> Realized a total of \$904,255 (PhP 43,856,368) in program leverage through collaboration with both the public and private sector on coffee related development initiatives Collaborated with DTI INREMP through joint trainings on coffee post-harvest handling and processing, good agricultural practices and sensory analysis and cupping Collaborated with USAID Protect Wildlife to integrate conservation messages into training modules Continued partnership with DAR ConVERGE and DTI RAPID Growth through joint coffee trainings Continued engagement with Apex Mining Corporation for their corporate social responsibility program with coffee farmers Continued engagement with Sagrex and Yara Philippines 	<ul style="list-style-type: none"> Generated a total of US\$75,382.89 (PhP 3,769,144.89) in leverage through collaboration with both the public and private sector on coffee related development initiatives Continued support to DAR ConVERGE and DTI RAPID Growth Projects by providing trainings through coffee mentors Entered a tripartite MOU with DA-PRDP and PCG to provide GAP training and coffee-related farm facilities in PRDP assisted areas Provided technical assistance to LGUs in Cagayan Valley, Davao del Norte, Davao de Oro, Misamis Oriental, Sultan Kudarat, South Cotabato and North Cotabato Continued engagement with Sagrex and Yara Philippines
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ACTIVITY 8: FACILITATE BUYER-SELLER RELATIONSHIPS

<ul style="list-style-type: none"> Spearheaded the Philippine Coffee Quality Competition 2019 through collaborative partnership (ACDI/VOCA, USDA, DA-Ph, DTI, CQI, BCAA, GrainPro Ph) 24 local farmers were ranked awarded for Specialty Arabica 	<ul style="list-style-type: none"> Sponsored the trip of 2019 PCQC winner Marivic Dubria of BACOFA to the 2019 Global Coffee Expo in Boston Facilitated shipment and payment processing of winning green coffee beans from the PCQC online 	<ul style="list-style-type: none"> Co-organized a series of cupping courses and continued market matching activities among coffee producers and buyers both within and outside the Philippines Organized a market visit and quality requirement 	<ul style="list-style-type: none"> Initiated a virtual coffee forum Kape't Kwentuhan with a total of 12 sessions featured on PCE Facebook page Established a market matching platform for the sale of PCQC 2020 coffee entries Actively promoted Philippine Coffee 	<ul style="list-style-type: none"> Facilitated several coffee buyer-seller relationships through celebration of International Coffee Day, preparation activities for PCQC 2021, training on food safety compliance for coffee export, investment 	<ul style="list-style-type: none"> Successfully conducted PCQC 2021 by bringing together the international judges in Singapore, Indonesia, and Taiwan, and the local judges in Manila and Davao in a virtual setting to identify the top-
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Sep 2018 – Apr 2019	May 2019 – Oct 2019	Sep 2019 – Apr 2020	May 2020 – Oct 2020	Sep 2020 – Apr 2021	May 2021 – Oct 2021
and Robusta categories, 12 for each category	auction with a total of 8 bidders and 1888 kgs of coffee beans <ul style="list-style-type: none"> Participated in the planning and preparation for PCQC 2020 as part of the TWG Supported a two-day coffee event and exhibited coffee from different farms Facilitated a public cupping event attended by farmers, coffee shop owners, coffee consumers, baristas and Q Graders 	orientation for coffee farmers at the Fresh Roast of Great Kaffee and Roastery <ul style="list-style-type: none"> Finalized the PCQC Manual Met with IFAD and DTI RAPID Growth representatives to discuss collaboration points on the advancement of the Philippine coffee industry 	and home brewing competitions and livestreams on coffee sustainability and traceability to boost value of coffee both on the side of farmers and consumers through social media <ul style="list-style-type: none"> Organized a virtual training with Food and Drug Administration (FDA) on GMP 	promotions and online forums such as Kape't Kwentuhan	quality coffees in the country <ul style="list-style-type: none"> Assisted in the shipment and sale of coffee to London, US and Canada Conducted market planning activities for Caraga-based POs Organized a marketing and communication training on social media skills to enhance POs and MSAs capacity in utilizing social media platforms

Annex 4: Methodology

INTRODUCTION

The MTE is based on the reach of the project by June 30, 2021. The list of the project beneficiaries by June 30, 2021²⁸ consists of 9,498 individuals and 463 organization/firms. The table below provides the disaggregation of beneficiaries by type and region.

Geographical distribution of project beneficiaries is shown in Chapter 6: GIS Data.

Number of Project Beneficiaries by June 30, 2021, disaggregated by region and type

Region	Individuals						Firms/Organization				
	CS	GA	La	PS	P/F	Total	NGO/CS	PSF	PO	P/GA	Total
CAR	128	12	10	98	487	735	2	5	31	13	51
NCR	20	16	20	54		110	1	19	1	4	25
I	4	6		14	8	32		2	1	4	7
II	4	18		20	11	53		3	2	4	9
III				2	1	3			1		1
IV-A	50	2		20	25	97		2	6	5	13
IV-B				2		2		1			1
V					1	1					
VI	2	14		12	62	90		11	9	8	28
VII		2	4	14		20		5		1	6
VIII					1	1					
IX		6				6					
X	184	252	44	1,060	1,421	2,961	7	12	45	28	92
XI	382	212	62	430	1,777	2,863	5	34	39	26	104
XII	118	126	46	324	1,165	1,779	6	13	45	23	87
XIII	6	26	2	50	625	709	1	2	28	2	33
BARMM	4			2	30	36		1	3		4
Total	902	692	188	2,102	5,614	9,498	22	110	211	118	461 ²⁹

Legend: CS=Civil Society GA=Government Agency La=Laborer PS=Private Sector
P/F=Producer/Farmer
NGO/CS=Non-Government Organization or Civil Societies
PSF=Private Sector Firms (including private universities and colleges)

STUDY METHODOLOGY

The MTE used and analyzed primary and secondary data to address the study objectives and answer the questions in the Terms of Reference. Secondary data sources include the PhilCAFE Baseline Study, PhilCAFE Semi-Annual Progress Report from April 2019 to October 2021, and various Philippine coffee-related documents made available by the PSA and DA on their respective websites. Primary data done includes sample surveys, KIIs, and focus group discussions (FGDs). Overall, the MTE used mixed-methods research (triangulation) design.

Three (3) sample surveys were conducted to cover three (3) groups of respondents, namely (i) farmers, (ii) Market System Actors (MSA, individuals), and (iii) MSA Firms.

The FGDs were conducted amongst coffee farmers/producers with the following grouping:

- Adult male farmers
- Adult female farmers

²⁸ Updated value provided on 14 December 2021

²⁹ Two (2) firms with addresses outside of the Philippines were included in the list, Indochina Coffee (UK) and Venture Coffee (USA).

- Young male farmers
- Young female farmers
- Adult male IP/indigenous community coffee farmer members
- Adult female IP/indigenous community coffee farmer members

The KIs were selected from the list of beneficiaries representing the following beneficiary type:

- Academe
- Coffee Influencers and private firms
- National Government Agencies, Provincial Government Units and Civil Society/Non-Government Organization
- Financial Sectors

The assignment requires the conduct of initial comparison of project outcome; thus, the MTE is designed to capture both the treatment group and the comparison group (also referred to as the comparison group). The study team analyzed the Mindanao area in which project interventions are more focused and with higher coverage. The MTE examined if there was a significant change in outcomes (production yield, income) that can be attributed to the intervention of PhilCAFE. The DID with PSM was used in this analysis. The comparison group identified in the baseline study was used for this purpose. The first-year annual survey of PhilCAFE was also used as an alternative counterfactual. Summary of data collection vis-à-vis study population that is sampled is tabulated below.

Summary of Data Collection vis-à-vis Study Population (Treatment + Comparison)

Data Collection	Group	Population*
Farmer Survey	Treatment Group	5,614
	Comparison Group	Not applicable
MSA Survey		1,942
Firm Survey	Treatment Group	461
	Comparison Group	Not applicable
Focus Group Discussion		
Key Informant Interview		

*Project reach as of June 30, 2021

SAMPLING PROCEDURES AND SAMPLE SIZE

The sampling determination followed the design in the PhilCAFE baseline study which provided the foundation for a robust mid-term and end-line evaluation of the project. A multistage/clustering sampling was used to determine the samples needed for the mid-term evaluations farm level, MSA representatives, and firm-level surveys. The formula for calculating a sample for proportions was used for the three (3) quantitative surveys. Common parameters were used in the calculation which include a confidence level of 95%, a margin of error of 5%, and an equal sample proportion of 0.5. For each of the quantitative survey, the initial sample size, n_0 , computed to be 384.

Sample Size Calculation for Proportion, n_0 :

$$n_0 = \frac{Z^2 pq}{e^2}$$

where:
 $Z^2 = 95\%$ (the abscissa of the normal curve that cuts off an area α at the tails ($1 - \alpha$ which equals the desired confidence level))
 $e = 0.5$ (the desired level of precision, margin of error)
 $p = 0.5$ (the estimated proportion of an attribute that is present in the population, sample proportion)
 $q = 0.5 (1 - p)$
 n_0 is the sample size

$$n_0 = 384$$

Adjustment of the sample size for each of the quantitative surveys is done based on their respective population (finite population correction). The details of each survey are further discussed in the subsequent sections.

The list per type of beneficiaries provided by PhilCAFE was the basis for the random selection of survey participants in each cluster. A list of randomized samples was provided to each team before deployment as well as replacement (in case the initially selected respondent refused to participate in the survey or is not available).

Coffee Farmers Survey

Treatment Group. Farmer survey was conducted to collect information on PhilCAFE indicators at the farm-level. The sample size is calculated following the sampling strategy utilized in the baseline study. The parameters used include a confidence level of 95%, a margin of error of 5%, and an equal sample proportion of 0.5 which resulted in 384 samples. The computed sample size was adjusted to a finite population correction of 5,614 individual/coffee farmers reached by the PhilCAFE by June 30, 2021, and a design effect of 2 is applied to compensate for the reduction in precision due to clustering. The resulted minimum required sample size is 720. This sample comprises the treatment group used in generating multipliers for updating the values of the indicators of the project's PMP.

Adjusting the sample size to the finite population correction, n' :

$$n' = \frac{n_0}{1 + \frac{(n_0 - 1)}{N}}$$

where:
 $n_0 = 384$
 $N = 5,614$ (finite population, number of farmers beneficiaries reached by June 30, 2021)
 n' is the adjusted sample size

$$n' = 360$$

Adjusting further the sample size with the design effect, n :

$$n = n' \times d_{eff}$$

where:
 $d_{eff} = 2$ (design effect)

$$n = 720$$

The probability proportional to size (PPS) was used to identify sampled clusters. The clusters are the regions covered by the PhilCAFE project. The first stage is the selection of cluster regions in which larger clusters have a bigger probability of being sampled. The second stage is sampling the same number of individuals per cluster in which individuals in large clusters have a lower probability of being sampled. This is to compensate for the first stage so that each individual in the population has the same probability of being sampled. This resulted in CAR, Region X, Region XI, Region XII, and Region XIII as selected regions – with equal sample allocation of 144 individuals randomly selected considering stratification in each cluster.

Random selection of municipalities/cities was conducted to further distribute the sample. In the distribution of the sample within the municipality/cities, the sample was stratified based on (i) proportional to size distribution of gender (male and female), (ii) age group (less than 29 years old and 30 years and above), (iii) farm size (smallholders with less than 5 hectares land, and non-smallholders with more than 5 hectares land), and (iv) the type of coffee produced (fresh cherries, dried cherries, GCB, and mixed). This was done in consultation with PhilCAFE. The sample was distributed proportionally to size and based on available data³⁰. Randomization using random numbers was applied in the selection of survey participants and a list was provided to the field supervisors for the field interview. During the actual interview, replacements were done when needed based on agreed protocols. The table on the right shows the farmers survey sample size per Region and Municipality/City.

Region	Sample per cluster
CAR	144
X	144
XI	144
XII	144
XIII	144
Total	720

Detailed Distribution of 720 Farmers Survey Sample Respondents (farmer-beneficiaries, treatment)

Region	Province, Municipality/City	Sample Size	Gender		Age Group			Farm Size			Coffee Product				
			M	F	0-14	15-29	30 and up	≤5has	>5has	TBD	FC	DC	GCB	Mixed	TBD
CAR	Mountain Province														
	Bauko	59	19	40		5	54	6		53	3		1	2	53
	Sagada	85	11	74		3	82	13		72		2		11	72
10	Bukidnon														
	Impasug-ong	64	38	26		13	51	35	4	25	1	1	11	9	42
	Pangantucan	46	17	29		10	36	30	1	15	5	2	10	8	21
	Talakag	34	17	17	2	11	21	8	1	25	3		2		29
11	Davao del Sur														
	Davao City	80	51	29		11	69	26		54	1	3	8	8	60
	Santa Cruz	64	41	23		15	49	52		12	32	3	4	4	21
12	Sultan Kudarat														
	Sen. Ninoy Aquino	144	82	62	1	27	116	79	16	49	7	21	47	19	50
13	Surigao del Sur														
	Tagbina	144	72	72		13	131	82	8	54	3	7	41	10	83
	Total	720	348	372	3	108	609	331	30	359	55	39	124	71	431

Legend: FC Fresh Cherries DC Dried Cherries GCB Green Coffee Bean
TBD To be defined (no prior information on farm size and type of coffee produced by the beneficiary)

Comparison Group. The target participants for the comparison group, or comparison group, are those included in the baseline survey (1st wave) which covered 230 coffee farmers. As designed by PhilCAFE, no project intervention was introduced in the comparison group area to prevent contamination. For the MTE (2nd wave), a total of 224 farmer-participants were selected as the comparison group. The slight reduction in the comparison group in Sultan Kudarat was done to balance the number of treatment participants (see The Quasi-Experimental Design Sample below).

The Quasi-Experimental Design Sample

Region	Province	Municipality/City	Barangay/s	Number of Respondents	
				Treatment Group	Comparison Group
11	Davao del Sur	Davao City	Calinan and Sibulan	80*	
			Tambobong		80
12	Sultan Kudarat	Sen. Ninoy Aquino	Kuden and Tinalon	144*	
		Esperanza	Salumping		144
Total				224*	224

Note: *The Treatment Samples here are part of the 720 farmer-beneficiaries survey (treatment) respondents.

³⁰ The project beneficiary list contained cells with "to be determined (TBDs)" value because information are not made available or was not shared by the PhilCAFE partners.

Market System Actor (MSA) Representative Survey

The study team conducted a reevaluation of coffee value-chain actors and other private coffee-related enterprises representatives that participated in PhilCAFE activities. These MSAs are broadly categorized as civil society, government agencies, laborers, and private sectors. The sample size for this MSA representative survey (also referred to as MSA survey) was also determined using simple random sampling derived using a 95% confidence interval, 5% margin of error, and a population of 1,942 MSA representatives.

Adjusting the sample size to the finite population correction, n :

$$n = \frac{n_0}{1 + \frac{(n_0 - 1)}{N}}$$

where:
 $n_0 = 384$
 $N = 1,942$ (finite population, number of farmers beneficiaries reached by June 30, 2021)
 n is the adjusted sample size
 $n = 321$

The computed sample of 321 was adjusted to 327 after the distribution and rounding off. The total sample was distributed to four (4) randomly selected regions which accounted for 90% of the MSA project beneficiaries.

The 327 sample was further distributed proportionally to each type of MSA representative (i.e., civil society, government agency, laborer, and private sector). Further distribution proportional to size was done considering (i) sex (male and female) of the MSA respondents, (ii) age of representatives (≤ 29 years old and ≥ 30), (iii) farm size (smallholders: < 5 hectares and non-smallholders: ≥ 5 hectares), and (iv) type of coffee products produced (fresh cherries, dried beans, GCB and processed coffee products). Similar to the farmers survey, randomization using random numbers was also applied in the selection of survey participants and a list was provided to the field supervisors from the field interview. The distribution of MSA Survey sample size is presented in Tables below (Regional Distribution by Beneficiary Type and Detailed Distribution)

Regional Distribution of MSA Representatives Sample Respondents by Type

Region	Civil Society	Government Agency	Laborer	Private Sector	Producer	Total
CAR	3	10	1	10	-	93
10	4	37	4	30	69	75
11	34	22	6	40	-	102
12	1	22	4	30	-	57
Total	42	91	15	110	69	327

Detailed Distribution of MSA Representatives by Type

Region	Municipality/City	Sample Size	Gender		Age Group			Farm Size			Coffee Product				
			M	F	0-14	15-29	30 and up	≤5has	>5has	TBD	FC	DC	GCB	Mixed	TBD
Civil Society															
CAR	La Trinidad	3	2	1		1	2		1	2				1	2
10	Lantapan	4	3	1		3	1			4					4
11	Maco	34	19	15		32	2	1	5	28	2	1	2		29
12	Kalamansig	1		1			1			1					1
Government Agency															
CAR	Tabuk City	10	2	8		2	8			10					10
10	Gingoog City	17	10	7		5	12	2		15			1		16
	Maramag	20	7	13		4	16		1	19					20
11	Davao City	22	9	13		4	18		2	20					22
12	Bagumbayan	6	3	3		2	4			6					6
	Tacurong City	16	8	8		4	12			16					16
Laborer															
CAR	La Trinidad	1	1				1			1					1
10	Pangantucan	4	3	1		1	3		3	1			2	1	1

Region	Municipality/City	Sample Size	Gender		Age Group			Farm Size			Coffee Product				
			M	F	0-14	15-29	30 and up	≤5has	>5has	TBD	FC	DC	GCB	Mixed	TBD
11	Davao City	6	5	1		1	5			6					6
12	Bagumbayan	4	3	1		2	2			4					4
Private Sector															
CAR	Baguio City	6	5	1		3	3			6					6
	La Trinidad	4	2	2		1	3		1	3			1		3
10	Malaybalay City	30	22	8		1	29			30					30
11	Davao City	40	26	14		10	30	2		38			2		38
12	Bagumbayan	10	6	4		3	7			10					10
	Lebak	20	10	10		1	19			20					20
Producer															
10	Pangatucan	69	35	34		2	67		4	65	1	1	1	1	65
	Total	327	181	146		82	245	5	17	305	3	2	9	3	310

Legend: FC Fresh Cherries DC Dried Cherries GCB Green Coffee Bean
TBD To be defined (no prior information on farm size and type of coffee produced by the beneficiary)

MSA Firm-level Survey

Treatment Group. The MSA firm-level survey (also referred to as Firms Survey) covered MSA Firms which are categorized into (i) NGOs or Civil Societies, (ii) private sector firms including private universities and colleges, (iii) producers' organizations, and (iv) public sector firms including SUCs. The sample size for this survey was determined using simple random sampling derived using a 95% confidence interval and 5% margin of error, and a population of 463 firms and organization beneficiaries. The total sample (adjusted to the finite population correction) for the firms survey is 210.

Adjusting the sample size to the finite population correction, n :

$$n = \frac{n_0}{1 + \frac{(n_0 - 1)}{N}}$$

where:
 $n_0 = 384$
 $N = 463$ (finite population, number of firm beneficiaries reached by June 30, 2021)
 n is the adjusted sample size
 $n = 210$

The total sample was distributed to six regions which accounted for 91% of the project's reach for this beneficiary category. The six regions are CAR, NCR, Region X, Region XI, Region XII, and Region XIII. The distribution of the Firms survey sample is presented in Tables below (Regional Distribution by Beneficiary Type and Detailed Distribution).

Similar to the other quantitative surveys conducted during the actual interview, initially identified respondents who were not interested in joining the survey or were not available were replaced.

Regional Distribution of MSA Firms Sample Respondents by Type

Region	Non-Government Organization or Civil Societies	Private Sector Firms (Include private Universities and Colleges)	Producer's Organization	Public/Government Agencies (include SUCs)	Total
CAR	1	3	16	7	27
NCR	1	10	1	2	14
10	4	6	24	15	49
11	3	18	21	14	56
12	3	7	24	12	46
13	1	1	15	1	18
Total	13	45	101	51	210

Detailed Distribution of MSA Firms Survey Respondents by Type

Region	Municipality/City	Sample Size	Firm Size				Ownership					
			Micro Enterprise	Small Enterprise	Medium Enterprise	Large Enterprise	Association	Corporation	Cooperative	Partnership	Sole Proprietary	Public/GOCC
Non-Government Organization or Civil Societies												
CAR	La Trinidad	1	1				1					
NCR	Quezon City	1	1				1					
10	Gingoog City	2	2				2					
	Impasug-ong	1	1				1					
	Malaybalay City	1	1				1					
11	Davao City	3	2	1			1	2				
12	Alamada	2	2				1	1				
	Koronadal City	1	1					1				
R13	Bayugan City	1			1		1					
Private Sector Firms (includes Private Universities and College)												
CAR	La Trinidad	3	3					2			1	
NCR	Quezon City	6	5		1			1	1		4	
	Makati City	2	2					1			1	
	Taguig City	2	2					1			1	
10	Valencia City	1	1					1				
	Cagayan de Oro City	2	1	1				1	1			
	Claveria	2	1	1							2	
	Gingoog City	1	1								1	
11	Davao City	18	15	3				7		1	10	
12	General Santos City	3	3					1			2	
	Koronadal City	2	2					1		1		
	Sen. Ninoy Aquino	1	1					1				
13	Butuan City	1		1				1				
Producer's Organization												
CAR	Baguio City	2	2				1		1			
	La Trinidad	1	1				1					
	Bauko	7	7				6		1			
	Sagada	4	3	1			2	1	1			
	Tabuk City	2	2				1		1			
NCR	Quezon City	1	1						1			
10	Impasug-ong	6	3	3			5		1			
	Lantapan	5	5				5					
	Pangantucan	4	3	1			2		2			
	Iligan City	4	4				2		2			
	Claveria	5	4	1			5					
11	Davao City	10	4	4	2		6		4			
	Maco	8	6	2			8					
	Bansalan	3	1	1	1		1		2			
12	Lebak	5	3		2		4		1			
	Sen. Ninoy Aquino	8	1	5	2		7		1			
	Bagumbayan	3			3		3					
	Magpet	3	1	1	1		3					

Region	Municipality/City	Sample Size	Firm Size				Ownership					
			Micro Enterprise	Small Enterprise	Medium Enterprise	Large Enterprise	Association	Corporation	Cooperative	Partnership	Sole Proprietary	Public/GOCC
	Alabel	3	3				2		1			
	Tupi	2	2				2					
13	Tagbina	14	11	2	1		6		7	1		
	Butuan City	1				1	1					
Public/Government Agencies (includes SUCs)												
CAR	Baguio City	3	1	1	1							3
	La Trinidad	2	1	1								2
	Tabuk City	2	2									2
NCR	Taguig City	2	2									2
10	Iligan City	3	2	1								3
	Impasug-ong	1		1								1
	Lantapan	1		1								1
	Malaybalay City	2		1	1							2
	Pangantucan	1	1									1
	Cagayan de Oro City	5	1	1	2	1						5
	Gingoog City	2	1		1							2
11	Davao City	6	3		1	2						6
	Tagum City	3	2	1								3
	Nabunturan	3	1	1	1							3
	Digos City	3	1	1	1							3
12	Koronadal City	4	1	1	2							4
	Lebak	1		1								1
	Sen.Ninoy Aquino	1		1								1
	Tupi	2	1		1							2
	Tacurong City	4	1	1	1	1						4
13	Tagbina	1	1									1
	Total	210	137	42	26	5	83	23	28	3	22	52

Comparison Group. A comparison group for the firm survey was supplemented³¹ to the study. The comparison group of 10% (21 firms) of the total sample size of the firm survey treatment group was implemented that covered comparable firms in areas not covered by PhilCAFE. Firms for the comparison group were either provided by DTI or identified by the study team.

FGD and KII

The qualitative data collection techniques will generate learnings from non-government organizations or civil society groups, private sector firms including private universities and colleges, producers' organizations, and government agencies including SUCs. Specifically:

- FGD sessions will gather information from producers' organizations, IP communities, and the youth across the covered regions, and
- KII will collect data from leaders or heads of civil society groups, government agencies, NGOs, academe, and other coffee industry actors.

Participants and informants in the FGDs and KIIs were not respondents of any of this study's sample surveys. The tables below provides the distribution number of FGDs by region and KIIs by type of respondent, respectively. Changes in the KII

³¹ Not included in the TOR but is requested during the Inception Phase by PhilCAFE

distribution were brought about by the need to replace initially identified informants and the unavailability of informants as replacements.

Distribution of FGD by Region

Region	Producers Organization
CAR	3
10	3
11	2
12	4
13	1
BARMM	2
Total	15

Distribution of KII by Type

Region	No. of Informants/Sessions
Civil Society and NGOs	10
NGAs	8
PLGUs	10
Academe	5
Regional Coffee Council	8
Coffee Influencers and Private Sector	9
Total	50

DATA COLLECTION TOOLS AND TECHNIQUES

Quantitative Data Collection

The quantitative data collection was done through structured survey. The study team used Kobo Collect, an application that was employed during the baseline survey. Kobo Collect allows for more efficient data gathering, although understandably given the uneven internet access in remote areas, there could be instances that the conventional pen and paper will be used. Copies of the questionnaires are available in Annex 6.

Qualitative Data Collection

The qualitative data collection used pen and paper plus a recording device. After KII or FGD, the recording is transcribed and with the notes during the interview/discussion, the KII or FGD questionnaire is accomplished by the respective KII interviewer or FGD facilitator. Copies of the KII and FGD questionnaires are available in Annex 6.

TRAINING AND PRE-TEST

Training of Enumerators

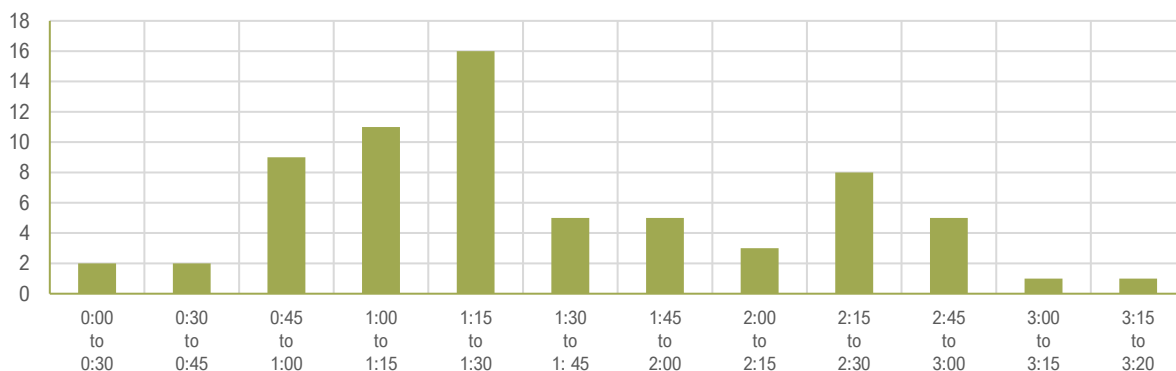
The Training of Enumerators was a 2-day online training conducted on 24-25 February 2022. The five (5) field supervisors with their respective enumerators attended the said training. The program of the said training which indicates the topics and sessions as well as the resource persons and/or facilitators of the sessions is included in Annex 6.

After the online training, coaching, and re-tooling of enumerators were done by their respective field supervisors – either one-on-one or by groups. During the updating and finalization of the quantitative questionnaires, an online retooling was again provided to the enumerators by the Statistician/Quantitative Data Expert.

Pre-Test Activities

The training was followed by the Pre-Test of the Farmers Surveys and FGD from 26 to 28 February 2022. The pre-test of farmer survey treatment group as well as the FGD was done in Barangays Alegre and Managa, Municipality of Bansalan, Davao del Sur. The farmer survey comparison group, on the other hand, was the baseline comparison group in Barangays Tibolo and Sibulan, Municipality of Santa Cruz, Davao del Sur.

The farmers survey questionnaire was estimated to take between 45 minutes to an hour. During the pre-test, the duration of the interviews varied significantly, ranging from around 15 minutes for farmers who had switched crops and no longer cultivated coffee) to a little over 3 hours for some participants. The figure below illustrates the number of respondents against the duration of their interview within a 15-minute range. The mode value is 1 hour (most common value with 9 out of 68) while in terms of the 15-min range, the most common range is between 1 hour and 15 minutes and 1 hour and 30 minutes (16 out of 68). The mean value is 1 hour and 39 minutes (1:39) while the median value is 1.5 hours (1:30). It is important to note that these durations do not account for intermittent breaks taken by some respondents who realized that the interview was taking longer than expected and needed to attend to other tasks such as cooking lunch or running errands. In contrast, the FGD had a predetermined duration of 2 hours, which aligned with the estimated time. For more details, please refer to Annex 6, the Pre-Test Report for the Farmers Survey and FGD.



Number of Respondents vs Duration of Interview (range in hh:mm)

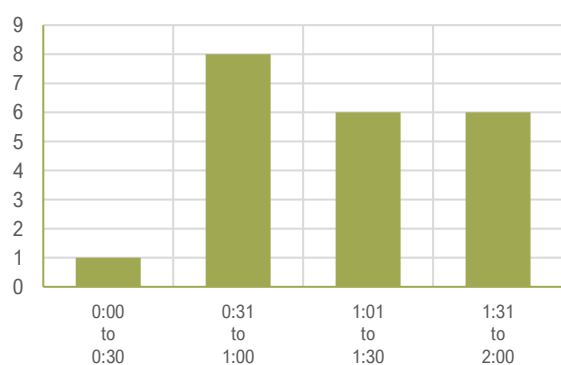
The Pre-Test of the MSA and Firms Survey was done from 10 to 16 March 2022 at the following areas:

- CAR | Sagada, (Mountain Province)
- Region 10 | Lantapan and Malaybalay City (Bukidnon), Gingoog City (Misamis Oriental)
- Region 11 | Maco, Nabunturan, and Pantukan (Davao de Oro), Talaingod (Davao del Norte), Davao City (Davao del Sur)
- Region 12 | Alamada and Kidapawan City (North Cotabato)

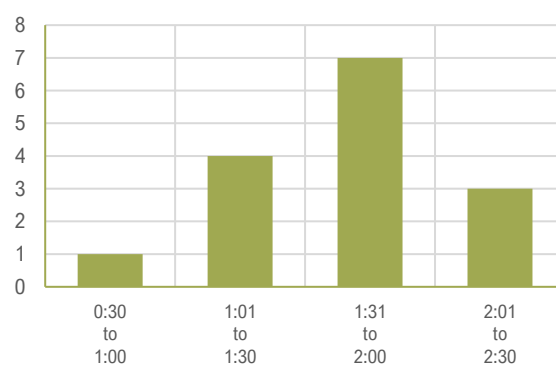
The MSA survey questionnaire was estimated to take between 30 minutes to an hour. During the pre-test, the duration of interview alone ranged from around 30 minutes (interviewed MSA who belongs to a financial services cooperative) to about 2 hours. Figure below (left) presents the number of respondents against the duration of their interview in a 30-minute spread range. The mode value is 1 hour – that is the most common value with 8 out of 21. The mean value is 1 hour and 20 minutes (1:20) and the median value is 1.5 hours (1:30).

The Firms survey is estimated to take between 30 minutes to an hour. During the pre-test, the duration of interview alone ranged from around 1 hour to about 2 hours and 30 minutes. Figure below (right) presents the number of respondents against the duration of their interview in a 30-minute spread range. The mode value is 2 hours (most common value with 6 out of 15) while in terms of 30-min range, the most common is between 1:31 to 2:00 (7 out of 15). The mean value is 1 hour and 50 minutes (1:50) and the median value is 2 hours.

Annex 6 includes the Pre-Test Report for the MSA and Firms Survey.



MSA Survey Pre-Test: Number of Respondents vs Duration of Interview (range in hh:mm)



Firms Survey Pre-Test: Number of Respondents vs Duration of Interview (range in hh:mm)

ACTUAL CONDUCT OF SURVEY

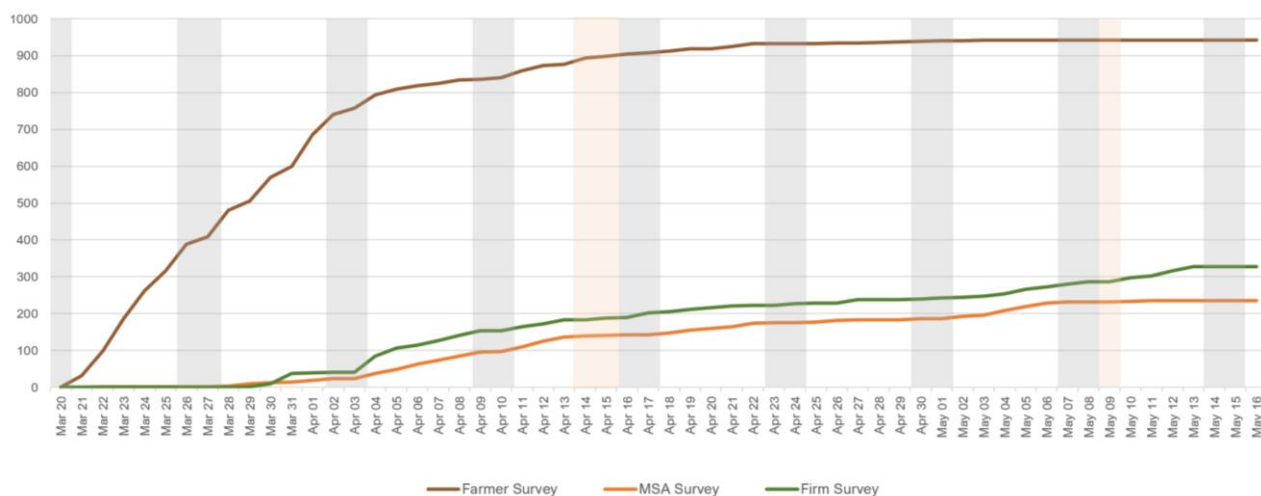
The mechanics used for the primary data gathering vary depending on the type of respondent, data collection method, and location. The table below briefly presents the mechanics used by data collection method. There were very rare cases

during the latter part of the field work, however, that face-to-face interviews were done through online/telephone. This was considered upon the request of those willing-to-participate project beneficiaries who were either out-of-town during the survey or who does not prefer face-to-face interview (due to health/pandemic/personal reasons), and if the list of remaining potential respondents/replacements are close be becoming insufficient in achieving the desired target number respondents.

Data Collection Method and Mechanics

Data Collection	Group	Mechanics
Farmer Survey	Treatment Group and Comparison Group	Face-to-face interview
MSA Survey		For those respondents within the region with farmer survey, as much as possible face-to-face interview. For those respondents outside the region of farmer survey, use blended or combination approach
Firm Survey	Treatment Group	Face-to-face interview
	Comparison Group	Through online and/or telephone/mobile phone
Focus Group Discussion		Face-to-face interview
Key Informant Interview		For those respondents within the region with farmer survey, as much as possible face-to-face interview. For those respondents outside the region of farmer survey, use blended or combination approach

The actual data gathering was done from 21 March 2022 to 16 May 2022 with 5 field supervisors and 25 enumerators. The progress of quantitative data gathering over the duration of the field work is presented in the figure below.



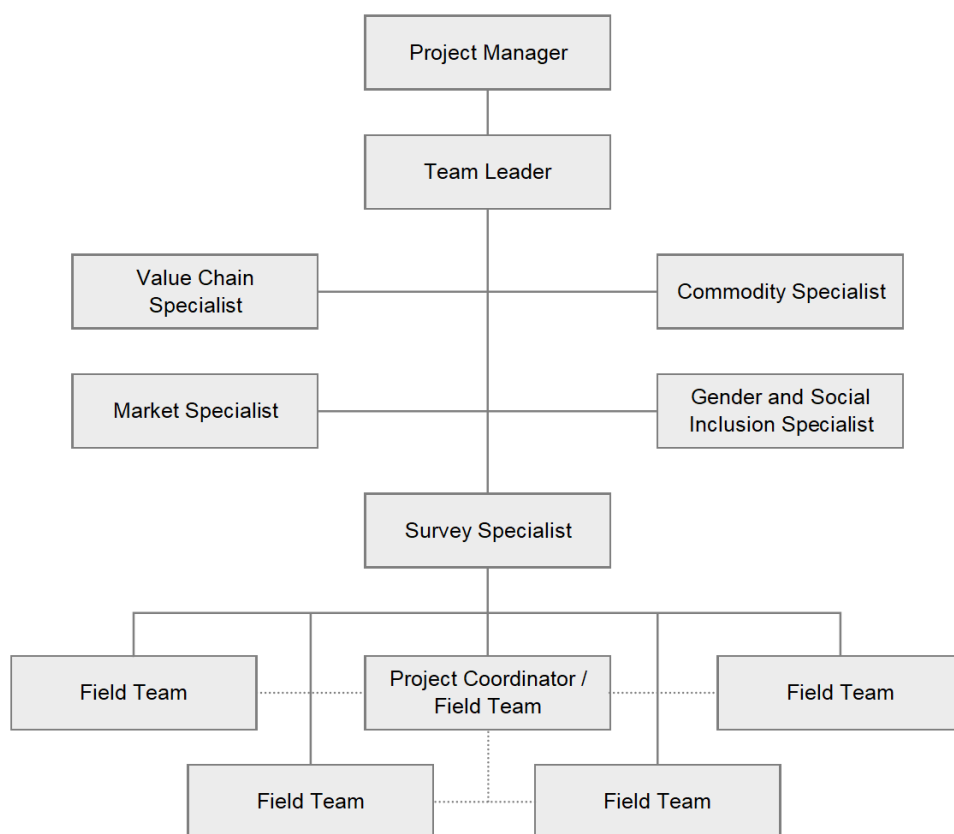
Running Total of Interviews Done per Day from March 21 to May 16, 2022, per survey (i.e., farmers survey, MSAs survey, firms survey)

The snags and difficulties experienced by the study team as well as realities on the ground which contributed to the delays during the actual data gathering are discussed in succeeding sections.

SURVEY TEAMS MANAGEMENT AND OPERATIONS

Team Composition

The study team consists of the Project Manager, Team Leader, Value Chain Specialist, Survey Specialist, Market Specialist, Gender and Social Inclusion Specialist, Commodity Specialist and supported by a Project Coordinator and five field teams. The team structure is illustrated in the image below.



Management and Operations

The whole study area was initially divided into 5 areas, (i) CAR and NCR, (ii) Region X, (iii) Region XI, (iv) Region XII and BARMM, and (v) Region XIII – that is one for each field team. Each team consists of 3 to 7 enumerators – depending on the number of respondents or informants to be covered in an area. Field Supervisors closely supervised and monitored their respective enumerators and immediately provided feedback to the Team Leader, Survey Specialist, and/or Subject Matter Specialists for issues and concerns encountered on the field. As much as possible, enumerators go by pairs with each one bringing their corresponding tablet, a power bank, identification papers, calculator, and personal protective gear (COVID-19 pandemic protocol requirements).

ISEDl sought the support of Subject Matter Specialists (gender and social inclusion, commodity, value chain, and marketing experts) to provide more insights on the context and the MTE results. Lastly, the office staff of ISEDl extend financial, administrative, logistical, and technical/IT support.

Communication Platform and Data Repository

Being the most common communication platform across the study team including the enumerators, Facebook Messenger's group chat was used by the team and respective groups to easily communicate to each other as well as share documents or photos. Google Sheet³² and Google Drive were also used to exchange and store data and documents respectively.

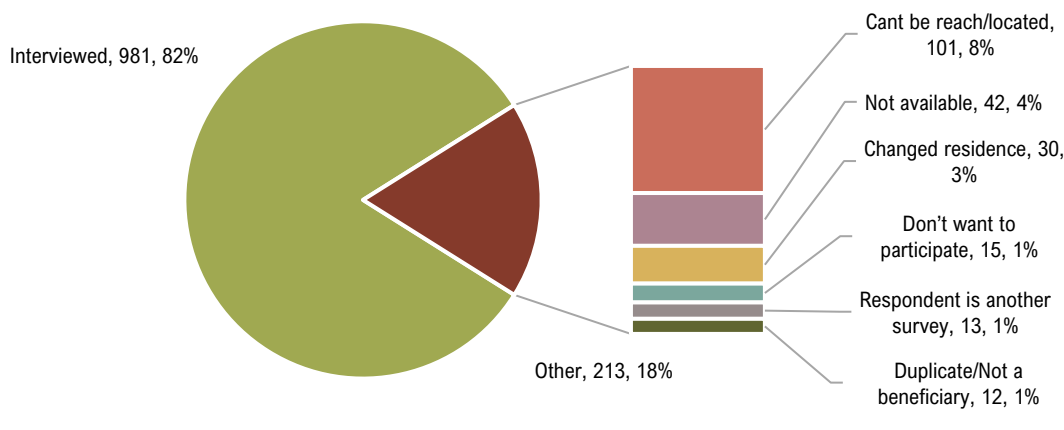
³² <https://www.google.com/sheets/about/>

Training and Re-tooling

Besides the online training of enumerators, retooling was provided to the enumerators on the MSA and Firms Survey questionnaires since the MSA and Firms Survey commenced a week after the Farmer Survey started. Some enumerators were also reassigned to other areas to support other groups.

Validating Project Beneficiaries as Respondents

The field team tried to locate or reach a total of 1,194 potential respondents where only 1,093 were contacted and/or located. Of those contacted and/or located, 42 were not available for the interview, 30 have change residence and are residing about the study area, 15 don't want to participate due to various reasons, 9 are duplicates (i.e., same person, same household), and 3 were found to be not valid project beneficiary. Thirteen (13) of those potential respondents were also replaced since they were already interviewed (i.e., sample survey respondent but is also a KII respondent).



Distribution of list of sample respondents plus replacements

DATA PROCESSING AND MANAGEMENT

Quantitative Data

The survey database received a total of 1,506 forms consisting of 942 farmers survey forms, 328 MSA survey forms, and 236 firm survey forms by the end of the field work.

During the actual data gathering, the daily process of interviews was being supervised and/or monitored by the respective Field Supervisors. Weekly progress by area was provided by each Field Supervisor by updating the team's active GoogleSheet where the team Leader extracts field information and prepares the weekly progress (on the ongoing data collection) for submission to PhilCAFE. At the same time, daily progress of uploaded forms was monitored by the Survey Specialist via the KoboToolbox Dashboard. Access to the KoboToolbox Dashboard was also provided to PhilCAFE M&E Director for quick updates on the progress of uploaded forms.

The Survey Specialist also performed random audits for content completeness, range, and consistency – and immediately called the attention of the concerned Field Supervisor when inconsistencies were found. A few days after the onset of the data gathering, the Survey Specialist circulated a guide to assist the enumerators and field supervisors in reviewing specific questions where inconsistencies were found.

The quantitative data were collected using KoboCollect³³ – an android data collection app of KoBoToolbox³⁴. The collected data was stored at KoBoToolbox server. The dataset from KoBoToolbox server was exported to Microsoft Excel for the final data audit and checked for errors, including transpositions, coding, consistency, and range.

Qualitative Data

The recorded KIIs and FGDs were transcribed with the interviewers notes and later translated (to English from local dialect). The audio recordings and processed files (i.e., transcribed, translated) were uploaded in an online shared folder using GoogleDrive for easy access and storage.

³³ <https://play.google.com/store/apps/details?id=org.koboc.collect.android>

³⁴ <https://www.kobotoolbox.org/>

Recording of the KIIs and FGDs are uploaded and accessible at GoogleDrive³⁵. Annex 7 are the 15 FGDs and 50 KIIs which were transcribed and translated.

DATA ANALYSIS AND PRESENTATION

Quantitative Data

Descriptive Analysis. Descriptive analysis of data was done in Stata V.10 software and Microsoft Excel. Graphical presentation of the data was conducted in Excel.

Regression and Probit Analysis. Regression and Probit analysis was used to help understand how the typical value of the dependent variable (or “criterion variable/outcomes”) changes when any one of the independent variables is varied, while the other independent variables are held fixed. Logistic analysis was also used to understand the factors of production and post-production technology adoption.

Difference in Difference. To determine the initial impact of the PhilCAFE project at the farm level, the DID Analysis which provides unbiased impact estimate of the program was undertaken. Propensity score matching was utilized to compare possible causes of differences in trajectory ensuring that parallel assumption holds. Perfect matching would require matching each individual or unit in the treatment group with a person or unit in the comparison group that is identical on all relevant observable characteristics, such as age, education, religion, occupation, wealth, attitudes to risk, and so on³⁶. This is not possible: but nor is it necessary. There are other matching methods, however, which are practical and do ensure balance – one of the most common approaches is propensity score matching. In propensity score matching, matching is not on every single character but a single number: the propensity score.

The propensity score is the estimated probability of being in the treatment group given the observable characteristics from a regression model of participation³⁷. It creates a comparison group from untreated observations by matching treatment observations to one or more observations from the untreated sample, based on observable characteristics. Treated units are matched to untreated units with a similar propensity score.

The sample utilized in the analysis are data from region 11 and 12 in which a quasi-experimental design was established. There are six (6) project outcome indicators examined namely, yield per hectare converted to GCB in kgs/ha, total coffee sales, total annual income of the farmers, post-harvest losses, farm employment, and annual cost of production.

Qualitative Data

For the KIIs and FGDs, thematic analysis worksheet was used in identifying the concepts/codes and themes/categories of the translated text segments from each uploaded FGDs and KIIs accomplished forms. Qualitative Analysis Codebook of the 15 FGDs and 50 KIIs are in Annex 7.

