



VIETNAM

GCP: Economic Viability of Coffee Farming

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OBJECTIVES OF STUDY

Overall objective

- Identify opportunities for potential benefits to coffee farmers from improved farm profitability and increased efficiency along the supply chain

Detailed objectives

- 1 Understand overall farm-level financial benefits for the dominant farmer type in each country and how they compare to other countries
- 2 Describe the main green coffee supply chain in each country at a high level to understand supply chain efficiency
- 3 Highlight key opportunities to increase farmer profitability in each country and explore next steps to increase value add for farmers and the industry

ANALYTICAL PROCESS TO DEVELOP A BUSINESS CASE FOR COFFEE FARMING



Approach	Model Inputs	Model Outputs
1 Define producer types	<ul style="list-style-type: none"> • Farm size • Coffee yields • Coffee quality metrics • Production volume • Number of growers 	<ul style="list-style-type: none"> • Farmer types
2 Establish farmer financial benefits	<ul style="list-style-type: none"> • Coffee price premiums • Potential increase in yield • Incremental changes to costs 	<ul style="list-style-type: none"> • Potential increase in net income for farmer
3 Describe value chain structure	<ul style="list-style-type: none"> • Key actors in value chain • Costs and margins • Share of value captured 	<ul style="list-style-type: none"> • Map of supply chain • Supply chain overview
4 Present recommendations	<ul style="list-style-type: none"> • Selected opportunities to optimize business case 	<ul style="list-style-type: none"> • High-level recommendations for priority opportunities • Potential partners to address gaps

Note: Assumes that demand for coffee will increase as coffee supply increases, thus maintaining static coffee prices

POTENTIAL ANNUAL VALUE CREATION OF \$390M ACROSS 573K FARMERS



Lowering production costs

- There is moderate potential for value add from lowering production costs and increasing yields.
- Yields in Vietnam are very high, though there is potential for a 10% improvement in yield. However, farmers tend to over-irrigate and over-fertilize.

Certification premiums

- There is limited potential for value add from price premiums.
- Certification premiums may be an opportunity to add value for individual farmers. However, certifications are already quite prevalent among farmers, presenting a smaller opportunity for sectoral change.
- Beyond premiums, certification programs can be a catalyst for other levers of change, such as yield improvements and reduction of costs.

Supply chain efficiency

- Farmers receive a high portion of the FOB price, with farmer share around 95%, making Vietnam the most cost-efficient coffee supply chain in the world.

Preventing environmental degradation

- Current farming practices threaten long-term sustainability of coffee production from over-irrigation. Reducing water usage and improving fertilization practices also mitigates long-term risk to coffee production and environmental degradation.

POTENTIAL REVENUE INCREASE FROM LOWER PRODUCTION COSTS



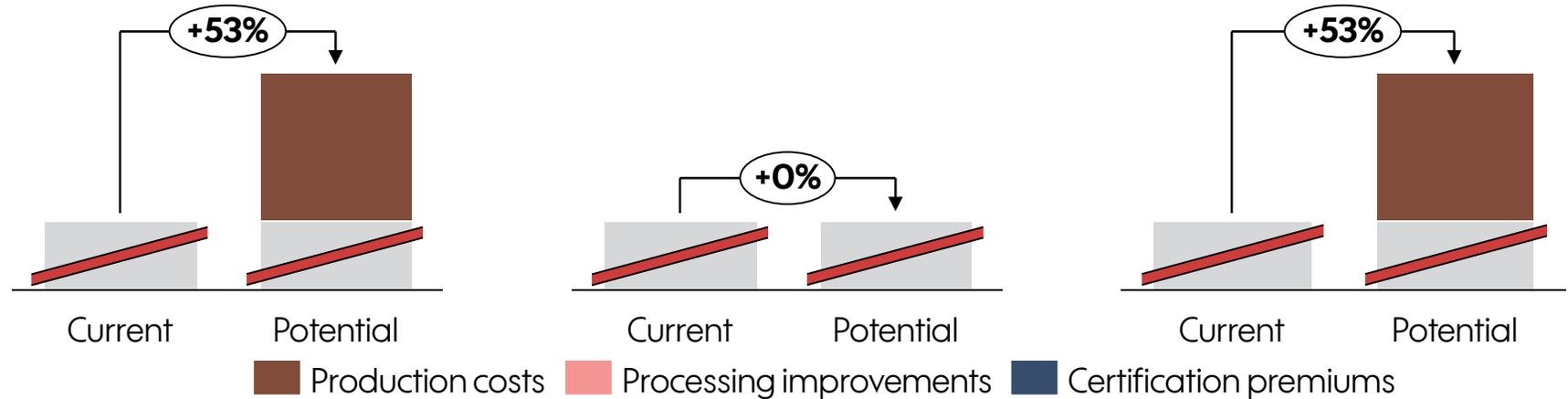
Net income from lower production costs (\$ / ha)