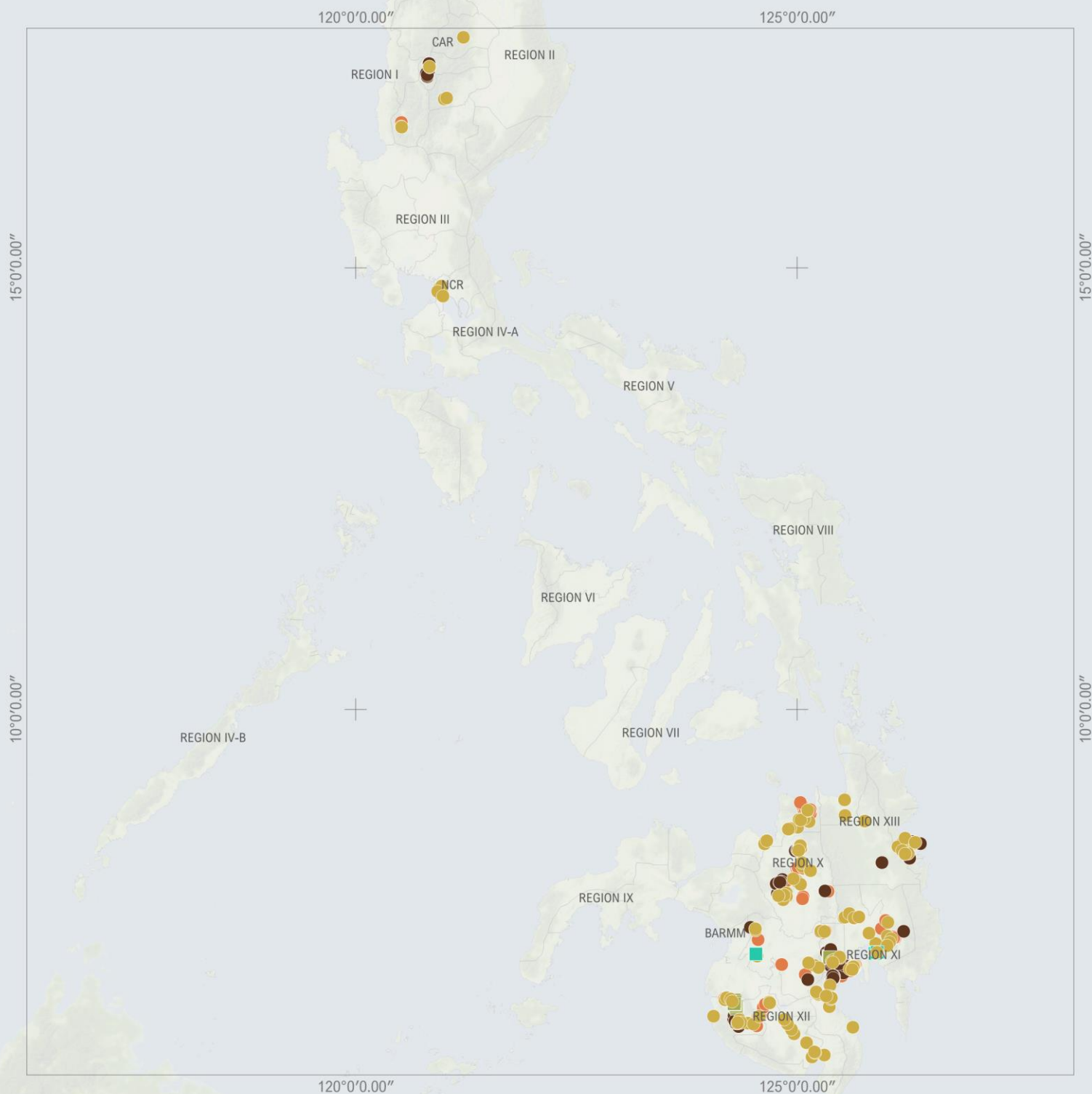
GIS DATA AND REPORTING

Part of the data gathering was taking the geotagging the location of the interview. This, however, is done using an android tablet and is dependent on the accuracy of Google Map’s geotagging facility and availability of Internet connection in the area. A map showing the location (geotag) of the interview and reporting/uploading of responses is provided on the next page.

³⁵ Permission to access needs to be acquired from PhilCAFE.

³⁶ White, H. and D. Raitzer. Impact Evaluation of Development Interventions. 2017. Retrieved from <https://www.adb.org/sites/default/files/institutional-document/390086/guide-impact-evaluation-development-interventions.pdf>

³⁷ Rosenbaum R. and D. Rubin. The Central Role of the Propensity Score in Observational Studies for Causal Effects. 1983. Retrieved from http://www.stat.cmu.edu/~ryantibs/journalclub/rosenbaum_1983.pdf



FARMERS, MSA, AND FIRM SURVEY

Source: Study Team - ISEDI-AdDU, 2022

Legend:

Firms Survey

Control/Comparison

Treatment

Farmers Survey

Control/Comparison

Treatment

MSA Survey

MSA Survey



Scale: 1:6,000,000

0 10 20 30 km

PRS: WGS 84 UTM Zone 51 N

Annex 5: Tables and Diagrams

Table 17: PMP Indicators (does not include indicators from routine data collection as indicated by PhilCAFE), Year 3 Targets and Mid-term Values

Indicator Number	Performance Indicator	Year 3 Target	MidTerm Values
4	Value of annual sales of farms and firms receiving USDA assistance (USD)	\$ 15,061,451	\$ 1,847,763
5	Volume of commodities sold by farms and firms receiving USDA assistance (in MT)	14,739	1,327
6	Number of Jobs attributed to USDA assistance	3,900	4,418
7	Value of coffee exported from Philippines (in USD)		No data
8	Yield of targeted agricultural commodities among program participants with USDA assistance (in MT-GCB)	0.65	0.38
9	Number of hectares under improved management practices or technologies that promote improved climate risk reduction and/or natural resources management with USDA assistance	4,280	2,860
10	Number of hectares under improved management practices or technologies with USDA assistance		4,513.48
11	Number of individuals in the agriculture system who have applied improved management practices or technologies with USDA assistance	15,326	3,474
18	Number of farmers able to mention at least three farm management practices	9,324	4,808
19	Number of host government or community derived risk management plans formally proposed, adopted, implemented or institutionalized with USDA assistance	19	2
22	Number of farmers and firms adding value to postproduction agricultural products	160	1,887
23			
24	Number of registered firms (including POs and Enterprises) in target sectors that obtain certification	17	9
25	Number of supported POs and Enterprises reporting increased efficiency in their post-production processes	130	16
26	Number of POs and enterprises who are using at least three improved practices like dehulling, fermentation, pulping, drying, proper storage, etc. for coffee	40	4
27	Total increase in installed storage capacity (dry or cold storage) as a result of USDA	135	688
28	Number of enterprises that invest in improved post-harvest infrastructure (including grant support)	30	22
29	Number of enterprises using improved media in marketing products	100	77
31	Number of supported firms reporting increased efficiency in their transaction		Not included
32	Number of supported buyer/seller groups with increased management capacity		Not included
34	Number of policies, regulations and/or administrative procedures in each of the following stages of development as a result of USDA assistance (FTF 8)	6	10

Table 18: Percentage of farmers who confirmed their participation or they received assistance due to PhilCAFE, per type of intervention

Region	Technical Assistance or Training		Some Form of Financing or Resources		Participated in any event	
	No	%	No	%	No	%
CAR	139	96.5	0	0.0	34	23.6
Region 10	94	65.3	7	4.9	57	39.6
Region 11	137	93.8	18	12.3	106	72.6
Region 12	141	97.2	7	4.8	16	11.0
Region 13	144	99.3	77	53.1	89	61.4
Overall	655	90.5	109	15.1	302	41.7

Table 19: Distribution of Respondents by Gender, and by Region, Treatment (n=724) and Comparison (n=219)

Type	Treatment							Comparison			
	Region					Total	%	Region		Total	%
	CAR	10	11	12	13			11	12		
Adult	140	114	121	123	137	635	87.7	66	138	204	93.2
Female	116	53	46	50	71	336	46.4	30	53	83	37.9
Male	24	61	75	73	66	299	41.3	36	85	121	55.3
Youth	4	30	25	22	8	89	12.3	9	6	15	6.8
Female	4	17	16	10	5	52	7.2	1	1	2	0.9
Male		13	9	12	3	37	5.1	8	5	13	5.9
Overall	144	144	146	145	145	724	100	75	144	219	100
%	19.9	19.9	20.2	20	20	100		34.2	65.8	100	

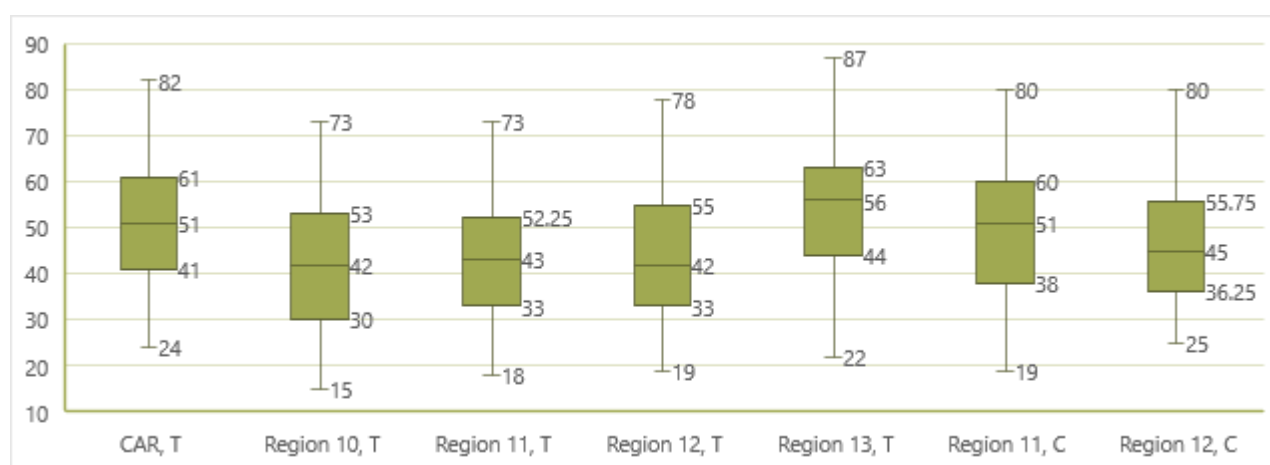


Figure 26: Distribution of Age of Respondents (top = upper extreme, top box = upper quartile, mid box = median, bottom box = lower quartile, bottom = lower extreme, outliers not included; T = Treatment, C = Comparison)

Table 20: Average Age of Respondents, by Region, Treatment (n=724) and Comparison (n=219)

Region	mean	sd	se(mean)	Region	mean	sd	se(mean)
Treatment	46.65	13.93	0.52	Comparison	47.89	14.39	0.97
CAR	50.39	12.11	1.01	11	48.96	15.12	1.75
10	42.32	13.30	1.11	12	47.33	14.01	1.17
11	43.66	13.57	1.12				
12	43.66	13.00	1.08				
13	53.24	14.26	1.18				

Table 21: Distribution of Respondents by Marital Status and by Region, Treatment (n=724) and Comparison (n=219)

Marital Status	Region					Overall	
	CAR	10	11	12	13	f	%
Treatment	144	144	146	145	145	724	100
Married	121	114	99	113	117	564	77.9
Single	5	15	33	12	8	73	10.1
Widow/Widower	13	11	5	8	17	54	7.5
Annulled	1	-	-	-	-	1	0.1
Common Law/Live-in	2	4	5	7	3	21	2.9
Separated/Divorced	2	-	4	5	-	11	1.5
Comparison	-	-	75	144	-	219	100
Married	-	-	60	119	-	179	81.7
Single	-	-	7	3	-	10	4.6
Widow/Widower	-	-	3	16	-	19	8.7
Common Law/Live-in	-	-	3	5	-	8	3.7
Separated/Divorced	-	-	2	1	-	3	1.4

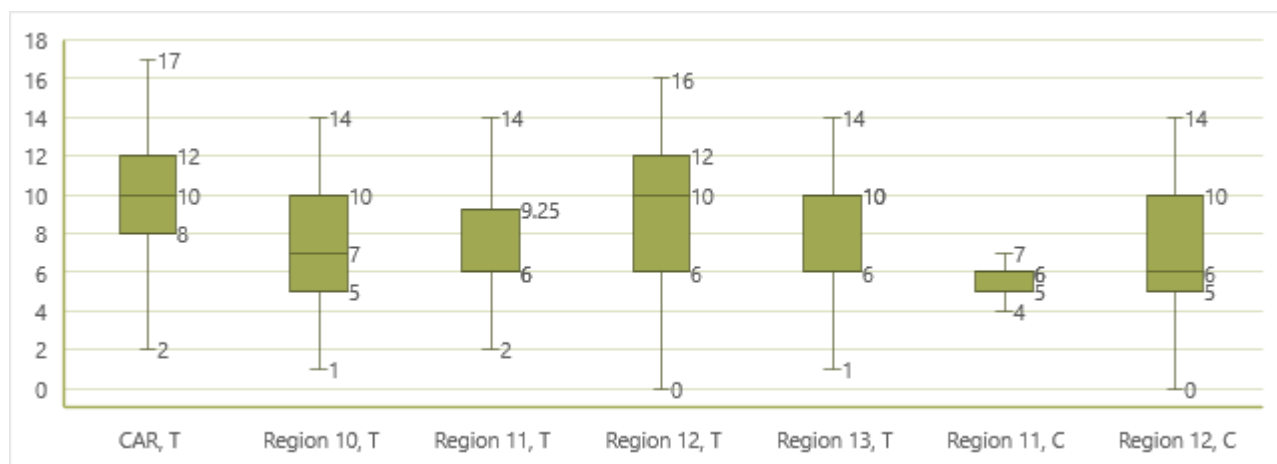


Figure 27: Distribution of Number of Years of Formal Education (top = upper extreme, top box = upper quartile, mid box = median, bottom box = lower quartile, bottom = lower extreme, outliers not included; T = Treatment, C = Comparison)

Table 22: Average Number of Years of Formal Education of Respondents, by Region, Treatment (n=724) and Comparison (n=219)

Region	mean	sd	se(mean)
Treatment	8.49	3.31	0.12
CAR	9.98	2.88	0.24
10	7.33	2.95	0.25
11	7.03	3.26	0.27
12	9.17	3.52	0.29
13	8.97	2.95	0.24
Comparison	6.62	3.08	0.21
11	6.21	2.68	0.31
12	6.83	3.26	0.27

Table 23: Distribution of Respondents by Ethnicity and by Region, Treatment (n=724)

Ethnic group	Region, f					Overall	
	CAR	10	11	12	13	f	%
Aplai	10	-	-	-	-	10	1.4
Bagobo	-	-	2	1	-	3	0.4
Bicolano	-	-	-	1	-	1	0.1
Bisaya	-	-	1	1	1	3	0.4

Ethnic group	Region, <i>f</i>					Overall	
	CAR	10	11	12	13	<i>f</i>	%
Blaan	-	-	-	1	-	1	0.1
Boholano	-	1	-	-	32	33	4.6
Bol-Anon	-	2	-	-		2	0.3
Camiguíño	-	-	-	-	1	1	0.1
Cebuano	-	20	12	41	65	138	19.1
Dabawenyo	-	-	1	-	-	1	0.1
Guingan/Clata	-	-	1	-	1	2	0.3
Higaonon	-	65	-	-	-	65	9
Igorot	109	-	-	-	-	109	15.1
Ilocano	-	-	-	16	1	17	2.3
Ilocano/Cebuano	-	-	1	-	-	1	0.1
Ilonggo	-	-	-	69	6	75	10.4
Kamayo	-	-	-	-	20	20	2.8
Kankanaey	25	-	-	-	-	25	3.5
Kapangpangan	-	-	-	-	1	1	0.1
Leytenio	-	-	-	-	5	5	0.7
Manobo	-	6	-	-	-	6	0.8
Manobo Dulangan	-	-	-	2	-	2	0.3
Manobo/Ubo	-	19	1	10	3	33	4.6
Matigsalog	-	-	2	-	-	2	0.3
Misamismon	-	-	-	-	1	1	0.1
Surigaonon	-	-	-	-	2	2	0.3
Tagabawa	-	-	123	-	-	123	17
Talaandig	-	31	-	-	-	31	4.3
Tausog	-	-	1	-	-	1	0.1
Tiduray	-	-	1	2	-	3	0.4
Waray	-	-	-	1	6	7	1

Table 24: Distribution of Respondents by Ethnicity and by Region, Comparison (n=219)

Ethn	Region, <i>f</i>		Overall	
	11	12	<i>f</i>	%
Bagobo	13	-	13	5.94
Bisaya	1	-	1	0.46
Boholano	1	-	1	0.46
Cebuano	3	10	13	5.94
Dulangan	-	9	9	4.11
Guingan/Clata	9	-	9	4.11
Igorot	-	1	1	0.46
Ilianen	-	1	1	0.46
Ilocano	-	11	11	5.02
Ilonggo	-	21	21	9.59
Lambangian	-	1	1	0.46
Mandaya	-	1	1	0.46
Manobo Biit	-	1	1	0.46
Manobo Dulangan	-	7	7	3.2
Manobo/Ubo	41	36	77	35.16
Meztiso Tiduray	-	1	1	0.46
Tagabawa	6	-	6	2.74
Tagalog	-	1	1	0.46
Tboli	1	-	1	0.46
Tiduray	-	43	43	19.63

Table 25: Distribution of Respondents by Organizational Affiliation of Household Head, by Region, Treatment (n=724) and Comparison (n=219)

Region	Affiliated with Organization		Cooperative /Farmer Association		Women's Group		Political Group		Religious Group		Youth Group		Cultural Association		Indigenous People Group		Others	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%
Treatment																		
CAR	140	97.2	140	97.2	16	11.1	1	0.7	3	2.1	-	0	2	1.4	7	4.9	4	2.8
10	139	96.5	135	93.8	7	4.9	-	0	4	2.8	2	1.4	-	0	33	22.9	-	0
11	134	91.8	128	87.7	1	0.7	1	0.7	4	2.7	3	2.1	-	0	7	4.8	6	4.1
12	140	96.6	131	90.3	32	22.1	5	3.4	5	3.4	-	0	1	0.7	1	0.7	5	3.4
13	139	95.9	139	95.9	1	0.7	-	0	-	0	-	0	-	0	-	0	-	0
Overall	692	95.6	673	93	57	7.9	7	1	16	2.2	5	0.7	3	0.4	48	6.6	15	2.1
Comparison																		
11	22	29.3	9	12	-	0	-	0	-	0	-	0	1	1.3	11	14.7	1	1.3
12	106	73.6	86	59.7	5	3.5	2	1.4	12	8.3	-	0	1	0.7	18	12.5	1	0.7
Overall	128	58.4	95	43.4	5	2.3	2	0.9	12	5.5	-	0	2	0.9	29	13.2	2	0.9

Table 26: Average Household (HH) size, distribution of members per age and sex, Treatment (n=724) and Comparison (n=219)

Region	Mean HH Size	0 - 14 years old		15 - 29 years old		30 - 44 years old		45 - 60 years old		More than 60 years old	
		Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Treatment	4.5	0.5	0.7	0.6	0.7	0.4	0.5	0.4	0.4	0.2	0.2
CAR	5.6	0.7	0.9	0.8	0.8	0.4	0.5	0.4	0.5	0.3	0.3
10	4.2	0.5	0.5	0.6	0.7	0.4	0.5	0.4	0.4	0.1	0.1
11	3.7	0.4	0.5	0.4	0.6	0.3	0.4	0.4	0.5	0.1	0.1
12	4.4	0.6	0.7	0.6	0.7	0.4	0.5	0.3	0.4	0.2	0.2
13	4.5	0.5	0.7	0.6	0.6	0.3	0.4	0.4	0.4	0.3	0.4
Comparison	4.6	0.6	0.7	0.5	0.7	0.4	0.5	0.4	0.4	0.2	0.2
11	4.5	0.5	0.6	0.6	0.7	0.4	0.3	0.4	0.4	0.2	0.3
12	4.7	0.6	0.8	0.5	0.7	0.5	0.5	0.3	0.4	0.2	0.2

Note: closer to 1 value for the distribution implies that majority of the household have at least 1 member in that age classification.

Table 27: Average of the count of household members involved with on-farm work, by age and sex, Treatment (n=724) and Comparison (n=219)

Region	15 - 29 years old		30 - 44 years old		45 - 60 years old		More than 60 years old	
	Female	Male	Female	Male	Female	Male	Female	Male
Treatment	0.2	0.3	0.2	0.3	0.2	0.3	0.1	0.1
CAR	0.4	0.4	0.2	0.2	0.3	0.3	0.2	0.2
10	0.2	0.4	0.3	0.4	0.2	0.3	0.0	0.1
11	0.0	0.1	0.1	0.2	0.1	0.3	0.0	0.1
12	0.1	0.4	0.3	0.4	0.2	0.3	0.0	0.1
13	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
Comparison	0.1	0.3	0.2	0.3	0.2	0.3	0.1	0.2
11	0.0	0.2	0.0	0.2	0.1	0.3	0.0	0.1
12	0.2	0.4	0.3	0.4	0.3	0.4	0.1	0.2

Note:
0.1 means about 1 for every 10HH
0.2 means about 2 for every 10HH
0.3 means about 3 for every 10HH
0.4 means about 1 for every 5HH

Table 28: Average of the count of household members involved with off-farm work, by age and sex, Treatment (n=724) and Comparison (n=219)

Region	15 - 29 years old		30 - 44 years old		45 - 60 years old		More than 60 years old	
	Female	Male	Female	Male	Female	Male	Female	Male
Treatment	0.0	0.1	0.1	0.2	0.1	0.1	0.0	0.0
CAR	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1
10	0.1	0.2	0.1	0.2	0.1	0.2	0.0	0.0
11	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0
12	0.0	0.1	0.1	0.2	0.0	0.1	0.0	0.0
13	0.0	0.0	-	0.1	-	0.0	0.0	0.0
Comparison	0.0	0.2	0.1	0.1	0.1	0.1	0.0	0.0
11	0.1	0.2	0.1	0.1	0.1	0.1	0.0	0.0
12	0.0	0.2	0.1	0.2	0.0	0.1	0.0	0.0

Note:
0.1 means about 1 for every 10HH
0.2 means about 2 for every 10HH

Table 29: Average of the count of household members involved with non-farm work, by age and sex, Treatment (n=724) and Comparison (n=219)

Region	15 - 29 years old		30 - 44 years old		45 - 60 years old		More than 60 years old	
	Female	Male	Female	Male	Female	Male	Female	Male
Treatment	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
CAR	0.1	0.2	0.1	0.2	0.1	0.2	0.0	0.1
10	0.1	0.1	0.1	0.1	0.1	0.1	-	0.0
11	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0
12	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0
13	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.0
Comparison	0.1	0.1	0.1	0.1	0.0	0.1	0.0	-
11	0.1	0.1	0.1	0.2	0.1	0.0	-	-
12	0.0	0.0	0.0	0.1	0.0	0.1	0.0	-

Note:
0.1 means about 1 for every 10HH
0.2 means about 2 for every 10HH

Table 30: Average household income (PhP) and share of coffee to total income (%), Treatment (n=724)

Income Sources	Region					Overall		
	CAR	10	11	12	13	mean	sd	se (mean)
On-farm Income (Annual)								
Income from Coffee farming/production and/or processing	6,548.0	8,400.2	8,142.6	56,914.4	6,089.7	17,233.4	33,347.7	1,239.4
Products from other crops farming/production and/or processing	17,399.3	47,217.4	41,507.1	36,385.5	42,302.0	36,981.4	55,422.6	2,059.8
Livestock and poultry raising	21,878.3	4,263.0	2,591.8	4,741.4	1,536.8	6,979.4	18,679.6	694.2
Average Annual On-farm Income	45,825.6	59,880.6	52,241.5	98,041.3	49,928.6	61,194.2	66,831.6	2,483.8
Off-farm Income (Monthly)								
Farm labor for other farms doing land preparation, input application, weeding, harvesting, hauling and others	2,100.0	1,637.5	753.8	960.0	1,067.0	1,301.3	2,819.2	104.8
Total Annual Off-farm Income	25,200.0	19,650.0	9,045.2	11,520.0	12,803.4	15,615.9	33,830.9	1,257.3
Total Annual Off-farm Income	71,025.6	79,530.6	61,286.7	109,561.3	62,732.0	76,810.0	70,928.7	2,636.0
Non-farm Income (Monthly)								
Micro/small enterprise (business activity)	314.2	860.8	719.2	1,328.7	2,432.4	1,132.0	7,070.1	262.8
Skilled labor (carpenter, mason, mechanic)	1,150.0	444.3	219.2	373.1	122.8	460.6	2,008.8	74.7
Unskilled (household help, store helper)	731.9	209.0	58.2	79.3	71.7	229.1	1,422.6	52.9

Income Sources	Region					Overall		
	CAR	10	11	12	13	mean	sd	se (mean)
Driving (motorcycles, jeeps, buses)	542.0	272.9	61.6	596.6	81.4	310.3	2,089.0	77.6
Employment (government or private)	3,708.4	1,461.8	3,204.1	2,486.9	2,433.4	2,659.9	7,370.9	273.9
Professional services (as doctor, teacher, lawyer, accountant, etc.)	1,208.3	192.5	308.2	1,514.5	818.3	808.0	4,773.0	177.4
Remittances	281.9	-	950.7	107.6	679.3	405.4	3,554.0	132.1
Pension, relief (assistance from government such as 4Ps)	891.4	820.1	782.5	920.4	1,910.5	1,065.2	4,477.3	166.4
Other sources of income not mentioned	1,395.9	289.3	685.7	442.1	458.4	653.8	2,545.7	94.6
Total Annual Non-farm Income	122,689.7	54,609.9	83,873.7	94,189.6	108,097.9	92,691.1	166,821.9	6,199.9
Total Annual Income	193,715.3	134,140.4	145,160.4	203,750.9	170,829.9	169,501.2	179,820.1	6,683.0
Percentage (%) Contribution of Coffee Farming to Annual Income	4.7	9.3	10.5	34.6	7.7	13.4	21.7	0.8

Table 31: Average household income (PhP) and share of coffee to total income (%), Comparison (n=219)

Income Sources	Region		Overall		se (mean)
	11	12	mean	sd	
On-farm Income (Annual)					
Income from Coffee farming/production and/or processing	8,124.9	64,243.1	45,024.6	64,306.6	4,345.4
Products from other crops farming/production and/or processing	46,551.4	37,542.6	40,627.8	46,504.4	3,142.5
Livestock and poultry raising	752.0	2,279.2	1,756.2	6,168.8	416.9
Average Annual On-farm Income	55,428.3	104,064.9	87,408.5	82,843.6	5,598.1
Off-farm Income (Monthly)					-
Farm labor for other farms doing land preparation, input application, weeding, harvesting, hauling and others	808.2	916.7	879.5	1,637.6	110.7
Average Annual Off-farm Income	9,698.6	11,000.0	10,554.3	19,650.7	1,327.9
Total Annual Off-farm Income	65,126.9	115,064.9	97,962.8	80,740.2	5,455.9
Non-farm Income (Monthly)					-
Micro/small enterprise (business activity)	613.3	1,017.4	879.0	4,197.3	283.6
Skilled labor (carpenter, mason, mechanic)	1,213.9	183.3	536.3	2,348.7	158.7
Unskilled (household help, store helper)	1,426.7	74.3	537.4	6,199.4	418.9
Driving (motorcycles, jeeps, buses)	525.3	245.8	341.6	1,721.5	116.3
Employment (government or private)	1,580.0	1,284.7	1,385.8	5,425.3	366.6
Professional services (as doctor, teacher, lawyer, accountant, etc.)	640.0	625.0	630.1	4,416.9	298.5
Remittances	200.0	381.9	319.6	1,787.0	120.8
Pension, relief (assistance from government such as 4Ps)	782.7	855.4	830.5	1,127.0	76.2
Other sources of income not mentioned	1,048.8	334.7	579.3	2,409.7	162.8
Total Annual Non-farm Income	96,368.3	60,031.4	72,475.6	142,085.4	9,601.2
Total Annual Income	161,495.2	175,096.3	170,438.4	164,589.9	11,122.0
Percentage Contribution of Coffee Farming to Annual Income	7.1	40.9	29.4	26.5	1.8

Table 32: Average annual expenditure and savings (in PhP) of household, by region, Treatment (n=724)

Monthly Expenditures	Region					Overall		se(mean)
	CAR	10	11	12	13	mean	sd	
Food	5,821.6	3,429.3	4,011.3	4,456.6	4,258.1	4,394.2	2,618.8	97.3

Monthly Expenditures	Region					Overall		se(mean)
	CAR	10	11	12	13	mean	sd	
Education	1,442.4	485.0	913.7	784.6	800.1	885.0	1,710.9	63.6
Water	8.7	32.1	120.2	44.9	227.6	86.9	406.2	15.1
Electricity	480.2	246.4	427.5	408.2	488.9	410.4	541.3	20.1
Transportation	777.0	596.5	860.3	1,282.8	401.6	784.0	1,043.4	38.8
Clothing	39.3	186.1	620.3	274.6	84.2	241.8	561.6	20.9
Communications (including mobile phone and internet)	632.4	210.8	435.8	466.4	226.8	394.4	790.6	29.4
House Rental/Amortization	100.3	3.5	41.8	-	13.8	31.8	245.8	9.1
Leisure/Entertainment	72.8	69.0	292.4	264.4	46.9	149.5	433.7	16.1
Health related expenses	314.3	120.8	372.4	391.3	329.0	305.9	825.8	30.7
Debt Services ("Bayad Utang")	1,605.4	509.2	712.2	878.5	1,045.2	949.5	4,210.0	156.5
Farm Expenses	847.0	1,376.8	1,349.9	3,420.4	1,061.7	1,612.2	2,583.5	96.0
Other expenses not mentioned	924.9	21.5	60.5	76.2	86.2	233.0	1,094.9	40.7
Average Annual Expenditures	156,794.4	87,445.9	122,621.0	152,988.9	108,840.0	125,743.7	105,746.6	3,930.0
Savings/Dissaving	36,920.8	46,694.5	22,539.4	50,762.0	61,989.9	43,757.4	139,338.5	5,178.5

Table 33: Average annual expenditure and savings (in PhP) of household, by region, Comparison (n=219)

Monthly Expenditures	Region		Overall		se(mean)
	11	12	mean	sd	
Food	4,237.3	4,154.5	4,182.9	1,900.6	128.4
Education	820.5	924.9	889.1	2,070.0	139.9
Water	158.1	44.8	83.6	210.7	14.2
Electricity	449.8	270.3	331.8	447.9	30.3
Transportation	692.7	935.3	852.2	783.8	53.0
Clothing	464.2	180.2	277.5	383.2	25.9
Communications (including mobile phone and internet)	277.2	275.2	275.9	559.7	37.8
House Rental/Amortization	-	36.1	23.7	176.8	11.9
Leisure/Entertainment	266.3	253.3	257.7	476.1	32.2
Health related expenses	363.9	133.3	212.3	457.4	30.9
Debt Services ("Bayad Utang")	810.3	245.6	439.0	1,630.3	110.2
Farm Expenses	1,744.5	3,166.7	2,679.7	3,132.1	211.7
Other expenses not mentioned	-	33.5	22.1	125.3	8.5
Average Annual Expenditures	123,418.9	127,844.4	126,328.8	82,960.4	5,605.9
Savings/Dissaving	38,076.3	47,251.9	44,109.5	135,619.6	9,164.3

Table 34: Average total farm size, cultivate farm, and area planted devoted to coffee, by region, Treatment (n=724) and Comparison (n=219)

Region	Total Farm Size (in ha)			Size of Cultivated Farm (in ha)			Farm Size Devoted to Coffee (in ha)		
	mean	sd	se (mean)	mean	sd	se (mean)	mean	sd	se (mean)
Treatment	2.4	2.9	0.1	1.1	1.6	0.2	0.6	0.9	0.1
CAR	0.4	0.6	0.1	0.2	0.5	-	0.2	0.4	-
10	2.1	1.9	0.2	0.7	0.9	0.1	0.5	0.7	0.1
11	1.4	1.1	0.1	0.7	0.9	0.1	0.5	0.6	0.1
12	5.0	4.2	0.4	2.6	2.5	0.2	2.2	2.0	0.2
13	2.9	2.8	0.2	1.2	1.5	0.1	1.0	1.2	0.1
Comparison	4.9	4.5	0.3	2.4	2.7	0.2	2.0	2.2	0.1
11	2.0	1.6	0.2	0.9	1.6	0.2	0.6	0.9	0.1
12	6.4	4.8	0.4	3.1	2.8	0.2	2.8	2.3	0.2

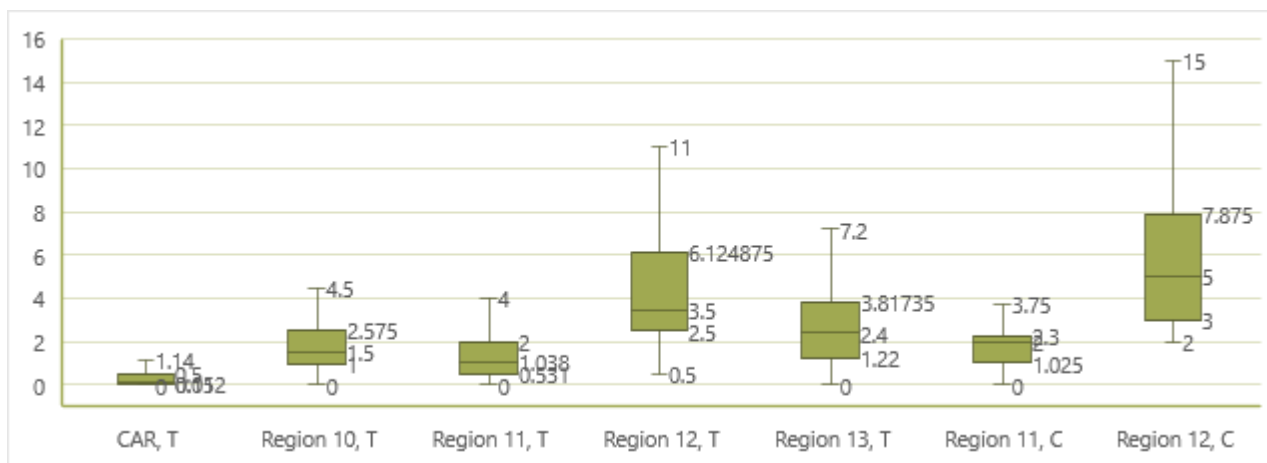


Figure 28: Distribution of Farm Size (in hectares) of Respondents (top = upper extreme, top box = upper quartile, mid box = median, bottom box = lower quartile, bottom = lower extreme, outliers not included; T = Treatment, C = Comparison)

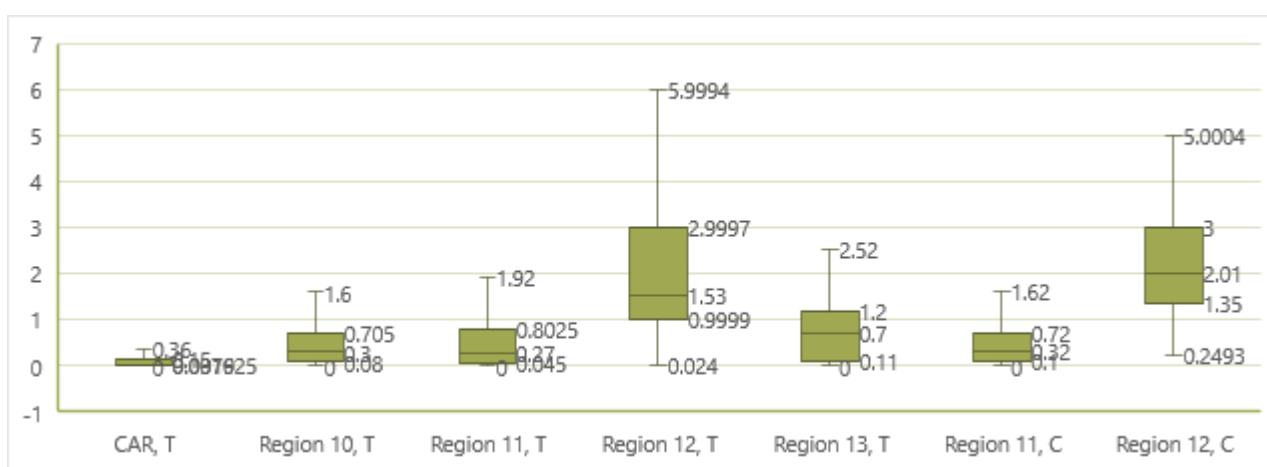


Figure 29: Distribution of Farm Size (in hectares) Devoted to Coffee of Respondents (top = upper extreme, top box = upper quartile, mid box = median, bottom box = lower quartile, bottom = lower extreme, outliers not included; T = Treatment, C = Comparison)

Table 35: Average farm size per coffee specie, by region, Treatment (n=724) and Comparison (n=219)

Region	Arabica (ha)	Robusta (ha)	Liberica (ha)	Excelsa (ha)	Overall (ha)		
					mean	sd	se(mean)
Treatment	0.1	0.8	-	0	0.9	1.4	0.1
CAR	0.2	-	-	-	0.2	0.4	0
10	0.1	0.4	-	0	0.5	0.7	0
11	0	0.5	-	0	0.5	0.6	0
12	0	2.2	-	-	2.2	2	0.1
13	0	1	-	-	1	1.2	0
Comparison	0	2	-	0	2	2.2	0.1
11	0	0.6	-	0	0.6	0.9	0.1
12	-	2.7	-	0	2.8	2.3	0.2

Table 36: Average Number of Coffee Hills per coffee specie, by region, Treatment (n=724) and Comparison (n=219)

Region	Arabica	Robusta	Liberica	Excelsa	Overall			Total Coffee Hills per hectare		
					mean	sd	se(mean)	mean	sd	se(mean)
Treatment	134.2	893.3	-	0.9	1,028.4	1,742.8	64.8	1,670.2	2,053.7	76.3
CAR	395.2	-	-	-	395.2	596.1	22.2	3,901.7	3,513.1	130.6
10	167.1	525.0	-	3.5	695.6	1,088.3	40.4	1,464.7	663.7	24.7
11	44.6	382.4	-	1.0	428.1	572.2	21.3	994.5	1,238.5	46.0
12	63.4	2,825.8	-	-	2,889.2	2,850.6	105.9	1,303.6	376.4	14.0
13	3.4	728.1	-	-	731.5	901.6	33.5	705.2	487.3	18.1

Region	Arabica	Robusta	Liberica	Excelsa	Overall			Total Coffee Hills per hectare		
					mean	sd	se(mean)	mean	sd	se(mean)
Comparison	3.0	2,477.0	-	17.6	2,497.6	2,932.0	198.1	1,258.3	786.2	53.1
11	8.8	427.9	-	7.1	443.7	437.6	29.6	1,142.8	1,269.6	85.8
12	-	3,544.2	-	23.2	3,567.4	3,105.1	209.8	1,318.5	312.4	21.1

Table 37: Average planting distance (in square meters) per coffee specie, by region, Treatment (n=724) and Comparison (n=219)

Region	Arabica (in sq.m.)	Robusta (in sq.m.)	Liberica (in sq.m.)	Excelsa (in sq.m.)	Overall (in sq.m.)		
					mean	sd	se(mean)
Treatment	1.6	8.3	-	0.1	9.5	10.0	0.4
CAR	3.5	-	-	-	3.5	3.5	0.1
10	3.1	5.4	-	0.1	7.6	3.7	0.1
11	0.9	14.2	-	0.2	14.9	18.3	0.7
12	0.5	8.3	-	-	8.3	2.4	0.1
13	0.1	13.2	-	-	12.9	6.9	0.3
Comparison	0.2	9.4	-	0.2	9.6	7.9	0.5
11	0.5	12.1	-	0.5	12.7	12.8	0.9
12	-	8.1	-	0.1	8.1	2.1	0.1

Table 38: Average age of coffee plants (in years) per specie, by region, Treatment (n=724) and Comparison (n=219)

Region	Arabica (in years)	Robusta (in years)	Liberica (in years)	Excelsa (in years)
Treatment	1.5	12.8	-	0.1
CAR	4.0	-	-	-
10	1.4	17.5	-	0.3
11	1.9	23.4	-	0.1
12	0.1	13.3	-	-
13	0.0	9.4	-	-
Comparison	0.4	16.1	-	0.7
11	1.2	21.7	-	1.8
12	-	13.2	-	0.1

Table 39: Percentage of respondents who changed their area planted with coffee since 2019, by region, Treatment (n=724) and Comparison (n=219)

Region	Increase (%)	Decrease (%)	No change (%)
Treatment	20.3	9.1	70.6
CAR	36.1	4.9	59.0
10	11.1	22.9	66.0
11	3.4	6.2	90.4
12	37.9	5.5	56.6
13	13.1	6.2	80.7
Comparison	23.3	0.9	75.8
11	-	1.3	98.7
12	35.4	0.7	63.9

Table 40: Distribution of respondents who practice intercropping system, by region, Treatment (n=724) and Comparison (n=219)

Region	No	Yes	% Yes
Treatment	322	402	55.5
CAR	86	58	40.3
10	88	56	38.9
11	37	109	74.7
12	74	71	49.0
13	37	108	74.5

Region	No	Yes	% Yes
Comparison	117	102	46.6
11	27	48	64.0
12	90	54	37.5

Table 41: Average volume of production, yield per tree and hectare, per species, from October 2020 to September 2021, Treatment (n=724)

Coffee production	Region, f					Overall		
	CAR	10	11	12	13	mean	sd	se (mean)
As fresh cherries								
total area harvested, in ha	-	0.6	0.7	0.7	1.0	0.6	0.6	0.0
number of trees harvested		829.6	461.3	907.3	287.5	563.9	1,185.9	44.1
total volume of production, in kgs		348.3	343.4	968.7	477.0	369.8	476.8	17.7
yield per tree, in kgs	-	0.9	1.7	1.7	1.4	1.5	1.9	0.1
yield per ha, in kgs	-	884.2	813.5	1,929.3	308.7	845.7	972.6	36.1
home consumption, in kgs	-	0.5	-	-	-	0.1	1.1	0.0
As dried cherries								
total area harvested, in ha	-	0.6	0.7	4.1	0.7	1.0	1.9	0.1
number of trees harvested	-	514.3	508.3	6,124.7	532.7	1,036.3	3,133.7	116.5
total volume of production, in kgs	-	95.4	261.2	795.5	129.5	230.2	324.2	12.0
yield per tree, in kgs	-	0.3	1.0	0.3	0.5	0.6	0.9	0.0
yield per ha, in kgs	-	257.2	991.6	305.1	223.3	510.0	1,024.4	38.1
home consumption, in kgs	-	3.6	-	-	4.1	2.2	11.5	0.4
As green coffee bean								
total area harvested, in ha	0.1	0.8	1.0	2.0	1.4	1.5	1.5	0.1
number of trees harvested	178.4	981.3	714.8	2,430.7	706.7	1,651.2	1,895.0	70.4
total volume of production, in kgs	41.2	239.6	194.4	777.2	140.6	499.9	585.3	21.8
yield per tree, in kgs	0.8	0.5	0.3	0.4	0.2	0.4	0.4	0.0
yield per ha, in kgs	3,129.4	758.1	283.8	547.6	86.6	638.6	1,356.0	50.4
home consumption, in kgs	7.0	2.4	-	7.6	65.0	13.2	69.7	2.6
As parchment								
total area harvested, in ha	0.2	-	0.3	0.3	1.5	0.6	0.9	0.0
number of trees harvested	372.0		70.0	416.0	973.0	555.8	818.9	30.4
total volume of production, in kgs	79.1		300.0	160.0	276.4	141.2	226.6	8.4
yield per tree, in kgs	0.6	-	4.3	0.4	0.6	0.7	1.0	0.0
yield per ha, in kgs	1,725.2	-	1,200.0	640.0	174.2	1,248.9	2,339.6	86.9
home consumption, in kgs	25.2	-	-	-	5.8	18.7	28.6	1.1
As roasted coffee								
total area harvested, in ha	0.0	-	0.7	1.5	3.0	0.8	1.0	0.0
number of trees harvested	152.5		733.3	1,944.5	3,000.0	969.9	1,096.1	40.7
total volume of production, in kgs	15.6		336.7	166.7	160.0	156.6	295.9	11.0
yield per tree, in kgs	0.3	-	0.3	0.1	0.1	0.2	0.3	0.0
yield per ha, in kgs	1,487.5	-	348.8	108.3	53.3	726.6	1,527.6	56.8
home consumption, in kgs	6.9	-	-	-	-	2.8	6.5	0.2

Table 42: Average volume of production, yield per tree and hectare, per species, from October 2020 to September 2021, Comparison (n=219)

Coffee production	Region, f		Overall		
	11	12	mean	sd	se (mean)
As fresh cherries					
total area harvested, in ha	0.7	2.0	1.5	1.2	0.1

Coffee production	Region, f		Overall		
	11	12	mean	sd	se (mean)
number of trees harvested	348.9	2,413.6	1,528.7	1,531.0	103.5
total volume of production, in kgs	316.3	1,206.5	825.0	726.5	49.1
yield per tree, in kgs	1.1	0.8	0.9	0.7	0.0
yield per ha, in kgs	1,444.9	867.2	1,114.8	2,124.4	143.6
home consumption, in kgs	-	-	-	-	-
As dried cherries					
total area harvested, in ha	0.8	-	0.8	0.8	0.1
number of trees harvested	646.2	-	646.2	323.0	21.8
total volume of production, in kgs	156.0	-	156.0	122.2	8.3
yield per tree, in kgs	0.3	-	0.3	0.2	0.0
yield per ha, in kgs	263.6	-	263.6	195.5	13.2
home consumption, in kgs	-	-	-	-	-
As green coffee bean					
total area harvested, in ha	1.6	2.4	2.3	2.7	0.2
number of trees harvested	489.0	2,784.9	2,373.9	2,170.2	146.7
total volume of production, in kgs	201.9	945.1	812.0	1,170.1	79.1
yield per tree, in kgs	0.4	7.9	6.6	78.5	5.3
yield per ha, in kgs	404.6	489.8	474.6	531.6	35.9
home consumption, in kgs	1.0	0.6	0.7	5.4	0.4

Table 43: Average volume of production and yield per hectare, converted to GCB, Treatment (n=724) and Comparison (n=219)

Region	Volume of Production			Mean Farm Size Devoted to Coffee (in ha)	Yield per hectare		
	mean	sd	se (mean)		mean	sd	se (mean)
Treatment	192.3	493.3	18.3	0.6	345.5	588.2	21.9
CAR	22.4	47.8	1.8	0.2	712.5	1,780.4	66.2
10	91.3	169.9	6.3	0.5	280.3	1,222.8	45.4
11	83.5	141.2	5.2	0.5	193.5	416.7	15.5
12	693.4	663.4	24.7	2.2	490.3	585.9	21.8
13	69.9	178.7	6.6	1.0	54.0	103.5	3.8
Comparison	618.5	1,060.0	71.6	2.0	385.0	501.9	33.9
11	97.9	203.3	13.7	0.6	208.2	446.9	30.2
12	889.6	1,214.6	82.1	2.8	464.5	507.9	34.3

Note: Conversion: 1 kg dried cherries = 0.5 GCB; 6kgs fresh cherries = 1 GCB; 1 kg parchment = 0.8 kg GCB; 1 kg roasted coffee = 1.19 GCB: source from ICO

Table 44: Average volume sold (Kgs), converted to GCB, Treatment (n=724) and Comparison (n=219)

Region	Volume Sold		
	mean	sd	se (mean)
Treatment	188.0	408.9	15.2
CAR	15.7	38.0	1.4
10	90.3	169.9	6.3
11	83.4	141.2	5.2
12	686.9	664.9	24.7
13	62.4	174.2	6.5
Comparison	617.7	1,060.0	71.6
11	97.9	203.3	13.7
12	888.5	1,214.9	82.1

Note: Conversion: 1 kg dried cherries = 0.5 GCB; 6kgs fresh cherries = 1 GCB; 1 kg parchment = 0.8 kg GCB; 1 kg roasted coffee = 1.19 GCB: source from ICO

Table 45: Volume sold per type of buyer/market (domestic), in kgs, Treatment (n=724) and Comparison (n=219)

Buyers/Market (Domestic)	Fresh Cherries	Dried Cherries	Green Coffee Bean	Parchment	Roasted Coffee
Treatment					
My Coop/Association	212.6	40.6	65.9	84.9	16.5
Other Coop/Association	-	-	6.1	-	-
Local Trader	126.1	165.4	398.7	19.5	49.5
Coffee Shops/Stores/Café	0.2	-	-	11.9	35.3
Roasters	-	-	-	-	48.5
Processors	-	-	15.8	3.8	-
Neighbors	14.6	22.0	0.1	0.8	4.0
Exporters or International Market	13.5	-	-	-	-
Walk-in Clients	2.6	-	-	1.6	-
Comparison					
Other Coop/Association	-	-	2.4	-	-
Local Trader	781.4	137.5	732.7	-	-
Processors	-	-	72.2	-	-
Neighbors	43.6	-	4.1	-	-
Exporters or International Market	-	18.5	-	-	-

Note: No export/international market at the farmer level.

Table 46: Number and percentage of farmers who attended trainings, per type of technologies, Treatment (n=724) and Comparison (n=219)

Region	Coffee Production Technologies		Coffee Post-Harvest Technologies and Other Processing and Value Addition Technologies		Promoting Improved Climate Risk Reduction and/or Natural Resources Management		Farm Management Practices	
	f	%	f	%	f	%	f	%
Treatment	642	88.7	533	73.6	194	26.8	294	40.6
CAR	141	97.9	105	72.9	20	13.9	56	38.9
10	140	97.2	99	68.8	57	39.6	41	28.5
11	104	71.2	88	60.3	27	18.5	59	40.4
12	142	97.9	132	91	25	17.2	67	46.2
13	115	79.3	109	75.2	65	44.8	71	49
Comparison*	90	41.1	82	37.4	2	0.9	38	17.4
11	7	9.3	2	2.7	-	-	21	28
12	83	57.6	80	55.6	2	1.4	17	11.8

Table 47: Recall of trained farmers to introduced coffee production technologies, Treatment (n=724)

Coffee Production Technologies	Region, f					Overall	
	CAR	10	11	12	13	f	%
Application of basal fertilizer	87	17	4	9	82	199	27.5
Application of inorganic fertilizer	84	23	8	52	99	266	36.7
Application of organic fertilizer	101	62	26	59	96	344	47.5
Application of organic fungicides	15	5	6	2	84	112	15.5
Application of organic pesticide	23	8	8	14	86	139	19.2
Application of synthetic fungicides	11	1	1	1	83	97	13.4
Application of synthetic pesticide	16	3	1	15	89	124	17.1
Capping	88	5	4	8	74	179	24.7
Digging of hole	125	117	48	88	113	491	67.8
Farm planning (Sketch Map, SWOT, Action Plan)	27	1	8	10	91	137	18.9
Field planting	95	39	39	30	112	315	43.5
Identification of disease	30	14	5	8	75	132	18.2

Coffee Production Technologies	Region, <i>f</i>					Overall	
	CAR	10	11	12	13	<i>f</i>	%
Identification of pest	54	12	23	17	81	187	25.8
Leaf sampling	24	1	-	6	74	105	14.5
Mother plant selection	12	8	5	9	89	123	17
Pick ripe	95	85	27	110	97	414	57.2
Proper planting distance	117	114	53	106	105	495	68.4
Proper pruning	89	38	43	130	112	412	56.9
Seed germination	39	5	9	7	89	149	20.6
Seed selection	35	7	33	27	88	190	26.2
Seedlings selection	66	18	63	62	91	300	41.4
Shading	107	22	31	23	91	274	37.8
Site selection	29	22	34	20	90	195	26.9
Soil analysis	15	-	-	6	79	100	13.8
Soil sampling	19	-	-	5	79	103	14.2
Stumping / rejuvenation	84	49	49	73	82	337	46.5
Use of biocomparison agents	13	6	-	-	73	92	12.7

Table 48: Recall of trained farmers to introduced coffee post-harvest technologies and other processing and value addition technologies, Treatment (n=724)

Coffee Post-Harvest Technologies and Other Processing and Value Addition Technologies	Region, <i>f</i>					Overall	
	CAR	10	11	12	13	<i>f</i>	%
Cupping	21	-	3	5	61	90	12.4
Drying	80	75	79	130	106	470	64.9
Fermentation	81	41	28	25	93	268	37
Floatation	85	85	80	90	108	448	61.9
Grinding	20	1	4	9	76	110	15.2
Hulling	42	4	7	22	92	167	23.1
Measuring sugar content	18	-	-	-	56	74	10.2
Packaging	17	-	1	20	72	110	15.2
Polishing	13	4	3	7	88	115	15.9
Pulping	96	38	33	38	93	298	41.2
Roasting	19	1	4	10	77	111	15.3
Size grading	19	3	8	7	93	130	18
Sorting and defects classification	58	24	10	12	97	201	27.8
Storing	31	3	3	8	88	133	18.4
Use of elevated dryers	44	92	32	61	107	336	46.4
Washing	83	71	76	69	99	398	55

Table 49: Recall of trained farmers to introduced related to promoting improved climate risk reduction and/or natural resources management, Treatment (n=724)

Promoting Improved Climate Risk Reduction and/or Natural Resources Management	Region, <i>f</i>					Overall	
	CAR	10	11	12	13	<i>f</i>	%
Adjustment of sowing/planting time	8	-	-	-	61	69	9.5
Agroforestry	11	30	9	11	61	122	16.9
Biodiversity conservation	11	57	24	13	64	169	23.3
Diversification	1	15	11	2	54	83	11.5
Efficient nitrogen fertilizer use	12	-	-	-	60	72	9.9
Introduction/expansion of perennials	1	-	1	2	59	63	8.7
Irrigation (drip)	1	1	-	1	29	32	4.4
Low- or no-till practices	3	-	2	-	64	69	9.5

Promoting Improved Climate Risk Reduction and/or Natural Resources Management	Region, <i>f</i>					Overall	
	CAR	10	11	12	13	<i>f</i>	%
Practices that promote methane reduction	-	-	-	-	58	58	8
Restoration of organic soils and degraded lands	12	1	2	8	65	88	12.2
Stream bank management, restoration, re/afforestation	7	1	1	10	58	77	10.6
Use of drought and flood resistant varieties	4	-	1	3	62	70	9.7
Use of perennial varieties	1	1	2	1	61	66	9.1
Use of short duration varieties	2	1	1	2	49	55	7.6
Woodlot management	9	17	2	2	64	94	13

Table 50: Recall of trained farmers to introduced farm management practices, Treatment (n=724)

Farm Management Practices	Region, <i>f</i>					Overall	
	CAR	10	11	12	13	<i>f</i>	%
Accounting	1	8	-	2	38	49	6.8
Financial Planning	16	25	12	34	63	150	20.7
Human Resources	1	7	1	1	39	49	6.8
Marketing/Trading	11	6	44	9	61	131	18.1
Processing	45	19	20	23	61	168	23.2
Record	43	25	14	63	64	209	28.9
Use of Information/Communication technology	3	2	-	4	46	55	7.6

Table 51: Adoption rate of coffee production technologies, and effectiveness rating, Treatment (n=724)

Coffee Production Technologies	% of Adoption Rate	Number of coffee plants			Planting distance (in sq m)			Effectiveness rating: increasing coffee yield*	Effectiveness rating: increasing coffee quality*
		mean	sd	se (mean)	mean	sd	se (mean)		
Application of basal fertilizer	9.1	612	636	24	4	3.6	0.1	5	4.5
Application of inorganic fertilizer	12.2	123	1335	50	9	5.7	0.2	4.5	4.4
Application of organic fertilizer	10.5	785	763	28	7	5.8	0.2	4.8	4.1
Application of organic fungicides	0.6	1588	1209	45	9	7.9	0.3	4.3	4.3
Application of organic pesticide	1.9	968	532	20	2	6.5	0.2	3.9	3.9
Application of synthetic fungicides	1.1	1527	933	35	12	6.6	0.2	4	4
Application of synthetic pesticide	1.5	1576	1078	40	13	5.6	0.2	4	4
Capping	4.1	152	751	28	5	3.6	0.1	4.2	4.5
Digging of hole	21.5	128	2262	84	7	5.2	0.2	4.5	4.2
Farm Planning (Sketch Map, SWOT, Action Plan)	1	1114	626	23	7	6.3	0.2	4.1	3.9
Field planting	10.5	92	990	37	8	6.1	0.2	4.5	4.4
Identification of disease	1	938	584	22	4	2.8	0.1	4.4	4.1
Identification of pest	3.3	798	637	24	8	4.0	0.1	4.3	4.4
Leaf sampling	0.3	325	248	9	9	9.9	0.4	3.5	3.5
Mother plant selection	0.6	1563	984	37	6	2.4	0.1	4.3	4.3
Pick ripe	18.8	1379	1501	56	9	4.4	0.2	4.1	4.3
Proper planting distance	22.1	1274	1549	58	8	4.7	0.2	4.3	4
Proper pruning	22.2	2122	3151	117	8	4.4	0.2	4.2	4.1
Seed germination	1.1	696	817	30	4	1.7	0.1	4.6	4.3
Seed selection	3.3	922	823	31	7	3.2	0.1	4.3	4.2
Seedlings selection	8.1	147	1373	51	6	5.1	0.2	4.6	4.2

Coffee Production Technologies	% of Adoption Rate	Number of coffee plants			Planting distance (in sq m)			Effectiveness rating: increasing coffee yield*	Effectiveness rating: increasing coffee quality*
		mean	sd	se (mean)	mean	sd	se (mean)		
Shading	9.4	65	674	25	5	4.5	0.2	5	4.6
Site selection	2.3	1172	1376	51	9	7.5	0.3	4.6	4.2
Soil sampling	0.1	5	-	-	2	-	-	3	3
Stumping / rejuvenation	8.3	1298	1439	54	9	6.4	0.2	4.3	4.2
Use of bio comparison agents	0.4	16	872	32	4	4.0	0.2	4	4

Note: Effectiveness Rating* 1-Not at all effective, 2-Not so effective, 3-Somewhat effective, 4-Very effective, 5-Extremely effective

Table 52: Adoption rate of coffee production technologies, and effectiveness rating, Comparison (n=219)

Coffee Production Technologies	% of Adoption Rate	Number of coffee plants			Planting distance (in sq m)			Effectiveness rating: increasing coffee yield*	Effectiveness rating: increasing coffee quality*
		mean	sd	se (mean)	mean	sd	se (mean)		
Application of inorganic fertilizer	4.1	3,586	2,262	153	9	2.1	0.1	4.8	4.6
Application of organic fertilizer	0.5	3,333	-	-	9	-	-	5	5
Application of organic pesticide	0.9	2,917	589	40	8	2.1	0.1	4	4
Digging of hole	1.4	4,444	962	65	6	-	-	4.7	4.3
Field planting	0.9	6,944	1,964	133	2	2.1	0.1	4	4.5
Pick ripe	6.8	348	2,126	144	8	1.9	0.1	3.9	4.7
Proper planting distance	11	4,493	4,752	321	8	2.6	0.2	3.8	4.2
Proper pruning	32	3,419	2,162	146	9	2.0	0.1	3.9	4
Seed selection	0.5	555	-	-	9	-	-	5	5
Seedlings selection	0.9	1,925	2,015	136	5	1.4	0.1	4	4
Shading	0.5	5	-	-	6	-	-	4	4
Site selection	0.5	25	-	-	9	-	-	5	5
Stumping / rejuvenation	3.2	3,826	1,273	86	1	1.6	0.1	3.3	4
Use of bio comparison agents	0.5	222	-	-	9	-	-	3	3

Note: Effectiveness Rating* 1-Not at all effective, 2-Not so effective, 3-Somewhat effective, 4-Very effective, 5-Extremely effective

Table 53: Adoption rate of coffee post-harvest technologies and other processing and value addition technologies, and effectiveness rating, Treatment (n=724) and Comparison (n=219)

Coffee Post-Harvest Technologies and Other Processing and Value Addition Technologies	% of Adoption Rate	Number of coffee plants			Planting distance (in sq m)			Effectiveness rating: increasing coffee yield*	Effectiveness rating: increasing coffee quality*
		mean	sd	se (mean)	mean	sd	se (mean)		
Treatment									
Cupping	1	1464	679	25	4	3	0.1	3.7	4
Drying	28.7	1922	2524	94	8	4	0.2	4.1	4.1
Fermentation	4.7	791	642	24	5	4	0.1	4.8	4.4
Floatation	15.5	1712	3517	131	9	6	0.2	4.2	4
Grinding	0.4	1860	2008	75	11	6	0.2	4	4.7
Hulling	4.6	1402	1019	38	7	4	0.1	4	4.2
Measuring sugar content	0.4	1967	651	24	5	4	0.1	4.3	4
Packaging	0.6	2950	2193	82	8	4	0.1	4.5	4.5
Polishing	0.4	1407	706	26	5	4	0.2	4.7	4.3
Pulping	7.7	807	775	29	6	4	0.1	4.4	4.2
Roasting	0.8	2033	2192	82	8	5	0.2	4.2	4.3
Size grading	1.2	1422	751	28	5	4	0.1	4.2	4

Coffee Post-Harvest Technologies and Other Processing and Value Addition Technologies	% of Adoption Rate	Number of coffee plants			Planting distance (in sq m)			Effectiveness rating: increasing coffee yield*	Effectiveness rating: increasing coffee quality*
		mean	sd	se (mean)	mean	sd	se (mean)		
Sorting and Defects Classification	4.4	1221	879	33	6	4	0.1	4.3	4.1
Storing	1.8	1274	533	20	7	6	0.2	4.5	4.4
Use of Elevated Dryers	7.3	1201	980	36	8	6	0.2	4.1	4.1
Washing	9.5	1134	1376	51	7	6	0.2	4.3	4.1
Comparison									
Drying	27.4	3789	2857	193	8	2	0.1	4.1	4.3
Floatation	0.9	10000	7071	478	6	0	0	4.5	4.5
Hulling	1.8	4097	3219	218	11	2	0.1	4	4.5

Note: Effectiveness Rating* 1-Not at all effective, 2-Not so effective, 3-Somewhat effective, 4-Very effective, 5-Extremely effective

Table 54: Adoption rate of technologies related to promoting improved climate risk reduction and/or natural resources management, and effectiveness rating, Treatment (n=724)

Promoting Improved Climate Risk Reduction and/or Natural Resources Management	% of Adoption Rate	Number of coffee plants			Planting distance (in sq m)			Effectiveness rating: increasing coffee yield*	Effectiveness rating: increasing coffee quality*
		mean	sd	se (mean)	mean	sd	se (mean)		
Adjustment of sowing/planting time	0.7	1147	1084	40	5	6	0.2	4	4.4
Agroforestry	3.9	816	781	29	6	5	0.2	4.8	4.9
Biodiversity conservation	5.1	1077	980	36	8	4	0.1	4.1	4.1
Efficient nitrogen fertilizer use	0.8	678	518	19	4	2	0.1	4.8	4
Restoration of organic soils and degraded lands	1.5	1863	1171	44	8	4	0.2	4	4.1
Stream bank management, restoration, re/afforestation	0.6	2208	1542	57	9	4	0.1	4.5	4.5
Use of drought and flood resistant varieties	0.3	1250	354	13	4	4	0.1	5	4
Woodlot management	1.2	900	806	30	4	5	0.2	4.6	4.4

Note: Effectiveness Rating* 1-Not at all effective, 2-Not so effective, 3-Somewhat effective, 4-Very effective, 5-Extremely effective

No adoption of any related technologies in the comparison group.

Table 55: Adoption rate of technologies related to farm management practices, Treatment (n=724) and Comparison (n=219)

Farm Management Practices	Adoption Rate (%)
Treatment	
Processing	1.0
Record	28.7
Financial Planning	4.7
Use of Information/Communication technology	15.5
Marketing/Trading	0.4
Accounting	4.6
Human Resources	0.4
Comparison	
Record	8.2
Financial Planning	0.5
Marketing/Trading	1.5
Human Resources	0.5

Table 56: Adoption rate of common technologies, baseline versus midterm survey, Treatment (n=724) and Comparison (n=219)

Technologies	Baseline (2019)		Midterm (2021)		Difference-in-difference variance (c-a)-(d-b)
	Treatment A	Comparison b	Treatment c	Comparison d	
Production Technologies					
Pick Ripe	69.8	88.3	27.8	7.8	38.5
Stumping / Rejuvenation	63.7	63.6	12.2	3.6	8.5
Post-Harvest and Processing Technologies					
Cupping	0.0	0.0	1.0	0.0	1.0
Drying	80.5	32.1	28.7	27.4	-47.1
Fermentation	4.5	0.2	4.7	0.0	0.4
Floatation	0.0	0.0	15.5	0.9	14.6
Grinding	0.0	0.0	0.4	0.0	0.4
Hulling	15.7	5.3	4.6	1.8	-7.7
Measuring sugar content	0.0	0.0	0.4	0.0	0.4
Packaging	0.0	0.0	0.6	0.0	0.6
Polishing	1.6	0.0	0.4	0.0	-1.2
Pulping	16.5	2.6	7.7	0.0	-6.2
Roasting	0.0	0.0	0.8	0.0	0.8
Size grading	0.0	0.0	1.2	0.0	1.2
Sorting and Defects Classification	5.8	0.5	4.4	0.0	-0.9
Storing	8.6	0.0	1.8	0.0	-6.8
Use of Elevated Dryers	0.0	0.0	7.3	0.0	7.3
Washing	6.2	0.2	9.5	0.0	3.5
Processing	0.0	0.0	15.7	0.0	15.7
Farm management practices					
Record keeping	8.9	0.6	21.4	8.2	4.9
Financial planning	3.7	0.5	13.3	0.5	9.6
Use of information communication	0.0	0.0	2.6	0.0	2.6
Marketing trading	1.3	0.3	13.7	10.0	2.7
Accounting	0.0	0.0	1.4	0.0	1.4
Human resources	1.0	0.2	4.0	0.5	2.8

* This is based on the overall average of region with comparison and treatment groups.

Table 57: Probit model average marginal effects farmers adoption rate to coffee production technologies

Variables	Proper pruning	Proper planting distance	Digging hole	Pick ripe	Apply inorganic fertilizer	Apply organic fertilizer	Field planting
Age (in years)	0.0008	-0.0008	0.000	0.001	0.001	0.0008	0.000
Completed Education (in years)	0.0087**	0.0065	0.0003	-0.0017	0.0045	0.0011	-0.0017
Household Size	-0.0006	0.0063	0.0076	0.0044	0.0048	-0.0001	0.0062
Annual Income (in '000 PhP)	0.0001	0.0001**	0.0001	0.000	0.000	0.000	0.0001**
Area Devoted to Coffee (in ha)	0.0175**	0.0115	-0.003	0.0029	0.0016	-0.0061	0.0023
Annual Cost per hectare (in '000 PhP)	0.0016	0.0004	0.0041***	0.0039***	0.0049***	0.002*	0.0035***
Weekly Hours Farm Work Men	0.0028***	-0.0005	-0.0008	0.0021***	-0.0002	-0.0007	0.0001
Weekly Hours Farm Work Male Youth	0.0033***	-0.0003	0.0011	0.0001	0.0001	-0.0001	0.0015**
Weekly Hours Farm Work Women	0.004***	0.0036***	0.0022*	0.0026**	0.0019**	-0.0003	0.0025***
Weekly Hours Farm Work Female Youth	0.0039	0.0064**	0.0028	0.0023	-0.0016	0.0018	0.0005
Coop/Farmer's Association	0.1018***	0.1158***	0.0866*	0.0422	0.0258	0.0076	0.0222
Treatment	-0.0923**	0.0686**	0.1411***	0.125***	0.0456*	0.0757***	0.0672***
Gender (Male=1)	0.0153	0.0369	-0.0467**	-0.0072	-0.0296	-0.0509***	0.0023
Marital Status (Married=1)	0.0036	0.0381	0.0365	0.0117	0.0196	0.0623***	-0.0088
Have External Support of Coffee Capital	-0.0444	-0.0611	-0.0712**	-0.0418	-0.0628***	-0.0664***	-0.0152
Have Existing Credit	0.0976**	0.0084	0.0705*	-0.0082	0.0484	0.0218	0.0292

Variables	Proper pruning	Proper planting distance	Digging hole	Pick ripe	Apply inorganic fertilizer	Apply organic fertilizer	Field planting
Have Accessed to External Capacity-Building Activities	0.0203	0.0237	0.0797***	0.0392	0.1003***	0.037*	0.0657***
Intercropping	0.0015	0.0664***	-0.0016	-0.1213***	-0.0071	0.0554***	0.0179
Difficulty Accessing Inputs	0.0106	0.0627	0.0854**	-0.0638**	0.007	0.0395	0.0194
Want to Certify Farm	0.1679***	0.162***	0.1046***	0.0679***	0.1187***	0.067***	0.0122
Actively Marketing Coffee	-0.1366***	-0.0979***	-0.0261	-0.0139	-0.0188	-0.0165	0.0265
Have Enough Capital	-0.0231	0.0643**	0.0767***	0.0824***	0.0185	0.0196	0.0026
Have Difficulty Accessing Credit	0.03	-0.1176***	-0.0711**	-0.013	-0.0421*	-0.0511***	-0.0732***
Have Experienced Post-Harvest Loss	0.0187	-0.0452*	-0.0947***	0.0374	-0.0269	-0.0675***	-0.0731***
Prob>chi2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Pseudo R2	0.1877	0.1677	0.2309	0.1478	0.2497	0.2548	0.2579

Note: * significant at 10% level
** significant at 5% level
*** significant at 1% level

Table 58: Probit model average marginal effects farmers adoption rate to coffee post-harvest technologies

Variables	Drying	Floatation	Washing	Pulping	Use of elevated dryers	Fermentation	Hulling	Sorting and defects classification	Storing	Size grading
Age (in years)	0.0004	0.0004	0.0001	0.0023***	0.0007	0.002***	0.0002	0.0013**	0.0016**	0.0014*
Completed Education (in years)	0.0025	-0.007**	-0.0012	0.0026	0.0008	0.0042	0.0039*	0.0039	0.0012	0.0015
Household Size	0.0062	0.0016	0.0018	0.0066	0.0046	0.0043	0.0003	0.001	0.0044*	0.006*
Annual Income (in '000 PhP)	0.0002**	0.0001	0.0001	0.000	0.0001*	0.0001**	0.000	0.0001*	0.000*	0.0001**
Area Devoted to Coffee (in ha)	0.0238***	0.0159**	-0.0069	-0.0324***	0.0004	-0.0281**	-0.0026	-0.0083	-0.0046	-0.0044
Annual Cost per hectare (in '000 PhP)	0.0021	0.0024**	0.0037***	0.0041***	0.0025**	0.0025***	0.0021***	0.002***	0.0015***	-0.0015
Weekly Hours Farm Work Men	0.0013	-0.0017**	-0.0022**	-0.0017**	-0.0005	-0.0005	-0.0003	-0.001	-0.0001	0.0007
Weekly Hours Farm Work Male Youth	0.0021**	-0.0003	-0.0004	-0.0006	-0.0001	-0.0003	0.0005	0.0014**	-0.0002	0.0003
Weekly Hours Farm Work Women	0.0037***	0.0008	0.0015	0.0015*	0.0007	-0.0001	0.0009	-0.0005	-0.0006	-0.0008
Weekly Hours Farm Work Female Youth	0.006**	-0.0011	0.0023	0.006***	-0.0008	0.0025	0.0009	-0.0016	0.001	-0.0013
Coop/Farmer's Association	0.068*	0.0938**	0.0628		0.0678		-0.0118			
Treatment	0.1338***	0.1316***					0.0219			
Gender (Male=1)	0.0094	-0.0102	-0.0224	0.0177	-0.013	-0.0056	0.0016	-0.0328**	-0.0119	-0.0366**
Marital Status (Married=1)	0.02	0.0103	-0.0235	0.0233	0.0059	0.0017	0.0124	0.0145	0.0144	
Have External Support of Coffee Capital	-0.0675	-0.0324	-0.0567**	-0.0421**	-0.0438**	-0.0462***	-0.0346***	0.0128	-0.0198***	0.0315
Have Existing Credit	0.1137**	0.0793**	0.066*	0.0488	-0.0255	0.0452**	0.0081	0.0222	0.0168	0.0329
Have Accessed to External Capacity-Building Activities	-0.0563*	0.0348	0.0525*	0.0622**	0.0738**	0.067***	0.0386*	0.0276	0.0197	-0.0197
Do Intercrop Coffee	0.0036	-0.0352*	0.0063	-0.0029	-0.0041	0.0093	-0.0336***	0.0363**	0.0159*	0.0267***
Difficulty Accessing Inputs	0.0216	0.0046	-0.014	0.0229	-0.0236	0.0146	-0.031***	-0.0002	0.0195	0.0199
Want to Certify Farm	0.1513***	0.1062***	0.128***	0.0469**	0.0669***	0.0512***	0.0355**	0.0737***	0.0151	0.0457***
Actively Marketing Coffee	-0.1356***	-0.0041	0.0455	0.0687	0.0066	0.0486	-0.0088	0.013	0.0277	-0.0216**
Have Enough Capital	0.0541*	0.0301	0.0311	0.1277***	0.033	0.0489***	0.0529***	0.0312*	0.0201	0.0023
Have Difficulty Accessing Credit	0.0112	-0.1315***	-0.1162***	-0.0809***	-0.0829***	-0.0486***	-0.004	-0.0502***	-0.0176**	
Have Experienced Post-Harvest Loss	0.1276***	0.0257	-0.0014	0.0207	0.052**	-0.0262*	0.0355**	0.0155	0.0108	-0.0007

Variables	Drying	Floatation	Washing	Pulping	Use of elevated dryers	Fermentation	Hulling	Sorting and defects classification	Storing	Size grading
Prob>chi2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0009
Pseudo R2	0.2197	0.2020	0.2112	0.3888	0.1789	0.5280	0.2825	0.3655	0.5164	0.5149

Note: * significant at 10% level
** significant at 5% level
*** significant at 1% level

Table 59: Probit model average marginal effects farmers adoption rate to climate risk reduction management technologies

Variables	Biodiversity conservation	Agroforestry	Restoration of organic soil	Efficient nitrogen fertilizer
Age (in years)	0.0003	0.0007	0.000	0.0011*
Completed Education (in years)	-0.007**	0.0007	0.0058**	0.0028
Household Size	0.0002	0.0045	-0.0026	0.0023
Annual Income (in '000 PhP)	0.000	0.000	0.000	0.000
Area Devoted to Coffee (in ha)	-0.0103	-0.0044	0.0002	-0.0128
Annual Cost per hectare (in '000 PhP)	0.0033***	0.0025***	0.0016***	0.0008**
Weekly Hours Farm Work Men	-0.001	-0.0008	0.0009*	-0.0002
Weekly Hours Farm Work Male Youth	-0.001	-0.0006	-0.0001	-0.0001
Weekly Hours Farm Work Women	0.0002	0.0011*	0.0008**	-0.0004
Weekly Hours Farm Work Female Youth	0.0007	0.0009	0.0007	0.0008
Coop/Farmer's Association	-0.0126	0.0063	-0.0327	
Gender (Male=1)	0.0001	-0.0172	-0.001	0.0001
Marital Status (Married=1)	0.0028	-0.0256	0.014	0.01
Have External Support for Coffee Capital	-0.039**	-0.0367***		
Have Existing Credit	0.0042	0.091***	-0.0031	0.011
Have Accessed to External Capacity-Building Activities	-0.0182	0.0472**	0.0635**	0.0266
Do Intercrop Coffee	0.0146	-0.0286*	-0.012	0.0193
Difficulty Accessing Inputs	0.0078	0.0054	-0.0215***	-0.01
Want to Certify Farm	0.0035	-0.0046	-0.0058	0.0085
Actively Marketing Coffee	-0.0413**	0.0589	0.0185	
Have Enough Capital	0.0458**	0.0053	0.0479***	0.0096
Have Difficulty Accessing Credit	-0.0227		-0.0094	-0.0003
Have Experienced Post-Harvest Loss	0.0402**	-0.0127	0.0277*	-0.0015
Prob>chi2	0.0090	0.0000	0.0001	0.0151
Pseudo R2	0.1440	0.4410	0.5104	0.5482

Note: * significant at 10% level ** significant at 5% level *** significant at 1% level

Table 60: Probit model average marginal effects farmers adoption rate to farm management practices

Variables	Processing	Record	Financial planning	Use of information communication	Marketing trading	Accounting	Human resources
Age (in years)	0.0017*	0.0017	0.0013*	-0.0005	0.0018***	0.0003	0.0019***
Completed Education (in years)	0.01**	0.0159	0.0097***	0.0058***	0.003	0.0001	0.0039*
Household Size	0.002	0.0064	0.0039	-0.0006	0.0022	-0.0006	0.0049*
Annual Income (in '000 PhP)	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Area Devoted to Coffee (in ha)	-0.0016	0.0195	0.0047	0.0006	-0.0014	0.0072**	-0.002
Annual Cost per hectare (in '000 PhP)	0.0025*	0.0032	0.0015	0.0003	-0.0016	-0.0013	-0.0001
Weekly Hours Farm Work Men	0.0007	0.0006	-0.0005	0.0003	0.0001	-0.0007*	-0.0008
Weekly Hours Farm Work Male Youth	-0.0019	-0.0012***	-0.0022*	-0.0002	-0.0033**	-0.0011	-0.0014
Weekly Hours Farm Work Women	0.0011	0.0007	-0.0022*	-0.0012	-0.0051***	-0.0007	-0.0021**
Weekly Hours Farm Work Female Youth	0.000	0.0019	0.000	-0.0013	0.002	0.0006	0.0027**
Coop/Farmer's Association	0.0465	0.1688	0.0104	-0.0076	-0.0438	-	0.0154

Variables	Processing	Record	Financial planning	Use of information communication	Marketing trading	Accounting	Human resources
Treatment	-	0.0831	0.1201***	-	0.0771***	-	0.0244*
Gender (Male=1)	0.0215	0.0274	0.0333*	-0.0138	-0.0112	0.0119	0.035***
Marital Status (Married=1)	-0.0097	0.0233	-0.0063	-0.01	0.0149	0.0017	-0.0114
Have External Support of Coffee Capital	0.0511	0.1043	0.1225**	0.0327	0.0107	0.0681**	0.0134
Have Existing Credit	0.1119***	0.0286	-0.0396*	0.0048	-0.0304	0.0015	0.0076
Have Accessed to External Capacity-Building Activities	0.185***	-0.0124***	-0.042**	0.0194	0.0987***	0.013	-0.0067
Do Intercrop Coffee	0.0855***	0.0307	0.0124	-0.0017	-0.0212	-0.0079	0.0164
Difficulty Accessing Inputs	0.0241	0.0155	0.0503	-0.0135	-0.0022	0.009	0.0235
Want to Certify Farm	-0.0319	0.0672	-0.0219	0.01	0.0248	0.008	-0.0217*
Actively Marketing Coffee	0.2023***	0.077	0.1343***	0.0975**	0.3406***	0.1105*	0.0246
Have Enough Capital	0.0352	0.0063	-0.001	-0.0052	-0.0698***	-0.0018	-
Have Difficulty Accessing Credit	-0.0973***	-0.0254***	-0.0679***	-0.0323***	0.04	-	-0.0329***
Have Experienced Post-Harvest Loss	0.0956***	0.0115	0.0957***	0.0373**	0.1207***	0.0174	0.0189
Prob>chi2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Pseudo R2	0.3023	0.1393	0.2145	0.3829	0.4744	0.5687	0.3230

Table 61: Perception of percentage of respondents on influence of coffee post-harvest technologies and other processing and value addition technologies on the quality of coffee production, per region, Treatment (n=724) and Comparison (n=219)

Region	Increased quality	Decreased quality	Quality remained the same
Treatment	28.2	0.7	31.5
CAR	39.6	-	12.5
10	18.1	-	35.4
11	7.5	1.4	43.2
12	51.7	1.4	41.4
13	24.1	0.7	24.8
Comparison	11	0.5	34.2
11	-	-	9.3
12	16.7	0.7	47.2

Table 62: Estimated change in percentage (%) in the quality of coffee production, per region, Treatment (n=209) and Comparison (n=25)

Region	Increased Quality			Decreased Quality		
	mean	sd	se (mean)	mean	sd	se (mean)
Treatment	33.3	33.3	1.2	0.3	0.2	0.0
CAR	45.6	45.6	3.8	-	-	-
10	14.5	14.5	1.2	-	-	-
11	27.5	27.5	2.3	0.4	0.2	0.0
12	32.7	32.7	2.7	0.4	0.2	0.0
13	29.9	29.9	2.5	0.1	-	-
Comparison	30.3	30.3	2.0	0.2	-	-
11	-	-	-	-	-	-
12	32.8	32.8	2.7	0.2	-	-

Table 63: Number and percentage of respondents by responses on change in price of improved quality of coffee (due to adoption of technologies and practices), Treatment (n=126)

Region	Increase in Price		Decrease in Price		Price remained the same	
	f	%	f	%	f	%
Treatment	36	28.6	3	2.4	87	69.0
CAR	8	6.3	-	-	56	44.4
10	2	1.6	-	-	8	6.3
11	-	-	-	-	3	2.4
12	9	7.1	-	-	19	15.1
13	17	13.5	3	2.4	1	0.8

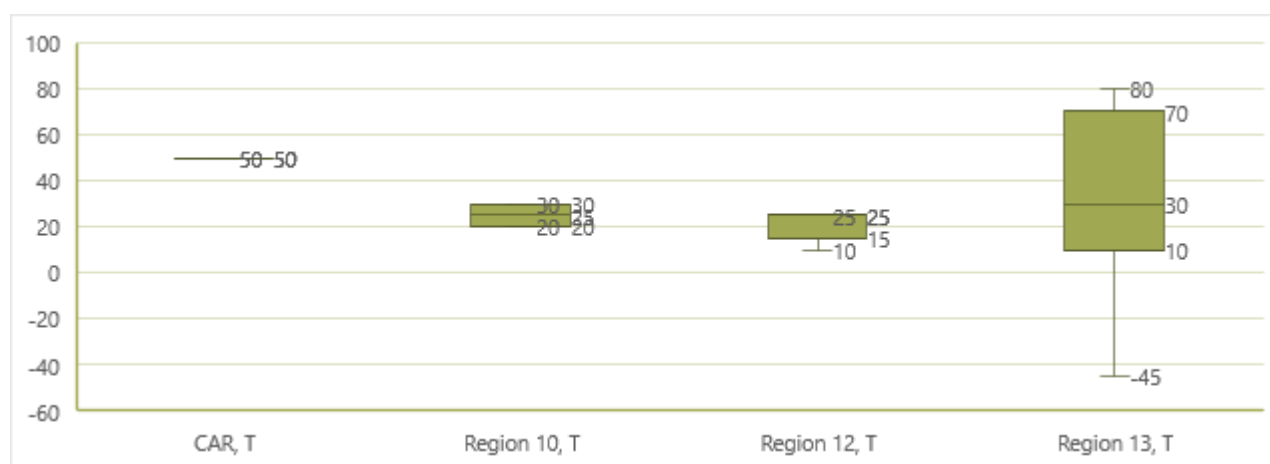


Figure 30: Distribution of responses on change in price (increase or decrease) of coffee (in PhP) due to improve in quality of coffee (top = upper extreme, top box = upper quartile, mid box = median, bottom box = lower quartile, bottom = lower extreme, outliers not included; T = Treatment)

Table 64: Average amount of price changes due to change in quality of coffee, per region

Region	Price Decreased				Price Increased			
	f	mean	sd	se (mean)	f	mean	sd	se (mean)
Treatment	3	41	3.6	0.1	36	56.0	112.9	4.2
CAR	-	-	-	-	8	46.3	15.1	1.3
10	-	-	-	-	2	25.0	7.1	0.6
11	-	-	-	-	-	-	-	-
12	-	-	-	-	9	28.7	26.7	2.2
13	3	41	3.6	0.3	17	78.6	162.2	13.5
Overall	3	41	3.6	0.1	36	56.0	112.9	4.2

Table 65: Percentage of farmers who preferred method of trainings (modality) that is seen more effective, Treatment (n=724) and Comparison (n=219)

Region	Face to face	Combination	Others
Treatment	88.7	9.5	1.9
CAR	97.2	1.4	1.4
10	97.9	1.4	0.7
11	97.9	2.1	-
12	89.0	11.0	-
13	61.4	31.7	7.6
Comparison	96.8	2.3	0.9
11	97.3	-	2.7
12	96.5	3.5	-

Table 66: Percentage of farmers who applied introduced technologies/ techniques/practices applied to conservation/protected areas, average hectares, Treatment (n=724) and Comparison (n=219)

Region	Applied technology practices on conservation/protected areas		Size of area applied (in hectares)		
	f	%	mean	sd	se(mean)
Treatment	202	27.9	2.4	2.9	0.1
CAR	98	68.1	0.4	0.6	0.1
10	27	18.8	2.1	1.9	0.2
11	9	6.2	1.4	1.1	0.1
12	36	24.8	5.0	4.2	0.4
13	32	22.1	2.9	2.8	0.2
Comparison*	30	13.7	4.9	4.5	0.3
11	1	1.3	2.0	1.6	0.2
12	29	20.1	6.4	4.8	0.4

* Training on technology practices on conservation/protected areas is provided by others – not PhilCAFE or PhilCAFE supported training.