+

Net income from price premiums (\$ / ha)

=

Total net income increase (\$ / ha)



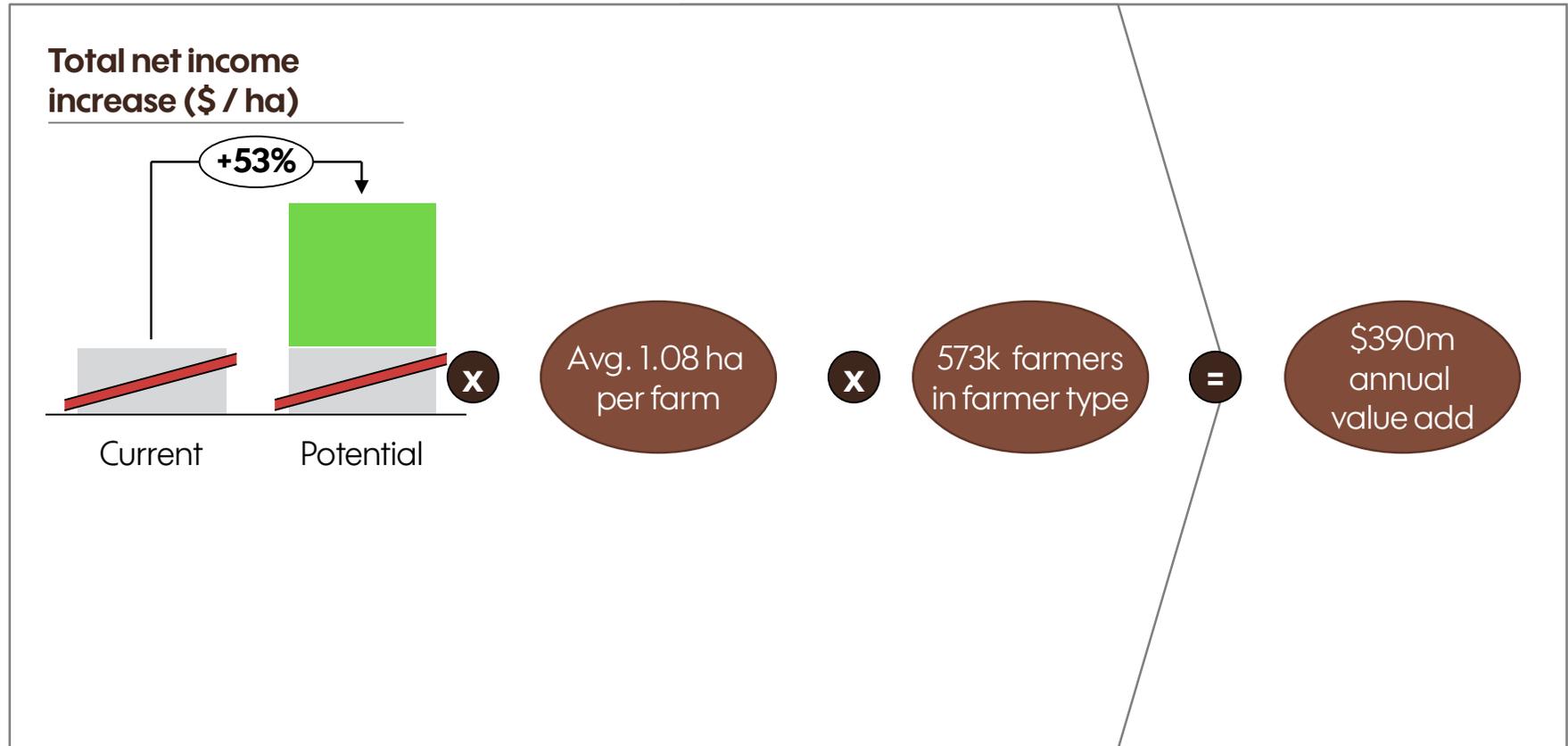
- Yields are high at 2.4 tons / ha, but there is potential to increase yields, particularly through new varieties. Better timing of picking and selling can also improve yields
- Reduction in costs through improved practices in irrigation, fertilization, and use of labor can improve profitability without adverse effect to yields