Table 67: Percentage who shared technology practices to other farmers (and who then decided to apply it), Treatment (n=724) and Comparison (n=219)

Region	Shared technology practices to other farmers	
	f	%
Treatment	126	17.4
CAR	32	22.2
10		0
11	6	4.1
12	61	42.1
13	27	18.6
Comparison	24	11.0
11	-	0
12	24	16.7

Table 68: Coffee production technologies copied/applied by other farmers, Treatment (n=724)

Coffee Production Technologies	Region, f					Overall	
	CAR	10	11	12	13	f	%
Application of basal fertilizer	8	-	-	-	20	28	3.9
Application of inorganic fertilizer	7	-	-	21	22	50	6.9
Application of organic fertilizer	13	-	1	14	18	46	6.4
Application of organic fungicides	-	-	-	-	17	17	2.3
Application of organic pesticide	1	-	-	1	18	20	2.8
Application of synthetic fungicides	-	-	-	-	17	17	2.3
Application of synthetic pesticide	-	-	-	1	21	22	3.0
Capping	9	-	-	-	21	30	4.1
Digging of hole	15	-	5	25	27	72	9.9
Farm planning (sketch map, SWOT, action plan)	2	-	1	1	25	29	4.0
Field planting	7	-	3	6	26	42	15.8
Identification of Disease	2	-	-	1	20	23	3.2
Identification of Pest	2	-	-	-	20	22	3.0
Leaf sampling	-	-	-	-	18	18	2.5
Mother plant selection	1	-	-	1	23	25	3.5
Pick ripe	5	-	2	26	20	53	7.3
Proper planting distance	17	-	4	40	27	88	12.2
Proper pruning	8	-	3	54	26	91	12.6
Seed germination	1	-	-	-	23	24	3.3

Coffee Production Technologies	Region, <i>f</i>					Overall	
	CAR	10	11	12	13	<i>f</i>	%
Seed selection	2	-	-	2	22	26	3.6
Seedlings selection	13	-	1	13	22	49	6.8
Shading	14	-	1	1	24	40	5.5
Site selection	-	-	2	3	22	27	3.7
Soil analysis	-	-	-	-	16	16	2.2
Soil sampling	-	-	-	-	17	17	2.3
Stumping / rejuvenation	3	-	4	21	21	49	6.8
Use of bio comparison agents	1	-	-	-	18	19	2.6

Table 69: Coffee post-harvest technologies and other processing and value addition technologies copied/applied by other farmers, Treatment (n=724)

Coffee Post-Harvest Technologies and Other Processing and Value Addition Technologies	Region, <i>f</i>					Overall	
	CAR	10	11	12	13	<i>f</i>	%
Cupping	1	-	-	-	10	11	1.5
Drying	11	-	4	55	25	95	13.1
Fermentation	10	-	1	1	21	33	4.6
Floatation	15	-	3	26	24	68	9.4
Grinding	2	-	-	1	19	22	3.0
Hulling	7	-	-	6	21	34	4.7
Measuring sugar content	-	-	-	-	9	9	1.2
Packaging	-	-	-	2	15	17	2.3
Polishing	-	-	-	-	20	20	2.8
Pulping	13	-	1	5	23	42	5.8
Roasting	2	-	1	1	18	22	3.0
Size grading	2	-	-	-	21	23	3.2
Sorting and defects classification	8	-	-	3	22	33	4.6
Storing	4	-	-	-	20	24	3.3
Use of elevated dryers	9	-	1	14	24	48	6.6
Washing	14	-	3	13	23	53	7.3

Table 70: Technologies promoting improved climate risk reduction and/or natural resources management copied/applied by other farmers, Treatment (n=724)

Technologies Promoting Improved Climate Risk Reduction and/or Natural Resources Management	Region, <i>f</i>					Overall	
	CAR	10	11	12	13	<i>f</i>	%
Adjustment of sowing/planting time	1	-	-	-	16	17	2.3
Agroforestry	3	-	1	-	15	19	2.6
Biodiversity conservation	2	-	-	-	15	17	2.3
Diversification	-	-	1	-	12	13	1.8
Efficient nitrogen fertilizer use	5	-	-	-	15	20	2.8
Introduction/expansion of perennials	-	-	-	-	15	15	2.1
Irrigation (drip)	-	-	-	-	5	5	0.7
Low- or no-till practices	-	-	-	-	16	16	2.2
Practices that promote methane reduction	-	-	-	-	14	14	1.9
Restoration of organic soils and degraded lands	1	-	-	5	16	22	3.0
Stream bank management, restoration, re/afforestation	-	-	-	2	15	17	2.3
Use of drought and flood resistant varieties	-	-	1	-	16	17	2.3
Use of perennial varieties	-	-	-	-	16	16	2.2
Use of short duration varieties	-	-	1	-	8	9	1.2
Woodlot management	3	-	-	-	15	18	2.5

Table 71: Farm Management Practices copied/applied by other farmers, Treatment (n=724)

Farm Management Practices	Region, f					Overall	
	CAR	10	11	12	13	f	%
Accounting	-	-	-	1	4	5	0.7
Financial Planning	2	-	3	4	10	19	2.6
Human Resources	-	-	-	-	5	5	0.7
Marketing/Trading	-	-	4	1	12	17	2.3
Processing	8	-	4	4	20	36	5.0
Record	7	-	3	21	13	44	6.1
Use of Information/Communication technology	-	-	-	1	5	6	0.8

Table 72: Percentage of respondents who know any farmer that is newly farming coffee from oct 2020 to sep 2021 because they have observed your coffee farm or you shared technologies, Treatment (n=724) and Comparison (n=219)

Region	know any farmer that is newly farming coffee	
	f	%
Treatment	82	11.3
CAR	35	24.3
10	1	0.7
11	5	3.4
12	17	11.7
13	24	16.6
Comparison	5	2.3
11	-	-
12	5	3.5

Table 73: Percentage of farmers with access to warehouse/storage space, Treatment (n=724)

Region	Accessed dry storage facility		Size of dry storage facility accessed (in cubic meters)
	f	%	
CAR		-	-
10		-	-
11		-	-
12	1	0.7	0.7
13	8	5.5	4.1
Overall	9	1.2	1

Table 74: Percentage of farmers who did purchase/access additional coffee equipment/facility, Treatment (n=724)

Region	Purchased or have access to additional coffee equipment or facility	
	f	%
CAR	3	2.1
10	1	0.7
11	-	-
12	2	1.4
13	8	5.5
Overall	14	1.9

Table 75: Type of equipment/facility, Treatment (n=724)

Region	Elevated Dryer	Fermentary	Pulpers	Dehullers	Warehouse / storage	Others
CAR	1	1	3			2
10						1
11						
12	2					
13	5	1	2	3	2	3
Overall	8	2	5	3	2	6

Table 76: Percentage of farmers with difficulty accessing specific coffee inputs or technology in the past production year (October 2020 to September 2021), Treatment (n=724) and Comparison (n=219)

Region	Accessed dry storage facility	
	f	%
Treatment	116	16.0
CAR	20	13.9
10	11	7.6
11	28	19.2
12	32	22.1
13	25	17.2
Comparison	39	17.8
11	14	18.7
12	25	17.4

Table 77: Percentage of farmers with access to inputs or technology for coffee farm due to PhilCAFE or external assistance (comparison) in the past production year (October 2020 to September 2021), Treatment (n=724) and Comparison (n=219)

Region	Accessed dry storage facility	
	f	%
Treatment	134	18.5
CAR	47	32.6
10	13	9.0
11	13	8.9
12	22	15.2
13	39	26.9
Comparison	2	0.9
11	-	-
12	2	1.4

Table 78: Average cost of coffee production per hectare per year, in PhP, for October 2020 to September 2021, Treatment (n=724)

Monthly Expenditures	Region					Overall		
	CAR	10	11	12	13	mean	sd	se
Planting materials	1,912	563	3	1,900	257	925	3,578.6	133
Paid labor	794	524	77	1,962	76	686	3,678.3	136.7
Fertilizers	3,257	562	234	3,230	703	1,594	3,518.4	130.8
Pesticides	73	33	59	1,240	223	326	1,350.1	50.2
Other Cost	6,037	1,683	373	8,331	1,259	3,531	7,540.4	280.2
Annual Cost/Ha.	12,001	3,333	687	15,423	2,294	6,737	4,578	170.1

Table 79: Average cost of coffee production per hectare per year, for October 2020 to September 2021, Comparison (n=219)

Monthly Expenditures	Region		Overall		
	12	13	mean	sd	se
Planting materials	107	2,020	1,365	4,322	292.1
Paid labor	35	1,043	698	2,462	166.3
Fertilizers	416	1,487	1,120	2,622	177.2
Pesticides	33	400	274	636	43.0
Other Cost	590	4,950	3,457	7,542	509.6
Annual Cost/Ha.	1,180	9,900	6,914	3,517	238

Table 80: Change in production cost since 2019 (% of the farmer respondents), Treatment (n=724) and Comparison (n=219)

Region	Decreased	Increased	Remained the same
Treatment	12.2	19.4	68.4
CAR	8.4	21.7	69.9
10	8.7	7.2	84.1
11	20.7	4.1	75.2
12	13.8	47.6	38.6
13	9.0	16.0	75.0
Comparison	14.2	29.2	56.6
11	29.3	0.0	70.7
12	6.3	44.4	49.3

Table 81: Percentage of farmers who have experienced post-harvest losses (%), Treatment (n=724) and Comparison (n=219)

Region	Farmers experienced post-harvest losses		Average estimated post-harvest losses (%)
	f	%	
Treatment	302	41.7	21.8
CAR	11	7.6	41.1
10	52	36.1	6.3
11	69	47.3	42.2
12	109	75.2	11.4
13	61	42.1	27.0
Comparison	132	60.3	18.4
11	32	42.7	45.6
12	100	69.4	9.7

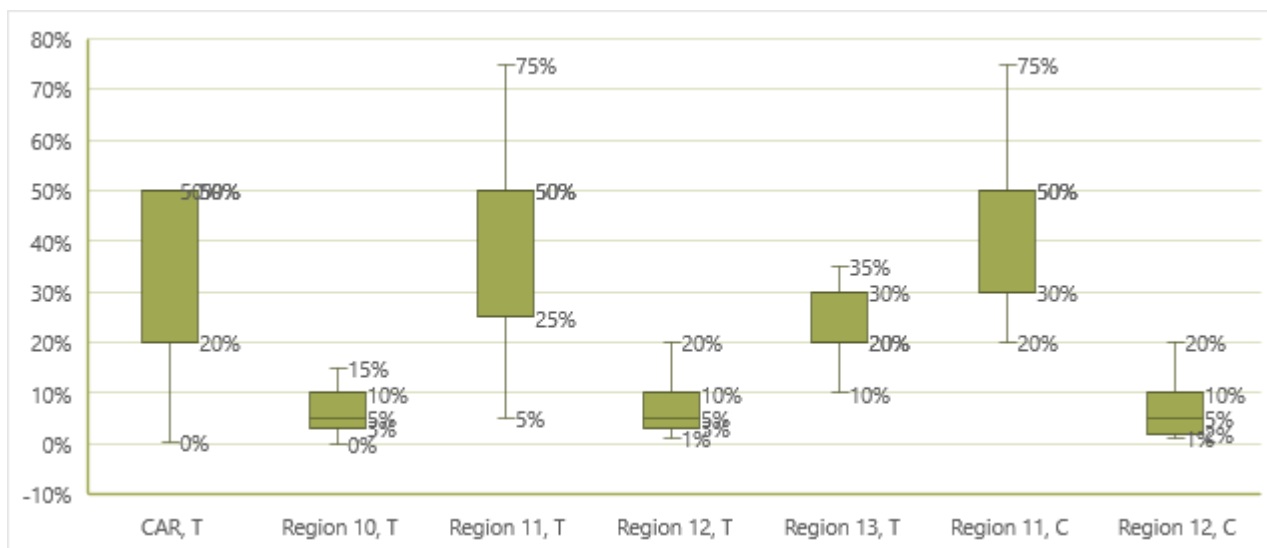


Figure 31: Distribution of estimated post-harvest losses (in % of production) by region (top = upper extreme, top box = upper quartile, mid box = median, bottom box = lower quartile, bottom = lower extreme, outliers included; T = Treatment, C=Comparison)

Table 82: Typical reasons/causes of losses, in percentage, by type and region, Treatment (n=724) and Comparison (n=219)

Cause of loss	Region, f					Overall
	CAR	10	11	12	13	f
Treatment						
Antiquated/old tools (i.e. mortar and pestle for depulping)	9.1	-	27.5	1.8	-	7.3
Disease attack	63.6	76.9	84.1	19.3	68.9	55.6
Exposure to rain	54.5	46.2	33.3	73.4	41	52.3
Inadequate storage/containers	9.1	1.9	26.1	0.9	27.9	12.6
Inappropriate pulping and hulling process	-	1.9	26.1	1.8	1.6	7.3
Poor carrying containers	-	-	37.7	2.8	13.1	12.3
Poor transportation	-	5.8	43.5	14.7	4.9	17.2
Prolonged drying	-	17.3	26.1	18.3	14.8	18.5
Strip harvesting of coffee (ripe and unripe cherries are harvested from the branches)	9.1	26.9	49.3	40.4	42.6	39.4
Others	63.6	3.8	27.5	14.7	23	19.2
Comparison						
Antiquated/old tools (i.e. mortar and pestle for depulping)			46.9	-		11.4
Disease attack			96.9	11		31.8
Exposure to rain			53.1	84		76.5
Inadequate storage/containers			50	-		12.1
Inappropriate pulping and hulling process			50	1		12.9
Poor carrying containers			56.3	-		13.6
Poor transportation			56.3	12		22.7
Prolonged drying			53.1	24		31.1
Strip harvesting of coffee (ripe and unripe cherries are harvested from the branches)			75	41		49.2
Others			40.6	4		12.9

Table 83: Volume sold (in Kgs) per type of coffee produce, by market outlet, Treatment (n=724) and Comparison (n=219)

Buyers/Market	Fresh Cherries	Dried Cherries	Green Coffee Bean	Parchment	Roasted Coffee
Treatment					
My Coop/Association	212.6	40.6	65.9	84.9	16.5
Other Coop/Association	-	-	6.1	-	-

Buyers/Market	Fresh Cherries	Dried Cherries	Green Coffee Bean	Parchment	Roasted Coffee
Local Trader	126.1	165.4	398.7	19.5	49.5
Coffee Shops/Stores/Café	0.2	-	-	11.9	35.3
Roasters	-	-	-	-	48.5
Department Stores/Supermarkets	-	-	-	-	-
Processors	-	-	15.8	3.8	-
Neighbors	14.6	22.0	0.1	0.8	4.0
Exporters or International Market	13.5	-	-	-	-
Walk-in Clients	2.6	-	-	1.6	-
Comparison					
Other Coop/Association	-	-	2.4	-	-
Local Trader	781.4	137.5	732.7	-	-
Processors	-	-	72.2	-	-
Neighbors	43.6	-	4.1	-	-
Exporters or International Market	-	18.5	-	-	-

Table 84: Reason for market outlet selection, market development due PhilCAFE assistance, Treatment (n=724)

Reason for market selection	Fresh Cherries	Dried Cherries	Green Coffee Bean	Parchment	Roasted Coffee
Treatment					
It is the closest market	12.3	8.3	27.1	5.5	1.0
It had the best prices	2.5	2.9	7.7	1.5	0.4
Payment for cash advances	0.1	0.4	5.5	0.3	-
Others	-	0.6	3.0	3.2	0.1
End-market					
New end-market	0.7	-	0.1	2.5	0.1
Strengthened end-market	12.6	9.0	32.0	6.4	1.2
Due to PhilCAFE Assistance					
No	7.9	4.8	24.4	5.8	1.1
Yes	5.4	4.1	7.7	3.0	0.3

Table 85: Reason for market outlet selection, market development due to external assistance, Comparison (n=219)

Reason for market selection	Fresh Cherries	Dried Cherries	Green Coffee Bean
Comparison			
It is the closest market	9.1	5.5	67.1
It had the best prices	0.5	0.9	17.8
Payment for cash advances	2.3	-	19.2
Others	-	-	0.5
End-market			
New end-market	-	1.4	0.5
Strengthened end-market	9.6	4.6	73.5
Due to External Assistance			
No	8.7	5.5	73.5
Yes	0.9	0.5	0.5

Table 86: Perceive changed in total coffee production since 2019, % of respondents and perceived % of change, Treatment (n=724) and Comparison (n=219)

Region	Remained the same	Perceived Increase in Production				Perceived Decrease in Production			
		f	Perceived Percentage of Increase (%)			f	Perceived Percentage of Decrease (%)		
			mean	sd	se (mean)		mean	sd	se (mean)
Treatment	37.7	11.5	18.0	17.0	0.6	24.0	38.7	21.0	0.8
CAR	2.3	4.7	22.5	18.5	0.7	1.7	53.3	11.5	0.4
10	4.4	1.8	18.9	21.7	0.8	5.1	24.6	20.5	0.8
11	9.1	0.1	25.0	-	-	5.0	43.6	14.1	0.5
12	5.0	3.9	15.1	15.4	0.6	9.7	37.6	21.8	0.8
13	5.9	1.0	22.7	15.1	0.6	2.6	43.7	22.3	0.8
Comparison	11.9	5.5	15.2	17.5	1.2	42.5	43.7	20.8	1.4
11	11.9	-	-	-	-	7.8	42.3	14.9	1.0
12	-	5.5	15.2	17.5	1.2	34.7	44.0	22.0	1.5

Table 87: Perceive changed in sales since 2019, % of respondents and perceived % of change, Treatment (n=724) and Comparison (n=219)

Region	No Sales	Have sales								
		Remained the same	Perceived Increase in Sales				Perceived Decrease in Sales			
			f	Perceived Percentage of Increase (%)			f	Perceived Percentage of Decrease (%)		
	f	f		mean	sd	se (mean)		mean	sd	se (mean)
Treatment	41.3	24.9	12.3	18.0	17.0	0.6	21.5	38.7	21.0	0.8
CAR	73.6	7.6	10.4	22.5	18.5	0.7	8.3	53.3	11.5	0.4
10	47.9	22.9	9.7	18.9	21.7	0.8	19.4	24.6	20.5	0.8
11	29.5	47.3	0.7	25.0	-	-	22.6	43.6	14.1	0.5
12	7.6	20.0	33.1	15.1	15.4	0.6	39.3	37.6	21.8	0.8
13	48.3	26.2	7.6	22.7	15.1	0.6	17.9	43.7	22.3	0.8
Comparison	11.4	36.5	15.5	15.2	17.5	1.2	36.5	43.7	20.8	1.4
11	33.3	46.7	-	-	-	-	20.0	42.3	14.9	1.0
12	-	31.3	23.6	15.2	17.5	1.2	45.1	44.0	22.0	1.5

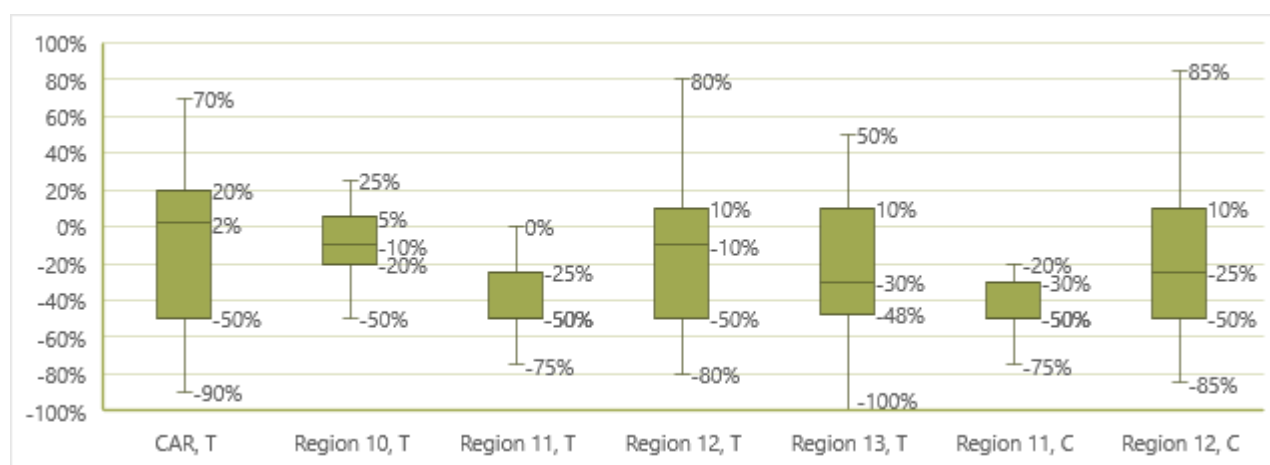


Figure 32: Distribution of perceived estimated change in sales (increase, decrease) of those who perceived to have a change (n=359), by region, (top = upper extreme, top box = upper quartile, mid box = median, bottom box = lower quartile, bottom = lower extreme, outliers not included; T = Treatment, C=Comparison)

Table 88: Perceived changed in type of market actors, Treatment (n=724) and Comparison (n=219)

Region	Change	Remained the same
Treatment	1.4	53.9
CAR	3.5	22.2
10	-	47.9
11	-	69.2
12	0.7	89.0
13	2.8	40.7
Comparison	0.5	86.8
11	-	64.0
12	0.7	98.6

Table 89: Average perceived changed (%) in the number of market actors since 2019, Treatment (n=724) and Comparison (n=219)

Region	Decreased	Increased	NA	Remained the same
Treatment	1.7	1.5	44.1	52.8
CAR	4.2	2.1	74.3	19.4
10	-	-	52.1	47.9
11	3.4	-	28.1	68.5
12	-	2.1	9.7	88.3
13	0.7	3.4	56.6	39.3
Comparison	-	1.8	11.9	86.3
11	-	-	34.7	65.3
12	-	2.8	-	97.2

Table 90: Percentage of farmers satisfied with their end-market for coffee, Treatment (n=724) and Comparison (n=219)

Region	Satisfied with the end markets that you are accessing/selling to?		Not applicable, Only for Home Consumption
	Yes	No	
Treatment	45.3	28.6	26.1
CAR	23.6	6.3	70.1
10	49.3	29.2	21.5
11	57.5	17.8	24.7
12	73.8	24.1	2.1
13	22.1	65.5	12.4
Comparison	68.9	20.1	11.0
11	50.7	18.7	30.7
12	78.5	20.8	0.7

Table 91: Percentage of farmers who participated in coffee cupping since 2019, and the average cupping score, Treatment (n=724) and Comparison (n=219)

Region	Percentage of farmers who participated in coffee cupping since 2019	Cupping Score		
		Mean	sd	se (mean)
Treatment	3.6	81.7	2.3	0.1
CAR	15.3	82	2.3	0.1
10	-	-	-	-
11	-	-	-	-
12	-	-	-	-
13	2.8	80	-	-
Comparison	-	-	-	-
11	-	-	-	-

Region	Percentage of farmers who participated in coffee cupping since 2019	Cupping Score		
		Mean	sd	se (mean)
12	-	-	-	-

Table 92: Number of farmers who perceived that coffee cupping grade influence coffee sales, Treatment (n=26)

Region	Number of farmers who perceived that coffee cupping grade influence coffee sales	
	Yes	No
CAR	4	18
10	-	-
11	-	-
12	-	-
13	4	-
Overall	8	18

Table 93: Number of farmers who perceived that coffee cupping of a Q grade is the basis to classify the coffee sold as specialty or fine, Treatment (n=26)

Region	Number of farmers who perceived that coffee cupping of a Q grade is the basis to classify the coffee sold as specialty or fine	
	Yes	No
CAR	7	15
10	-	-
11	-	-
12	-	-
13	4	-
Overall	11	15

Table 94: Percentage of farmers who sold specialty coffee. Treatment (n=26)

Region	Percentage of farmers who sold specialty coffee	
	Yes	No
CAR	1	21
10	-	-
11	-	-
12	-	-
13	4	-
Overall	5	21

Table 95: Volume and selling price of specialty coffee, CAR and Region 13

Region	Fine Coffee, in kilo			Average Selling Price, in php		
	mean	sd	mean	sd	mean	sd
Arabica	16	35.7	1.3	190	424.8	15.7
Robusta	488	287.6	10.6	330	277.4	10.3

Table 96: Causes for not attaining volume and sales target (% of respondents), Treatment (n=724)

Items	Region, f					Overall
	CAR	10	11	12	13	f
Treatment						
Poor/limited markets (limited buyers/low market demand)	0.6	0.1	9.0	1.4	5.2	16.3
Poor farm-to-market access (i.e., connecting the production site to main roads)	0.1	0.1	8.0	1.0	1.9	11.2
Postharvest losses	0.3	2.1	11.3	5.5	3.3	22.5

Items	Region, <i>f</i>					Overall
	CAR	10	11	12	13	<i>f</i>
Absence/insufficient post-harvest facilities	0.7	-	5.2	0.8	1.8	8.6
Difficulty accessing inputs or services to get desired yields	0.7	0.3	4.8	0.8	4.4	11.0
Problems with accessing labor	0.3	0.1	4.1	0.4	2.3	7.3
Climate/weather issues	1.8	4.8	6.4	8.6	4.7	26.2
Others, specify	15.2	10.4	6.2	4.4	11.9	48.1
Comparison						
Poor/limited markets (limited buyers/low market demand)	-	-	3.6	1.8	-	5.4
Poor farm-to-market access (i.e., connecting the production site to main roads)	-	-	3.7	0.4	-	4.1
Postharvest losses	-	-	5.4	8.0	-	13.4
Absence/insufficient post-harvest facilities	-	-	4.0	0.4	-	4.4
Difficulty accessing inputs or services to get desired yields	-	-	3.2	0.3	-	3.5
Problems with accessing labor	-	-	2.5	1.1	-	3.6
Climate/weather issues	-	-	2.9	10.1	-	13.0
Others, specify	-	-	3.6	1.8	-	5.4

% of the observations of respondent type (treatment = 724, comparison = 219)

Table 97: Percentage of farmers who are satisfied with the average price received for their coffee in October 2020-September 2021

Region	Number and percentage of farmers who are satisfied with the average price received	
	<i>f</i>	%
Treatment	256	35.4
CAR	30	20.8
10	56	38.9
11	60	41.1
12	87	60.0
13	23	15.9
Comparison	122	55.7
11	28	37.3
12	94	65.3

Table 98: Percentage of farmers who want to certify their coffee farm, Treatment (n=724) and Comparison (n=219)

Region	Percentage of farmers who want to certify their coffee farm	
	Yes	No
Treatment	70.7	29.3
CAR	72.2	27.8
10	85.4	14.6
11	64.4	35.6
12	88.3	11.7
13	43.4	56.6
Comparison	85.8	14.2
11	65.3	34.7
12	96.5	3.5

Table 99: Percentage with family labor and hired labor in coffee farming, by region, Treatment (n=724) and Comparison (n=219)

Region	With Family Labor			With Hired Labor		
	No	Yes	% Yes	No	Yes	% Yes
Treatment	212	512	70.7	545	179	24.7
CAR	40	104	72.2	121	23	16.0
10	21	123	85.4	118	26	18.1
11	52	94	64.4	125	21	14.4
12	17	128	88.3	48	97	66.9
13	82	63	43.4	133	12	8.3
Comparison	31	188	85.8	138	81	37.0
11	26	49	65.3	63	12	16.0
12	5	139	96.5	75	69	47.9

Table 100: Average number of family labor involved in coffee farming by category, Treatment (n=724) and Comparison (n=219)

Region	Average Number of family labor	Average of Adult Male	Average of Youth Male	Average of Adult Female	Average of Youth Female
Treatment	2.2	0.9	0.4	0.6	0.2
CAR	3.0	1.0	0.5	0.9	0.5
10	2.2	0.9	0.5	0.6	0.2
11	1.6	0.9	0.2	0.4	0.1
12	2.1	0.9	0.4	0.6	0.2
13	1.8	0.9	0.2	0.5	0.1
Comparison	2.1	1.0	0.4	0.6	0.2
11	1.4	0.9	0.2	0.2	0.0
12	2.4	1.0	0.4	0.7	0.2

Table 101: Details of family labor/participation in coffee farming, adult male and female, Treatment (n=724) and Comparison (n=219)

Region	Adult Male				Adult Female			
	% Full time	% Part-time	Ave. days worked per month	% with pay	% Full time	% Part-time	Ave. days worked per month	% with pay
Treatment	51.5	48.5	13.5	1.3	30.7	69.3	10.2	0.6
CAR	9.8	90.2	6.7	0.0	6.3	93.8	7.2	0.0
10	50.9	49.1	12.1	2.6	46.6	53.4	10.2	2.7
11	67.1	32.9	18.1	0.0	41.0	59.0	11.2	0.0
12	70.2	29.8	13.2	1.7	35.1	64.9	9.0	0.0
13	63.8	36.2	21.9	1.7	44.1	55.9	20.6	0.0
Comparison	70.4	29.6	16.1	1.1	38.2	61.8	11.6	2.7
11	67.4	32.6	20.0	0.0	41.7	58.3	14.5	0.0
12	71.3	28.7	14.8	1.5	37.8	62.2	11.2	3.1

Table 102: Details of family labor/participation in coffee farming, youth male and female, Treatment (n=724) and Comparison (n=219)

Region	Adult Male				Adult Female			
	% Full time	% Part-time	Ave. days worked per month	% with pay	% Full time	% Part-time	Ave. days worked per month	% with pay
Treatment	36.2	63.8	9.5	1.5	17.7	82.3	6.5	0.0
CAR	2.0	98.0	3.1	2.0	0.0	100.0	3.1	0.0
10	50.0	50.0	10.6	3.3	53.8	46.2	9.0	0.0
11	61.9	38.1	17.6	0.0	20.0	80.0	11.2	0.0
12	51.9	48.1	11.4	0.0	23.8	76.2	9.2	0.0

Region	Adult Male				Adult Female			
	% Full time	% Part-time	Ave. days worked per month	% with pay	% Full time	% Part-time	Ave. days worked per month	% with pay
13	0.0	100.0	9.4	0.0	0.0	100.0	10.0	0.0
Comparison	29.7	70.3	11.9	4.1	3.2	96.8	8.9	0.0
11	58.3	41.7	17.8	0.0	0.0	100.0	10.0	0.0
12	24.2	75.8	10.8	4.8	3.4	96.6	8.9	0.0

Table 103: Average number of hired labor involved in coffee farming by category, Treatment (n=724) and Comparison (n=219)

Region	Average number of hired labor	Average of Adult Male	Average of Youth Male	Average of Adult Female	Average of Youth Female
Treatment	3.2	2.1	0.5	0.4	0.1
CAR	3.5	0.7	0.4	1.9	0.4
10	2.0	1.6	0.3	0.1	0.0
11	2.0	0.8	0.4	0.4	0.1
12	3.9	3.0	0.6	0.2	0.1
13	1.5	1.1	0.3	0.0	0.0
Comparison	3.2	1.5	1.4	0.3	0.1
11	2.4	0.4	1.4	0.5	0.1
12	3.4	1.7	1.4	0.2	0.1

Table 104: Details of hired labor/participation in coffee farming, adult male and female, Treatment (n=724) and Comparison (n=219)

Items	Adult Male				Adult Female			
	% Full time	% Part-time	Ave. days worked per month	% with pay	% Full time	% Part-time	Ave. days worked per month	% with pay
Treatment	12.3	87.7	1.9	96.7	4.0	96.0	2.1	100.0
CAR	-	100.0	0.7	93.3	-	100.0	0.9	100.0
10	19.3	80.7	5.3	100.0	0.0	100.0	0.0	100.0
11	8.1	91.9	3.1	100.0	12.5	87.5	7.3	100.0
12	12.3	87.7	1.0	96.2	9.1	90.9	2.9	100.0
13	9.5	90.5	3.1	90.5	-	-	-	-
Comparison	7.1	92.9	0.8	98.8	8.7	91.3	2.3	91.3
11	6.7	93.3	3.0	100.0	16.7	83.3	6.7	100.0
12	7.1	92.9	0.6	98.6	5.9	94.1	0.8	88.2

Table 105: Details of hired labor/participation in coffee farming, youth male and female, Treatment (n=724) and Comparison (n=219)

Items	Adult Male				Adult Female			
	% Full time	% Part-time	Ave. days worked per month	% with pay	% Full time	% Part-time	Ave. days worked per month	% with pay
Treatment	22.8	77.2	311.0	100.0	15.8	84.2	1.4	100.0
CAR	-	100.0	1.2	100.0	-	100.0	-	100.0
10	25.0	75.0	5.0	100.0	-	100.0	-	100.0
11	-	100.0	4.2	100.0	-	100.0	6.0	100.0
12	31.1	68.9	467.4	100.0	60.0	40.0	1.6	100.0
13	-	100.0	1.5	100.0	-	-	-	-
Comparison	11.7	88.3	3.3	99.1	-	100.0	0.3	100.0
11	5.9	94.1	3.1	100.0	-	100.0	2.0	100.0
12	12.8	87.2	3.4	98.9	-	100.0	-	100.0

Table 106: Change in labors/Did the number of hours and/or the number of persons working on your coffee farm change in this fiscal year (Oct 2020 to Sept 2021), compared to the previous year (Oct 2019 to Sept 2020), Treatment (n=724) and Comparison (n=219)

Region	Decreased	Increased	Remained the same	Percentage increase of labors	Percentage decrease of labors
Treatment	9.3	1.9	88.8	25.1	44.9
CAR	0.0	2.1	97.9	10.3	-
10	2.1	0.0	97.9	-	60.0
11	17.1	0.0	82.9	-	46.7
12	4.8	6.2	89.0	32.2	39.3
13	22.1	1.4	76.6	15.0	44.1
Comparison	11.4	0.9	87.7	37.5	52.6
11	25.3	0.0	74.7	-	57.9
12	4.2	1.4	94.4	37.5	35.8

Table 107: Percentage of farmers who actively market their coffee products, Treatment (n=724) and Comparison (n=219)

Region	No	Yes	% Yes
Treatment	623	101	14.0
CAR	136	8	5.6
10	144	-	0.0
11	94	52	35.6
12	139	6	4.1
13	110	35	24.1
Comparison	187	32	14.6
11	48	27	36.0
12	139	5	3.5

Table 108: Frequency of accessing agricultural market/price information (percentage), Treatment (n=724) and Comparison (n=219)

Region	Daily	Weekly	Monthly	Quarterly	Bi-Annual	Annual
Treatment	0.3	1.7	13.0	9.5	5.8	69.8
CAR	-	-	4.2	2.1	4.2	89.6
10	-	0.7	2.1	8.3	6.9	81.9
11	-	-	-	0.7	0.7	98.6
12	-	4.1	21.4	4.8	2.1	67.6
13	1.4	3.4	37.2	31.7	15.2	11.0
Comparison	-	2.7	3.7	0.5	0.5	92.7
11	-	-	-	-	-	100.0
12	-	4.2	5.6	0.7	0.7	88.9

Table 109: Percentage of farmers who are optimistic about coffee, Treatment (n=724) and Comparison (n=219)

Items	Optimistic about coffee in the next 3-5 years?	Pessimistic about coffee in the next 3-5 years?	No comment
Treatment	74.4	2.6	22.9
Comparison	80.8	2.3	16.9

Table 110: Percentage who has accessed to external support for coffee production capital, Treatment (n=724) and Comparison (n=219)

Region	No (relied from last year's profit)	Yes	% Yes
Treatment	662	62	8.6
CAR	117	27	18.8
10	142	2	1.4

Region	No (relied from last year's profit)	Yes	% Yes
11	140	6	4.1
12	137	8	5.5
13	126	19	13.1
Comparison	211	8	3.7
11	75	-	-
12	136	8	5.6

Table 111: Percentage of farmers who perceived that their production capital is enough for their current operations, Treatment (n=724) and Comparison (n=219)

Region	No	Yes	% Yes
Treatment	485	239	33.0
CAR	82	62	43.1
10	57	87	60.4
11	128	18	12.3
12	88	57	39.3
13	130	15	10.3
Comparison	181	38	17.4
11	66	9	12.0
12	115	29	20.1

Table 112: Percentage of farmers who have existing savings/share capital with the organization that they are a member of, Treatment (n=724) and Comparison (n=219)

Region	No	Yes	% Yes
Treatment	528	196	27.1
CAR	34	110	76.4
10	139	5	3.5
11	135	11	7.5
12	120	25	17.2
13	100	45	31.0
Comparison	212	7	3.2
11	74	1	1.3
12	138	6	4.2

Table 113: Percentage of farmers who have an existing credit/loan from a microfinance institution or bank, Treatment (n=724) and Comparison (n=219)

Region	No	Yes	% Yes
Treatment	637	87	12.0
CAR	103	41	28.5
10	142	2	1.4
11	131	15	10.3
12	122	23	15.9
13	139	6	4.1
Comparison	212	7	3.2
11	70	5	6.7
12	142	2	1.4

Table 114: Percentage of farmers who have difficulty in accessing credit, Treatment (n=724) and Comparison (n=219)

Region	No	Yes	% Yes
Treatment	618	106	14.6
CAR	135	9	6.3
10	133	11	7.6
11	105	41	28.1
12	104	41	28.3
13	141	4	2.8
Comparison	150	69	31.5
11	54	21	28.0
12	96	48	33.3

Table 115: Are these challenges common to all famers in the community?

Region	No	Yes	% Yes
Treatment	437	262	36.2
CAR	127	17	11.8
10	110	13	9.0
11	64	81	55.5
12	43	102	70.3
13	93	49	33.8
Comparison	82	137	62.6
11	39	36	48.0
12	43	101	70.1

Table 116: Percentage of farmers who have additional/future need to borrow money, Treatment (n=724) and Comparison (n=219)

Region	No	Yes	% Yes
Treatment	357	367	50.7
CAR	49	95	66.0
10	95	49	34.0
11	57	89	61.0
12	47	98	67.6
13	109	36	24.8
Comparison	79	140	63.9
11	25	50	66.7
12	54	90	62.5

Table 117: Purpose of additional needed borrowing, Treatment (n=724) and Comparison (n=219)

Region	Land purchase for coffee expansion	Coffee production	Post-Harvest facilities	Marketing	Others
Treatment	25.3	84.7	33.8	13.1	15.5
CAR	2.1	83.2	37.9	0.0	30.5
10	40.8	73.5	49.0	4.1	4.1
11	66.3	78.7	51.7	40.4	6.7
12	11.2	96.9	14.3	5.1	5.1
13	2.8	86.1	11.1	13.9	41.7
Comparison	27.1	89.3	29.3	16.4	7.9
11	64.0	76.0	64.0	42.0	4.0
12	6.7	96.7	10.0	2.2	10.0

* amongst those who have need for additional borrowing

Table 118: Amount needed for borrowing, and maximum rate of interest willing to pay, Treatment (n=724) and Comparison (n=219)

Region	Average needed borrowing (PhP)	Percentage who are willing to pay interest			Ave. maximum interest rate (%)
		No	Yes	% Yes	
Treatment	63,129	33	334	91.0	1.8
CAR	59,389	1	94	98.9	0.8
10	35,703	21	28	57.1	3.3
11	49,270	6	83	93.3	1.5
12	102,929	3	95	96.9	2.5
13	36,250	2	34	94.4	2.5
Comparison	65,058	4	136	97.1	2.3
11	47,101	-	50	100.0	1.4
12	75,033	4	86	95.6	2.8

Table 119: Percentage of farmers who have an existing credit/cash advance from input suppliers or traders, Treatment (n=724) and Comparison (n=219)

Region	Farmers who have an existing credit/cash advance from input suppliers or traders			Average amount of Credit from traders (in PhP)	Average interest rate of Credit from traders
	No	Yes	% Yes		
Treatment	700	24	3.3	24,354	4.3
CAR	140	4	2.8	20,500	1.6
10	144	-	-	-	-
11	144	2	1.4	24,000	3.0
12	129	16	11.0	27,281	5.1
13	143	2	1.4	9,000	4.8
Comparison	210	9	4.1	13,667	13.1
11	75	-	-	-	-
12	135	9	6.3	13,667	13.1

Table 120: Percentage of farmers who have access to external capacity-building activities (training, exposure trips, industry-wide gatherings), Treatment (n=724) and Comparison (n=219)

Region	No, I rely on my own efforts	Yes	% Yes
Treatment	522	202	27.9
CAR	57	87	60.4
10	138	6	4.2
11	108	38	26.0
12	139	6	4.1
13	80	65	44.8
Comparison	202	17	7.8
11	60	15	20.0
12	142	2	1.4

Table 121: External sources of capacity-building activities of farmers (training, exposure trips, industry-wide gatherings), Treatment (n=724) and Comparison (n=219)

External sources of capacity-building activities of farmers	Percentage
LGU/national government	27.2
Taught by fellow coffee farmers	25.2
Support from NGO	23.1
Support from a cooperative	10.9
SUC extension staff (research, development & extension)	9.5
Others	4.1

Table 122: Relevance and effectiveness of external capacity-building activities

External Capacity Building Provider	Relevance Rating				Effectiveness Rating				
	1 Not at all relevant	3 Somewhat relevant	4 Very relevant	5 Extremely relevant	1 Not at all effective	2 Not so effective	3 Somewhat effective	4 Very effective	5 Extremely effective
LGU/national government	0.0	2.5	62.5	35.0	0.0	2.5	0.0	62.5	35.0
SUC extension staff (research, development & extension)	0.0	0.0	21.4	78.6	0.0	0.0	0.0	21.4	78.6
Support from a cooperative	6.7	13.3	53.3	26.7	13.3	0.0	13.3	46.7	26.7
Support from NGO	0.0	0.0	82.4	17.6	0.0	0.0	0.0	82.4	17.6
Taught by fellow coffee farmers	0.0	5.4	40.5	54.1	2.7	0.0	8.1	35.1	54.1

Table 123: Activities of household members, treatment and comparison group, by sex category, in percentage, Treatment (n=724) and Comparison (n=219)

Farm Activities	Treatment				Comparison			
	Men	Male Youth	Women	Female Youth	Men	Male Youth	Women	Female Youth
Seed/plant selection	18.2	7.8	10.4	6.0	6.2	1.1	0.0	0.0
Nursery establishment	16.0	8.6	10.0	5.6	3.6	1.1	0.0	0.0
Land preparation	48.6	28.6	22.1	12.4	43.0	13.8	5.7	0.0
Planting	56.8	42.7	35.5	17.1	66.8	35.1	23.0	6.1
Transplanting	25.4	15.3	14.0	8.5	13.0	6.4	2.9	1.5
Weeding	67.0	57.6	50.7	35.5	61.1	36.2	27.0	10.6
Fertilizer application	47.7	32.2	31.9	18.4	43.5	22.3	21.3	6.1
Soil and water conservation	13.9	7.8	10.0	4.3	5.2	4.3	0.6	0.0
Pruning	47.9	29.4	24.6	10.3	71.5	40.4	35.1	10.6
Harvesting/picking	58.8	42.4	42.2	21.4	82.9	61.7	47.7	30.3
Drying	49.5	38.0	38.4	21.4	74.1	56.4	57.5	34.8
Hulling	19.9	13.3	14.8	9.8	28.0	12.8	8.0	3.0
Sorting	12.8	9.0	17.5	15.0	2.6	1.1	0.0	0.0
Storage	11.3	5.9	11.3	5.1	2.6	2.1	0.0	0.0
Packing	18.0	10.6	13.4	6.0	22.3	16.0	8.0	3.0
Selling	32.8	17.6	29.9	17.9	67.4	29.8	46.6	19.7
Caring for children	18.6	10.2	62.6	42.3	15.5	2.1	59.8	19.7
Teaching/tutoring/training children	12.4	8.2	43.6	28.6	7.8	0.0	44.3	12.1
Food and drink preparation	27.5	38.0	87.5	84.2	27.5	38.3	86.2	89.4
Cleaning the house	21.3	38.0	87.1	87.6	20.7	38.3	86.2	90.9
Attending group/committee meetings	32.5	8.2	42.6	15.0	37.3	3.2	40.2	10.6
Others (specify)	7.1	15.7	5.0	17.1	3.1	33.0	8.6	36.4

*Divisor is the total household with members under sex and age category.

Table 124: Household Decision Making Dynamics, Treatment (n=724)

Activity	Who Normally makes the decision (%)							To what extent do you feel you can participate in decisions about an activity (%)*			
	Self	Spouse	Self and Spouse Jointly	Someone else in the household	Jointly with someone else inside the household	Jointly with someone else outside the household	Others	Not at all	Small Extent	Medium Extent	To a high extent
What crops to plant or produce	41.7	4.7	47.0	2.2	3.5	0.4	0.6	2.8	2.1	49.5	45.5
What production technology to use	42.5	7.0	42.3	2.1	3.6	0.4	2.1	3.4	2.4	51.4	42.8
Whether to avail of financial assistance or credit	34.1	3.6	54.3	1.8	3.9	0.3	2.1	3.1	2.7	47.8	46.3
Where to use the borrowed funds	32.6	2.8	55.8	2.6	3.7	0.4	2.1	2.9	1.7	48.2	47.2
What inputs to procure	41.4	6.5	43.8	2.2	3.6	0.4	2.1	3.3	3.3	50.7	42.7
Where and quantity of produce to sell (selling decision)	43.9	5.2	41.6	1.8	4.1	0.4	2.9	5.7	1.7	47.0	45.6
What price level to negotiate	45.4	5.0	40.2	2.3	3.6	0.3	3.2	5.8	1.8	47.3	45.1
Whether to add value to the coffee production (e.g. process cherry to green coffee beans)	44.1	4.7	41.3	2.3	3.7	0.6	3.3	5.4	2.5	48.4	43.7
Who will receive the income from the coffee sale	38.5	9.5	42.7	2.2	3.0	0.3	3.7	5.8	1.6	45.2	47.4
How and where to spend the income from coffee	31.8	3.2	54.8	2.1	3.7	0.3	4.1	5.3	1.2	45.5	48.0
Decide on which coffee-related equipment and facilities to purchase	39.4	6.2	44.8	2.3	3.6	0.8	2.9	4.6	3.4	49.4	42.6
Who will use and how to use farm equipment and facilities	39.4	8.1	43.2	2.9	3.5	0.8	2.1	3.4	3.9	47.2	45.6
Who to hire, how many to hire and how much wages to pay for coffee-related labor	43.0	6.4	40.7	2.3	4.3	0.7	2.6	4.1	0.7	50.6	44.6
Who within the household will participate in PO/Cooperative meetings	45.0	4.0	40.5	1.9	4.4	0.3	3.9	1.8	1.3	47.0	50.0
Who within the household will participate in agricultural extension trainings	49.9	4.8	38.5	1.9	3.7	0.3	0.8	1.4	2.8	45.7	50.1

Note: * Not at all: You are not interested in the decision or you are not asked for your opinion
Small extent: You can give your opinion but it is not considered in the final decision
Medium extent: You can discuss and come to an agreement about a decision
To a high extent: You can make the decision even if your spouse disagrees

Table 125: Household Decision Making Dynamics, Comparison (n=219)

Activity	Who Normally makes the decision (%)							To what extent do you feel you can participate in decisions about an activity (%)*			
	Self	Spouse	Self and Spouse Jointly	Someone else in the household	Jointly with someone else inside the household	Jointly with someone else outside the household	Others	Not at all	Small Extent	Medium Extent	To a high extent
What crops to plant or produce	40.2	5.9	50.7	1.8	1.4	0.0	0.0	0.8	0.8	45.0	53.4
What production technology to use	42.0	5.9	47.9	2.7	1.4	0.0	0.0	0.8	2.4	41.7	55.1
Whether to avail of financial assistance or credit	34.7	5.0	57.5	1.4	1.4	0.0	0.0	0.7	0.0	49.7	49.7
Where to use the borrowed funds	33.8	3.2	59.8	1.8	1.4	0.0	0.0	0.7	2.8	47.5	48.9
What inputs to procure	39.7	7.8	48.9	2.3	1.4	0.0	0.0	0.8	1.5	52.3	45.5
Where and quantity of produce to sell (selling decision)	38.4	6.4	51.6	1.4	1.8	0.5	0.0	0.7	0.0	45.2	54.1
What price level to negotiate	43.4	6.4	46.1	2.3	1.8	0.0	0.0	0.8	0.8	46.0	52.4
Whether to add value to the coffee production (e.g. process cherry to green coffee beans)	39.7	5.9	49.3	1.8	2.3	0.0	0.9	1.5	3.0	44.7	50.8
Who will receive the income from the coffee sale	32.4	18.7	44.7	2.3	1.8	0.0	0.0	0.7	4.1	39.9	55.4
How and where to spend the income from coffee	26.5	3.2	64.8	3.2	1.8	0.0	0.5	0.6	1.2	43.5	54.7
Decide on which coffee-related equipment and facilities to purchase	40.6	7.8	45.7	4.1	1.8	0.0	0.0	0.8	2.3	44.6	52.3
Who will use and how to use farm equipment and facilities	40.6	9.6	44.7	2.7	2.3	0.0	0.0	0.8	2.3	43.1	53.8
Who to hire, how many to hire and how much wages to pay for coffee-related labor	35.6	6.4	53.4	2.3	2.3	0.0	0.0	0.7	0.7	45.4	53.2
Who within the household will participate in PO/Cooperative meetings	46.1	4.1	45.7	2.3	1.8	0.0	0.0	0.8	4.2	41.5	53.4
Who within the household will participate in agricultural extension trainings	45.2	4.1	46.1	2.7	1.8	0.0	0.0	0.8	5.0	42.5	51.7

Note: * Not at all: You are not interested in the decision or you are not asked for your opinion
Small extent: You can give your opinion but it is not considered in the final decision
Medium extent: You can discuss and come to an agreement about a decision
To a high extent: You can make the decision even if your spouse disagrees

Table 126: Opinions on farm and household decision-making, in percentage, Treatment (n=724) and Comparison (n=219)

Opinions on Farm and Household Decision-Making	Treatment			Comparison		
	Agree	Partially Agree	Do Not Agree	Agree	Partially Agree	Do Not Agree
All household member's opinions should be considered when making decisions about how money will be spent	70.3	22.5	7.2	69.4	18.3	12.3
A man should have the final decision about the household's financial decisions	48.9	40.9	10.2	62.6	36.1	1.4
Men and women within a household should make decisions about household finances in a way that neighbors and the community expect that they should	66.7	18.5	14.8	64.4	14.6	21.0
It's a woman's responsibility to manage the household's finances	60.6	32.3	7.0	68.9	28.8	2.3
A man should make the decisions about managing the coffee farm	62.2	28.5	9.4	74.0	23.7	2.3
A woman's role is taking care of her home and family	70.6	22.0	7.5	72.6	24.7	2.7
A man should help his wife with household chores and taking care of the family	83.8	15.9	0.3	78.1	21.9	0.0

Table 127: Average time spent (in hours per week) on coffee farming, domestic work and care work, Treatment (n=724) and Comparison (n=219)

Region	Treatment				Comparison			
	Men	Male Youth	Women	Female Youth	Men	Male Youth	Women	Female Youth
Number of hours spent on coffee farming per week	15.1	8.8	8.1	2.4	20.8	9.9	10.0	3.3
CAR	5.1	4.0	7.2	2.1				
Region 10	11.2	7.6	7.3	3.3				
Region 11	13.9	8.9	4.7	1.0	10.7	4.9	3.2	0.6
Region 12	28.1	19.4	14.0	4.1	25.8	12.5	13.7	4.6
Region 13	17.8	3.8	7.2	1.3				
Number of hours spent on food and drink preparation	4.4	4.1	13.1	8.9	3.9	4.3	13.5	9.3
CAR	2.4	3.5	6.2	5.0				
Region 10	4.0	6.6	21.8	14.4				
Region 11	4.3	3.6	13.6	10.0	1.8	2.8	13.7	9.2
Region 12	6.8	4.7	16.4	9.9	5.0	5.1	13.4	9.3
Region 13	4.4	1.5	9.2	5.4				
Number of hours spent on cleaning the house	2.3	2.9	9.6	7.0	2.4	3.1	11.8	9.0
CAR	0.8	1.4	2.9	2.6				
Region 10	1.1	4.9	12.8	8.5				
Region 11	2.0	2.1	10.0	9.1	0.7	1.3	9.4	8.9
Region 12	4.7	4.1	14.8	9.6	3.2	4.0	13.0	9.1
Region 13	3.0	1.6	9.1	6.3				
Number of hours spent caring for children	3.8	1.5	10.0	6.6	2.7	0.5	10.1	4.4
CAR	3.5	1.6	5.9	4.4				
Region 10	4.5	2.3	14.1	10.6				
Region 11	1.7	0.8	9.7	5.7	0.9	0.6	10.6	5.3
Region 12	4.4	1.1	13.3	5.3	3.6	0.5	9.9	3.9
Region 13	4.6	1.6	8.3	6.8				

Table 128: Household members with access to agricultural extension services (i.e. direct interaction with extension staff from different organizations), in percentage, Treatment (n=724) and Comparison (n=219)

Region	Treatment					Comparison				
	Access to agricultural extension services				No access to agricultural extension services	Access to agricultural extension services				No access to agricultural extension services
	Men	Male Youth	Women	Female Youth		Men	Male Youth	Women	Female Youth	
CAR	36.1	3.5	70.8	3.5	14.6	-	-	-	-	-
Region 10	52.8	7.6	28.5	10.4	16.0	-	-	-	-	-
Region 11	56.8	11.6	27.4	7.5	21.2	33.3	6.7	13.3	2.7	50.7
Region 12	53.1	7.6	33.1	4.8	29.7	35.4	2.1	22.9	0.7	56.3
Region 13	71.7	2.1	35.9	3.4	6.9	-	-	-	-	-
Overall	54.1	6.5	39.1	5.9	17.7	34.7	3.7	19.6	1.4	54.3

Table 129: Percentage of farmers who shared learnings from extension trainings and average number of influenced household and community members, Treatment (n=724) and Comparison (n=219)

Region	% of farmers who shared learnings to household members	Ave. number of influenced HH members	% of farmers who shared learnings to community members	Ave. number of influenced community members
Treatment	37.4	2	13.0	10
CAR	58.3	3	36.1	8
10	45.1	3	0.7	5
11	11.6	1	0.7	65
12	49.7	2	10.3	16
13	40.7	2	17.2	7
Comparison	13.7	2	4.6	8
11	2.7	1	0.0	0
12	19.4	2	6.9	8

Table 130: Percentage of household members who attended/participated to training on coffee farming, processing and marketing, Treatment (n=724) and Comparison (n=219)

Region	Treatment					Comparison				
	Men	Male Youth	Women	Female Youth	None	Men	Male Youth	Women	Female Youth	None
CAR	25.0	0.7	67.4	0.7	20.1	-	-	-	-	-
Region 10	64.6	12.5	43.8	11.8	6.9	-	-	-	-	-
Region 11	57.5	11.6	39.0	10.3	7.5	37.3	6.7	20.0	4.0	44.0
Region 12	61.4	8.3	35.9	7.6	14.5	54.2	2.8	37.5	1.4	28.5
Region 13	70.3	2.1	32.4	3.4	8.3	-	-	-	-	-
Overall	55.8	7.0	43.6	6.8	11.5	48.4	4.1	31.5	2.3	33.8

Table 131: Percentage of farmers who shared learnings trainings related to coffee farming, processing and marketing with other household and community members, Treatment (n=724) and Comparison (n=219)

Region	% of farmers who shared learnings to household members	Ave. number of influenced HH members	% of farmers who shared learnings to community members	Ave. number of influenced community members
Treatment	44.1	2	12.7	9
CAR	58.3	3	30.6	9
10	54.2	3	1.4	0
11	13.7	1	2.7	16

Region	% of farmers who shared learnings to household members	Ave. number of influenced HH members	% of farmers who shared learnings to community members	Ave. number of influenced community members
12	56.6	2	13.8	14
13	37.9	3	15.2	5
Comparison	19.6	2	5.0	14
11	2.7	1	0.0	0
12	28.5	2	7.6	14

Table 132: Percentage of household members who affiliated/member of POs, Treatment (n=724) and Comparison (n=219)

Region	Treatment					Comparison				
	Men	Male Youth	Women	Female Youth	None	Men	Male Youth	Women	Female Youth	None
Member of POs	46.7	4.7	39.9	5.0	20.6	27.9	2.7	21.5	0.9	56.6
CAR	19.4	0.0	70.1	0.7	19.4	-	-	-	-	-
Region 10	56.3	8.3	38.2	10.4	11.1	-	-	-	-	-
Region 11	48.6	8.2	24.7	8.2	27.4	16.0	1.3	2.7	0.0	80.0
Region 12	42.1	5.5	31.0	2.1	37.2	34.0	3.5	31.3	1.4	44.4
Region 13	66.9	1.4	35.9	3.4	7.6	-	-	-	-	-
Have held or currently holding leadership position in the POs	16.0	0.7	10.6	1.8	75.0	11.9	1.4	8.2	0.5	82.6
CAR	4.2	0.0	14.6	0.7	81.3	-	-	-	-	-
Region 10	0.7	0.0	2.1	0.7	96.5	-	-	-	-	-
Region 11	17.1	2.1	11.0	4.8	75.3	0.0	1.3	0.0	0.0	98.7
Region 12	15.9	1.4	13.1	2.1	74.5	18.1	1.4	12.5	0.7	74.3
Region 13	42.1	0.0	12.4	0.7	47.6	-	-	-	-	-

Table 133: Opinions on Access to Information, Participation in Groups, and Leadership Treatment (n=724) and Comparison (n=219)

Opinions on Access to Information, Participation in Groups, and Leadership	Treatment			Comparison		
	Agree	Partially Agree	Do not agree	Agree	Partially Agree	Do not agree
It is easy for producers to attend agricultural extension trainings	66.4	33.1	0.4	63.4	34.7	4.7
Men and women feel comfortable speaking up and expressing their opinions in the group	79.8	20.0	0.1	77.0	22.5	3.3
In my PO/cooperative women are encouraged to take up leadership positions	69.5	27.9	2.6	62.9	36.2	3.8
Men are better leaders than women	44.5	42.5	13.0	64.8	35.7	2.3
A woman can be a leader, just like a man can	75.8	23.8	0.4	71.4	30.0	1.4

Table 134: Who else within the household is interested in continuing or expanding coffee farm activities?