- Farmers can improve post-harvest practices to minimize defects and improve quality
- Though potential for certification premiums is limited, farmers are able to access training and reduce costs through certification programs

- There is potential to increase net income for farmers by lowering production costs
- There is some potential to achieve price premiums through certification, but given the prevalence of certification schemes already, there is less potential for overall value creation

Note: Assumes that three interventions are separate and independent.
 Source: See appendix.

\$390 MILLION OF POTENTIAL INCREMENTAL VALUE ANNUALLY

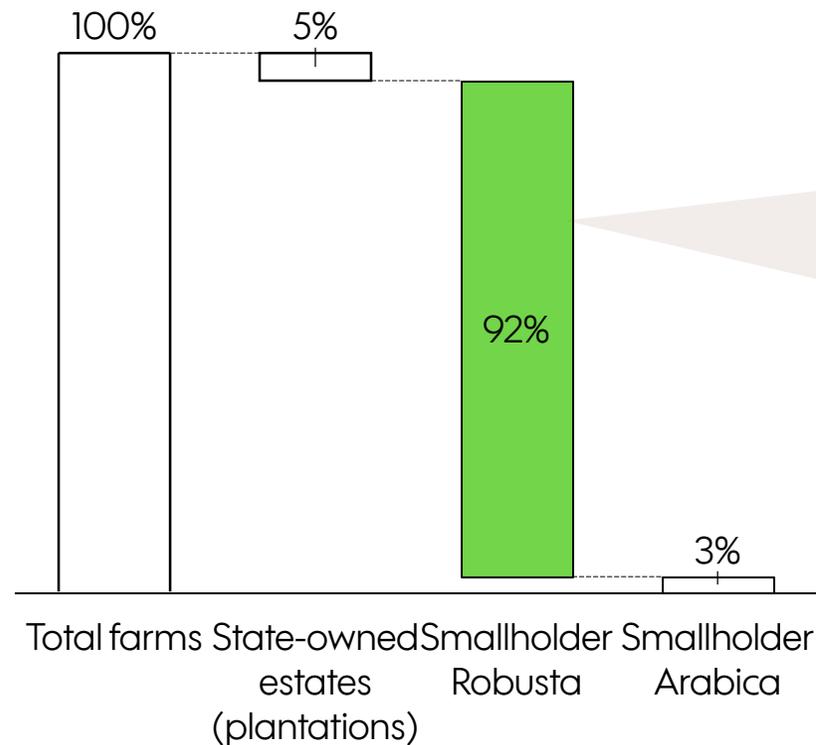


- There is an opportunity for a 53% increase in profitability for farmers, which translates into an estimated \$390m annual potential value across the 573k farmers in this farmer type (smallholder Robusta farmers)

Note: Extrapolated estimate annual value; improvements in profit for individual farmers may vary.
Source: See appendix.