Region	Treatment					Comparison				
	Men	Male Youth	Women	Female Youth	None	Men	Male Youth	Women	Female Youth	None
CAR	39.6	31.9	34.0	25.7	18.8	-	-	-	-	-
Region 10	47.9	38.2	38.2	17.4	13.2	-	-	-	-	-
Region 11	29.5	41.8	21.2	11.6	25.3	37.3	46.7	26.7	12.0	21.3
Region 12	63.4	34.5	56.6	27.6	6.9	61.1	42.4	56.3	34.0	11.8
Region 13	64.8	14.5	30.3	10.3	14.5	-	-	-	-	-
Overall	49.0	32.2	36.0	18.5	15.7	53.0	43.8	46.1	26.5	15.1

Table 135: Organizational risk management plan.

Region	Organization with risk management plan					Farm covered by the plan		
	NA*	No	No idea	Yes	% yes	No	Yes	% yes
Treatment	22	92	547	63	8.7	18	45	6.2
CAR	6	13	116	9	6.3	1	8	5.6
Region 10	3	3	113	25	17.4	8	17	11.8
Region 11	11	19	110	6	4.1	4	2	1.4
Region 12	1	42	101	1	0.7	-	1	0.7
Region 13	1	15	107	22	15.2	5	17	11.7
Comparison	61	52	106	-	-	-	-	-
Region 11	44	-	31	-	-	-	-	-
Region 12	17	52	75	-	-	-	-	-

*- Not a member of organization

Table 136: Percentage of farmers who are willing to attend training on risk assessment and management

Region	No	Yes	% Yes
Treatment	208	516	71.3
CAR	21	123	85.4
10	9	135	93.8
11	44	102	69.9
12	57	88	60.7
13	77	68	46.9
Comparison	106	113	51.6
11	30	45	60.0
12	76	68	47.2

Note: If yes, who do you think is the best person/group that can help you.

Table 137: Percentage of MSA respondents confirmed their participation in PhilCAFE facilitated/organized activities, by classification (n=328)

MSA	Received some form of enterprise growth or improvement training or technical assistance from an organization and facilitator due to PhilCAFE	Received some form of financing or resources from organization due to PhilCAFE assistance	Participated in an event facilitated by PhilCAFE	None
Civil Society	83.3	15.0	23.3	-
Government Agency	45.1	20.9	72.5	4.4
Laborer	27.8	22.2	88.9	-
Private Sector	45.3	27.0	61.0	-
Overall	51.2	22.9	58.8	1.2

Note: Some respondents received more than one type (multiple response). Table 137 above shows the number of respondents receiving more than one type of intervention.

Table 138: Distribution of MSA respondents by sex and average age (n=328)

Items	Female		Male		Average Age (in years)	
	f	%	f	%	Female	Male
Civil Society	29	48.3	31	51.7	24	23
Government Agency	52	57.1	39	42.9	43	43
Laborer	2	11.1	16	88.9	32	38
Private Sector	64	40.3	95	59.7	76	43
Grand Total	147	44.8	181	55.2	53	39

Table 139: Distribution (%) of MSA respondents by ethnicity, by classification (n=328)

Items	Civil Society	Government Agency	Laborer	Private Sector	Overall
Aklanon	-	-	-	0.6	0.3
American	-	-	-	0.6	0.3
Ata-Manobo	11.7	-	-	-	2.1
Bagobo	-	1.1	-	0.6	0.6
Batangueno / Bulaceno	-	1.1	-	-	0.3
Bisaya	-	13.2	22.2	3.1	6.4
Boholano	3.3	3.3	-	2.5	2.7
Bontoc	-	-	-	0.6	0.3
Cebuano	56.7	23.1	11.1	40.3	36.9
Capampangan	-	1.1	-	-	0.3
Dabawenyon	1.7	2.2	-	2.5	2.1
Filipino-Chinese	-	-	-	1.3	0.6
Guangan/Clata	-	-	-	1.9	0.9
Higaonon	-	17.6	11.1	11.3	11.0
Hiligaynon	-	-	-	0.6	0.3
Ibaloi	-	-	-	1.3	0.6
Igorot	1.7	14.3	5.6	3.1	6.1
Iligaynon	-	1.1	-	-	0.3
Ilocano	1.7	3.3	-	3.1	2.7
Iloggo	-	12.1	5.6	15.1	11.0
Japanese	1.7	-	-	-	0.3
Kankanaey	3.3	1.1	-	-	0.9
Mandaya	5.0	-	-	-	0.9
Manobo/Ubo	-	2.2	38.9	5.0	5.2
Mansaka	1.7	-	-	-	0.3
Matigsalog	-	-	-	3.8	1.8
None	-	-	5.6	-	0.3
Pangasinense	-	1.1	-	-	0.3
Surigaonon	-	1.1	-	-	0.3
Tagabawa	-	-	-	1.3	0.6
Talaandig	8.3	-	-	-	1.5
Tboli	-	-	-	0.6	0.3
Waray	3.3	1.1	-	0.6	1.2

Table 140: Number and percentage of respondents (practicing MSAs) against services provided

Number of Practicing MSA Respondents	Inputs Supplier		Producer/ Farmer	Processor	Roaster	Brewer	Financer	Academic and Technical Provider	Policy and Government Support	Consolidator/ Trader
	Nursery	Other farm inputs								
	Seedlings A	Fertilizer, supplies, etc B	Coffee cherries C	Green Coffee Bean D	Roasted/ Ground Coffee E	Brewed Coffee F	Funding G	Technical Know-how H	Productive Environment I	any coffee product J
2 (0.8%)										
4 (1.6%)										
2 (0.8%)										
3 (1.2%)										
5 (2.0%)										
82 (32.9%)										
23 (9.2%)										
7 (2.8%)										
4 (1.6%)										
3 (1.2%)										
23 (9.2%)										
19 (7.6%)										

Number of Practicing MSA Respondents	Inputs Supplier		Producer/ Farmer	Processor	Roaster	Brewer	Financer	Academic and Technical Provider	Policy and Government Support	Consolidator/ Trader
	Nursery	Other farm inputs								
	Seedlings A	Fertilizer, supplies, etc B								
			Coffee cherries C	Green Coffee Bean D	Roasted/ Ground Coffee E	Brewed Coffee F	Funding G	Technical Know-how H	Productive Environment I	any coffee product J
4 (1.6%)										
3 (1.2%)										
4 (1.6%)										
2 (0.8%)										
1 (0.4%)										
8 (3.2%)										
7 (2.8%)										
25 (10.0%)										
17 (6.8%)										
1 (0.4%)										
249	128 51.4%	7 2.8%	60 24.1%	47 18.9%	27 10.8%	18 7.2%	7 2.8%	107 43.0%	40 16.1%	12 4.8%

Table 141: Percentage of MSA respondents recall of agricultural production technologies and nursery-related technologies, by technology, by classification (n=249)

Agricultural production technologies and nursery-related technologies	Civil Society	Government Agency	Laborer	Private Sector	Overall
Site selection	17.9	24.6	-	22.5	20.5
Seedlings Selection	26.8	36.8	33.3	36.7	34.1
Proper planting distance	76.8	66.7	68.8	61.7	66.7
Digging of hole	78.6	59.6	62.5	53.3	61.0
Field planting	73.2	36.8	68.8	30.8	44.2
Shading	5.4	22.8	6.3	23.3	18.1
Farm Planning (Sketch Map, SWOT, Action Plan)	5.4	10.5	12.5	8.3	8.4
Mother plant selection	3.6	14.0	-	12.5	10.0
Seed selection	7.1	21.1	31.3	23.3	19.7
Seed germination	8.9	10.5	-	14.2	11.2
Proper pruning	35.7	49.1	12.5	57.5	47.8
Capping	3.6	10.5	-	3.3	4.8
Stumping / Rejuvenation	7.1	28.1	56.3	38.3	30.1
Leaf sampling	1.8	10.5	-	9.2	7.2
Soil Sampling	8.9	10.5	-	4.2	6.4
Soil Analysis	7.1	10.5	-	2.5	5.2
Application of Organic Fertilizer	48.2	57.9	50.0	33.3	43.4
Application of Inorganic Fertilizer	39.3	17.5	6.3	15.8	20.9
Application of Basal Fertilizer	14.3	10.5	6.3	11.7	11.6
Identification of Pest	12.5	38.6	31.3	11.7	19.3
Application of Organic Pesticide	25.0	40.4	-	14.2	21.7
Application of Synthetic Pesticide	23.2	10.5	-	10.0	12.4
Use of biocomparison Agents	-	8.8	-	5.8	4.8
Identification of Disease	1.8	19.3	-	9.2	9.2
Application of Organic Fungicides	3.6	14.0	-	10.0	8.8
Application of Synthetic Fungicides	1.8	8.8	-	5.8	5.2
Pick ripe	66.1	28.1	31.3	57.5	51.0

Table 142: Percentage of MSA respondents recall of post-harvest technologies and other processing and value addition technologies, by technology, by classification (n=249)

Post-harvest technologies and other processing and value addition technologies	Civil Society	Government Agency	Laborer	Private Sector	Overall
Washing	35.7	47.4	43.8	47.5	44.6

Post-harvest technologies and other processing and value addition technologies	Civil Society	Government Agency	Laborer	Private Sector	Overall
Floatation	53.6	52.6	56.3	63.3	58.2
Pulping	14.3	15.8	18.8	28.3	21.7
Fermentation	10.7	40.4	25.0	26.7	26.1
Use of Elevated Dryers	42.9	38.6	25.0	39.2	39.0
Drying	23.2	52.6	87.5	63.3	53.4
Polishing	1.8	12.3	31.3	7.5	8.8
Sorting and Defects Classification	5.4	10.5	6.3	7.5	7.6
Size grading	10.7	8.8	-	6.7	7.6
Storing	5.4	7.0	6.3	9.2	7.6
Hulling	3.6	8.8	6.3	14.2	10.0
Storing	5.4	7.0	6.3	9.2	7.6
Grinding	3.6	8.8	6.3	5.8	6.0
Roasting	7.1	14.0	6.3	9.2	9.6
Packaging	3.6	10.5	6.3	6.7	6.8
Cupping	5.4	19.3	18.8	5.0	9.2
Measuring sugar content	-	5.3	-	2.5	2.4

Table 143: Percentage of MSA respondents recall of Climate Risk Management, by technology, by classification (n=249)

Climate Risk Management	Civil Society	Government Agency	Laborer	Private Sector	Overall
Biodiversity conservation	-	40.4	33.3	19.2	20.5
Woodlot management	-	3.5	-	4.2	5.5
Restoration of organic soils and degraded lands	-	8.8	-	8.3	6.0
Use of drought and flood-resistant varieties	3.6	12.3	31.3	11.7	11.2
Low- or no-till practices	1.8	3.5	-	5.8	4.0
Efficient nitrogen fertilizer use	1.8	5.3	-	5.0	4.0
Adjustment of sowing/planting time	-	5.3	-	6.7	4.4
Use of perennial varieties	3.6	8.8	-	5.0	5.2
Practices that promote methane reduction	-	3.5	-	5.0	3.2
Introduction/expansion of perennials	-	3.5	-	5.0	3.2
Streambank management, restoration, re/afforestation	1.8	8.8	-	5.0	4.8
Agroforestry	14.3	7.0	-	2.5	6.0
Irrigation (drip)	3.6	3.5	-	5.8	4.4
Use of short duration varieties	-	3.5	-	6.7	4.0
Diversification	5.4	7.0	-	7.5	6.4
Contour Farming	5.4	3.5	-	3.3	3.6

Table 144: Percentage of MSA respondents recall of management practices by technology, by classification (n=249)

Management Practices	Civil Society	Government Agency	Laborer	Private Sector	Overall
Processing	7.1	29.8	12.5	19.2	18.5
Marketing/Trading	12.5	24.6	43.8	25.0	23.3
Record-Keeping	16.1	54.4	31.3	28.3	31.7
Human Resources	1.8	28.1	31.3	11.7	14.5
Financial Planning	19.6	21.1	37.5	13.3	18.1
Accounting	5.4	10.5	-	7.5	7.2
Use of Information/Communication technology	-	12.3	-	8.3	6.8

Table 145: Coffee-related techniques, technologies, and practices provided/supported by PhilCAFE against target participants

Coffee-related techniques, technologies, and practices from PhilCAFE	MSA Services									
	Inputs Supplier		Producer/ Farmer	Processor	Roaster	Brewer	Financer	Academic and Technical Provider	Policy and Government Support	Consolidator/ Trader
	Seedlings	Other farm inputs								
Nursery related technologies										
Agricultural production technologies										
Post-harvest and value addition technologies										
Technologies to conservation/protected areas										
Climate risk reduction and natural resources management/technologies										
Business-level practices technologies.										

Table 146: Number and percentage of MSA with nursery operation and those who adopted nursery related technologies, by technology, by classification

MSA _P Respondents	Civil Society	Government Agency	Laborer	Private Sector	Overall
Respondents with nursery operations (amongst practicing MSA respondents, n=249)	37 66.1%	10 16.9%	5 33.3%	30 25.2%	82 32.9%
Respondents said they practiced, adopted, and/or promoted nursery-related technologies and/or adopted these technologies/practices into your training curricula/technical assistance between October 2020 to June 2021 (amongst those practicing MSA with nursery operations, n=82)	33 89.2%	7 70.0%	1 20.0%	12 40.0%	53 64.6%
Respondents who were able to name/enumerate specific nursery-related technologies they applied/adopted (amongst those practicing MSA with nursery operations, n=82)	32 86.5%	4 40.0%	- -	7 23.3%	43 52.4%

Table 147: Adoption rate of nursery related technologies amongst those who recalled applying/adopting the technology, by technology, by MSA beneficiary type, n=43

Adoption Rate (%) of Nursery Related Technologies	Civil Society	Government Agency	Private Sector	Overall
Application of Basal Fertilizer	21.9			16.3
Application of Inorganic Fertilizer	34.4			25.6
Application of Organic Fertilizer	56.3	25		44.2
Application of Organic Fungicides	6.3			4.7
Application of Organic Pesticide	15.6			11.6
Application of Synthetic Fungicides	3.1			2.3
Application of Synthetic Pesticide	12.5			9.3
Digging hole	90.6		14.3	69.8
Farm Planning (Sketch Map, SWOT, Action Plan)	3.1			2.3
Field Planting	81.3	50		65.1
Identification of Pest	3.1	50		7
Media Mixture			57.1	9.3
Pick Ripe	34.4			25.6
Proper Bag Size	6.3		57.1	14
Proper Planting Distance	100	50	14.3	81.4
Proper Pruning	21.9		14.3	18.6
Seed Germination	3.1		14.3	4.7
Seed Selection	6.3	75	14.3	14
Seedlings Selection	15.6	75	42.9	25.6

Adoption Rate (%) of Nursery Related Technologies	Civil Society	Government Agency	Private Sector	Overall
Shading	3.1			2.3
Site Selection	9.4			7
Soil Analysis	3.1			2.3
Soil Sampling	3.1			2.3
Soil Sterilization			14.3	2.3
Stumping / Rejuvenation		50		4.7
Use of BioComparison Agents	3.1			2.3

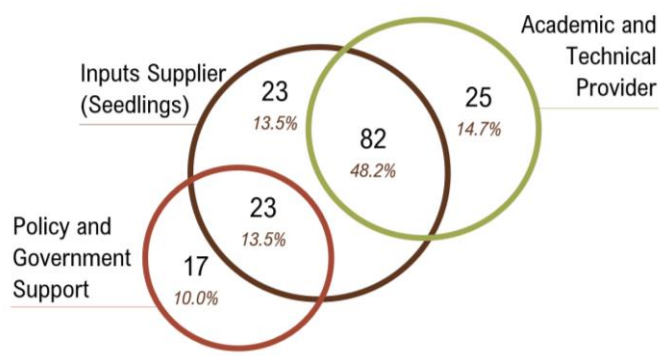


Figure 33: Number and percentage of MSA_P respondents providing MSA services as inputs (seedling) suppliers, academic/technical providers, and policy and government support (n=170).

Table 148: Number and percentage of MSA_P respondents MSA Beneficiaries providing MSA services as inputs (seedling) suppliers, academic/technical providers, and policy and government support (n=170).

MSA Beneficiary Type	Inputs (seedlings) Supplier	Academic/ Technical Provider	Policy and Government Support	Any one or a combination
Civil Society	50 39.1%	55 51.4%	- -	55 32.4%
Government Agency	28 21.9%	19 17.8%	40 100%	59 34.7%
Laborer	7 5.5%	2 1.9%	- -	7 4.1%
Private Sector	43 33.6%	31 29.0%	- -	49 28.8%
Overall	128 100%	107 100%	40 100%	170 100%

Table 149: Average number of coffee trees applied with nursery related technologies, by technology, by classification

Nursery Related Technologies	Civil Society	Government Agency	Private Sector	Overall
Application of Basal Fertilizer	320	525		379
Application of Inorganic Fertilizer	29	417		145
Application of Organic Fertilizer	32	417		121
Application of Organic Fungicides	750			750
Application of Organic Pesticide	310			310
Application of Synthetic Fungicides	1,500			1,500
Application of Synthetic Pesticide	388			388
Digging hole	499	100	1,667	497
Farm Planning (Sketch Map, SWOT, Action Plan)	1,500			1,500
Field planting	189	100		176
Identification of Pest		1,000		1,000
Media mixture			2,000	2,000
Pick ripe	203	50		172
Proper bag size	50		2,000	700

Nursery Related Technologies	Civil Society	Government Agency	Private Sector	Overall
Proper Planting distance	160	270		182
Proper pruning	12	0		10
Seed germination	1,500			1,500
Seed selection	50	5,000		1,700
Seedlings Selection	1,020	3,250	2,000	1,700
Shading		1,000		1,000
Site Selection	750	50		517
Soil Analysis	1,500			1,500
Soil Sampling	1,500			1,500
Use of BioComparison Agents	0			0

Table 150: Number and percentage of MSA respondents who were trained and applied coffee production technologies learnings; by MSA beneficiary type; and by Practicing, Non-Practicing or Inactive MSAs

MSA Respondents	Civil Society	Government Agency	Laborer	Private Sector	Overall
Trained on Agricultural Production Technologies (amongst MSA project beneficiary respondents, n=324)	56 93.3%	61 68.5%	15 88.2%	129 81.6%	261 80.6%
Practicing MSAs (amongst trained respondents, n=261)	52 92.9%	51 83.6%	13 86.7%	95 73.6%	211 80.8%
Non-Practicing or Inactive MSAs (amongst trained respondents, n=261)	4 7.1%	10 16.4%	2 13.3%	34 26.4%	50 19.2%
Practiced/adopted/promoted coffee production technologies applied in coffee production and/or adopted into training curricula/technical assistance services (amongst trained respondents, n=261)	40 66.7%	13 14.6%	3 18.8%	54 34.4%	110 34.2%
Practicing MSAs (amongst trained respondents who applied learnings, n=110)	40 100%	13 100%	3 100%	52 96.3%	108 98.2%
Name/enumerate specific nursery-related technologies they applied/adopted (amongst trained respondents who applied learnings, n=110)	34 85.0%	11 84.6%	2 66.7%	47 87.0%	94 85.5%
Practicing MSAs (amongst those who were able to name/enumerate, n=94)	34 100%	11 100%	2 100%	45 95.7%	92 97.9%

Table 151: Adoption rate of agricultural production technologies amongst those who recalled practicing/applying, by technology, by MSA beneficiary type, n=94

Production Related Technologies	Civil Society	Government Agency	Laborer	Private Sector	Overall
Application of Basal Fertilizer	14.7				5.3
Application of Inorganic Fertilizer	35.3			21.3	23.4
Application of Organic Fertilizer	64.7	18.2		17	34
Application of Organic Fungicides	5.9				2.1
Application of Organic Pesticide	20.6				7.4
Application of Synthetic Fungicides	2.9			2.1	2.1
Application of Synthetic Pesticide	11.8				4.3
Digging of Hole	88.2	36.4	50	31.9	53.2
Farm Planning (Sketch Map, SWOT, Action Plan)	5.9				2.1
Field Planting	70.6	9.1		6.4	29.8
Identification of Disease	5.9				2.1
Identification of Pest	5.9	18.2		4.3	6.4
Leaf Sampling				2.1	1.1
Pick Ripe	41.2	27.3	100	31.9	36.2
Proper Planting Distance	85.3	81.8		61.7	71.3
Proper Pruning	32.4	54.5	50	80.9	59.6
Seed Germination	11.8				4.3

Production Related Technologies	Civil Society	Government Agency	Laborer	Private Sector	Overall
Seed Selection	5.9			4.3	4.3
Seedlings Selection	5.9	9.1		19.1	12.8
Shading	2.9				1.1
Site Selection	5.9				2.1
Soil Analysis	5.9				2.1
Soil Sampling	5.9				2.1
Stumping / Rejuvenation	8.8			19.1	12.8

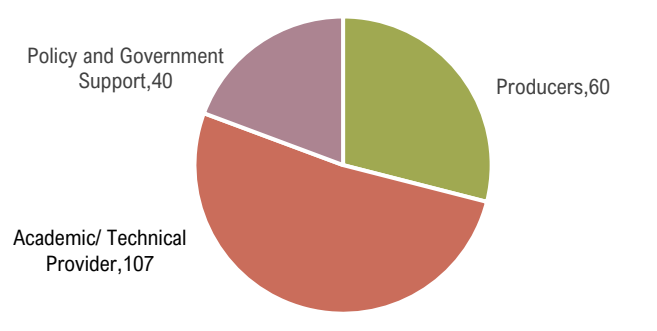


Figure 34: Number and percentage of MSA_P respondents providing MSA services as producers, academic/technical providers, and policy and government support (n=208).

Table 152: Number and percentage of MSA_P respondents MSA Beneficiaries providing MSA services as providers, academic/technical providers, and policy and government support (n=208).

MSA Beneficiary Type	Producers	Academic/ Technical Provider	Policy and Government Support	Overall
Civil Society	1 1.7%	55 51.4%	- -	56 27.1%
Government Agency	- -	19 17.8%	40 100%	59 28.5%
Laborer	9 15.0%	2 1.9%	- -	11 5.3%
Private Sector	50 83.3%	31 29.0%	- -	81 39.1%

Table 153: Number and percentage of MSA respondents who were trained and applied coffee production technologies learnings; by MSA beneficiary type, amongst MSA_Ps who are producers, academic/technical providers, or government personnel

MSA _P s who are producers, academic/technical providers, or government personnel	Civil Society	Government Agency	Laborer	Private Sector	Overall
Trained on Agricultural Production Technologies (Amongst trained respondents, n=261)	52 92.9%	51 83.6%	10 66.7%	77 59.7%	190 72.8%
Practiced/adopted/promoted coffee production technologies applied in coffee production and/or adopted into training curricula/technical assistance services (Amongst trained respondents who applied learnings, n=110)	40 100%	13 100%	2 66.7%	49 90.7%	104 94.5%

Table 154: Average number of coffee trees applied with agricultural production technologies, by technology, by classification

Agricultural Production Technologies	Civil Society	Government Agency	Laborer	Private Sector	Overall
Application of Basal Fertilizer	520				520
Application of Inorganic Fertilizer	225			1831	955
Application of Organic Fertilizer	185	1000		1584	572
Application of Organic Fungicides	850				850
Application of Organic Pesticide	236				236

Agricultural Production Technologies	Civil Society	Government Agency	Laborer	Private Sector	Overall
Application of Synthetic Fungicides	50			800	425
Application of Synthetic Pesticide	375				375
Digging of hole	199	1017	220	835	456
Farm Planning (Sketch Map, SWOT, Action Plan)	1000				1000
Field planting	238	50		967	310
Identification of Disease	0				0
Identification of Pest	1500	1000		1350	1340
Leaf sampling				700	700
Pick ripe	359	20	1725	696	591
Proper planting distance	211	881		996	633
Proper pruning	384	1333	3300	1132	1029
Seed germination	875				875
Seed selection	1000			1350	1175
Seedlings Selection	0	1667		1544	1297
Shading	1000				1000
Site selection	1500				1500
Soil Analysis	750				750
Soil Sampling	750				750
Stumping / Rejuvenation	1067			480	627

Table 155: Number and percentage of MSA respondents who were trained and applied coffee post-harvest technologies and other processing, and value addition technologies learnings; by MSA beneficiary type; and by Practicing, Non-Practicing or Inactive MSAs

MSA Respondents	Civil Society	Government Agency	Laborer	Private Sector	Overall
Trained on Coffee Post-Harvest Technologies and other Processing, and Value Addition Technologies (amongst MSA project beneficiary respondents, n=324)	40 66.7%	56 62.9%	16 94.1%	121 76.6%	233 71.9%
Practicing MSAs (amongst trained respondents, n=233)	36 90.0%	47 83.9%	14 87.5%	94 77.7%	191 82.0%
Non-Practicing or Inactive MSAs (amongst trained respondents, n=233)	4 10.0%	9 16.1%	2 12.5%	27 22.3%	42 18.0%
Practiced/adopted/promoted coffee post-harvest technologies and other processing, and value addition technologies (amongst trained respondents, n=233)	- -	5 8.9%	3 18.8%	1 0.8%	9 3.9%
Practicing MSAs (amongst trained respondents who applied learnings, n=9)	- -	5 100%	3 100%	1 100%	9 100%
Name/enumerate specific nursery-related technologies they applied/adopted (amongst trained respondents who applied learnings, n=9)	- -	4 80%	3 100%	1 100%	8 88.9%
Practicing MSAs (amongst those who were able to name/enumerate, n=8)	- -	5 100%	3 100%	1 100%	8 100%

Table 156: Adoption rate of post-harvest with technologies and other processing and value addition technologies, by technology, by MSA beneficiary type, n=8

Post-Harvest with Technologies and Other Processing and Value Addition Technologies	Government Agency	Laborer	Private Sector	Overall
Drying	50.0	-	-	25.0
Fermentation	50.0	-	-	25.0
Floatation	50.0	-	-	25.0
Grinding	-	33.3	-	12.5
Packaging	50.0	33.3	-	37.5
Pulping	-	33.3	-	12.5
Roasting	-	33.3	-	12.5
Sorting and Defects Classification	-	-	100.0	12.5

Post-Harvest with Technologies and Other Processing and Value Addition Technologies	Government Agency	Laborer	Private Sector	Overall
Use of Elevated Dryers	-	33.3	-	12.5
Washing	75.0	-	-	37.5

Table 157: Average number of coffee trees applied with post-harvest technologies and other processing and value addition technologies, by technology, by MSA beneficiary type, n=8

Post-Harvest with Technologies and Other Processing and Value Addition Technologies	Government Agency	Laborer	Overall
Drying	9,000	-	4,500
Fermentation	4,875	-	2,437.5
Floatation	9,000	-	4,500
Packaging	9,000	-	4,500
Pulping	-	399.9	150
Use of Elevated Dryers	-	800.1	300
Washing	9,000	-	4,500

Table 158: Number and percentage of MSA respondents who were trained and applied Climate Risk Reduction and Natural Resources Management learnings; by MSA beneficiary type; and by Practicing, Non-Practicing or Inactive MSAs

MSA Respondents	Civil Society	Government Agency	Laborer	Private Sector	Overall
Trained on Climate Risk Reduction and Natural Resources Management (amongst MSA project beneficiary respondents, n=324)	13 21.7%	43 48.3%	5 29.4%	48 30.4%	109 33.6%
Practicing MSAs (amongst trained respondents, n=109)	13 100.0%	34 81.0%	4 80.0%	32 68.1%	83 77.6%
Non-Practicing or Inactive MSAs (amongst trained respondents, n=109)	- -	8 19.0%	1 20.0%	15 31.9%	24 22.4%
Practiced/adopted/promoted climate risk reduction and natural resources management (amongst trained respondents, n=109)	3 23.1%	8 18.6%	- -	10 20.8%	21 19.3%
Practicing MSAs (amongst trained respondents who applied learnings, n=21)	3 100%	8 100%	- -	10 100%	21 100%
Name/enumerate specific nursery-related technologies they applied/adopted (amongst trained respondents who applied learnings, n=21)	3 100%	7 87.5%	- -	7 70.0%	17 81.0%
Practicing MSAs (amongst those who were able to name/enumerate, n=17)	3 100%	7 100%	- -	7 100%	17 100%

Table 159: Adoption rate of climate risk reduction and/or natural resources management/technologies amongst those who recalled practiced/adopted/promoted, by technology, by MSA beneficiary type, n=17

Climate Risk Reduction and/or Natural Resources Management	Civil Society	Government Agency	Private Sector	Overall
Adjustment of sowing/planting time	-	14.3	-	5.9
Agroforestry	66.7	57.1	14.3	41.2
Biodiversity conservation	-	28.6	57.1	35.3
Diversification	-	28.6	-	11.8
Efficient nitrogen fertilizer use	33.3	-	-	5.9
Irrigation (drip)	33.3	14.3	-	11.8
Restoration of organic soils and degraded lands	33.3	14.3	28.6	23.5
Stream bank management, restoration, re/afforestation	-	14.3	-	5.9
Use of drought and flood resistant varieties	-	-	14.3	5.9

Table 160: Average number of coffee trees applied climate risk reduction and/or natural resources management related technologies, by technology, by classification

Climate Risk Reduction and/or Natural Resources Management Related Technologies	Civil Society	Government Agency	Private Sector	Overall
Agroforestry	500	71.4	285.7	235.3
Biodiversity conservation	-	142.9	385.7	217.6
Efficient nitrogen fertilizer use	500	-	-	88.2
Irrigation (drip)	666.7	238.1	-	215.7
Restoration of organic soils and degraded lands	500	-	242.9	188.2
Stream bank management, restoration, re/afforestation	-	214.3	-	88.2
Use of drought and flood resistant varieties	-	-	285.7	117.6

Table 161: Percentage of MSA who applied introduced technologies/techniques/practices applied to conservation/protected areas

MSA Beneficiary Classification	No	Yes	% Yes	Average hectares
Civil Society	48	12	20.0	18.5
Government Agency	87	4	4.4	2.0
Laborer	17	1	5.6	3.0
Private Sector	131	28	17.6	3.0
Overall	283	45	13.7	7.1

Table 162: Number and percentage of MSA respondents who were trained and are practicing Business-Level Practices and Technologies; by MSA beneficiary type; and by Practicing, Non-Practicing or Inactive MSAs

MSA Respondents	Civil Society	Government Agency	Laborer	Private Sector	Overall
Trained on Business-Level Practices and Technologies (amongst MSA project beneficiary respondents, n=324)	12 20.0%	23 25.84%	7 41.18%	32 20.3%	74 22.8%
Practicing Business-Level Practices and Technologies (amongst MSA project beneficiary respondents, n=324)	19 31.7%	33 37.1%	5 29.4%	46 29.1%	103 31.8%

Table 163: Adoption rate of business-level practices and technologies, by technology, by classification (n=328)

Agricultural Production Technologies	Civil Society	Government Agency	Laborer	Private Sector	Overall
Financial Management (financial planning, accounting processes, etc.)	10.0	12.1	22.2	14.5	13.4
Record Management (financial and production documents, receipts and expenses, inventory, etc.)	10.0	19.8	33.3	13.8	15.9
Input, Output and Needs Computation	11.7	7.7	-	6.3	7.3
Business Planning (includes production scheduling)	8.3	4.4	-	5.0	5.2
Human Resources Management (provision of training, incentives, promotion, etc.)	10.0	18.7	16.7	5.0	10.4
Marketing and Promotion	8.3	5.5	27.8	9.4	9.1
Inventory Management	-	1.1	-	3.8	2.1
Quality Management Systems (5-S, ISO, etc.)	-	2.2	-	3.8	2.4
Strategic Planning	-	4.4	-	3.8	3.0

Table 164: Percentage of Respondents who have influenced other organizations and other coffee producers, by MSA beneficiary type, amongst MSA respondents and amongst practicing MSA respondents

MSA Respondents	Civil Society	Government Agency	Laborer	Private Sector	Overall
Influenced other organizations					
Amongst MSA respondents, n=324	18.3	15.7	-	24.1	19.4
Amongst Practicing MSA respondents, n=249	19.6	23.7	-	31.9	25.3

MSA Respondents	Civil Society	Government Agency	Laborer	Private Sector	Overall
Influenced other coffee producer					
Amongst MSA respondents, n=324	11.7	3.4	5.9	10.8	8.6
Amongst Practicing MSA respondents, n=249	12.5	5.1	6.7	13.4	10.8

Table 165: Technologies promoted, by classification

Technologies	Civil Society	Government Agency	Private Sector	Overall
Drying	5.0	3.3	23.9	13.4
Fermentation	3.3	0.0	0.6	0.9
Grading	0.0	1.1	0.6	0.6
Hulling	3.3	1.1	7.5	4.6
Others (specify)	0.0	0.0	0.6	0.3
Polishing	0.0	0.0	0.6	0.3
Pulping	3.3	0.0	1.9	1.5
Sorting	1.7	1.1	0.6	0.9
Storage	1.7	0.0	1.3	0.9
Washing	5.0	1.1	5.0	3.7
Overall	23.3	7.7	42.8	27.1

Table 166: Percentage of respondents who confirmed the influence of PhilCAFE with their interaction to coffee sectors in terms of producers, by MSA beneficiary type, amongst MSA respondents and amongst practicing MSA respondents

MSA Respondents	Civil Society	Government Agency	Laborer	Private Sector	Overall
Amongst MSA respondents, n=324	90.0	33.7	17.6	56.3	54.3
Amongst Practicing MSA respondents, n=249	96.4	49.2	20.0	73.1	69.5

Table 167: Percentage of respondents who confirmed the influence of PhilCAFE with their interaction to coffee sectors in terms of firms that support producers such as input providers, technical service providers, or processing/value addition firms.

MSA Respondents	Civil Society	Government Agency	Laborer	Private Sector	Overall
Amongst MSA respondents, n=324	80.0	27.0	29.4	45.6	54.0
Amongst Practicing MSA respondents, n=249	85.7	40.7	33.3	58.0	58.6

Table 168: Percentage of MSA who perceived that PhilCAFE's assistance somehow changed how they market/advertise these services or programs

MSA Respondents	Civil Society	Government Agency	Laborer	Private Sector	Overall
Amongst MSA respondents, n=324	41 68.3%	23 25.8%	2 11.8%	54 34.2%	120 37.0%
Amongst Practicing MSA respondents, n=249	41 73.2%	23 39.0%	2 13.3%	51 42.9%	117 47.0%

Table 169: Percentage of MSA who are currently engaging in local cooperatives, coffee associations, POs, SUCs, and local intermediaries to expand stakeholder reach in terms of coffee services

MSA Beneficiary Types	No	Yes	% Yes
Civil Society	48	12	20.0
Government Agency	65	26	28.6
Laborer	13	5	27.8
Private Sector	130	29	18.2
Overall	256	72	22.0

Table 170: Service reach by MSAs, per type of engagement

MSA Beneficiary Types	Local	Regional/ National	International
Civil Society	66.7	50.0	25.0
Coffee association	33.3	25.0	8.3
Cooperatives	8.3	8.3	8.3
Local intermediaries	8.3	8.3	-
Others	8.3	-	-
SUCs	8.3	8.3	8.3
Government Agency	65.4	19.2	3.8
Coffee association	38.5	7.7	-
Cooperatives	3.8	-	-
Local intermediaries	3.8	-	-
Others	3.8	3.8	3.8
POs	7.7	3.8	-
SUCs	7.7	3.8	-
Laborer	40.0	-	-
Others	40.0	-	-
Private Sector	37.9	20.7	3.4
Coffee association	17.2	10.3	3.4
Cooperatives	3.4	6.9	-
Local intermediaries	3.4	3.4	-
Others	6.9	-	-
SUCs	6.9	-	-

Table 171: Distribution of MSA (amongst with engagement) in terms of currently engage organizations in expanding reach of coffee services

MSA Beneficiary Types	Civil Society	Government Agency	Laborer	Private Sector	Overall
Coffee association	33.3	38.5	0.0	17.2	26.4
Cooperatives	8.3	3.8	0.0	6.9	5.6
Local intermediaries	8.3	3.8	0.0	3.4	4.2
POs	0.0	7.7	0.0	0.0	2.8
SUCs	8.3	11.5	0.0	6.9	8.3
Others	8.3	3.8	40.0	6.9	8.3
Overall	66.7	69.2	40.0	41.4	55.6

Table 172: Percentage of MSAs perceived that Philcafe contribute/assist in these initiatives

MSA Beneficiary Types	No	Not sure	Yes	% Yes
Civil Society	2	8	6	50.0
Government Agency		11	15	57.7
Laborer	1	3	1	20.0
Private Sector	4	19	6	20.7
Overall	7	37	28	38.9

Table 173: Percentage of MSAs confirmed that PhilCAFE contributed in expanding your shareholders reach in terms of coffee services

MSA Respondents	Civil Society	Government Agency	Laborer	Private Sector	Overall
Amongst MSA respondents, n=324	55.2	26.3	18.5	23.5	29.9

Amongst Practicing MSA respondents, n=249	59.2	40.8	19.8	30.3	38.6
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Table 174: Percentage of MSAs among who perceived that the engagement has a significant impact on their organizations reach at the local, regional or international level

MSA Respondents	Civil Society	Government Agency	Laborer	Private Sector	Overall
Amongst MSA respondents, n=324	34.8	27.4	18.7	16.5	23.1
Amongst Practicing MSA respondents, n=249	35.5	35.7	19.9	15.9	25.2

Table 175: Average number of stakeholders that had been reached due to Philcafe assistance

MSA Beneficiary Types	Average number of Male	Average number of Female	Average number of Youth
Civil Society	11	14	27
Government Agency	1,354	1,522	137
Laborer	0	0	0
Private Sector	13	10	4
Overall	400	449	51

Table 176: Percentage of MSAs perceived changes in stakeholders reach (increased, decreased, or remained the same) since 2019, the percentage of change

MSA Beneficiary Types	Perceived changes			Percentage change	
	Remained the same	Decreased	Increased	Decreased	Increased
Civil Society	95.0	-	5.0	-	33.3
Government Agency	87.9	-	12.1	-	20.1
Laborer	88.9	5.6	5.6	30.0	12.0
Private Sector	81.8	1.3	17.0	50.0	60.3
Overall	86.3	0.9	12.8	43.3	49.5

Table 177: Estimated percentage change in stakeholders reach by category

MSA Beneficiary Types	Male stakeholders	Female stakeholders	Youth stakeholders
Civil Society	11.7	11.7	25.0
Government Agency	17.1	10.0	0.0
Laborer	1.5	2.5	2.0
Private Sector	34.5	35.3	5.4
Overall	28.2	27.7	5.8

Table 178: Percentage of MSAs perceived that Philcafe's assistance somehow influenced the quality of the services they offer to stakeholders

MSA Respondents	Civil Society	Government Agency	Laborer	Private Sector	Overall
Amongst MSA respondents, n=324	67.9	45.1	18.7	40.5	45.8
Amongst Practicing MSA respondents, n=249	71.0	47.6	19.9	45.1	49.9

Table 179: Percentage of MSAs with risk management plan in the areas planted with coffee

MSA Respondents	Civil Society	Government Agency	Laborer	Private Sector	Overall
Amongst MSA respondents, n=324	0	7.7	6.2	6.9	5.8
Amongst Practicing MSA respondents, n=249	0	6.8	13.2	6.7	5.6

Table 180: Percentage of MSAs perceived that their organization identified risk related to the business, and on coffee and related services

MSA Respondents	Civil Society	Government Agency	Laborer	Private Sector	Overall
Amongst MSA respondents, n=324	5.1	16.7	12.4	8.9	10.6
Amongst Practicing MSA respondents, n=249	3.6	8.6	13.3	7.6	7.3

Table 181: Percentage of MSAs perceived that their organization been affected by any other type of external shock (lack of transport, etc.) from October 2019 to September 2020

MSA Respondents	Civil Society	Government Agency	Laborer	Private Sector	Overall
Amongst MSA respondents, n=324	6.7	45.9	0	30.5	28.9
Amongst Practicing MSA respondents, n=249	5.4	52.2	0	33.5	29.6

Table 182: Percentage of MSAs perceived that their organization already asked for some type of assistance in support to coffee business in their area

MSA Respondents	Civil Society	Government Agency	Laborer	Private Sector	Overall
Amongst MSA respondents, n=324	16.6	18.6	12.5	15.2	16.3
Amongst Practicing MSA respondents, n=249	16.0	23.7	13.3	15.8	17.6

Table 183: Percentage of MSA respondents confirmed their participation in PhilCAFE facilitated/organized activities, by classification (n=235)

MSA Firms	Received some form of enterprise growth or improvement training or technical assistance from an organization and facilitator due to PhilCAFE	Received some form of financing or resources from organization due to PhilCAFE assistance	Participated in an event facilitated by PhilCAFE	None
Non-Government Organization/ Civil Society	72.7	27.3	72.7	-
Private Sector	43.5	41.3	60.9	-
Producer's Organization	75.0	22.0	52.0	-
Public/ Government Agency	67.2	13.8	72.4	1.7
Overall	66.0	24.2	60.4	0.5

Note: Some respondents received more than one type (multiple response). Table 183 above shows the number of respondents receiving more than one type of intervention.