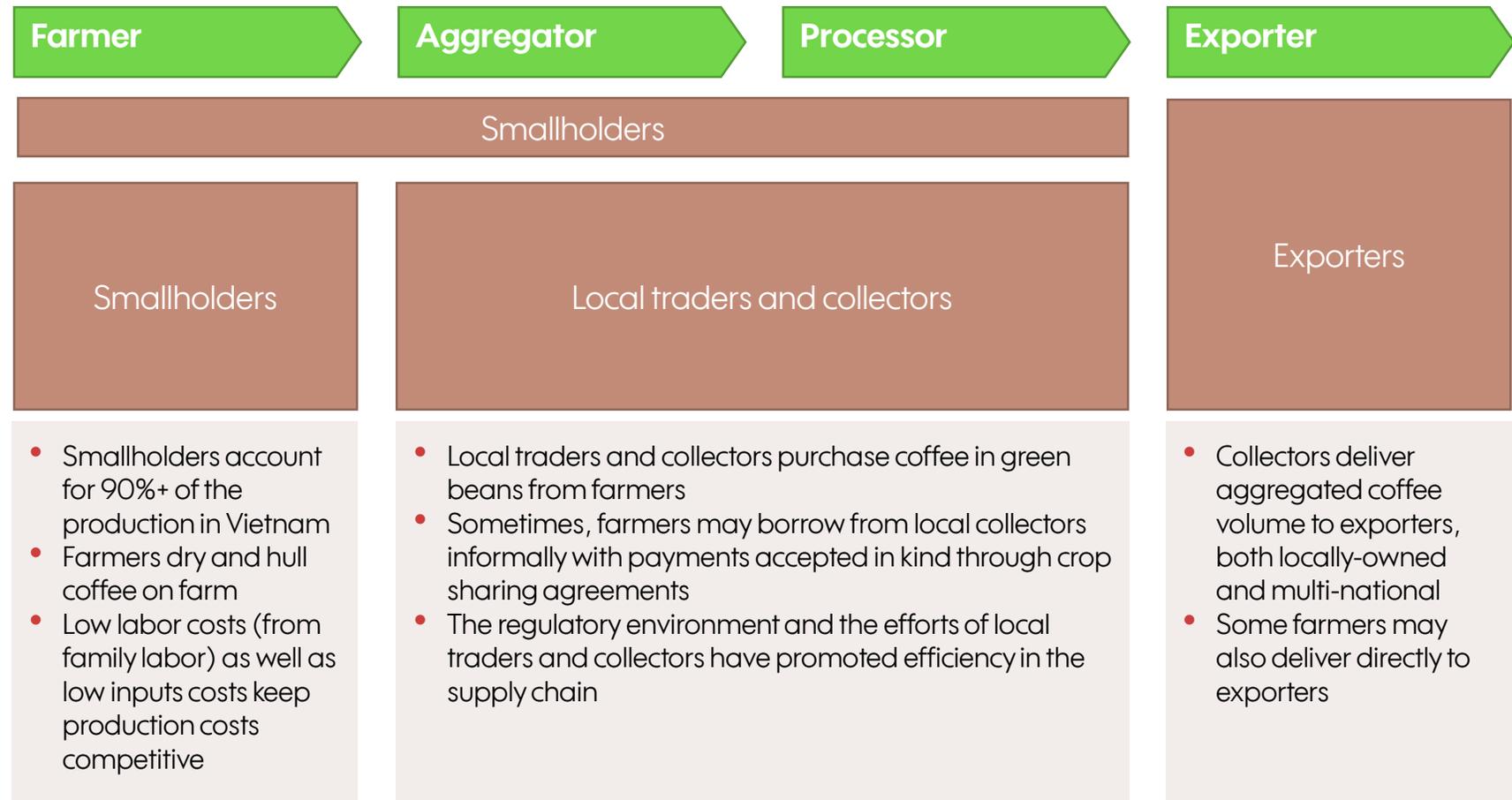
IDENTIFYING FARMER TYPE WITH HIGHEST POTENTIAL IMPACT

Farmer types by share of volume



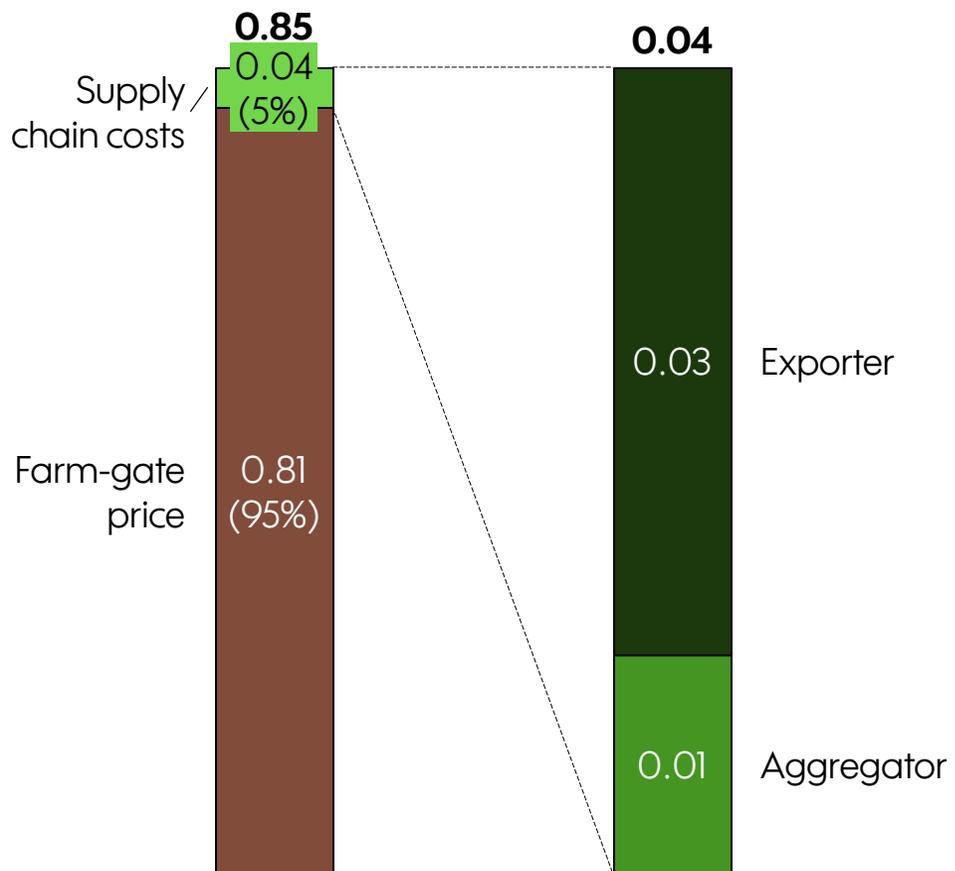
- We estimate there are ~596k farmers total in Vietnam, 573k of which are smallholder Robusta farmers
- About 90% of the production is Robusta
- Majority of the farmers are smallholders, concentrated in the Central Highlands

SUPPLY CHAIN OVERVIEW



SUPPLY CHAIN COST BREAKDOWN FROM FARM TO EXPORT

Supply chain cost breakdown (US \$ per lb green)



- Farmers receive about 95% of the FOB price. Vietnam remains the world's most competitive coffee producer
- Supply chain is efficient due to several factors. Vietnamese coffee has a large Robusta market share (~40%) and allows easy access to large buyers. Competition among collectors and exporters, along with high farmer output, allows supply chain actors to keep costs low
- Various supply chain actors, including the government, have been successful in promoting new seed varieties and scaling farmer extension programs, particularly through public-private collaboration and certification and verification programs



APPENDIX

DETAIL ON FARMER TYPES



Type	Region	Farm size (ha)	Variety	Number of farms
State-owned estates (plantations)		State-owned enterprises (plantations)	N/A	59
Smallholder Robusta	Mostly Central Highlands	Smallholder	Robusta	573,000
Smallholder Arabica	Mostly Northern mountain and Southern Central regions	Smallholder	Arabica	22,000

DETAILED DATA APPLICABLE TO SELECTED FARMER TYPE



Data point	Unit	Data
Farmer data		
Average coffee farm size	ha	1.08
Number of farmers in type	#	573,000
Assumptions		
Exchange rate	USD to LCU	22,700
Market Data		
Farm-gate price	cts/lb	81
Average FOB export price	cts/lb	85
Yield		
Average coffee yield	lb/ha	5,357
Potential yield increase	%	10%
Price		
Potential quality premium	cts/lb	0
% of production eligible for quality premium	%	0%
Potential certification premium	cts/lb	1
% of production eligible for certification	%	5%

Note: Costs of production updated to 2016 exchange rates. All volume units are for green coffee equivalent.