Table 184: Average age of the firm representative (treatment n= 214, comparison n=21)

Region	Mean
Treatment	45.9
Non-Government Organization or Civil Societies	49.9
Private Sector Firms (include private Universities and Colleges)	38.7
Producer's Organization	50.8
Public/Government Agencies (include SUCs)	42.9
Comparison	50.0
Non-Government Organization or Civil Societies	43.0
Private Sector Firms (include private Universities and Colleges)	50.8
Producer's Organization	51.2
Public/Government Agencies (include SUCs)	48.4

Table 185: Distribution of firm respondents based on gender, per firm type (in %) (treatment n= 214, comparison n=21)

Region	Female	Male
Treatment	34.9	56.2

Region	Female	Male
Non-Government Organization or Civil Societies	0.9	3.8
Private Sector Firms (include private Universities and Colleges)	4.7	14.9
Producer's Organization	17.5	24.3
Public/Government Agencies (include SUCs)	12.0	13.2
Comparison	4.3	4.7
Non-Government Organization or Civil Societies	-	0.4
Private Sector Firms (include private Universities and Colleges)	1.7	0.9
Producer's Organization	0.9	3.0
Public/Government Agencies (include SUCs)	1.7	0.4

Table 186: Distribution of ethnicity of firm representatives, per firm type (%) (treatment n= 214, comparison n=21)

Ethnicity	NGO/Civil Societies	Private Sector Firms	Producer's Organization	Public/ Government Agencies	Overall	
					f	%
Treatment						
Cebuano	2	17	26	22	67	29.7
Igorot	-	1	13	9	23	8.8
Ilonggo	-	1	13	6	20	6.2
Higaonon	4	1	12	2	19	8.2
Bisaya	1	8	1	1	11	6.6
Boholano	-	1	4	3	8	2.9
Tagalog	-	7	-	1	8	6.3
Tagabawa	-	-	4	1	5	2.5
Ilocano	-	1	1	3	5	1.1
Dabawenyo	-	4	-	1	5	3.2
Iligaynon	-	1	-	3	4	0.9
Mandaya	-	-	2	1	3	1.4
Ata-Manobo	2	-	-	1	3	1.7
Bilaan	-	-	3	-	3	0.7
Waray	-	-	3	-	3	0.8
Tboli	-	1	-	1	2	0.5
Talaandig	-	-	2	-	2	1.5
Bol-Anon	-	-	2	-	2	0.4
Manobo/Ubo	-	-	2	-	2	1.0
Suban-On	-	-	1	-	1	0.2
Cebuano Boholano	-	-	1	-	1	0.1
Bagobo	-	-	1	-	1	0.2
Leytenio	-	-	1	-	1	0.5
None	-	1	-	-	1	0.4
Hiligaynon	-	1	-	-	1	0.3
Surigaonon	-	-	1	-	1	0.1
Teduray	1	-	-	-	1	0.3
Tagakaolo	-	-	-	1	1	0.6
Tandaganon	-	-	1	-	1	0.1
Kamayo	-	1	-	-	1	0.1
Yattuka	-	-	1	-	1	0.5
Tausug	-	-	1	-	1	0.5
Mansaka	-	-	1	-	1	0.5
Ayangan	-	-	-	1	1	0.5
Maranao	-	-	-	1	1	0.3
Islam	1	-	-	-	1	0.3

Ethnicity	NGO/Civil Societies	Private Sector Firms	Producer's Organization	Public/ Government Agencies	Overall	
					f	%
Aklanon	-	-	-	1	1	0.2
Kalanguya	-	-	1	-	1	0.5
Comparison						
Cebuano	1	4	4	5	14	6.8
Muslim	-	-	2	-	2	1.1
Bisaya	-	-	1	-	1	0.3
Tausug	-	-	1	-	1	0.4
Yakan	-	-	1	-	1	0.2
Dumaguatinio	-	1	-	-	1	0.6
Ilonggo	-	1	-	-	1	0.3

Table 187: Percentage of firms that involves in any form of cultivation (have own/communal farm) (treatment n= 214, comparison n=21)

Firms Beneficiary Types	Involved in any form of cultivation (with own/communal farm) (%)
Treatment	88.8
Non-Government Organization or Civil Societies	5.1
Private Sector Firms (Include private Universities and Colleges)	27.5
Producer's Organization	42.5
Public/Government Agencies (include SUCs)	13.7
Comparison	11.2
Non-Government Organization or Civil Societies	-
Private Sector Firms (include private Universities and Colleges)	3.4
Producer's Organization	6.3
Public/Government Agencies (include SUCs)	1.5

Table 188: Firms with coffee farms

Coffee Products	NGO or Civil Societies	Private Sector Firms	Producer's Organization	Public/ Government Agencies	Overall
Treatment (n=214)	4 36.4%	14 30.4%	30 30.0%	10 17.5%	58 27.1%
Comparison (n=21)	- -	2 33.3%	3 33.3%	1 20.0%	6 28.6%

Table 189: Average total farm size, size of cultivated farm, and area devoted to coffee (in has) (n=64) (treatment n= 58, comparison n=6)

Firms Beneficiary Types	Mean Total Farm Size	Mean Size of Cultivated Farm	Mean Area devoted to Coffee
Treatment	28.7	27.7	22.9
Non-Government Organization or Civil Societies	7.7	7.7	3.6
Private Sector Firms (include private Universities and Colleges)	5.1	4.2	3.9
Producer's Organization	26.5	25.4	21.4
Public/Government Agencies (include SUCs)	76.8	75.3	62.0
Comparison	97.9	45.7	39.4
Non-Government Organization or Civil Societies	-	-	-

Firms Beneficiary Types	Mean Total Farm Size	Mean Size of Cultivated Farm	Mean Area devoted to Coffee
Private Sector Firms (include private Universities and Colleges)	25.1	25.1	12.6
Producer's Organization	178.3	74.3	70.3
Public/Government Agencies (include SUCs)	2.0	0.9	0.2

Table 190: Average area devoted to coffee per specie (in has) (treatment n=58, comparison n=6)

Firms Beneficiary Types	Arabica	Robusta	Liberica	Excelsa	Overall Mean
Treatment	2.9	2.5	0.1	0.0	2.7
Non-Government Organization or Civil Societies	1.1	1.3	1.3	0.0	1.5
Private Sector Firms (include private Universities and Colleges)	2.6	1.3	0.0	0.0	3.6
Producer's Organization	4.0	3.5	0.0	0.1	7.5
Public/Government Agencies (include SUCs)	0.7	1.5	0.1	0.0	2.5
Comparison	7.3	32.0	0.0	0.0	9.1
Non-Government Organization or Civil Societies	-	-	-	-	-
Private Sector Firms (include private Universities and Colleges)	0.0	12.5	0.0	0.0	2.9
Producer's Organization	14.7	55.7	0.0	0.0	14.7
Public/Government Agencies (include SUCs)	0.0	0.2	0.0	0.0	0.2

Table 191: Average number of coffee trees per species (treatment n=58, comparison n=6)

Firms Beneficiary Types	Arabica	Robusta	Liberica	Excelsa	Overall Mean	Total Coffee Hills per hectare (Mean)
Treatment	1,041.5	2,356.4	122.4	34.5	888.7	1,740.9
Non-Government Organization or Civil Societies	1,212.5	1,750.0	1,750.0	0.0	1,178.1	1,159.0
Private Sector Firms (include private Universities and Colleges)	2,204.3	1,207.1	0.0	0.0	852.9	1,542.1
Producer's Organization	685.8	3,304.0	0.0	66.7	1,014.1	1,654.6
Public/Government Agencies (include SUCs)	412.1	1,365.0	10.0	0.0	446.8	2,511.1
Comparison	6,118.3	26,029.2	0.0	0.0	8,036.9	1,122.7
Non-Government Organization or Civil Societies						-
Private Sector Firms (include private Universities and Colleges)	0.0	8,021.0	0.0	0.0	2,005.3	1,145.8
Producer's Organization	12,220.0	46,377.7	0.0	0.0	14,649.4	1,111.1
Public/Government Agencies (include SUCs)	50.0	1,000.0	0.0	0.0	262.5	1,111.1

Table 192: Average planting distance per specie, in sq m. (treatment n=58, comparison n=6)

Firms Beneficiary Types	Arabica	Robusta	Liberica	Excelsa	Overall (sq.m.)		
					mean	sd	se (mean)
Treatment	5.1	4.4	0.3	0.5	8.5	6.1	0.4
Non-Government Organization or Civil Societies	9.3	2.0	2.3	0.0	9.7	4.4	0.0
Private Sector Firms (include private Universities and Colleges)	6.1	3.8	0.0	0.0	7.5	3.0	0.2
Producer's Organization	4.2	5.1	0.0	0.9	9.1	7.6	0.5
Public/Government Agencies (include SUCs)	4.8	4.3	0.6	0.0	7.6	5.3	0.4
Comparison	5.5	10.2	0.0	0.0	10.2	3.9	0.9
Non-Government Organization or Civil Societies	-	-	-	-	-	-	-
Private Sector Firms (include private Universities and Colleges)	0.0	11.0	0.0	0.0	11.0	7.1	1.5
Producer's Organization	8.0	10.0	0.0	0.0	10.0	3.5	0.8
Public/Government Agencies (include SUCs)	9.0	9.0	0.0	0.0	9.0	0.0	0.0

Table 193: Average age of coffee trees per specie, in years (treatment n=58, comparison n=6)

Firms Beneficiary Types	Arabica	Robusta	Liberica	Excelsa	Overall		
					mean	sd	se (mean)
Treatment	2.2	4.9	0.1	1.1	6.5	11.3	0.8
Non-Government Organization or Civil Societies	1.8	3.0	0.5	0.0	2.6	1.8	0.0
Private Sector Firms (include private Universities and Colleges)	1.8	2.8	0.0	0.0	3.3	2.7	0.2
Producer's Organization	1.5	6.0	0.0	2.2	9.1	15.4	1.1
Public/Government Agencies (include SUCs)	4.9	5.5	0.4	0.0	5.5	5.3	0.4
Comparison	6.5	12.0	0.0	0.0	10.7	11.0	2.4
Non-Government Organization or Civil Societies	-	-	-	-	-	-	-
Private Sector Firms (include private Universities and Colleges)	0.0	6.0	0.0	0.0	6.0	1.4	0.3
Producer's Organization	12.3	19.0	0.0	0.0	16.5	13.9	3.0
Public/Government Agencies (include SUCs)	2.0	3.0	0.0	0.0	2.5	0.0	0.0

Table 194: Percentage of firms that grow other crops in their farm (treatment n=58, comparison=6)

Firms Beneficiary Types	Banana		Cacao		Coconut		Fruit Trees		Others	
	f	%	f	%	f	%	f	%	f	%
Treatment	17.0	31.0	15.0	27.6	18.0	32.8	22.0	39.7	30.0	55.2
Non-Government Organization or Civil Societies	2.0	3.4	2.0	3.4	2.0	3.4	1.0	1.7	2.0	3.4
Private Sector Firms (include private Universities and Colleges)	2.0	3.4	2.0	3.4	2.0	3.4	3.0	5.2	7.0	15.5
Producer's Organization	10.0	17.2	8.0	13.8	10.0	17.2	14.0	24.1	16.0	27.6
Public/Government Agencies (include SUCs)	3.0	6.9	3.0	6.9	4.0	8.6	4.0	8.6	5.0	8.6
Comparison	3.0	50.0	0.0	0.0	2.0	33.3	1.0	16.7	5.0	83.3

Firms Beneficiary Types	Banana		Cacao		Coconut		Fruit Trees		Others	
	f	%	f	%	f	%	f	%	f	%
Non-Government Organization or Civil Societies	-	-	-	-	-	-	-	-	-	-
Private Sector Firms (include private Universities and Colleges)	1.0	16.7	0.0	0.0	1.0	16.7	0.0	0.0	1.0	16.7
Producer's Organization	2.0	33.3	0.0	0.0	0.0	0.0	1.0	16.7	3.0	50.0
Public/Government Agencies (include SUCs)	0.0	0.0	0.0	0.0	1.0	16.7	0.0	0.0	1.0	16.7

Table 195: Percentage of firms that is practicing intercropping system (treatment n=58, comparison n=6)

Firms Beneficiary Types	NO	YES	%YES	Banana		Cacao		Coconut		Fruit Trees		Others	
				f	%	f	%	f	%	f	%	f	%
Treatment	25	33	50.2	10	15.6	14	24.1	18	31.0	16	27.6	31	56.9
Non-Government Organization or Civil Societies	1	3	97.0	1	1.6	3	5.2	2	3.4	1	1.7	2	3.4
Private Sector Firms (include private Universities and Colleges)	8	6	38.6	2	3.1	1	1.7	2	3.4	2	3.4	8	17.2
Producer's Organization	12	18	50.1	5	7.8	8	13.8	10	17.2	8	13.8	16	27.6
Public/Government Agencies (include SUCs)	4	6	56.4	2	3.1	2	3.4	4	6.9	5	8.6	5	8.6
Comparison	3	3	47.1	3	50.0	0	0.0	2	33.3	1	16.7	5	83.3
Non-Government Organization or Civil Societies	-	-	-	-	-	-	-	-	-	-	-	-	-
Private Sector Firms (include private Universities and Colleges)	1	1	35.0	1	16.7	0	0.0	1	16.7	0	0.0	1	16.7
Producer's Organization	1	2	65.2	2	33.3	0	0.0	0	0.0	1	16.7	3	50.0
Public/Government Agencies (include SUCs)	1		0.0	0	0.0	0	0.0	1	16.7	0	0.0	1	16.7

Table 196: Average quantity of inputs, and annual coffee production cost per year, in PhP, (n=58)

Coffee Production Cost Items	NGO or Civil Societies	Private Sector Firms	Producer's Organization	Public/Government Agencies	Overall Mean
Coffee Production Cost per Hectare (in PhP)					
Planting Materials					
Dozens	0.0	0.0	0.0	10,000.0	10,000.0
Per Piece	4,712.5	3,977.9	1,045.6	1,122.0	2,714.5
Cost per Hectare per Year (PhP)	5,375.0	22,333.3	9,994.1	53,900.0	19,362.8
Paid Labor					
Individual	18.0	4.7	6.4	4.5	8.4
Package/Pakyaw	3.0	3.0	3,378.0	19.3	850.3
Cost per Hectare per Year (PhP)	15,750.0	25,650.0	31,491.7	107,339.0	44,426.4
Fertilizers					
Kgs	2.5	59.9	229.9	74.3	91.6
Liters		8.0	83.0		45.5
Cost per Hectare per Year (PhP)	3,000.0	5,912.5	3,814.7	14,280.0	6,415.0
Pesticides					
Kgs		1,000.0	1.0		500.5

Coffee Production Cost Items	NGO or Civil Societies	Private Sector Firms	Producer's Organization	Public/ Government Agencies	Overall Mean
Liters	3.0	5.0	2.5	25.5	9.0
Cost per Hectare per Year (PhP)	2,000.0	307,000.0	1,448.3	25,375.0	99,187.7
Average Net Coffee Production Cost per Hectare per Year (PhP)	15,250.0	120,107.1	27,675.9	122,548.3	65,487.3
Other cost (annual average, in PhP)					
Tools and equipment	900.0	2,776.0	1,166.8	1,020.0	1,544.9
Transport of materials and produce	1,375.0	3,684.5	750.6	300.0	1,479.8
Interest on loans	0.0	0.0	0.0	0.0	0.0
Taxes	0.0	312.5	96.7	0.0	129.5
Rentals	0.0	9,375.0	0.0	0.0	2,459.0
Others cost not mentioned	0.0	0.0	76.7	0.0	37.7
Average Gross Annual Coffee Production Cost per Year (PhP)	17,525.0	138,397.6	29,766.5	124,000.3	71,390.8

Table 197: Average quantity of inputs, and annual coffee production cost per year, in PhP, (n=6)

Coffee Production Cost Items	NGO or Civil Societies	Private Sector Firms	Producer's Organization	Public/ Government Agencies	Overall mean
Coffee Production Cost per Hectare (in PhP)					
Planting Materials					
Dozens					
Per Piece			1,000.0	1,100.0	1,050.0
Cost per Hectare per Year (PhP)	-	0.0	15,000.0	38,500.0	26,750.0
Paid Labor					
Individual				5.0	5.0
Package/Pakyaw		7.0	4.0		5.5
Cost per Hectare per Year (PhP)	-	2,100.0	2,000.0	10,000.0	4,700.0
Fertilizers					
Kgs				150.0	150.0
Liters		2.0			2.0
Cost per Hectare per Year (PhP)	-	4,000.0	0.0	4,600.0	4,300.0
Pesticides: Units & Quantity					
Kgs					
Liters					
Cost per Hectare per Year (PhP)		0.0	0.0	0.0	0.0
Average Net Coffee Production Cost per Hectare per Year (PhP)	-	3,050.0	5,666.7	53,100.0	12,700.0
Other cost (annual average, in PhP)	-				
Tools and equipment	-	0.0	2,333.3	3,500.0	1,750.0
Transport of materials and produce	-	750.0	533.3	5,000.0	1,350.0
Interest on loans	-	0.0	0.0	0.0	0.0
Taxes	-	0.0	2,500.0	0.0	1,250.0
Rentals	-	0.0	0.0	0.0	0.0
Others cost not mentioned	-	0.0	2,500.0	0.0	1,250.0
Average Gross Annual Coffee Production Cost per Year (PhP)	-	3,800.0	13,533.3	61,600.0	18,300.0

Table 198: Average volume of production and yield per hectare by end-product, treatment

Coffee Production Cost Items	NGO or Civil Societies	Private Sector Firms	Producer's Organization	Public/ Government Agencies	Overall (ha)		
					mean	sd	se (mean)
As fresh cherries (n=6)							
total area harvested, in ha	5.0	-	78.0	121.0	34.0	50.4	3.4
number of trees harvested	7,000.0	-	40,600.0	2,565.0	8,360.8	8,360.8	570.2
total volume of production, in kgs	1,500.0	-	30,800.0	2,950.0	5,875.0	5,875.0	400.7
yield per tree, in kgs per tree	0.2	-	8.3	1.9	1.7	1.7	0.1
yield per ha, in kgs/ha	300.0	-	5.925.0	2,900.4	1,520.9	1,520.9	103.7
home consumption, in kgs	-	-	20,000.0	50.0	3,341.7	3,341.7	227.9
As dried cherries (n=3)							
total area harvested, in ha	5.0	3.0	-	1.0	3.0	2.0	0.1
number of trees harvested	7,000.0	3,000.0	-	2,500.0	4,166.7	2,466.4	168.2
total volume of production, in kgs	1,500.0	3,900.0	-	1,496.0	2,298.7	1,386.8	94.6
yield per tree, in kgs per tree	0.2	1.3	-	0.6	0.7	0.6	0.0
yield per ha, in kgs/ha	300.0	1,300.0	-	1,496.0	1,032.0	641.5	43.7
home consumption, in kgs	-	3,400.0	-	-	1,133.3	1,963.0	133.9
As green coffee beans (n=20)							
total area harvested, in ha	5.0	13.0	130.7	3.4	7.6	17.4	1.2
number of trees harvested	1,500.0	10,300.0	79,050.0	3,050.0	4,695.0	8,987.1	612.9
total volume of production, in kgs	1,500.0	3,810.0	17,424.4	1,180.0	1,195.7	1,929.6	131.6
yield per tree, in kgs per tree	1.0	1.4	4.8	1.5	0.4	0.3	0.0
yield per ha, in kgs/ha	300.0	1,400.0	4,549.4	4,500.0	537.5	763.6	52.1
home consumption, in kgs	-	-	6,600.0	320.0	346.0	1,220.6	83.2
As parchment (n=5)							
total area harvested, in ha	-	3.0	6.2	0.5	1.9	2.0	0.1
number of trees harvested	-	3,300.0	6,000.0	1,830.0	2,226.0	1,529.3	104.3
total volume of production, in kgs	-	1,000.0	5,200.0	940.0	1,428.0	2,035.6	138.8
yield per tree, in kgs per tree	-	0.3	1.4	3.5	1.0	1.2	0.1
yield per ha, in kgs/ha	-	333.3	1,166.7	3,241.8	948.4	693.9	47.3
home consumption, in kgs	-	-	5,000.0	490.0	1,098.0	2,187.5	149.2
As roasted coffee (n=9)							
total area harvested, in ha	5.0	-	117.7	0.1	13.6	25.7	1.8
number of trees harvested	7,000.0	-	101,434.0	741.0	12,130.6	22,176.1	1,512.4
total volume of production, in kgs	1,500.0	-	24,279.0	79.0	2,873.1	4,420.3	301.5
yield per tree, in kgs per tree	0.2	-	2.5	0.1	0.3	0.3	0.0
yield per ha, in kgs/ha	300.0	-	4,070.0	1,580.0	661.1	593.8	40.5
home consumption, in kgs	-	-	-	-	-	-	

Table 199: Average volume of production and yield per hectare by end-product, Comparison

Coffee Production Cost Items	NGO or Civil Societies	Private Sector Firms	Producer's Organization	Public/ Government Agencies	Overall (ha)		
					mean	sd	se (mean)
As green coffee beans (n=3)							
total area harvested, in ha	-	1.0	11.0	-	4.0	5.2	0.5
number of trees harvested	-	625.0	7,800.0	-	2,808.3	3,631.1	13.1
total volume of production, in kgs	-	150.0	1,400.0	-	516.7	592.3	5.3
yield per tree, in kgs per tree	-	0.2	0.4	-	0.2	0.0	0.0
yield per ha, in kgs/ha	-	150.0	320.0	-	156.7	40.4	1.4
home consumption, in kgs	-	-	-	-	-	-	-
As roasted coffee (n=2)							
total area harvested, in ha	-	-	121.0	-	60.5	84.1	2.0

Coffee Production Cost Items	NGO or Civil Societies	Private Sector Firms	Producer's Organization	Public/ Government Agencies	Overall (ha)		
					mean	sd	se (mean)
number of trees harvested	-	-	100,800.0	-	50,400.0	70,145.0	57.8
total volume of production, in kgs	-	-	3,125.0	-	1,562.5	2,174.4	10.2
yield per tree, in kgs per tree	-	-	0.1	-	0.0	0.0	0.0
yield per ha, in kgs/ha	-	-	50.8	-	25.4	0.6	0.2
home consumption, in kgs	-	-	-	-	-	-	-

Table 200: Average Domestic Price Selling, in PhP (treatment n=58, comparison n=6)

Coffee Products	NGO or Civil Societies	Private Sector Firms	Producer's Organization	Public/ Government Agencies	Overall		
					mean	sd	se (mean)
Treatment							
Fresh Cherries	60.0	-	34.3	36.0	39.2	28.9	2.0
Dried Cherries	60.0	130.0	-	145.0	111.7	45.4	3.1
Green Coffee Bean	60.0	171.3	168.3	241.7	174.5	132.3	9.0
Parchment	-	30.0	70.0	280.0	146.0	238.5	16.3
Roasted Coffee	60.0	-	326.4	720.0	340.6	275.3	18.8
Comparison							
Green Coffee Bean	-	40.0	185.0	-	136.7	106.0	23.1
Roasted Coffee	-	-	800.0	-	800.0	565.7	123.4

Table 201: Average Domestic Revenue by end-product and by region, in PhP (treatment n=58, comparison n=6)

Coffee Products	NGO or Civil Societies	Private Sector Firms	Producer's Organization	Public/ Government Agencies	Overall		
					mean	sd	se (mean)
Treatment							
Fresh Cherries	90,000.0	-	61,800.0	104,400.0	80,700.0	81,716.2	5,573.0
Dried Cherries	90,000.0	65,000.0	-	216,920.0	123,973.3	81,459.0	5,555.5
Green Coffee Bean	90,000.0	131,025.0	119,985.3	84,233.3	115,331.2	94,716.9	6,459.6
Parchment	-	30,000.0	14,000.0	126,000.0	62,000.0	107,200.7	7,311.0
Roasted Coffee	90,000.0	-	572,982.9	56,880.0	461,973.3	600,565.6	40,958.2
Comparison							
Green Coffee Bean		6,000.0	97,000.0		66,666.7	70,493.5	15,382.9
Roasted Coffee	-	-	1,865,000.0	-	1,865,000.0	2,623,366.2	572,465.4

Table 202: Average volume of production (in kgs) and yield per hectare (in kg/ha), in GCB, by firm type (treatment n=58, comparison n=6)

Firms Beneficiary Types	Mean Volume of Production	Mean Volume Sold	Mean Yield per hectare
Treatment	3,419.0	3,419.0	0.4
Non-Government Organization or Civil Societies	1,785.0	1,785.0	0.3
Private Sector Firms (include private Universities and Colleges)	-	-	
Producer's Organization	4,127.4	4,127.4	0.4
Public/Government Agencies (include SUCs)	94.0	94.0	0.1
Comparison	1,859.4	1,859.4	0
Non-Government Organization or Civil Societies			
Private Sector Firms (include private Universities and Colleges)			-
Producer's Organization	1,859.4	1,859.4	0
Public/Government Agencies (include SUCs)			

Table 203: Since 2019, is there a change total coffee production? (in % among with coffee farm) (treatment n=58, comparison n=6)

Firms Beneficiary Types	Remained the same	Increased	Decreased
Treatment	94.1	67.1	87.4
Non-Government Organization or Civil Societies	7.3	3.0	0.0
Private Sector Firms (include private Universities and Colleges)	39.2	0.0	13.8
Producer's Organization	33.7	53.5	56.8
Public/Government Agencies (include SUCs)	14.0	10.5	16.8
Comparison	5.9	32.9	12.6
Non-Government Organization or Civil Societies	0.0	0.0	0.0
Private Sector Firms (include private Universities and Colleges)	3.4	7.6	0.0
Producer's Organization	0.0	25.3	12.6
Public/Government Agencies (include SUCs)	2.4	0.0	0.0

Table 204: Average increase/decrease (%) in total coffee production (treatment n=58, comparison n=6)

Firms Beneficiary Types	Increased			Decreased		
	mean	sd	se (mean)	mean	sd	se (mean)
Treatment	17.1	9.1	0.6	40.0	23.3	1.6
Non-Government Organization or Civil Societies	30.0	0.0	0.0	0.0	0.0	0.0
Private Sector Firms (include private Universities and Colleges)	0.0	0.0	0.0	60.0	14.1	1.0
Producer's Organization	16.0	8.2	0.6	35.0	27.6	1.9
Public/Government Agencies (include SUCs)	10.0	0.0	0.0	36.7	15.3	1.0
Comparison	44.3	38.8	8.5	20.0	0.0	0.0
Non-Government Organization or Civil Societies	0.0	0.0	0.0	0.0	0.0	0.0
Private Sector Firms (include private Universities and Colleges)	50.0	0.0	0.0	0.0	0.0	0.0
Producer's Organization	41.5	54.4	11.9	20.0	0.0	0.0
Public/Government Agencies (include SUCs)	0.0	0.0	0.0	0.0	0.0	0.0

Table 205: Average % post-harvest losses from the last cropping season of firms (among those with coffee farms) from Oct 2020 to Sep 2021 (treatment n=58, comparison n=6)

Firms Beneficiary Types	NO	YES	%YES	Average Post-harvest loss in percentage		
				Mean	sd	se (mean)
Treatment	45	17	29.3	31.6	26.6	1.8
Non-Government Organization or Civil Societies	4	0	0.0	-	-	-
Private Sector Firms (include private Universities and Colleges)	11	5	8.6	32.2	33.0	2.3
Producer's Organization	20	10	17.2	33.6	27.2	1.9
Public/Government Agencies (include SUCs)	10	2	3.4	20.0	0.0	0.0
Comparison	2	4	66.7	11.5	9.3	2.0
Non-Government Organization or Civil Societies			-	-	0.0	0.0
Private Sector Firms (include private Universities and Colleges)	1	1	16.7	5.0	0.0	0.0
Producer's Organization		3	50.0	13.7	10.0	2.2
Public/Government Agencies (include SUCs)	1		0.0	-	-	-

Table 206: Reasons why they think they experienced post-harvest losses from October 2020 to September 2021 (% among with coffee farms) (treatment n=58, comparison n=6)

Reasons of Experienced Post-Harvest Losses	NGO or Civil Societies	Private Sector Firms	Producer's Organization	Public/ Government Agencies	Overall
Treatment					

Reasons of Experienced Post-Harvest Losses	NGO or Civil Societies	Private Sector Firms	Producer's Organization	Public/ Government Agencies	Overall
Strip Harvesting of Coffee (ripe and unripe cherries are harvested from the branches)	0.0	0.0	3.1	0.0	3.1
Disease Attack	0.0	7.8	10.9	3.1	21.9
Inappropriate Pulping and Hulling Process	0.0	0.0	4.7	0.0	4.7
Prolonged Drying	0.0	0.0	9.4	1.6	10.9
Exposure To Rain	0.0	4.7	12.5	3.1	20.3
Antiquated/Old Tools (i.e., mortar and pestle for depulping)	0.0	0.0	6.3	0.0	6.3
Inadequate Storage/Containers	0.0	0.0	7.8	0.0	7.8
Poor Carrying Containers	0.0	0.0	6.3	0.0	6.3
Poor Transportation	0.0	0.0	6.3	0.0	6.3
Others	0.0	3.1	9.4	1.6	14.1
Comparison					
Strip Harvesting of Coffee (ripe and unripe cherries are harvested from the branches)	0.0	0.0	0.0	0.0	0.0
Disease Attack	0.0	0.0	1.6	0.0	1.6
Inappropriate Pulping and Hulling Process	0.0	0.0	0.0	0.0	0.0
Prolonged Drying	0.0	0.0	0.0	0.0	0.0
Exposure To Rain	0.0	1.6	0.0	0.0	1.6
Antiquated/Old Tools (i.e., mortar and pestle for depulping)	0.0	0.0	0.0	0.0	0.0
Inadequate Storage/Containers	0.0	0.0	0.0	0.0	0.0
Poor Carrying Containers	0.0	0.0	0.0	0.0	0.0
Poor Transportation	0.0	0.0	0.0	0.0	0.0
Others	0.0	0.0	3.1	0.0	3.1

Table 207: Average estimated cost per ton per year for coffee acquisition for October 2020 to September 2021, (in PhP)
(treatment n=214, comparison n=21)

Coffee Products	NGO or Civil Societies	Private Sector Firms	Producer's Organization	Public/ Government Agencies	Overall Mean
Treatment					
Paid Labor	-	34,422.4	274.9	-	6,734.7
Warehousing	-	1,666.7	-	21,276.6	6,907.9
Storage Tools and Equipment	-	16,750.0	-	6,383.0	5,279.6
Transport	-	1,533.3	5,500.0	-	2,763.2
Interest on loans	-	3,000.0	-	-	592.1
Taxes	-	4,533.3	-	-	894.7
Rentals	-	9,200.0	-	-	1,815.8
Others cost not mentioned	-	10,333.3	26.5	-	2,051.3
Total Non-farm Cost per Ton per Year (in PhP)	-	45,349.9	5,526.5	6,383.0	13,396.7
Comparison					
Paid Labor	-	10,000.0	-	-	2,857.1
Warehousing	-	-	5,000.0	-	2,000.0
Storage Tools and Equipment	-	-	-	-	-
Transport	-	-	833.3	-	333.3
Interest on loans	-	-	-	-	-
Taxes	-	-	-	-	-
Rentals	-	-	-	-	-
Others cost not mentioned	-	-	-	-	-
Total Non-farm Cost per Ton per Year (in PhP)	-	10,000.0	5,833.3	-	5,190.4

Table 208: Percentage of firms that applied technologies, per firm type (among with coffee farms) (treatment n=58, comparison n=6)

Firms Beneficiary Types	Coffee Production Technologies			Coffee Post-Harvest Technologies			Climate Risk Reduction		
	No	Yes	%Yes	No	Yes	%Yes	No	Yes	%Yes
Treatment	2	56	96.6	56	2	3.4	27	31	53.4
Non-Government Organization or Civil Societies	-	4	6.9	4	-	-	2	2	3.4
Private Sector Firms (Include private Universities and Colleges)	2	12	20.7	13	1	1.7	7	7	12.1
Producer's Organization	-	30	51.7	30	-	-	14	16	27.6
Public/Government Agencies (include SUCs)	-	10	17.2	9	1	1.7	4	6	10.3
Comparison	2	4	66.7	6	-	-	4	2	33.3
Non-Government Organization or Civil Societies	-	-	-	-	-	-	-	-	-
Private Sector Firms (Include private Universities and Colleges)	2	-	-	2	-	-	2	-	-
Producer's Organization	-	3	50.0	3	-	-	1	2	33.3
Public/Government Agencies (include SUCs)	-	1	16.7	1	-	-	1	-	-

Table 209: % of firms that is involved with nursery related activities (Among with coffee farms) (treatment n=24, comparison n=3)

Firms Beneficiary Types	Nursery-Related Activities		
	No	Yes	%Yes
Treatment	-	24	88.9
Non-Government Organization or Civil Societies	-	-	-
Private Sector Firms (include private Universities and Colleges)	-	8	29.6
Producer's Organization	-	9	33.3
Public/Government Agencies (include SUCs)	-	7	25.9
Comparison	1	2	7.4
Non-Government Organization or Civil Societies	-	-	-
Private Sector Firms (include private Universities and Colleges)	-	-	-
Producer's Organization	1	1	3.7
Public/Government Agencies (include SUCs)	-	1	3.7

Table 210: Adoption Rate in terms of Nursery Related Technologies

Nursery Related Technologies	% of Adoption Rate	Number of coffee plants			Planting distance (in sq m)		
		mean	sd	se (mean)	mean	sd	se (mean)
Treatment							
Proper bag size	10.3	5,255.0	10,193.7	695.2	3.9	3.2	0.2
Media mixture	8.6	6,206.0	11,095.4	756.7	2.9	2.1	0.1
Seedlings Selection	8.6	6,306.0	11,038.8	752.8	4.5	4.7	0.3
Soil sterilization	6.9	1,032.5	1,117.5	76.2	2.1	1.4	0.1
Seed germination	5.2	3,676.7	5,497.6	374.9	3.7	2.5	0.2
Seed selection	5.2	510.0	485.1	33.1	4.7	4.0	0.3

Nursery Related Technologies	% of Adoption Rate	Number of coffee plants			Planting distance (in sq m)		
		mean	sd	se (mean)	mean	sd	se (mean)
Grafting	3.4	225.0	176.8	12.1	9.0	0.0	0.0
Mother plant selection	3.4	515.0	685.9	46.8	2.5	2.1	0.1
Proper Planting distance	3.4	2,500.0	707.1	48.2	6.5	3.5	0.2
Site Selection	3.4	23,000.0	4,242.6	289.3	7.5	2.1	0.1
Digging hole	1.7	3,000.0	0.0	0.0	9.0	0.0	0.0
Farm Planning (Sketch Map, SWOT, Action Plan)	1.7	10,000.0	0.0	0.0	6.0	0.0	0.0
Mother plant garden	1.7	5,000.0	0.0	0.0	6.0	0.0	0.0
Pick ripe	1.7	1,500.0	0.0	0.0	6.0	0.0	0.0
Propagation Chamber	1.7	30.0	0.0	0.0	1.0	0.0	0.0
Proper pruning	1.7	300.0	0.0	0.0	9.0	0.0	0.0
Comparison							
Propagation Chamber	16.7	100.0	0.0	0.0	9.0	0.0	0.0
Proper bag size	16.7	500.0	0.0	0.0	6.0	0.0	0.0
Seedlings Selection	16.7	500.0	0.0	0.0	6.0	0.0	0.0

Table 211: Adoption Rate in terms of coffee production technologies

Coffee Production Technologies	% of Adoption Rate	Number of coffee plants			Planting distance (in sq m)		
		mean	sd	se (mean)	mean	sd	se (mean)
Treatment							
Digging of hole	33.8	1,615.9	2,093.6	142.8	10.1	9.2	0.6
Proper planting distance	30.9	1,710.4	2,115.6	144.3	6.7	2.0	0.1
Proper pruning	29.4	4,096.6	8,163.9	556.8	6.9	3.6	0.2
Application of Organic Fertilizer	25.0	1,514.9	2,347.9	160.1	9.9	7.6	0.5
Pick ripe	25.0	4,010.7	8,703.7	593.6	8.5	7.9	0.5
Field planting	20.6	1,184.4	1,072.1	73.1	8.2	6.1	0.4
Identification of Pest	17.6	2,181.8	3,229.4	220.2	5.6	2.7	0.2
Shading	14.7	1,093.2	921.3	62.8	4.8	2.3	0.2
Capping	13.2	3,449.1	4,991.0	340.4	5.3	5.1	0.3
Stumping / Rejuvenation	11.8	7,237.5	12,273.2	837.0	9.8	4.3	0.3
Application of Inorganic Fertilizer	10.3	857.1	402.5	27.5	10.9	11.2	0.8
Seedlings Selection	10.3	1,485.7	1,064.9	72.6	5.9	1.7	0.1
Farm Planning (Sketch Map, SWOT, Action Plan)	7.4	990.0	406.8	27.7	12.2	13.4	0.9
Application of Basal Fertilizer	5.9	1,000.0	334.2	22.8	6.3	2.1	0.1
Seed selection	5.9	1,575.0	953.5	65.0	5.8	2.4	0.2
Application of Organic Pesticide	4.4	600.0	519.6	35.4	17.0	16.5	1.1
Seed germination	4.4	1,100.0	100.0	6.8	6.3	2.5	0.2
Site selection	4.4	916.7	332.9	22.7	7.0	1.7	0.1
Application of Synthetic Fungicides	2.9	750.0	636.4	43.4	21.0	21.2	1.4
Application of Synthetic Pesticide	2.9	3,000.0	1,414.2	96.4	13.0	4.2	0.3
Identification of Disease	2.9	692.0	200.8	13.7	6.0	0.0	0.0
Soil Analysis	2.9	1,100.0	141.4	9.6	5.0	1.4	0.1
Application of Organic Fungicides	1.5	1,200.0	0.0	0.0	6.0	0.0	0.0
Mother plant selection	1.5	1,000.0	0.0	0.0	4.0	0.0	0.0
Soil Sampling	1.5	1,000.0	0.0	0.0	4.0	0.0	0.0
Comparison							
Proper pruning	66.7	25,950.0	49,369.5	10,773.3	9.8	2.9	0.6
Proper planting distance	50.0	1,600.0	1,216.6	265.5	9.0	3.0	0.7
Application of Organic Fertilizer	16.7	1,000.0	0.0	0.0	9.0	0.0	0.0

Coffee Production Technologies	% of Adoption Rate	Number of coffee plants			Planting distance (in sq m)		
		mean	sd	se (mean)	mean	sd	se (mean)
Pick ripe	16.7	1,00.0	0.0	0.0	6.0	0.0	0.0
Seedlings Selection	16.7	800.0	0.0	0.0	6.0	0.0	0.0

NOTE: There is only 1 firm (private sector) who adopted the coffee post-harvest technologies. This has 1500 coffee trees with 6 sq. m. planting distance

Table 212: Adoption rate in terms of climate risk reduction and/or natural resource management

Climate Risk Reduction and Natural Resource Management	% of Adoption Rate	Number of coffee plants			Planting distance (in sq m)		
		mean	sd	se (mean)	mean	sd	se (mean)
Treatment							
Agroforestry	19.0	5,566.5	11,312.5	771.5	6.8	5.6	0.4
Biodiversity conservation	12.1	2,828.6	2,984.8	203.6	7.3	2.6	0.2
Restoration of organic soils and degraded lands	6.9	4,125.0	2,467.6	168.3	7.3	1.5	0.1
Stream bank management, restoration, re/afforestation	5.2	1,166.7	850.5	58.0	7.3	2.3	0.2
Adjustment of sowing/planting time	1.7	30.0	0.0	0.0	1.0	0.0	0.0
Diversification	1.7	38,000.0	0.0	0.0	9.0	0.0	0.0
Efficient nitrogen fertilizer use	1.7	7,000.0	0.0	0.0	8.0	0.0	0.0
Low- or no-till practices	1.7	2,000.0	0.0	0.0	10.0	0.0	0.0
Use of drought and flood resistant varieties	1.7	3,000.0	0.0	0.0	4.0	0.0	0.0
Use of perennial varieties	1.7	1,100.0	0.0	0.0	12.0	0.0	0.0
Use of short duration varieties	1.7	550.0	0.0	0.0	6.0	0.0	0.0
Woodlot management	1.7	1,800.0	0.0	0.0	36.0	0.0	0.0
Comparison							
Biodiversity conservation	16.7	100,000.0	0.0	0.0	12.0	0.0	0.0
Restoration of organic soils and degraded lands	16.7	500.0	0.0	0.0	6.0	0.0	0.0

Table 213: What Business-Level Practices and Technologies Do You Practice In The Firm? (treatment n=214, comparison n=21)

Reasons of Experienced Post-Harvest Losses	NGO or Civil Societies	Private Sector Firms	Producer's Organization	Public/ Government Agencies	Overall	
					f	%
Treatment						
Financial Management	0	20	34	17	71	33.0
Record Management	1	20	39	25	85	39.5
Input, Output And Needs Computation	0	13	25	20	58	27.0
Business Planning	0	10	26	13	49	22.8
Human Resources Management	0	10	21	21	52	24.2
Marketing And Promotion	0	18	25	17	60	27.9
Inventory Management	0	10	16	13	39	18.1
Quality Management Systems	0	8	10	3	21	9.8
Strategic Planning	0	4	12	10	26	12.1
Others	0	4	2	3	9	4.2
None	9	15	42	22	88	40.9
Comparison						
Financial Management	0	2	3	0	5	23.8
Record Management	0	2	6	0	8	38.1
Input, Output And Needs Computation	0	2	5	2	9	42.9
Business Planning	0	2	3	0	5	23.8
Human Resources Management	0	2	1	0	3	14.3
Marketing And Promotion	0	2	4	0	6	28.6

Reasons of Experienced Post-Harvest Losses	NGO or Civil Societies	Private Sector Firms	Producer's Organization	Public/ Government Agencies	Overall	
					f	%
Inventory Management	0	1	3	0	4	19.0
Quality Management Systems	0	0	1	0	1	4.8
Strategic Planning	0	0	1	0	1	4.8
None	1	4	2	3	10	47.6

Table 214: Average area in protected areas that these technologies were applied (treatment n=214, comparison n=21)

Firms Beneficiary Types	NO	YES	%YES	Areas in protected areas, ha		
				mean	sd	se (mean)
Treatment	165	50	23.3	42.6	124.7	8.5
Non-Government Organization or Civil Societies	7	4	1.9	2.6	1.7	0.1
Private Sector Firms (include private Universities and Colleges)	38	8	3.7	71.9	173.4	11.8
Producer's Organization	75	25	11.6	45.9	146.2	10.0
Public/Government Agencies (include SUCs)	45	13	6.0	30.6	43.8	3.0
Comparison	19	2	9.5	17.5	3.5	0.8
Non-Government Organization or Civil Societies	1	-	0.0	0.0	0.0	0.0
Private Sector Firms (include private Universities and Colleges)	5	1	4.8	20.0	0.0	0.0
Producer's Organization	8	1	4.8	15.0	0.0	0.0
Public/Government Agencies (include SUCs)	5	-	0.0	0.0	0.0	0.0

Table 215: Did Any of the New Technologies That You Applied Due To Philcafe Assistance Influence Your Organizations Sales Or Profitability (treatment n=214, comparison n=21)

Firms Beneficiary Types	NONE	NO	YES	% YES
Treatment	69	87	59	27.4
Non-Government Organization or Civil Societies	5	5	1	0.5
Private Sector Firms (include private Universities and Colleges)	16	14	16	7.4
Producer's Organization	30	41	29	13.5
Public/Government Agencies (include SUCs)	18	27	13	6.0
Comparison	8	11	2	9.5
Non-Government Organization or Civil Societies	1	-	-	0.0
Private Sector Firms (include private Universities and Colleges)	3	2	1	4.8
Producer's Organization	2	6	1	4.8
Public/Government Agencies (include SUCs)	2	3	-	0.0

Table 216: Average number of organizations who have seen the beneficiaries applying these Technologies/Practices (treatment n=214, comparison n=21)

Firms Beneficiary Types	NO	YES	%YES	Number of organizations		
				mean	sd	se (mean)
Treatment	158	56	26.0	3.5	4.2	0.3
Non-Government Organization or Civil Societies	8	3	1.4	1.0	0.0	0.0
Private Sector Firms (include private Universities and Colleges)	34	12	5.6	3.8	3.1	0.2
Producer's Organization	72	27	12.6	2.5	3.4	0.2
Public/Government Agencies (include SUCs)	44	14	6.5	5.7	5.9	0.4
Comparison	17	4	19.0	5.5	1.0	0.2
Non-Government Organization or Civil Societies	1	-	0.0	0.0	0.0	0.0
Private Sector Firms (include private Universities and Colleges)	6	-	0.0	0.0	0.0	0.0
Producer's Organization	7	2	9.5	5.0	0.0	0.0
Public/Government Agencies (include SUCs)	3	2	9.5	6.0	1.4	0.3

Table 217: What Coffee Production Technologies Did They Copy? (treatment n=214, comparison n=21)

Coffee Production Technologies	NGO or Civil Societies	Private Sector Firms	Producer's Organization	Public/ Government Agencies	Overall	
					f	%
Treatment						
Site Selection	0	3	14	7	24	11.2
Seedlings Selection	1	3	15	9	28	13.0
Proper Planting Distance	2	6	20	12	40	18.6
Digging Of Hole	3	7	21	9	40	18.6
Field Planting	0	3	15	9	27	12.6
Shading	1	2	14	7	24	11.2
Farm Planning (Sketch Map, Swot, Action Plan)	0	1	13	3	17	7.9
Mother Plant Selection	0	0	12	5	17	7.9
Seed Selection	0	4	13	7	24	11.2
Seed Germination	0	3	13	6	22	10.2
Proper Pruning	0	5	24	9	38	17.7
Capping	0	0	14	3	17	7.9
Stumping / Rejuvenation	0	2	18	5	25	11.6
Leaf Sampling	0	1	13	2	16	7.4
Soil Sampling	0	0	11	2	13	6.0
Soil Analysis	0	0	11	3	14	6.5
Application Of Organic Fertilizer	1	4	17	7	29	13.5
Application Of Inorganic Fertilizer	0	1	17	6	24	11.2
Application Of Basal Fertilizer	0	2	13	4	19	8.8
Identification Of Pest	3	2	17	4	26	12.1
Application Of Organic Pesticide	1	2	12	6	21	9.8
Application Of Synthetic Pesticide	0	0	11	4	15	7.0
Use Of Bio Comparison Agents	0	0	11	3	14	6.5
Identification Of Disease	1	4	11	3	19	8.8
Application Of Organic Fungicides	0	0	10	3	13	6.0
Application Of Synthetic Fungicides	0	0	9	3	12	5.6
Pick Ripe	1	6	19	9	35	16.3
None	0	1	0	0	1	1
Comparison						
Seedlings Selection	0	0	2	0	2	9.5
Proper Planting Distance	0	0	1	1	2	9.5
Digging Of Hole	0	0	1	0	1	4.8
Field Planting	0	0	0	1	1	4.8
Shading	0	0	1	0	1	4.8
Proper Pruning	0	0	2	1	3	14.3
Pick Ripe	0	0	2	0	2	9.5
None	0	0	0	1	1	4.8

Table 218: What Coffee Post-Harvest Technologies and Other Processing and Value Addition Technologies Did They Copy? (treatment n=214, comparison n=21)

Coffee Post-Harvest Technologies And Other Processing And Value Addition Technologies	NGO or Civil Societies	Private Sector Firms	Producer's Organization	Public/ Government Agencies	Overall	
					f	%
Treatment						
Washing	2	4	21	8	35	16.3
Floatation	3	3	19	7	32	14.9

Coffee Post-Harvest Technologies And Other Processing And Value Addition Technologies	NGO or Civil Societies	Private Sector Firms	Producer's Organization	Public/ Government Agencies	Overall	
					<i>f</i>	%
Pulping	0	4	15	5	24	11.2
Fermentation	0	2	14	6	22	10.2
Use Of Elevated Dryers	0	5	22	7	34	15.8
Drying	1	6	22	10	39	18.1
Polishing	0	1	13	3	17	7.9
Sorting And Defects Classification	0	1	12	4	17	7.9
Size Grading	0	3	11	4	18	8.4
Storing	0	1	11	3	15	7.0
Hulling	0	3	17	3	23	10.7
Grinding	0	3	13	4	20	9.3
Roasting	0	5	13	7	25	11.6
Packaging	0	2	12	5	19	8.8
Cupping	0	3	12	3	18	8.4
Measuring Sugar Content	0	1	8	1	10	4.7
None	0	2	3	3	8	3.7
Comparison						
Washing	0	0	2	0	2	9.5
Floatation	0	0	1	0	1	4.8
Pulping	0	0	1	1	2	9.5
Fermentation	0	0	1	0	1	4.8
Use Of Elevated Dryers	0	0	1	0	1	4.8
Drying	0	0	2	1	3	14.3
Polishing	0	0	1	0	1	4.8
Sorting And Defects Classification	0	0	1	0	1	4.8
Size Grading	0	0	1	1	2	9.5
Storing	0	0	1	1	2	9.5
Hulling	0	0	1	1	2	9.5
Grinding	0	0	1	0	1	4.8
Roasting	0	0	1	1	2	9.5
Packaging	0	0	1	1	2	9.5
Cupping	0	0	1	1	2	9.5
Others	0	0	0	1	1	4.8

Table 219: What Climate Risk Reduction and/or Natural Resource Management Did They Copy? (treatment n=214, comparison n=21)

Climate Risk Reduction and Natural Resource Management	NGO or Civil Societies	Private Sector Firms	Producer's Organization	Public/ Government Agencies	Overall	
					<i>f</i>	%
Treatment						
Biodiversity Conservation	1	5	10	7	23	10.7
Woodlot Management	0	2	7	3	12	5.6
Restoration of Organic Soils and Degraded Lands	0	1	9	3	13	6.0
Use of Drought and Flood Resistant Varieties	0	1	9	3	13	6.0
Low- or No-Till Practices	0	2	6	2	10	4.7
Efficient Nitrogen Fertilizer Use	1	1	5	2	9	4.2
Adjustment of Sowing/Planting Time	0	1	8	2	11	5.1
Use of Perennial Varieties	0	1	9	3	13	6.0
Practices that Promote Methane Reduction	0	1	6	1	8	3.7
Introduction/Expansion of Perennials	0	1	7	1	9	4.2
Stream Bank Management, Restoration, Re/Afforestation	0	2	8	2	12	5.6

Climate Risk Reduction and Natural Resource Management	NGO or Civil Societies	Private Sector Firms	Producer's Organization	Public/ Government Agencies	Overall	
					f	%
Agroforestry	0	4	10	4	18	8.4
Irrigation (Drip)	0	1	1	0	2	0.9
Use of Short Duration Varieties	0	1	6	1	8	3.7
Diversification	0	3	9	3	15	7.0
None	2	7	10	5	24	11.2
Comparison						
Biodiversity Conservation	0	0	0	1	1	4.8
Restoration of Organic Soils and Degraded Lands	0	0	1	0	1	4.8
None	0	0	1	1	2	9.5

Table 220: What Business Related Practices and Technologies they Copy? (treatment n=214, comparison n=21)

Business Related Practices and Technologies	NGO or Civil Societies	Private Sector Firms	Producer's Organization	Public/ Government Agencies	Overall	
					f	%
Treatment						
Financial Management	1	5	13	5	24	11.2
Record Management	1	4	16	5	26	12.1
Input, Output and Needs Computation	1	5	12	2	20	9.3
Business Planning	1	4	13	2	20	9.3
Human Resources Management	1	4	8	1	14	6.5
Marketing And Promotion	1	5	11	5	22	10.2
Inventory Management	0	3	9	3	15	7.0
Quality Management Systems	0	2	7	1	10	4.7
Strategic Planning	0	2	9	2	13	6.0
None	2	5	7	7	21	9.8
Comparison						
Financial Management	0	0	1	0	1	4.8
Record Management	0	0	1	0	1	4.8
Input, Output and Needs Computation	0	0	1	1	2	9.5
Business Planning	0	0	1	0	1	4.8
Human Resources Management	0	0	1	0	1	4.8
Marketing And Promotion	0	0	1	1	2	9.5
Inventory Management	0	0	1	0	1	4.8
Quality Management Systems	0	0	1	0	1	4.8
Strategic Planning	0	0	1	0	1	4.8
None	0	0	1	1	2	9.5

Table 221: Average number working on-farm, Treatment (n=58)

Firms Beneficiary Types	Adult		Youth		Overall Mean
	Female	Male	Female	Male	mean
Non-Government Organization or Civil Societies	3.0	8.0	0.0	7.0	18.0
Private Sector Firms (include private Universities and Colleges)	1.7	3.0	0.0	0.7	5.3
Producer's Organization	2.0	1.3	0.0	0.3	3.7
Public/Government Agencies (include SUCs)	1.0	1.0	3.0	1.0	6.0

Table 222: Average number working non-farm, Treatment (n=171)

Firms Beneficiary Types	Adult		Youth		Overall Mean
	Female	Male	Female	Male	mean
Non-Government Organization or Civil Societies	0.0	0.0	0.0	0.0	0.0
Private Sector Firms (include private Universities and Colleges)	0.0	0.0	0.0	1.0	1.0
Producer's Organization	0.5	0.5	0.0	0.0	1.0
Public/Government Agencies (include SUCs)	0.0	0.3	0.0	0.0	0.3

Table 223: Details of family labor/participation in coffee farming, by gender, adult/youth, Treatment

Business Related Practices and Technologies	NGO or Civil Societies	Private Sector Firms	Producer's Organization	Public/ Government Agencies
Adult Male				
% Full time	13.8	3.4	10.3	-
% Part-time	0.0	6.9	1.7	-
Average days worked per month	20.0	11.8	18.6	-
Adult Female				
% Full time	5.2	1.7	3.4	-
% Part-time	0.0	8.6	6.9	-
Average days worked per month	20.0	6.2	7.2	-
Youth Male				
% Full time	12.1	1.7	0.0	-
% Part-time	0.0	1.7	1.7	-
Average days worked per month	21.1	26.0	1.0	-
Others				
% Full time	-	-	-	-
% Part-time	8.6	1.7	-	-
Average days worked per month	8	24	-	-

Note: There is only 1 entry on non-farm adult-male from public/government: full-time, and is working 22 days per month.
There are only 3 entries on non-farm youth male, all from private sectors: All are full-time and working 28 days per month
There are only 3 entries on non-farm youth female, all from private sectors: All are full-time and working 28 days per month

Table 224: Change in labors, from oct 2019-sep2020 to oct2020-sep2021, % among with coffee farms (treatment n=64)

Business Related Practices and Technologies	Remained the same	Increased	Decreased
Non-Government Organization or Civil Societies	1.7	0.0	0.0
Private Sector Firms (Include private Universities and Colleges)	5.2	0.0	0.0
Producer's Organization	3.4	1.7	0.0
Public/Government Agencies (include SUCs)	0.0	0.0	1.7
Overall	10.3	1.7	1.7

Note: There is only 1 entry in increased in labors, from the private sector. The increase is 20%.
There is only 1 entry in decreased in labors, from the public/government agencies. The decrease is 30%.

Table 225: Have You Accessed Warehouse/Storage Space Due To Philcafe Assistance? (treatment n=214, comparison n=21)

Firms Beneficiary Types	NO	YES	% YES
Treatment	205	9	4.2
Non-Government Organization or Civil Societies	11	-	0.0
Private Sector Firms (include private Universities and Colleges)	42	4	1.9

Firms Beneficiary Types	NO	YES	% YES
Producer's Organization	93	5	2.3
Public/Government Agencies (include SUCs)	59	-	0.0
Comparison	20	1	4.8
Non-Government Organization or Civil Societies	1	-	0.0
Private Sector Firms (include private Universities and Colleges)	6	-	0.0
Producer's Organization	8	1	4.8
Public/Government Agencies (include SUCs)	5		0.0

Table 226: Average size (in cubic meters) of new facility dry storage, treatment

Firms Beneficiary Types	mean	sd	se(mean)
Private Sector Firms (Include private Universities and Colleges)	120.0	113.1	7.7
Producer's Organization	90.0	84.9	5.8
Overall	105.0	83.5	5.7

Table 227: Purchased/Accessed Additional Coffee Equipment/Facility From October 2020 to September 2021 (treatment n=58, comparison n=6)

Firms Beneficiary Types	NO	YES	%YES
Treatment	54	3	5.2
Non-Government Organization or Civil Societies	4	-	0.0
Private Sector Firms (include private Universities and Colleges)	14	-	0.0
Producer's Organization	27	2	3.4
Public/Government Agencies (include SUCs)	9	1	1.7
Comparison	6	-	0.0
Non-Government Organization or Civil Societies	-	-	0.0
Private Sector Firms (include private Universities and Colleges)	2	-	0.0
Producer's Organization	3	-	0.0
Public/Government Agencies (include SUCs)	1	-	0.0

Table 228: Acquired equipment and Facility, Treatment

Equipment and Facility	NGO or Civil Societies	Private Sector Firms	Producer's Organization	Public/Government Agencies	Overall	
					f	%
Pulpers	0	0	1	0	1	4.7
Dehullers	0	1	3	5	9	4.2
Elevated Dryer	0	0	4	2	6	2.8
Grinder	0	1	2	2	5	2.3
Warehouse/Storage	0	0	3	1	4	1.9
Roaster	0	1	1	2	4	1.9
Fermentary	0	0	0	2	2	1.4
Sorter	0	0	1	1	2	0.9

Table 229: Percentage of firms and organization actively market their coffee products (treatment n=58, comparison n=6)

Firms Beneficiary Types	NO	YES	%YES
Treatment	30	28	90.3
Non-Government Organization or Civil Societies	4	-	0.0
Private Sector Firms (include private Universities and Colleges)	7	7	22.6

Firms Beneficiary Types	NO	YES	%YES
Producer's Organization	13	17	54.8
Public/Government Agencies (include SUCs)	6	4	12.9
Comparison	3	3	9.7
Non-Government Organization or Civil Societies	-	-	0.0
Private Sector Firms (include private Universities and Colleges)	2	-	0.0
Producer's Organization	-	3	9.7
Public/Government Agencies (include SUCs)	1	-	0.0

Table 230: Distribution of firms by methods of marketing used in October 2020 to September 2021

Firms Beneficiary Types	Attendance To Exhibits/ Fairs	Participation To Trade Missions	Posters / Flyers	Radio Station	Social Media	Tv Station	Website	Others
Treatment	16.7	4.5	0.0	1.5	47.0	0.0	7.6	22.7
Non-Government Organization or Civil Societies	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Private Sector Firms (include private Universities and Colleges)	7.4	7.4	0.0	0.0	66.7	0.0	14.8	3.7
Producer's Organization	20.7	3.4	0.0	3.4	37.9	0.0	3.4	31.0
Public/Government Agencies (include SUCs)	22.2	0.0	0.0	0.0	22.2	0.0	0.0	55.6
Comparison	12.5	0.0	12.5	0.0	62.5	12.5	0.0	0.0
Private Sector Firms (include private Universities and Colleges)	50.0	0.0	0.0	0.0	50.0	0.0	0.0	0.0
Producer's Organization	0.0	0.0	20.0	0.0	60.0	20.0	0.0	0.0
Public/Government Agencies (include SUCs)	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0

Table 231: Average effectiveness rating marketing methods used in October 2020 to September 2021 in increasing market reach and sales

Firms Beneficiary Types	Attendance To Exhibits/ Fairs	Participation To Trade Missions	Posters / Flyers	Radio Station	Social Media	Tv Station	Website	Others
Treatment	4.4	4.0	-	4.0	4.1	-	3.8	3.9
Non-Government Organization or Civil Societies	4.0	-	-	-	-	-	-	-
Private Sector Firms (include private Universities and Colleges)	4.5	4.0	-	-	4.2	-	3.5	4.0
Producer's Organization	4.3	4.0	-	4.0	4.0	-	5.0	3.9
Public/Government Agencies (include SUCs)	4.5	-	-	-	4.0	-	-	4.0
Comparison	5.0	-	4.0	-	4.8	5.0	-	-
Private Sector Firms (include private Universities and Colleges)	5.0	-	-	-	5.0	-	-	-
Producer's Organization	-	-	4.0	-	4.7	5.0	-	-
Public/Government Agencies (include SUCs)	-	-	-	-	5.0	-	-	-

Note: 5- extremely effective, 4- very effective, 3-somewhat effective, 2-not so effective, 1-not at all effective

Table 232: Distribution of firms by frequency of accessing agricultural market and price information (treatment n=58, comparison n=6)

Firms Beneficiary Types	Annual	Bi-Annual	Quarterly	Monthly	Weekly	Daily
Treatment	55.2	1.7	8.6	20.7	5.2	8.6
Non-Government Organization or Civil Societies	6.9	0.0	0.0	0.0	0.0	0.0
Private Sector Firms (include private Universities and Colleges)	12.1	1.7	1.7	6.9	0.0	1.7
Producer's Organization	24.1	0.0	5.2	10.3	5.2	6.9
Public/Government Agencies (include SUCs)	12.1	0.0	1.7	3.4	0.0	0.0
Comparison	50.0	0.0	16.7	16.7	16.7	0.0
Non-Government Organization or Civil Societies	0.0	0.0	0.0	0.0	0.0	0.0
Private Sector Firms (include private Universities and Colleges)	16.7	0.0	0.0	16.7	16.7	0.0
Producer's Organization	16.7	0.0	16.7	0.0	0.0	0.0
Public/Government Agencies (include SUCs)	16.7	0.0	0.0	0.0	0.0	0.0

Table 233: Percentage of firms and organization involved in purchasing and consolidating coffee products from October 2020-September 2021 (treatment n=214, comparison n=21)

Firms Beneficiary Types	NR	NO	YES	%YES
Treatment	13	158	43	93.5
Non-Government Organization or Civil Societies	-	10	1	2.2
Private Sector Firms (include private Universities and Colleges)	1	26	19	41.3
Producer's Organization	6	72	20	43.5
Public/Government Agencies (include SUCs)	6	50	3	6.5
Comparison	-	18	3	6.5
Non-Government Organization or Civil Societies	-	1	-	0.0
Private Sector Firms (include private Universities and Colleges)	-	4	2	4.4
Producer's Organization	-	8	1	2.2
Public/Government Agencies (include SUCs)	-	5	-	0.0

Table 234: Average of Total Volume Purchased/ Consolidated, in kilo, by coffee farm (treatment n=43, comparison n=3)

Firms Beneficiary Types	Dried Cherries	Fresh Cherries	Green Coffee Beans	Ground Coffee	Parchment	Roasted Coffee
Treatment	1,100	9,966	4,987	52	11,271	147
Non-Government Organization or Civil Societies	-	-	800	-	-	-
Private Sector Firms (include private Universities and Colleges)	1,000	1,100	4,527	-	2,000	147
Producer's Organization	1,200	14,399	6,311	100	15,907	-
Public/Government Agencies (include SUCs)	-	-	1,500	4	-	-
Comparison	-	-	275	-	-	50
Private Sector Firms (include private Universities and Colleges)	-	-	300	-	-	50
Producer's Organization	-	-	250	-	-	-

Table 235: Average of buying price (Php/Kg) of Purchased/ Consolidated Coffee (treatment n=43, comparison n=3)

Firms Beneficiary Types	Dried Cherries	Fresh Cherries	Green Coffee Beans	Ground Coffee	Parchment	Roasted Coffee
Treatment	103	25	297	350	193	1,200

Firms Beneficiary Types	Dried Cherries	Fresh Cherries	Green Coffee Beans	Ground Coffee	Parchment	Roasted Coffee
Non-Government Organization or Civil Societies	-	-	85	-	-	-
Private Sector Firms (include private Universities and Colleges)	150	37	453	-	250	1,200
Producer's Organization	55	20	123	600	165	-
Public/Government Agencies (include SUCs)	-	-	85	100	-	-
Comparison	-	-	100	-	-	1,200
Private Sector Firms (include private Universities and Colleges)	-	-	80	-	-	1,200
Producer's Organization	-	-	120	-	-	-

Table 236: Average number of farmers and middlemen/ aggregators purchased/consolidated

Firms Beneficiary Types	Dried Cherries	Fresh Cherries	Green Coffee Beans	Ground Coffee	Parchment	Roasted Coffee
Treatment	56	35	15	13	27	2
Non-Government Organization or Civil Societies	-	-	30	-	-	-
Private Sector Firms (include private Universities and Colleges)	100	41	14	-	50	2
Producer's Organization	12	33	16	1	15	-
Public/Government Agencies (include SUCs)	-	-	23	25	-	-
Comparison	-	-	126	-	-	1
Private Sector Firms (include private Universities and Colleges)	-	-	1	-	-	1
Producer's Organization	-	-	250	-	-	-

Table 237: Average number of new farmers purchased coffee from

Firms Beneficiary Types	Dried Cherries	Fresh Cherries	Green Coffee Beans	Ground Coffee	Parchment	Roasted Coffee
Treatment	1	4	8	13	3	1
Non-Government Organization or Civil Societies	-	-	1	-	-	-
Private Sector Firms (include private Universities and Colleges)	1	1	1	-	1	1
Producer's Organization	1	6	13	0	5	-
Public/Government Agencies (include SUCs)	-	-	1	25	-	-
Comparison	-	-	1	-	-	1
Private Sector Firms (include private Universities and Colleges)	-	-	1	-	-	1
Producer's Organization	-	-	0	-	-	-

Table 238: Percentage of firms and organization sell coffee products from October 2020- September 2021 (treatment n=214, comparison n=21)

Firms Beneficiary Types	NR	NO	YES	%YES
Treatment	13	135	66	90.4
Non-Government Organization or Civil Societies		9	2	2.7
Private Sector Firms (include private Universities and Colleges)	1	25	20	27.4

Firms Beneficiary Types	NR	NO	YES	%YES
Producer's Organization	5	59	34	46.6
Public/Government Agencies (include SUCs)	7	42	10	13.7
Comparison		14	7	9.6
Non-Government Organization or Civil Societies		1		0.0
Private Sector Firms (include private Universities and Colleges)		3	3	4.1
Producer's Organization		5	4	5.5
Public/Government Agencies (include SUCs)		5		0.0

Table 239: Percentage of firms and organization that does domestic and international marketing, Treatment (n=66)

Firms Beneficiary Types	Domestic	%	International	%
Treatment	16.0	24.2	4.0	6.1
Non-Government Organization or Civil Societies	0.0	0.0	0.0	0.0
Private Sector Firms (include private Universities and Colleges)	2.0	3.0	1.0	1.5
Producer's Organization	12.0	18.2	2.0	3.0
Public/Government Agencies (include SUCs)	2.0	3.0	1.0	1.5

Table 240: Average of Volume Sold, in kilo, by coffee farm (treatment n=66, comparison n=7)

Firms Beneficiary Types	Dried Cherries	Fresh Cherries	Green Coffee Beans	Parchment	Roasted Coffee
Treatment	1,165.3	2,533.3	898.4	330.0	2,873.1
Non-Government Organization or Civil Societies	1,500.0	1,500.0	1,500.0	-	1,500.0
Private Sector Firms (include private Universities and Colleges)	500	-	850.0	1,000.0	-
Producer's Organization	-	3,600.0	964.4	100.0	3,468.4
Public/Government Agencies (include SUCs)	1,496.0	1,450.0	340.0	225.0	79.0
Comparison	-	-	516.7	-	1,562.5
Private Sector Firms (include private Universities and Colleges)	-	-	150.0	-	-
Producer's Organization	-	-	700.0	-	1,562.5

Note: Market are all domestic

Table 241: Average selling price, PhP/Kg, by coffee farm (treatment n=66, comparison n=7)

Firms Beneficiary Types	Dried Cherries	Fresh Cherries	Green Coffee Beans	Parchment	Roasted Coffee
Treatment	111.7	39.2	190.6	146.0	340.6
Non-Government Organization or Civil Societies	60.0	60.0	60.0	-	60.0
Private Sector Firms (include private Universities and Colleges)	130.0	-	175.0	30.0	-
Producer's Organization	-	34.3	182.0	70.0	326.4
Public/Government Agencies (include SUCs)	145.0	16.0	322.5	280.0	720.0
Comparison	-	-	136.7	-	800.0
Private Sector Firms (include private Universities and Colleges)	-	-	40.0	-	-
Producer's Organization	-	-	185.0	-	800.0

Note: Market are all domestic

Table 242: Average sales (Php), by coffee form

Firms Beneficiary Types	Dried Cherries	Fresh Cherries	Green Coffee Beans	Ground Coffee	Parchment	Roasted Coffee	Specialty
Treatment	86,219	65,650	610,979	536,704	181,000	706,159	1,950,500
Non-Government Organization or Civil Societies		9,450	39,413	108,800			
Private Sector Firms (include private Universities and Colleges)	65,000		50,396	865,733		672,885	
Producer's Organization	38,438	-	897,668	604,491	15,500	933,304	1,950,500
Public/Government Agencies (include SUCs)	203,000	187,500	20,700	94,345	512,000	3,000	
Comparison			404,750	1,869,750			
Private Sector Firms (include private Universities and Colleges)			60,000	19,500			
Producer's Organization			519,667	3,720,000			

Note: Market are all domestic

Table 243: Percentage of firms and organization who achieved their targets (coffee) sales in Oct 2020-Sept 2021 (treatment n=66, comparison n=7)

Firms Beneficiary Types	NO	YES	%YES
Treatment	37	29	87.8
Non-Government Organization or Civil Societies	1	1	3.0
Private Sector Firms (include private Universities and Colleges)	10	10	30.3
Producer's Organization	20	14	42.4
Public/Government Agencies (include SUCs)	6	4	12.1
Comparison	3	4	12.1
Non-Government Organization or Civil Societies	-	-	0.0
Private Sector Firms (include private Universities and Colleges)	3	-	0.0
Producer's Organization	-	4	12.1
Public/Government Agencies (include SUCs)	-	-	0.0

*NA- no sales related to coffee due to no operation, no production related to coffee, non-bearing coffee trees (young)

Table 244: Reasons for not attaining the target sales (treatment n=37, comparison n=3)

Firms Beneficiary Types	Poor/Limited Markets	Poor Farm-To-Market Access	Postharvest Losses	Insufficient Post-Harvest Facilities	Others, Specify
Treatment	0.1	0.1	0.3	0.2	0.7
Non-Government Organization or Civil Societies	0.0	0.0	0.0	1.0	0.0
Private Sector Firms (include private Universities and Colleges)	0.0	0.0	0.1	0.0	0.9
Producer's Organization	0.3	0.2	0.4	0.3	0.6
Public/Government Agencies (include SUCs)	0.0	0.0	0.3	0.2	0.8
Comparison	0.0	0.0	0.0	0.3	1.0
Non-Government Organization or Civil Societies	0.0	0.0	0.0	0.0	0.0
Private Sector Firms (include private Universities and Colleges)	0.0	0.0	0.0	0.3	1.0
Producer's Organization	0.0	0.0	0.0	0.0	0.0
Public/Government Agencies (include SUCs)	0.0	0.0	0.0	0.0	0.0

Table 245: Percentage of firms and organization satisfied with the received average price in October 2020-September 2021 (treatment n=66, comparison n=7)

Firms Beneficiary Types	NO	YES	%YES
Treatment	10	56	91.8
Non-Government Organization or Civil Societies	-	2	3.3
Private Sector Firms (include private Universities and Colleges)	2	18	29.5
Producer's Organization	5	29	47.5
Public/Government Agencies (include SUCs)	3	7	11.5
Comparison	2	5	8.2
Non-Government Organization or Civil Societies	-	-	0.0
Private Sector Firms (include private Universities and Colleges)	2	1	1.6
Producer's Organization	-	4	6.6
Public/Government Agencies (include SUCs)	-	-	0.0

Table 246: In October 2020 to September 2021 to whom does the organization sell the coffee?

Firms Beneficiary Types	Walk-in Clients	Coffee Shops/ Stores/ Café	Department Stores/ Supermarkets	Local Trader	Neighbors	Other Coop/ Association	Processors	Roasters
Treatment	18.0	13.0	4.0	25.0	5.0	4.0	9.0	10.0
Non-Government Organization or Civil Societies	50.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0
Private Sector Firms (include private Universities and Colleges)	11.5	34.6	0.0	11.5	0.0	3.8	0.0	11.5
Producer's Organization	18.6	5.1	6.8	27.1	6.8	3.4	15.3	11.9
Public/Government Agencies (include SUCs)	23.1	0.0	0.0	46.2	7.7	7.7	0.0	0.0
Comparison	28.6	14.3	14.3	28.6	0.0	0.0	14.3	0.0
Private Sector Firms (include private Universities and Colleges)	33.3	0.0	33.3	33.3	0.0	0.0	0.0	0.0
Producer's Organization	25.0	25.0	0.0	25.0	0.0	0.0	25.0	0.0

Table 247: Volume sold to those markets per coffee forms (in %)

Firms Beneficiary Types	Dried Cherries	Fresh Cherries	Green Coffee Beans	Ground Coffee	Parchment	Roasted Coffee	Specialty
Treatment	3.2	4.3	51.6	26.9	2.2	9.7	2.2
Non-Government Organization or Civil Societies	0.0	16.7	83.3	0.0	0.0	0.0	0.0
Private Sector Firms (include private Universities and Colleges)	4.3	0.0	39.1	26.1	4.3	26.1	0.0
Producer's Organization	0.0	4.9	63.4	19.5	0.0	7.3	4.9
Public/Government Agencies (include SUCs)	8.7	4.3	34.8	47.8	4.3	0.0	0.0
Comparison	0.0	0.0	27.3	0.0	18.2	0.0	54.5
Private Sector Firms (include private Universities and Colleges)	0.0	0.0	100.0	0.0	0.0	0.0	0.0
Producer's Organization	0.0	0.0	11.1	0.0	22.2	0.0	66.7

Table 248: Percentage firms and organization selling coffee products by selling platform (treatment n=66, comparison n=7)

Firms Beneficiary Types	Website	Facebook/ Messenger	Text And Call	Pick Up by The Buyer	Deliver To Buyer	"Padala" System	Others
Treatment	15.2	50.0	47.0	57.6	60.6	21.2	3.0
Non-Government Organization or Civil Societies	0.0	0.0	1.5	3.0	1.5	0.0	0.0
Private Sector Firms (include private Universities and Colleges)	12.1	28.8	18.2	19.7	15.2	10.6	0.0
Producer's Organization	3.0	16.7	24.2	28.8	36.4	10.6	0.0
Public/Government Agencies (include SUCs)	0.0	4.5	3.0	6.1	7.6	0.0	3.0
Comparison	0.0	14.3	14.3	85.7	57.1	14.3	0.0
Private Sector Firms (include private Universities and Colleges)	0.0	0.0	14.3	28.6	28.6	0.0	0.0
Producer's Organization	0.0	14.3	0.0	57.1	28.6	14.3	0.0

Table 249: Percentage of firms and organizations satisfied with the average price received for their products or services in October 2020-September 2020 (treatment n=66, comparison n=7)

Firms Beneficiary Types	NO	YES	%YES
Treatment	10	56	84.8
Non-Government Organization or Civil Societies	-	2	3.0
Private Sector Firms (include private Universities and Colleges)	2	18	27.3
Producer's Organization	5	29	43.9
Public/Government Agencies (include SUCs)	3	7	10.6
Comparison	2	5	71.4
Non-Government Organization or Civil Societies	-	-	0.0
Private Sector Firms (include private Universities and Colleges)	2	1	14.3
Producer's Organization	-	4	57.1
Public/Government Agencies (include SUCs)	-	-	0.0

Note: NR=no response (no operation, no production yet related to coffee)

Table 250: Percentage of firms and organizations with external sources of agricultural market/price information

Firms Beneficiary Types	No, only relied on firm/ cooperative/ institutional efforts	Yes	%Yes
Treatment	37	23	34.8
Non-Government Organization or Civil Societies	1	-	0.0
Private Sector Firms (include private Universities and Colleges)	14	4	6.1
Producer's Organization	17	15	22.7
Public/Government Agencies (include SUCs)	5	4	6.1
Comparison	6	1	14.3
Non-Government Organization or Civil Societies	-	-	0.0
Private Sector Firms (include private Universities and Colleges)	3	-	0.0
Producer's Organization	3	1	14.3
Public/Government Agencies (include SUCs)	-	-	0.0

Table 251: Distribution of respondents (in %) in terms of their frequency of access to agricultural market/price information (treatment n=214, comparison n=21)

Firms Beneficiary Types	Annual	Bi-Annual	Quarterly	Monthly	Weekly	Daily
Treatment	92.3	100.0	82.6	86.7	85.8	100.0

Firms Beneficiary Types	Annual	Bi-Annual	Quarterly	Monthly	Weekly	Daily
Non-Government Organization or Civil Societies	4.7	23.4	0.0	3.8	6.4	0.0
Private Sector Firms (include private Universities and Colleges)	21.0	0.0	33.0	38.7	18.7	4.7
Producer's Organization	35.7	45.1	29.2	27.2	48.7	80.0
Public/Government Agencies (include SUCs)	30.8	31.4	20.4	16.9	11.9	15.2
Comparison	7.7	0.0	17.4	13.3	14.2	0.0
Non-Government Organization or Civil Societies	0.0	0.0	0.0	3.4	0.0	0.0
Private Sector Firms (include private Universities and Colleges)	1.3	0.0	6.4	4.7	3.1	0.0
Producer's Organization	3.0	0.0	11.0	1.8	11.1	0.0
Public/Government Agencies (include SUCs)	3.5	0.0	0.0	3.5	0.0	0.0

Table 252: Percentage of firms and organization satisfied with the end markets that they are accessing/selling (treatment n=214, comparison n=21)

Firms Beneficiary Types	NO	YES	%YES
Treatment	22	192	89.8
Non-Government Organization or Civil Societies	1	10	5.0
Private Sector Firms (include private Universities and Colleges)	3	43	24.7
Producer's Organization	9	89	36.6
Public/Government Agencies (include SUCs)	9	50	23.6
Comparison	-	21	100.0
Non-Government Organization or Civil Societies	-	1	100.0
Private Sector Firms (include private Universities and Colleges)	-	6	100.0
Producer's Organization	-	9	100.0
Public/Government Agencies (include SUCs)	-	5	100.0

Table 253: Percentage of firms and organization who had their coffee cupped since 2019 (treatment n=214, comparison n=21)

Firms Beneficiary Types	NO	YES	%YES
Treatment	196	19	8.8
Non-Government Organization or Civil Societies	11		0.0
Private Sector Firms (include private Universities and Colleges)	39	7	15.2
Producer's Organization	90	10	10.0
Public/Government Agencies (include SUCs)	56	2	3.4
Comparison	19	2	9.5
Non-Government Organization or Civil Societies	1		0.0
Private Sector Firms (include private Universities and Colleges)	6		0.0
Producer's Organization	8	1	11.1
Public/Government Agencies (include SUCs)	4	1	20.0

Table 254: Average cupping score of the most recent coffee cupping (treatment n=19, comparison n=2)

Firms Beneficiary Types	Cupping Score
Treatment	184.9
Private Sector Firms (include private Universities and Colleges)	84.3
Producer's Organization	275.8
Public/Government Agencies (include SUCs)	82.5
Comparison	81.5
Producer's Organization	80.0
Public/Government Agencies (include SUCs)	83.0

Table 255: Percentage of firms and organization with coffee cupping score perceived that grade/score coffee influence the sales price or other aspect of sales (treatment n=19, comparison n=2)

Firms Beneficiary Types	NO	YES	%YES
Treatment	3	16	84.2
Private Sector Firms (include private Universities and Colleges)	1	6	85.7
Producer's Organization	2	8	80.0
Public/Government Agencies (include SUCs)	-	2	100.0
Comparison	-	2	100.0
Producer's Organization	-	1	100.0
Public/Government Agencies (include SUCs)	-	1	100.0

Table 256: Percentage of firms and organization with coffee cupping score perceived that cupping score of a q grader is basis to classify the coffee sold as specialty or fine (treatment n=19, comparison n=2)

Firms Beneficiary Types	NO	YES	%YES
Treatment	4	15	78.9
Private Sector Firms (include private Universities and Colleges)	2	5	71.4
Producer's Organization	2	8	80.0
Public/Government Agencies (include SUCs)	-	2	100.0
Comparison	-	2	100.0
Producer's Organization	-	1	100.0
Public/Government Agencies (include SUCs)	-	1	100.0

Table 257: Percentage of firms and organization with coffee cupping score who are selling specialty coffee (80 and above cupping score) (treatment n=19, comparison n=2)

Firms Beneficiary Types	No	Yes	% Yes
Treatment	5	14	73.7
Private Sector Firms (include private Universities and Colleges)	1	6	85.7
Producer's Organization	3	7	70.0
Public/Government Agencies (include SUCs)	1	1	50.0
Comparison	-	2	100.0
Producer's Organization	-	1	100.0
Public/Government Agencies (include SUCs)	-	1	100.0

Table 258: Average volume (in kg) and price (PhP/Kg) of specialty coffee (treatment n=19, comparison n=2)

Firms Beneficiary Types	Arabica-Fine Coffee		Robusta-Fine Coffee	
	Volume, Kg	Price/Kg	Volume, Kg	Price/Kg
Treatment	268.6	332.1	158.6	150.0
Private Sector Firms (include private Universities and Colleges)	493.3	725.0	20.0	50.0
Producer's Organization	114.3	42.9	300.0	257.1
Comparison	-	-	416.5	185.0
Producer's Organization	-	-	50.0	250.0
Public/Government Agencies (include SUCs)	-	-	783.0	120.0

Table 259: Percentage of firms and organization with difficulty accessing specific coffee inputs or technologies in the past production year (October 2020 to September 2021) (treatment n=214, comparison n=21)

Firms Beneficiary Types	NO	YES	%YES
Treatment	173	42	19.5
Non-Government Organization or Civil Societies	7	4	36.4

Firms Beneficiary Types	NO	YES	%YES
Private Sector Firms (include private Universities and Colleges)	38	8	17.4
Producer's Organization	76	24	24.0
Public/Government Agencies (include SUCs)	52	6	10.3
Comparison	16	5	23.8
Non-Government Organization or Civil Societies	1		0.0
Private Sector Firms (include private Universities and Colleges)	5	1	16.7
Producer's Organization	7	2	22.2
Public/Government Agencies (include SUCs)	3	2	40.0

Table 260: Percentage of firms and organization who accessed inputs or technologies for coffee farm due to PhilCAFE assistance in the past production year (October 2020 to September 2021) (treatment n=214, comparison n=21)

Firms Beneficiary Types	NO	YES	%YES
Treatment	162	53	24.7
Non-Government Organization or Civil Societies	6	5	45.5
Private Sector Firms (include private Universities and Colleges)	37	9	19.6
Producer's Organization	71	29	29.0
Public/Government Agencies (include SUCs)	48	10	17.2
Comparison	19	2	9.5
Non-Government Organization or Civil Societies	1	-	0.0
Private Sector Firms (include private Universities and Colleges)	4	2	33.3
Producer's Organization	9	-	0.0
Public/Government Agencies (include SUCs)	5	-	0.0

Table 261: Percentage of firms and organization who supply Improved Inputs and/or services (treatment n=214, comparison n=21)

Firms Beneficiary Types	NO	YES	%YES
Treatment	152	63	29.3
Non-Government Organization or Civil Societies	10	1	9.1
Private Sector Firms (include private Universities and Colleges)	34	12	26.1
Producer's Organization	79	21	21.0
Public/Government Agencies (include SUCs)	29	29	50.0
Comparison	16	5	23.8
Non-Government Organization or Civil Societies	1		0.0
Private Sector Firms (include private Universities and Colleges)	5	1	16.7
Producer's Organization	8	1	11.1
Public/Government Agencies (include SUCs)	2	3	60.0

Table 262: Type of Improved Inputs and/or services supplied by the firms and organizations (treatment n=63, comparison n=5)

Items	Comparison		Treatment	
	f	%	f	%
Fertilizer	1	20.0	20	31.7
Pesticide	0	0.0	5	7.4
Training	2	40.0	38	60.3
Loans/Credit	0	0.0	7	11.1
Savings	0	0.0	8	12.7
Microfinancing	1	20.0	4	6.3
Technical Assistance	1	20.0	29	46.0
Trucking	0	0.0	6	9.5
Weighing	1	20.0	7	11.1
Grinding	1	20.0	13	20.6

Items	Comparison		Treatment	
	f	%	f	%
Fermentation	0	0.0	7	11.1
Drying	2	40.0	16	25.4
Seedlings	2	40.0	16	25.4

Table 263: Average quantity of farm inputs in stocks

Firms Beneficiary Types	Coffee Seedlings (Pcs)	Organic Fertilizers (Bags)	Pesticide (L/Kg)	Synthetic Fertilizers (Bags)
Treatment	33,989	250	179	162
Private Sector Firms (include private Universities and Colleges)	7,500	500	254	1
Producer's Organization	10,600	125	-	25
Public/Government Agencies (include SUCs)	49,436	-	30	515
Comparison	700	-	-	-
Producer's Organization	400	-	-	-
Public/Government Agencies (include SUCs)	1000	-	-	-

Table 264: Average quantity of farm inputs allocated for members of the organization

Firms Beneficiary Types	Coffee Seedlings (Pcs)	Organic Fertilizers (Bags)	Pesticide (L/Kg)	Synthetic Fertilizers (Bags)
Treatment	40.3	48.3	66.7	53.8
Private Sector Firms (include private Universities and Colleges)	50.0	100.0	50.0	100.0
Producer's Organization	45.0	22.5	-	46.0
Public/Government Agencies (include SUCs)	36.0	-	100.0	50.0
Comparison	60.0	-	-	-
Producer's Organization	100.0	-	-	-
Public/Government Agencies (include SUCs)	20.0	-	-	-

Table 265: Average quantity of farm inputs allocated for General public/other buyers

Firms Beneficiary Types	Coffee Seedlings (Pcs)	Organic Fertilizers (Bags)	Pesticide (L/Kg)	Synthetic Fertilizers (Bags)
Treatment	54.4	51.7	33.3	46.3
Private Sector Firms (include private Universities and Colleges)	50.0	-	50.0	-
Producer's Organization	39.2	77.5	-	54.0
Public/Government Agencies (include SUCs)	63.5	-	-	50.0
Comparison	40.0	-	-	-
Producer's Organization	-	-	-	-
Public/Government Agencies (include SUCs)	80.0	-	-	-

Table 266: Average quantity of farm inputs sold

Firms Beneficiary Types	Coffee Seedlings (Pcs)	Organic Fertilizers (Bags)	Pesticide (L/Kg)	Synthetic Fertilizers (Bags)
Treatment	11,005	-	500	150
Private Sector Firms (include private Universities and Colleges)	5,350	-	500	-
Producer's Organization	18,000	-	-	150
Public/Government Agencies (include SUCs)	6,540	-	-	-
Comparison	800	-	-	-
Producer's Organization	800	-	-	-
Public/Government Agencies (include SUCs)	-	-	-	-

Table 267: Average selling price of farm inputs in PhP per unit

Firms Beneficiary Types	Coffee Seedlings (Pcs)	Organic Fertilizers (Bags)	Pesticide (L/Kg)	Synthetic Fertilizers (Bags)
Treatment	16.2	-	350.0	1,200.0
Private Sector Firms (include private Universities and Colleges)	12.0	-	350.0	-
Producer's Organization	15.0	-	-	1,200.0
Public/Government Agencies (include SUCs)	18.8	-	-	-
Comparison	20.0	-	-	-
Producer's Organization	20.0	-	-	-
Public/Government Agencies (include SUCs)	-	-	-	-

Table 268: Percentage of firms and organization who provide In-Kind Loans to Farmers Or Other Stakeholders due to Philcafe (external assistance for comparison group) Assistance In October 2020-Sept 2021 (treatment n=214, comparison n=21)

Firms Beneficiary Types	No	Yes	%Yes
Treatment	203	12	5.6
Non-Government Organization or Civil Societies	11	-	0.0
Private Sector Firms (include private Universities and Colleges)	43	3	6.5
Producer's Organization	95	5	5.0
Public/Government Agencies (include SUCs)	54	4	6.9
Comparison	21	-	0.0
Non-Government Organization or Civil Societies	1	-	0.0
Private Sector Firms (include private Universities and Colleges)	6	-	0.0
Producer's Organization	9	-	0.0
Public/Government Agencies (include SUCs)	5	-	0.0

Table 269: Percentage of firms and organization who have access to the capital or financing it needs for business operations and or growth (treatment n=214, comparison n=21)

Firms Beneficiary Types	No	Yes	%Yes
Treatment	155	60	28.0
Non-Government Organization or Civil Societies	9	2	18.2
Private Sector Firms (include private Universities and Colleges)	34	12	26.1
Producer's Organization	72	28	28.6
Public/Government Agencies (include SUCs)	40	18	30.5
Comparison	10	11	52.4
Non-Government Organization or Civil Societies	1	-	0.0
Private Sector Firms (include private Universities and Colleges)	1	5	83.3
Producer's Organization	3	6	66.7
Public/Government Agencies (include SUCs)	5	-	0.0

Table 270: Percentage of firms and organization who have receive increased investment/financing from an external firm due to PhilCAFFE facilitated assistance between October 2020 to September 2021 (treatment n=214, comparison n=21)

Firms Beneficiary Types	No	Yes	%Yes
Treatment	200	15	7.0
Non-Government Organization or Civil Societies	10	1	9.1
Private Sector Firms (include private Universities and Colleges)	42	4	8.7
Producer's Organization	92	8	8.0
Public/Government Agencies (include SUCs)	56	2	3.4
Comparison	21	-	0.0
Non-Government Organization or Civil Societies	1	-	0.0

Firms Beneficiary Types	No	Yes	%Yes
Private Sector Firms (include private Universities and Colleges)	6	-	0.0
Producer's Organization	9	-	0.0
Public/Government Agencies (include SUCs)	5	-	0.0

Table 271: Percentage of firms and organization who think that they influenced other organizations to start providing/producing similar coffee-related services or products due to their organizations' success (treatment n=214, comparison n=21)

Firms Beneficiary Types	No	Yes	%Yes
Treatment	179	36	16.7
Non-Government Organization or Civil Societies	9	2	18.2
Private Sector Firms (include private Universities and Colleges)	33	13	28.3
Producer's Organization	90	10	10.0
Public/Government Agencies (include SUCs)	47	11	19.0
Comparison	19	2	9.5
Non-Government Organization or Civil Societies	1	-	0.0
Private Sector Firms (include private Universities and Colleges)	6	-	0.0
Producer's Organization	7	2	22.2
Public/Government Agencies (include SUCs)	5	-	0.0

Table 272: Percentage of firms and organization with nursery (treatment n=214, comparison n=21)