Data point	Unit	Data
Production costs		
Operations	\$/ha	487
Inputs	\$/ha	1022
Labor	\$/ha	1524
Potential decrease in production costs	\$/ha	-196
Processing costs		
Paid processing labor	\$/ha	0
Drying service	\$/ha	16
Other	\$/ha	0
Incremental costs of improving processing	\$/ha	0
Third-party costs		
Other	\$/ha	97
Incremental costs of certification	\$/ha	0
Outputs		
Current revenue	\$/ha	4,322
Potential increase in net income from:		
Yield improvements	\$/ha	628
Processing improvements	\$/ha	0
Certification premiums	\$/ha	2

SOURCES



Organization	Data inputs	Detailed references
TechnoServe	Farmer data, market data, yield, price, costs, supply chain	IDH and TechnoServe, Vietnam: A business case for sustainable coffee production (2014)
Hanns R. Neumann Stiftung	Farmer data, market data, yield, price, costs	Stakeholder interview (2017)
Other	Farmer data	USDA, GAIN Report: Coffee, Vietnam (2017)
	Market data	Ministry of Industry & Commerce, Report on the Import-export situation in 2017 (2017)
	Costs	WASI, Technical Norms for 1 ha of mature coffee (2017)
	Farmer data	Department of Crop Production under the Ministry of Agriculture and Rural Development (DOCP), "Existing situation and some solutions for sustainable coffee production" (2017)
	Certification	ICO, The State of Sustainability Initiatives Review 2014 – Standards and the Green Economy (2014)
	Farmer data	World Bank, Trade facilitation, value creation, and competitiveness: Policy implications for Vietnam's economic growth (2013)
	Supply chain	World Economic Forum, Achieving the New Vision for Agriculture: New Models for Action (2013)



LIMITATIONS OF METHODOLOGY

This scan is intended to initiate conversations between coffee origins, rather than to be an exhaustive study of farmer economics. It seeks to provide a synthesis of existing databases, studies, and reports as well as a comparative analysis across origins. However, given wide variation in methodologies, regions, and characteristics of available information, there may be credible and important data sources not incorporated into this study.

Since national averages of production indicators do not represent real farmers, our scan focuses on one farmer type within each origin. These farmer types are not representative of the national averages and opportunities may not be uniform within each farmer type.

This scan is not meant to evaluate certification schemes, but rather assesses incremental contribution of certification premiums to farmers' incomes. Impacts of certification achieved through the promotion of best practices and improved access to markets are outside the scope of the scan. Prices are assumed to be static and therefore the scan does not account for volatility of coffee prices and exchange rates, both of which have a significant impact on farmer incomes. Climate change, droughts, and diseases such as coffee leaf rust also pose risks for farmers, but are outside the scope of this scan. Intercropping and other household incomes are also outside the scope of this scan.



Acknowledgements

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About the Global Coffee Platform

The GCP is the leading facilitator of the coffee sector's journey towards sustainability. The GCP improves the livelihoods, ecosystems and resilience of coffee farming communities and the sector as a whole by enabling producers, international roasters, governments, traders, and NGOs to align and multiply their efforts and investments, collectively act on local priorities and critical issues, and grow and scale successful sustainability initiatives across the coffee world.

About TechnoServe

TechnoServe works with enterprising men and women in the developing world to build competitive farms, businesses and industries. A nonprofit organization operating in 29 countries, TechnoServe is a leader in harnessing the power of the private sector to help people lift themselves out of poverty. By linking people to information, capital and markets, we have helped millions to create lasting prosperity for their families and communities.