Firms Beneficiary Types	No	Yes	%Yes
Treatment	179	35	16.3
Non-Government Organization or Civil Societies	11	-	0.0
Private Sector Firms (include private Universities and Colleges)	38	8	17.4
Producer's Organization	85	13	13.0
Public/Government Agencies (include SUCs)	45	14	24.1
Comparison	19	2	9.5
Non-Government Organization or Civil Societies	1	-	0.0
Private Sector Firms (include private Universities and Colleges)	6	-	0.0
Producer's Organization	8	1	11.1
Public/Government Agencies (include SUCs)	4	1	20.0

Table 273: Percentage of firms and organization who start their business due to PhilCAFE facilitation assistance (for Treatment) or external assistance (for Comparison) (treatment n=214, comparison n=21)

Firms Beneficiary Types	No	Yes	%Yes
Treatment	199	15	7.0
Non-Government Organization or Civil Societies	11	-	0.0
Private Sector Firms (include private Universities and Colleges)	43	3	6.5
Producer's Organization	91	7	7.0
Public/Government Agencies (include SUCs)	54	5	8.6
Comparison	20	1	4.8
Non-Government Organization or Civil Societies	1	-	0.0
Private Sector Firms (include private Universities and Colleges)	5	1	16.7
Producer's Organization	9	-	0.0
Public/Government Agencies (include SUCs)	5	-	0.0

Table 274: Percentage of firms and organization who developing a new approach or strategy due to Philcafe facilitated assistance (for Treatment) or external assistance (for comparison) (treatment n=214, comparison n=21)

Firms Beneficiary Types	No	Yes	%Yes
Treatment	162	52	24.2
Non-Government Organization or Civil Societies	7	4	36.4
Private Sector Firms (include private Universities and Colleges)	35	11	23.9
Producer's Organization	82	20	20.0
Public/Government Agencies (include SUCs)	40	17	29.3
Comparison	21	-	0.0
Non-Government Organization or Civil Societies	1	-	0.0
Private Sector Firms (include private Universities and Colleges)	6	-	0.0
Producer's Organization	9	-	0.0
Public/Government Agencies (include SUCs)	5	-	0.0

Table 275: Percentage of firms and organization who influenced individuals that newly started farming coffee between October 2020 to September 2021, due to their organization's trainings or Services (treatment n=214, comparison n=21)

Firms Beneficiary Types	NR	No	Yes	%Yes	Average number of individuals
Treatment	10	157	47	21.9	53
Non-Government Organization or Civil Societies	-	8	3	27.3	18
Private Sector Firms (include private Universities and Colleges)	1	41	4	8.7	20
Producer's Organization	7	69	26	26.0	40
Public/Government Agencies (include SUCs)	2	41	14	24.1	91
Comparison	-	19	2	9.5	5
Non-Government Organization or Civil Societies	-	1	-	0.0	0
Private Sector Firms (include private Universities and Colleges)	-	6	-	0.0	0
Producer's Organization	-	9	-	0.0	0
Public/Government Agencies (include SUCs)	-	3	2	40.0	5

Table 276: Percentage of firms and organizations who received capacity-building assistance (training, technical assistance, exposure trips, industrywide gatherings) (treatment n=214, comparison n=21)

Firms Beneficiary Types	No, only relied on firm/ cooperative/ institutional efforts	Yes	%Yes
Treatment	87	127	59.1
Non-Government Organization or Civil Societies	5	6	54.5
Private Sector Firms (include private Universities and Colleges)	24	22	47.8
Producer's Organization	32	66	66.0
Public/Government Agencies (include SUCs)	26	33	56.9
Comparison	13	8	38.1
Non-Government Organization or Civil Societies	1	-	0.0
Private Sector Firms (include private Universities and Colleges)	4	2	33.3
Producer's Organization	5	4	44.4
Public/Government Agencies (include SUCs)	3	2	40.0

Table 277: Relevance and effectiveness ratings of capacity building activities in terms of improving production and sales by sources

Items	Relevance rating*	Effectiveness rating**
Treatment	4.6	4.3
Non-Government Organization or Civil Societies	5.0	4.0
CAO GINGOOG	5.0	3.0

Items	Relevance rating*	Effectiveness rating**
Philippine Coffee Alliance	5.0	5.0
Private Sector Firms (Include private Universities and Colleges)	4.7	4.2
DTI	4.5	4.5
Farmers association	4.0	5.0
MAO Claveria	5.0	3.0
PhilCAFE	5.0	4.0
Producer's Organization	4.6	4.3
ACDI/VOCA	5.0	5.0
ATI	5.0	5.0
CAO GINGOOG	5.0	3.0
CAO Iligan	5.0	3.0
CDA	2.0	2.0
DA	5.0	5.0
DAR	5.0	5.0
DENR	5.0	5.0
DOST	5.0	5.0
DOST	2.0	2.0
DTI	3.0	3.0
MAHIFFA	5.0	3.0
MAO Claveria	5.0	3.0
MAO Iligan	5.0	3.0
MKCGC	5.0	5.0
MPSPC	5.0	5.0
OCCP-organic coffee center of the philippines	5.0	5.0
PAGRO	5.0	5.0
PARBEMCO	5.0	5.0
PARO	5.0	5.0
PhilCAFE	4.7	4.6
PhilMec	5.0	5.0
Region13 PAGRO	5.0	5.0
Public/Government Agencies (include SUCs)	4.5	4.2
CAO Iligan	5.0	3.0
DTI	5.0	5.0
DA	4.0	4.0
PhilCAFE	4.5	4.5
PRDP	4.0	4.0

Note: * 5- Extremely relevant, 4- Very relevant, 3- Somewhat relevant, 2- Not so relevant, and 1- Not at all relevant
 **5- Extremely effective, 4- Very effective, 3- Somewhat effective, 2- Not so effective, and 1- Not at all effective

Table 278: Percentage of firms and organizations signed a formal agreement with buyers between October 2020 to September 2021 due to PhilCAFE facilitated assistance (for Treatment) or external assistance (for comparison) (treatment n=214, comparison n=21)

Firms Beneficiary Types	No formal agreement /contract	Yes, we have formal agreement /contract with buyers.	% Yes
Treatment	200	14	6.5
Non-Government Organization or Civil Societies	11	-	0.0
Private Sector Firms (include private Universities and Colleges)	41	5	10.9
Producer's Organization	91	7	7.0
Public/Government Agencies (include SUCs)	57	2	3.4
Comparison	21	-	0.0
Non-Government Organization or Civil Societies	1	-	0.0

Firms Beneficiary Types	No formal agreement /contract	Yes, we have formal agreement /contract with buyers.	% Yes
Private Sector Firms (include private Universities and Colleges)	6	-	0.0
Producer's Organization	9	-	0.0
Public/Government Agencies (include SUCs)	5	-	0.0

Table 279: Percentage of firms and organizations want a Formal Agreement with Buyers (treatment n=214, comparison n=21)

Firms Beneficiary Types	NR	No	Yes	%Yes
Treatment	41	123	50	23.3
Non-Government Organization or Civil Societies	1	6	4	36.4
Private Sector Firms (include private Universities and Colleges)	11	27	8	17.4
Producer's Organization	16	57	29	29.0
Public/Government Agencies (include SUCs)	13	35	9	15.5
Comparison	3	11	7	33.3
Non-Government Organization or Civil Societies	1	-	-	0.0
Private Sector Firms (include private Universities and Colleges)	1	3	2	33.3
Producer's Organization		5	4	44.4
Public/Government Agencies (include SUCs)	1	3	1	20.0

Table 280: Percentage of firms and organizations who perceived that formal agreement is worthwhile (treatment n=214, comparison n=21)

Firms Beneficiary Types	NR	No	Yes	%Yes
Treatment	14	102	98	45.6
Non-Government Organization or Civil Societies	-	4	7	63.6
Private Sector Firms (include private Universities and Colleges)	5	28	13	28.3
Producer's Organization	7	44	51	51.0
Public/Government Agencies (include SUCs)	2	28	27	46.6
Comparison	-	11	10	47.6
Non-Government Organization or Civil Societies	-	-	1	100.0
Private Sector Firms (include private Universities and Colleges)	-	3	3	50.0
Producer's Organization	-	5	4	44.4
Public/Government Agencies (include SUCs)	-	3	2	40.0

Table 281: Percentage of firms and organizations who obtained any quality management certifications through PhilCAFE facilitated assistance (for Treatment) or external assistance (for comparison) between October 2020 to September 2021 (treatment n=214, comparison n=21)

Firms Beneficiary Types	No	Yes	%Yes
Treatment	205	9	4.2
Non-Government Organization or Civil Societies	10	1	9.1
Private Sector Firms (include private Universities and Colleges)	42	4	8.7
Producer's Organization	98	4	4.0
Public/Government Agencies (include SUCs)	57	-	0.0
Comparison	21	-	0.0
Non-Government Organization or Civil Societies	1	-	0.0
Private Sector Firms (include private Universities and Colleges)	6	-	0.0
Producer's Organization	9	-	0.0
Public/Government Agencies (include SUCs)	5	-	0.0

Table 282: Percentage of firms and organizations who passed/approved policies, regulations, and/or administrative procedures for coffee since 2019 due to PhilCAFE's intervention (treatment n=214, comparison n=21)

Firms Beneficiary Types	NR	No	Yes	%Yes
Treatment	16	181	17	7.9
Non-Government Organization or Civil Societies	1	10	-	0.0
Private Sector Firms (include private Universities and Colleges)	3	39	4	8.7
Producer's Organization	6	83	9	9.0
Public/Government Agencies (include SUCs)	6	49	4	6.9
Comparison	-	20	1	4.8
Non-Government Organization or Civil Societies	-	1	-	0.0
Private Sector Firms (include private Universities and Colleges)	-	6	-	0.0
Producer's Organization	-	8	1	11.1
Public/Government Agencies (include SUCs)	-	-	-	-

Table 283: Average share of coffee in terms of income contribution to the organization (treatment n=214, comparison n=21)

Firms Beneficiary Types	Average Percentage share of Coffee in organizational income
Treatment	19.0
Non-Government Organization or Civil Societies	9.1
Private Sector Firms (include private Universities and Colleges)	35.9
Producer's Organization	17.8
Public/Government Agencies (include SUCs)	9.6
Comparison	18.3
Non-Government Organization or Civil Societies	0.0
Private Sector Firms (include private Universities and Colleges)	24.2
Producer's Organization	24.2
Public/Government Agencies (include SUCs)	4.2

Table 284: Change in organizational cost since 2019 (treatment n=214, comparison n=21)

Firms Beneficiary Types	Decreased		Increased		Remained the same	
	f	%	f	%	f	%
Treatment	6	2.8	23	10.7	185	86.4
Non-Government Organization or Civil Societies		0.0	1	9.1	10	90.9
Private Sector Firms (include private Universities and Colleges)	2	4.3	9	19.6	35	76.1
Producer's Organization	3	3.0	10	10.0	85	87.0
Public/Government Agencies (include SUCs)	1	1.7	3	5.2	55	93.1
Comparison	4	19.0	5	23.8	12	57.1
Non-Government Organization or Civil Societies		0.0		0.0	1	100.0
Private Sector Firms (include private Universities and Colleges)	2	33.3	2	33.3	2	33.3
Producer's Organization	2	22.2	3	33.3	4	44.4
Public/Government Agencies (include SUCs)		0.0		0.0	5	100.0

Table 285: Percentage change in organizational cost since 2019 (treatment n=214, comparison n=21)

Firms Beneficiary Types, Change (Decrease/Increase)	% Decreased	% Increase
Treatment	27.5	26.4
Non-Government Organization or Civil Societies	-	10.0
Private Sector Firms (Include private Universities and Colleges)	22.5	30.0
Producer's Organization	30.0	24.4
Public/Government Agencies (include SUCs)	30.0	26.7
Comparison	27.5	11.0
Non-Government Organization or Civil Societies	-	-
Private Sector Firms (Include private Universities and Colleges)	25.0	10.0

Firms Beneficiary Types, Change (Decrease/Increase)	% Decreased	% Increase
Producer's Organization	30.0	11.7
Public/Government Agencies (include SUCs)	-	-

Table 286: Change in organizational sales since 2019 (treatment n=214, comparison n=21)

Firms Beneficiary Types	NR	Decreased		Increased		Remained the same	
		f	%	f	%	f	%
Treatment	17	20	9.3	19	8.8	158	73.8
Non-Government Organization or Civil Societies	-	1	9.1	1	9.1	9	81.8
Private Sector Firms (include private Universities and Colleges)	2	7	15.2	8	17.4	29	63.0
Producer's Organization	7	9	9.0	8	8.0	74	75.5
Public/Government Agencies (include SUCs)	8	3	5.2	2	3.4	46	78.0
Comparison	-	5	23.8	2	9.5	14	66.7
Non-Government Organization or Civil Societies	-	-	0.0	-	0.0	1	100.0
Private Sector Firms (include private Universities and Colleges)	-	2	33.3	1	16.7	3	50.0
Producer's Organization	-	3	33.3	1	11.1	5	55.6
Public/Government Agencies (include SUCs)	-	-	0.0	-	0.0	5	100.0

Table 287: Percentage of firms and organizations with risk management plan in the areas planted with coffee (treatment n=214, comparison n=21)

Firms Beneficiary Types	NA	No	No idea	Yes	% Yes
Treatment	42	110	28	34	15.8
Non-Government Organization or Civil Societies	2	6	3	-	0.0
Private Sector Firms (include private Universities and Colleges)	8	24	7	7	15.2
Producer's Organization	20	52	14	13	13.3
Public/Government Agencies (include SUCs)	12	28	4	14	23.7
Comparison	3	16	1	1	4.8
Non-Government Organization or Civil Societies	-	1	-	-	0.0
Private Sector Firms (include private Universities and Colleges)	2	3	1	-	0.0
Producer's Organization	1	7	-	1	11.1
Public/Government Agencies (include SUCs)	-	5	-	-	0.0

Table 288: Organization who assisted you in making the Risk Management Plan

Type of Firms	Please List down the risk you identified in you organization businesses, coffee, and services	Where did the organization learn about this risk?	Has the organization addressed or plan to address the risk in some way?	If yes how, and if no, why not.	If yes , what were the major incentives that led the organization to address the risk?
Producer's Organization	Compliance and Regulatory Risk	DTI	Yes	The organization have rules and regulations on lending money	For the organization to impose their rules and regulations and to members to abide with it
Producer's Organization	Financial Risk	DTI	Yes	Rate of interest on loan	Members who are not paying their loans before due date are penalize
Private Sector Firms (Include private Universities and Colleges)	Lack of Financing Adherence to Protocols	Farmer Meeting	Yes	Organized to the farmer	No idea
Public/Government Agencies (include SUCs)	Volatility of Process Adherence to Protocol Lack of Manpower	FGD	Yes	Trainings, Provision of farm tools Link to stable market	None

Type of Firms	Please List down the risk you identified in you organization businesses, coffee, and services	Where did the organization learn about this risk?	Has the organization addressed or plan to address the risk in some way?	If yes how, and if no, why not.	If yes , what were the major incentives that led the organization to address the risk?
	Due to Actual Labor Lack of Financing				
Private Sector Firms (Include private Universities and Colleges)	Out of Supply	If Normal Ang Harvest Sa Coffee Production	Yes	Capital	Capital involve
Producer's Organization	Regular Market for Coffee Beans	PhilCAFE	Yes	Strategic Plan	So, we started collective marketing though from our member to ensure market & price
Public/Government Agencies (include SUCs)	Pricing	In Marketing	Yes	Existing na ang price taas	In the firm and farmer

Table 289: Percentage of firms and organizations who Identified Risk Affecting the Business, On Coffee and Other Services (treatment n=214, comparison n=21)

Firms Beneficiary Types	NA	No	Yes	% Yes
Treatment	20	155	39	18.1
Non-Government Organization or Civil Societies	-	8	3	27.3
Private Sector Firms (include private Universities and Colleges)	3	34	9	19.6
Producer's Organization	8	73	17	17.0
Public/Government Agencies (include SUCs)	9	40	10	17.2
Comparison	-	19	2	9.5
Non-Government Organization or Civil Societies	-	1	-	0.0
Private Sector Firms (include private Universities and Colleges)	-	6	-	0.0
Producer's Organization	-	7	2	22.2
Public/Government Agencies (include SUCs)	-	5	-	0.0

Table 290: Percentage of firms and organization who are optimistic or pessimistic about coffee in the next 3-5 years considering their earnings in 2021 and other factors (treatment n=214, comparison n=21)

Firms Beneficiary Types	No comment	Optimistic about coffee in the next 3-5 years?		Pessimistic about coffee in the next 3-5 years?	
		f	%	f	%
Treatment	47	162	75.3	5	2.3
Non-Government Organization or Civil Societies	3	8	72.7	-	0.0
Private Sector Firms (include private Universities and Colleges)	6	39	84.8	1	2.2
Producer's Organization	24	71	71.0	4	4.0
Public/Government Agencies (include SUCs)	14	44	75.9	-	0.0
Comparison	4	16	76.2	1	4.8
Non-Government Organization or Civil Societies	-	1	100.0	-	0.0
Private Sector Firms (include private Universities and Colleges)	-	5	83.3	1	16.7
Producer's Organization	1	8	88.9	-	0.0
Public/Government Agencies (include SUCs)	3	2	40.0	-	0.0

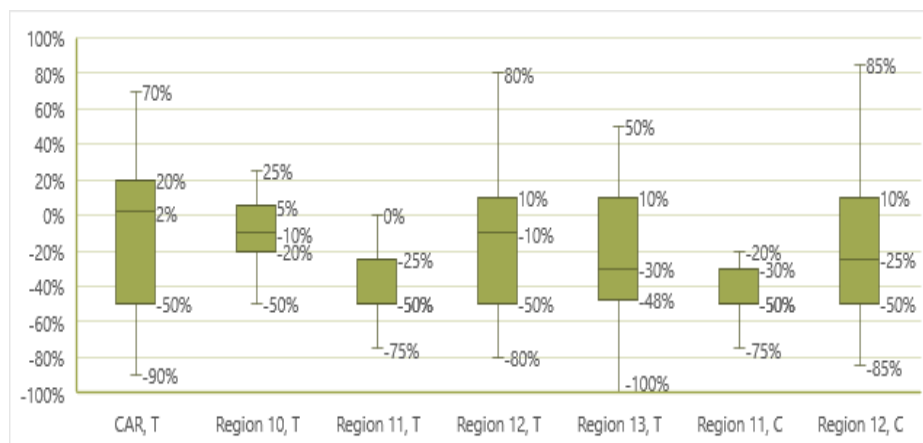


Figure 35. Perception on the effect of COVID-19 in the coffee industry (treatment group and comparison group)

Table 291: Percentage of firms who are affected by any other type of external shock (lack of transport, etc) from October 2020 to September 2021 (treatment n=214, comparison n=21)

Firms Beneficiary Types	No	Yes	% Yes
Treatment	107	107	49.8
Non-Government Organization or Civil Societies	6	5	45.5
Private Sector Firms (include private Universities and Colleges)	25	21	45.7
Producer's Organization	50	49	49.0
Public/Government Agencies (include SUCs)	26	32	55.2
Comparison	13	8	38.1
Non-Government Organization or Civil Societies	1	-	0.0
Private Sector Firms (include private Universities and Colleges)	1	5	83.3
Producer's Organization	7	2	22.2
Public/Government Agencies (include SUCs)	4	1	20.0

Table 292: Percentage of firms and organization who perceived that PhilCAFE (external projects for comparison group) influenced its ability to cope with the effects of COVID-19 (treatment n=214, comparison n=21)

Firms Beneficiary Types	No	Yes	% Yes
Treatment	151	63	29.3
Non-Government Organization or Civil Societies	6	5	45.5
Private Sector Firms (include private Universities and Colleges)	36	10	21.7
Producer's Organization	68	30	30.0
Public/Government Agencies (include SUCs)	41	18	31.0
Comparison	17	4	19.0
Non-Government Organization or Civil Societies	-	1	100.0
Private Sector Firms (include private Universities and Colleges)	6	-	0.0
Producer's Organization	7	2	22.2
Public/Government Agencies (include SUCs)	4	1	20.0

Table 293: Determinants of technology adoption, by production technology, 2021

Variables	Disease Management	Farm Management	Genetic Improvement	Pest Management	Soil Related Fertility	Farm Diversification
Age	-0.0288*	-0.0045 ns	-0.0016 ns	-0.0032 ns	-0.0068 ns	-0.0004 ns
Gender	0.1938ns	0.0571 ns	-0.1618 ns	0.1895 ns	-0.1525 ns	0.1482 ns
Marital Status	0.5945 ns	0.1082 ns	0.0761 ns	0.0627 ns	0.3596*	-0.1127 ns
Education	-0.1544*	0.0262 ns	-0.0083 ns	0.0095 ns	-0.0250 ns	-0.0313 ns
Household size	-0.1432 ns	0.0061 ns	0.0511 ns	-0.0345 ns	-0.0451 ns	0.0562 ns
Attended Training on Specific Technology	3.2623*	1.0032*	0.8946*	1.4715*	0.8598*	1.2475*
Coffee Income	0.0000 ns	0.0000 ns	0.0000 ns	0.0000 ns	0.0000 ns	0.0000 ns
Total Annual Income	0.0000 ns	0.0000 ns	0.0000 ns	0.0000 ns	0.0000 ns	0.0000*

Variables	Disease Management	Farm Management	Genetic Improvement	Pest Management	Soil Related Fertility	Farm Diversification
Coffee Cultivated Farm (Ha)	0.2969 ns	0.0241 ns	-0.0585 ns	-0.0227 ns	0.0112 ns	-0.0345 ns
With Intercropping	0.3168 ns	0.1045 ns	0.1401 ns	-0.0586 ns	-0.0204 ns	-0.0619 ns
Purchased Equipment	4.0771*	0.1505 ns	0.0998 ns	0.3097 ns	0.4100 ns	0.5374 ns
With Difficulty Accessing Inputs Technology	-1.2559*	0.2176 ns	-0.0461 ns	-0.1393 ns	0.2070 ns	0.0189 ns
With Access PhilCAFE Inputs and Technology	0.4553 ns	0.3989*	0.1719 ns	0.1450 ns	0.1579 ns	0.8203*
Cost per Hectare	0.0000 ns	0.0000 ns	0.0000 ns	0.0000 ns	0.0000*	0.0000*
Post-harvest losses (%)	-4.6275*	-0.7710 ns	-0.3776 ns	-0.9276*	-1.1656*	-1.9838*
Yield per Hectare (GCB)	0.0004 ns	0.0000 ns	0.0002 ns	0.0001 ns	-0.0002 ns	-0.0003 ns
Coffee Cupping	-0.1857 ns	0.1158 ns	0.1497 ns	0.4059 ns	-0.1758 ns	0.3785 ns
Target Sales	0.2868 ns	-0.2640 ns	0.1692 ns	-0.0531 ns	0.1039 ns	0.1251 ns
Satisfied Price	1.3429*	-0.0261 ns	-0.0365 ns	0.1904 ns	-0.1780 ns	0.1043 ns
Willingness to Certification	0.8467 ns	0.5379**	0.3641	0.7324*	0.3896*	-0.0197 ns
Number of Farm Laborer	0.9100*	0.0860 ns	0.0749 ns	0.2193*	0.2440*	0.0657 ns
Number Hired Labor	-0.2259*	0.0412 ns	0.0797 ns	0.1225*	0.0326 ns	0.0937 ns
Enough Capital	0.2556 ns	0.3941*	0.3671*	-0.0662 ns	0.3879*	0.1174 ns
Credit Access Difficulty	-2.7226*	-0.6429*	-0.2503 ns	-0.0518 ns	-0.3601 ns	-0.8421*
External Capacity Building	0.0974 ns	-0.0943 ns	-0.1082 ns	0.0263 ns	0.0198 ns	0.1951 ns
Men with Access to Agri Services	1.4970*	0.1546 ns	0.0521 ns	-0.2017 ns	0.2585 ns	0.6472*
Women with Access to Agri Services	0.3618 ns	0.1158 ns	0.1646 ns	-0.0101 ns	0.1531 ns	0.3703 ns
Number of Hours Spend in the Farm (Men)	-0.0096 ns	-0.0069 ns	-0.0024 ns	0.0040 ns	-0.0079 ns	0.0023 ns
Number of Hours Spend in the Farm (Men Youth)	-0.2194*	-0.0033 ns	-0.0098 ns	0.0058 ns	-0.0019 ns	0.0074 ns
Number of Hours Spend in the Farm (Women)	0.0040 ns	0.0041 ns	0.0042 ns	0.0076 ns	0.0015 ns	0.0103 ns
Number of Hours Spend in the Farm (Women Youth)	-2.4702*	0.0121 ns	-0.0460 ns	0.0083 ns	0.0067 ns	0.0107 ns
Men Participation to Training	-0.7322 ns	0.3484 ns	-0.0740 ns	0.0090 ns	-0.4737*	-0.7199*
Women Participation to Training	-1.7638*	-0.1652 ns	-0.3227 ns	-0.6914*	-0.3218 ns	-0.3935 ns
Membership to PO (Men)	0.9257 ns	-0.4756*	0.0009 ns	0.0808 ns	0.1338 ns	0.0948 ns
Membership to PO (Women)	1.7779*	0.0187 ns	0.2489 ns	0.9410*	0.3694 ns	0.4871*
With Succession Plan	3.2622*	0.2532 ns	-0.1063 ns	-0.0030 ns	-0.0194 ns	-0.1620 ns
Constant	-9.1124*	-2.6393 ns	-2.2464*	-2.6992*	-1.3089*	-2.8862*
Prob>chi2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Pseudo R2	0.6639	0.2128	0.1966	0.3220	0.2583	0.3938
Count R2	0.986	0.802	0.848	0.804	0.798	0.910

Note: Values in the table are the estimated coefficient from probit model estimation. Coefficients with * are significant at 5% level and ns are not significant. A positive coefficient means that an increase in the predictor leads to an increase in the predicted probability. A negative coefficient means that an increase in the predictor leads to a decrease in the predicted probability.

Table 294: Determinants of technology adoption, Harvest, processing, operational management, 2021

Variables	Harvest and Post-Harvest	Processing	Climate Risk Reduction	Operation Management
Age	-0.0037 ns	0.0027 ns	-0.0086 ns	0.0047 ns
Gender	0.3081 ns	0.0742 ns	-0.0240 ns	0.3306*
Marital Status	0.0716 ns	0.2179 ns	0.1175 ns	0.0976 ns
Education	0.0008 ns	0.0333 ns	-0.1326*	0.0092 ns
Household size	-0.0249 ns	-0.0023 ns	-0.0785 ns	0.0175 ns
Attended Training on Specific Technology	1.3906*	1.0263*	2.8804*	1.6751*
Coffee Income	0.0000 ns	0.0000 ns	0.0000 ns	0.0000 ns
Total Annual Income	0.0000 ns	0.0000*	0.0000 ns	0.0000*
Coffee Cultivated Farm (ha)	0.0277 ns	-0.0226 ns	-0.0641 ns	-0.0184 ns
With Intercropping	-0.0328 ns	-0.3775*	0.1066 ns	0.3228*
Purchased Equipment	0.4369 ns	-0.0963 ns	0.0758 ns	1.1693*
With Difficulty Accessing Inputs Technology	0.0166 ns	0.1186 ns	-0.3884 ns	0.4329*

Variables	Harvest and Post-Harvest	Processing	Climate Risk Reduction	Operation Management
With Access PhilCAFE inputs and Technology	-0.0659 ns	-0.1245 ns	-0.1175 ns	-0.0454 ns
Cost per Hectare	0.0000 ns	0.0000 ns	0.0001**	0.0000 ns
Post-harvest losses (%)	-0.5879 ns	0.6916 ns	0.1567 ns	0.8548*
Yield per Hectare (GCB)	0.0004*	0.0005*	-0.0001 ns	0.0000 ns
Coffee Cupping	-0.1404 ns	1.0801*	0.3759 ns	0.4829 ns
Target Sales	0.5255*	0.6207*	0.7465*	0.1274 ns
Satisfied Price	0.6618*	-0.0874 ns	-0.3077 ns	0.3834*
Willingness to Certification	0.4456*	0.3921*	0.4304 ns	-0.1884 ns
Number of Farm Laborer	0.1499*	0.0471 ns	0.3316*	-0.0334 ns
Number Hired Labor	0.0924*	0.0908 ns	0.1903*	-0.0360 ns
Enough Capital	0.2253 ns	0.6215*	0.6283*	-0.0080 ns
Credit Access Difficulty	-0.0729 ns	-0.3143 ns	-0.3873 ns	0.0260 ns
External Capacity Building	-0.1647 ns	0.4696*	0.3723 ns	0.5846*
Men with Access to Agri Services	-0.2313 ns	0.5222*	-0.0087 ns	0.0990 ns
Women with Access to Agri Services	0.0694 ns	-0.1389 ns	-0.4683 ns	-0.2664 ns
Number of Hours Spend in the Farm (Men)	0.0011 ns	-0.0057 ns	-0.0175*	0.0053 ns
Number of Hours Spend in the Farm (Men Youth)	0.0036 ns	0.0131 ns	-0.0179 ns	-0.0101 ns
Number of Hours Spend in the Farm (Women)	0.0135*	0.0040 ns	0.0081 ns	0.0000 ns
Number of Hours Spend in the Farm (Women Youth)	0.0334 ns	0.0337 ns	-0.0013 ns	-0.0053 ns
Men Participation to Training	0.3392 ns	-0.3618 ns	0.7701*	-0.1341 ns
Women Participation to Training	-0.2922 ns	-0.6328*	0.2848 ns	0.4324 ns
Membership to PO (Men)	-0.2604 ns	0.0673 ns	-0.7819*	-0.2734 ns
Membership to PO (Women)	0.5639**	1.0532**	0.1295 ns	-0.2166 ns
With Succession Plan	-0.1307 ns	0.1524 ns	-0.5827 ns	0.0693 ns
Constant	-2.6442*	-4.2199*	-2.4932*	-2.2431*
Prob>chi2	0.0000	0.0000	0.0000	0.0000
Pseudo R2	0.4020	0.4381	0.5670	0.3985
Count R2	0.816	0.935	0.961	0.823

Note: Values in the table are the estimated coefficient from probit model estimation. Coefficients with * are significant at 5% level and ns are not significant.

Table 295: Regression analysis on coffee yield (converted to GCB), 2021

Variables	Coef.	P-Value
Age	0.0001ns	0.9830
Household Size	-0.0206 ns	0.5900
Sex	0.3867**	0.0150
Years of formal education	-0.1810 ns	0.2060
Marital Status	0.0094 ns	0.6140
Membership to farmers' cooperative	0.1636 ns	0.5520
Total Farm Size (Ha)	-0.0251 ns	0.1250
Post-harvest losses	-0.5232 ns	0.1170
Intercropping	-0.0777 ns	0.5550
Adopt Disease Management	0.4210 ns	0.2440
Adopt Farm Management Practices	0.2371 ns	0.1750
Adopt Genetic Improvement	0.1813 ns	0.1940
Adopt Pest Management	0.1299 ns	0.3880
Adopt Soil Related Fertility and Conservation	-0.1615 ns	0.4180
Adopt Harvest and Postharvest	0.4632***	0.0050
Adopt Processing	0.4471**	0.0320
Adopt Farm Diversification	-0.5851***	0.0100

Variables	Coef.	P-Value
Adopt Climate Risk Reduction and NRM	-0.4553**	0.0290
Adopt Operational Management	0.0306 ns	0.8180
Production Cost (Per Hectare)	0.0000*	0.0990
Active Marketing	-0.1465 ns	0.3850
Enough Capital	0.4125***	0.0040
Number of Hours Spend in the Farm (Men)	0.0050 ns	0.2280
Number of Hours Spend in the Farm (Men Youth)	-0.0070 ns	0.1680
Number of Hours Spend in the Farm (Women)	0.0052 ns	0.4270
Number of Hours Spend in the Farm (Women Youth)	-0.0056 ns	0.6790
Men Participation to Training	-0.5332***	0.0010
Male Youth Participation to Training	-0.0785 ns	0.7650
Women Participation to Training	0.1377 ns	0.3620
Female Youth Participation to Training	0.0281 ns	0.9100
With succession plan	0.2814 ns	0.1630
Willingness to Certification	0.3443***	0.0080
Constant	4.4780***	0.0000
Prob > F	0.0000	
R-squared	0.2904	

Note: Values in the table are the estimated coefficient of the log-linear yield model (all produce converted to GCB) and the corresponding P-value coefficients with * are significant at 10% level, ** 5%, *** at 1% level and ns are not significant.

Table 296: Correlation analysis of post-harvest losses and adoption post-harvest practices/ technologies, 2018-2021

Variables	rpb	P-Value
Household Size	-0.0855*	0.0215
Years of formal education	-0.1435*	0.0001
Membership to farmers' cooperative	-0.0934*	0.0119
Total Farm Size (Ha)	0.1342*	0.0003
Yield (GCB)	-0.1500*	0.0023
Adopt Disease Management	-0.0077	0.8358
Adopt Farm Management Practices	-0.0934*	0.0119
Adopt Genetic Improvement	-0.0528	0.1560
Adopt Pest Management	-0.0922*	0.0131
Adopt Soil Related Fertility and Conservation	-0.1382*	0.0002
Adopt Harvest and Postharvest	-0.0513	0.1681
Adopt Processing	-0.0112	0.7642
Adopt Farm Diversification	-0.1144*	0.0021
Adopt Climate Risk Reduction and NRM	-0.0368	0.3222
Adopt Operational Management	0.2864*	0.0000
Production Cost (Per Hectare)	-0.0334	0.3700
Active Marketing	0.3851*	0.0000
Enough Capital	-0.1376*	0.0002
Number of Hours Spend in the Farm (Men)	0.0782*	0.0354
Number of Hours Spend in the Farm (Men Youth)	-0.0663	0.0746
Number of Hours Spend in the Farm (Women)	-0.0146	0.6948
Number of Hours Spend in the Farm (Women Youth)	0.0035	0.9256
Men Participation to Training	0.031	0.4043
Male Youth Participation to Training	-0.0309	0.4065
Women Participation to Training	0.0221	0.5522
Female Youth Participation to Training	-0.0324	0.3836
Arabica area (ha)	-0.1295*	0.0005
Robusta area (ha)	0.1164*	0.0017

Variables	rpb	P-Value
Excelsa area (ha)	0.0001	0.9972

Note: Values in the table are the point biserial correlation coefficient (r_{pb}) and the corresponding p-value, * signifies significant correlation at 5% level of significance.

Table 297: Correlation analysis on coffee sales, 2018-2021

Variables	rpb	P-Value
Age	0.0009	0.9812
Household Size	-0.0271	0.4664
Sex	0.0724	0.0516
Years of formal education	0.0773*	0.0376
Membership to farmers' cooperative	0.0315	0.3968
Total Farm Size (Ha)	0.4441*	0.0000
Yield/Ha (Fresh Cherries)	0.1579	0.1244
Yield/Ha (GCB and Dried Beans)	0.4247*	0.0000
Yield/Ha (GCB All)	0.3223*	0.0000
Post-harvest losses	0.0425	0.2539
Adopt Disease Management	0.0682	0.0666
Adopt Farm Management Practices	0.1241*	0.0008
Adopt Genetic Improvement	0.1343*	0.0003
Adopt Pest Management	0.2064*	0.0000
Adopt Soil Related Fertility and Conservation	0.0043	0.9082
Adopt Harvest and Postharvest	0.3960*	0.0000
Adopt Processing	0.0949*	0.0106
Adopt Farm Diversification	-0.0413	0.2673
Adopt Climate Risk Reduction and NRM	0.0552	0.1379
Adopt Operational Management	0.1296*	0.0005
Production Cost (Per Hectare)	0.2962*	0.0000
Coffee Cupping	0.1443*	0.0001
Active Marketing	0.0001	0.9983
Enough Capital	0.1505*	0.0000
Number of family labor	0.1231*	0.0009
Number of hired labor	0.4945*	0.0000
Number of Hours Spend in the Farm (Men)	0.2221*	0.0000
Number of Hours Spend in the Farm (Men Youth)	0.0924*	0.0129
Number of Hours Spend in the Farm (Women)	0.1546*	0.0000
Number of Hours Spend in the Farm (Women Youth)	-0.0005	0.9894
Men Participation to Training	0.0493	0.1850
Male Youth Participation to Training	-0.0131	0.7250
Women Participation to Training	-0.0124	0.7390
Female Youth Participation to Training	-0.0291	0.4339
With succession plan	0.0992*	0.0076
Willingness to Certification	0.2676*	0.0000

Note: Values in the table are the Pearson correlation coefficient (r) and the corresponding p-value, * signifies significant correlation at 5% level of significance.

Table 298: Changes in price due to change in Coffee Quality due to Adoption of Technologies and Practices, per region

Region	No	Yes	% Yes
Treatment			
CAR	10	64	44.4
10	8	10	6.9
11	1	3	2.1
12	2	28	19.3
13	8	21	14.5
Overall	29	126	17.4

Region	No	Yes	% Yes
Comparison			
11			0
12	5	16	11.1
Overall	5	16	7.3

Table 299: Perceive changed in coffee sales since 2019

Region	Decreased	Increased	No Sales	Remained the same
Treatment				
CAR	8.3	10.4	73.6	7.6
10	19.4	9.7	47.9	22.9
11	22.6	0.7	29.5	47.3
12	39.3	33.1	7.6	20.0
13	17.9	7.6	48.3	26.2
Overall	21.5	12.3	41.3	24.9
Comparison				
11	20.0	-	33.3	46.7
12	45.1	23.6	-	31.3
Overall	36.5	15.5	11.4	36.5

Table 300: Average perceived changed (%) in coffee sales since 2019

Region	Increased			Decreased		
	mean	sd	se(mean)	mean	sd	se(mean)
Treatment						
CAR	22.5	18.5	0.7	53.3	11.5	0.4
10	18.9	21.7	0.8	24.6	20.5	0.8
11	25.0	-	-	43.6	14.1	0.5
12	15.1	15.4	0.6	37.6	21.8	0.8
13	22.7	15.1	0.6	43.7	22.3	0.8
Overall	18.0	17.0	0.6	38.7	21.0	0.8
Comparison						
11	-	-	-	42.3	14.9	1.0
12	15.2	17.5	1.2	44.0	22.0	1.5
Overall	15.2	17.5	1.2	43.7	20.8	1.4

Table 301: Correlation analysis on credit availability/access, 2018-2021

Variables	rpb	P-Value
Age	0.0263	0.4801
Household Size	0.1325*	0.0004
Sex	-0.0713	0.0550
Years of formal education	0.2107*	0.0000
Membership to farmers' cooperative	0.0588	0.1139
Total Farm Size (Ha)	-0.0146	0.6941
Yield (GCB)	0.0425	0.3912
Post-harvest losses	-0.0296	0.4268
Adopt Disease Management	0.0549	0.1400
Adopt Farm Management Practices	0.0321	0.3880
Adopt Genetic Improvement	0.0803*	0.0308
Adopt Pest Management	0.1704*	0.0000
Adopt Soil Related Fertility and Conservation	0.1479*	0.0001

Variables	rpb	P-Value
Adopt Harvest and Postharvest	0.0927*	0.0126
Adopt Processing	0.1694*	0.0000
Adopt Farm Diversification	0.1592*	0.0000
Adopt Climate Risk Reduction and NRM	-0.006	0.8717
Adopt Operational Management	0.1173*	0.0016
Production Cost (Per Hectare)	0.0871*	0.0190
Active Marketing	0.0596	0.1089
Enough Capital	-0.0426	0.2519
Number of family labor	0.1199*	0.0012
Number of hired labor	0.1170*	0.0016
Number of Hours Spend in the Farm (Men)	-0.0185	0.6194
Number of Hours Spend in the Farm (Men Youth)	-0.0335	0.3679
Number of Hours Spend in the Farm (Women)	0.0782*	0.0353
Number of Hours Spend in the Farm (Women Youth)	-0.0158	0.6707
Men Participation to Training	-0.1244*	0.0008
Male Youth Participation to Training	-0.0353	0.3424
Women Participation to Training	0.0688	0.0644
Female Youth Participation to Training	-0.0827*	0.0261
With succession plan	-0.0152	0.6836
Willingness to Certification	0.0652	0.0794

Note: Values in the table are the Pearson correlation coefficient (r) and the corresponding p-value, * signifies significant correlation at 5% level of significance.

Table 302: Correlation analysis on Household Income, 2021

Variables	rpb	P-Value
Age	0.0301	0.4181
Household Size	0.1190*	0.0013
Sex	0.0337	0.3657
Years of formal education	0.3553*	0.0000
Membership to farmers' cooperative	0.0589	0.1131
Total Farm Size (Ha)	0.1215*	0.0011
Coffee Sales	0.1449*	0.0001
Yield/Ha (Fresh Cherries)	-0.0688	0.5056
Yield/Ha (GCB and Dried Beans)	0.1189	0.0765
Yield/Ha (GCB All)	0.0833	0.0922
Post-harvest losses	-0.0783*	0.0351
Adopt Disease Management	0.0049	0.8954
Adopt Farm Management Practices	0.1106*	0.0029
Adopt Genetic Improvement	0.0626	0.0926
Adopt Pest Management	0.0886*	0.0171
Adopt Soil Related Fertility and Conservation	0.0914*	0.0139
Adopt Harvest and Postharvest	0.0505	0.1747
Adopt Processing	0.1264*	0.0007
Adopt Farm Diversification	0.1225*	0.0010
Adopt Climate Risk Reduction and NRM	0.0218	0.5577
Adopt Operational Management	0.1007*	0.0067
Production Cost (Per Hectare)	0.1494*	0.0001
Active Marketing	-0.0501	0.1778
Coffee Cupping	0.0949*	0.0106
With access to credit	0.1762*	0.0000

Variables	rpb	P-Value
Enough Capital	0.0691	0.0630
Number of family labor	0.054	0.1465
Number of hired labor	0.1805*	0.0000
Number of Hours Spend in the Farm (Men)	-0.0179	0.6304
Number of Hours Spend in the Farm (Men Youth)	-0.0495	0.1832
Number of Hours Spend in the Farm (Women)	-0.0305	0.4124
Number of Hours Spend in the Farm (Women Youth)	-0.0500	0.1786
Men Participation to Training	0.0571	0.1250
Male Youth Participation to Training	0.0186	0.6178
Women Participation to Training	-0.0324	0.3846
Female Youth Participation to Training	-0.0578	0.1204

Table 303: Correlation of adoption to yield and farm coffee production sales of the firm

Items	Yield/ Ha		Farm Coffee Sales	
	r _{pb}	P-Value	r _{pb}	P-Value
Pest Management	0.0708	0.5784	0.1778	0.1599
Genetic Improvement	-0.1016	0.4243	-0.0427	0.7376
Farm Management Practices	-0.0416	0.7441	-0.0749	0.5564
Farm Diversification	0.0095	0.9405	-0.0896	0.4816
Disease Management	-0.0938	0.4612	-0.0721	0.5712
Soil-related fertility and conservation	0.0428	0.7372	0.1728	0.172
Harvest and Postharvest	0.1081	0.3952	0.1285	0.3115
Processing	0.0044	0.9728	-0.041	0.7479
Nursery related technologies	0.0878	0.4903	0.0601	0.6369
Operational Management	-0.0859	0.4997	0.0874	0.4921
Total farm size	-0.081	0.5248	0.0556	0.6626
Arabica Farm Size	-0.046	0.7184	-0.0405	0.7509
Robusta Farm Size	-0.0627	0.6228	-0.0506	0.6914
Liberica Farm Size	0.2415	0.0545	0.076	0.5506
Excelsa Farm Size	0.0251	0.8439	-0.0644	0.6134
Cost per hectare	0.1487	0.5089	-0.0735	0.5637

Note: Values in the table are the point biserial correlation coefficient (r_{pb}) and the corresponding p-value, * signifies significant correlation at 5% level of significance

Annex 6: Pre-Test Reports with Questionnaires

<https://drive.google.com/drive/folders/1skrfl5TPxumVWen6jvvcavcqErOsdwJy?usp=sharing>

Annex 7: Survey Data, FGDs and KIs Recordings, and Qualitative Analysis Codebook of the 15 FGDs and 50 KIs

- Raw data set in SPSS and/or CSV formats

(https://drive.google.com/drive/folders/1yzKJymadjccmY8GyZGqPV_8SkfCwTWJO?usp=sharing)

- Rules applied for cleaning data
(https://drive.google.com/drive/folders/1y4raFUOnzX9QEMAhHj1knd1X_pgR5Naj?usp=sharing)
- Data dictionary/codebook
(https://drive.google.com/drive/folders/1x_Lj9Pk5SDfqCcapKq2d_ILBSD0P6lfe?usp=sharing)
- Syntax for all data analysis and variable transformations
(<https://drive.google.com/drive/folders/1scYYBYRuSURdfBD7qLqvYPBqJaFpBqel?usp=sharing>)
- Final data set (cleaned data)
(<https://drive.google.com/drive/folders/1g1OR57GkkMFGNh56jZ3CtvSBSqipCmv0?usp=sharing>)
- Transcribed and translated responses of key informant interviews and focus group discussions
(https://drive.google.com/drive/folders/10SkzxUCC_yb3HgSrnhXP9tcy2qkCFcx0?usp=sharing)
- Recordings of key informant interviews and focus group discussions
(<https://drive.google.com/drive/folders/1R3-EJs-6wkJToiU3ixRn6jN9UBarSaNj?usp=sharing>)
- Qualitative analysis code books
(<https://drive.google.com/drive/folders/1pczkrrsQaaLh7iLuowkQHyTFuUvwkqgg?usp=sharing>)

INSTITUTE FOR SOCIO ECONOMIC DEVELOPMENT INITIATIVES

Ateneo de Davao University Campus
Room 401, Jubilee Building,
Jacinto Street, Davao City, Philippines
Telefax. No. (082) 2273091
Email Address: isfi@addu.edu.ph