

# SDM: Case Report Simexco

Service Delivery Model assessment: Short version  
December 2018

Location: Vietnam

Commodity: Coffee

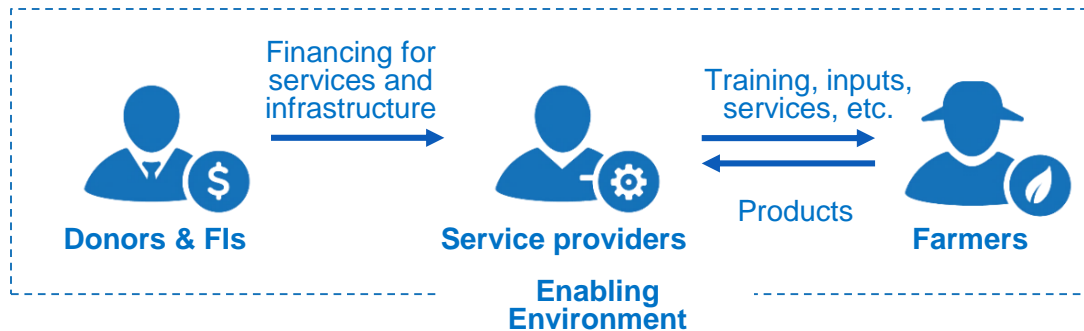
Services: Input provision, Cooperative support, Collector support, Agri-teams, Training facilitation, Access to finance, Monitoring and evaluation



# What are SDMs and why are we interested in analyzing them?

**Service Delivery Models (SDMs)** are supply chain structures which provide services such as training, access to inputs and finance to farmers. The aim is to improve farmers' performance, and ultimately their profitability and livelihoods.

A SDM consists of service providers, often supported by donors and financial institutions (FIs), and farmers receiving the services. All are set within a specific enabling environment.



By analyzing SDMs, we aim to support **efficient, cost-effective and economically sustainable SDMs at scale** through:

Key drivers for success of SDMs benchmarking



Innovation opportunities to support



Cross-sector learning, learning community



Convening at sector and national level



## Analyzing SDMs brings a range of benefits



### Farmers and farmer organizations

- **Enhanced services**, which lead to improved farmer income and resilience, through higher productivity and product quality
- **Improved SDM outcomes**, which lead to an improved social and environmental environment



### SDM operator

- Better understanding of your **business case**
- Insights to **improve service delivery**
- Insights to develop a **cost-effective SDM**
- Identification of opportunities for **innovation** and **access to finance**
- **Comparison** with other public and private SDM operators operating across sectors/geographies
- Ability to communicate **stories of impact and success** at farmer level



### Investors/FIs

- **Common language** to make better informed investment decisions
- Insights to achieve optimal **impact, efficiency and sustainability** with investments and partnerships in SDMs

# The Simexco SDM and objectives

## General SDM information:

Location:	Vietnam
Timing and analysis scope:	2019-2021
Scale (start of analysis):	2,256 farmers
Scale (end of analysis):	2,256 farmers
Funding:	Simexco
SDM Archetype*:	Local processor / trader



- Founded in 1993, Simexco is a state-owned company recognized as one of the leading coffee exporters in Vietnam.
- In 2009 Simexco implemented their Sustainable Project to manage their entire coffee supply chain, from farmers to roasters, and ensure the best quality of their products. Through this project, Simexco supports farmers to apply good coffee cultivation practices and to reach highest possible yields for the lowest costs possible.
- Simexco exports a variety of washed Arabica, semi-washed Robusta, and unwashed Robusta. This SDM focuses solely on unwashed Robusta.
- Majority of Simexco farmers are certified through UTZ, Rainforest Alliance, and Buon Ma Thuot Geographical Identification.
- Simexco operates three mills in Dak Lak and Binh Duong with the capacity to process 500 MT of coffee per day. Simexco exports 80,000 - 120,000 MT of coffee annually, 8% of Vietnam's coffee production. Simexco supplies directly to large roasters such as Nestle, DEMB, JDE, Lavazza, and Tchibo.

## SDM objectives:

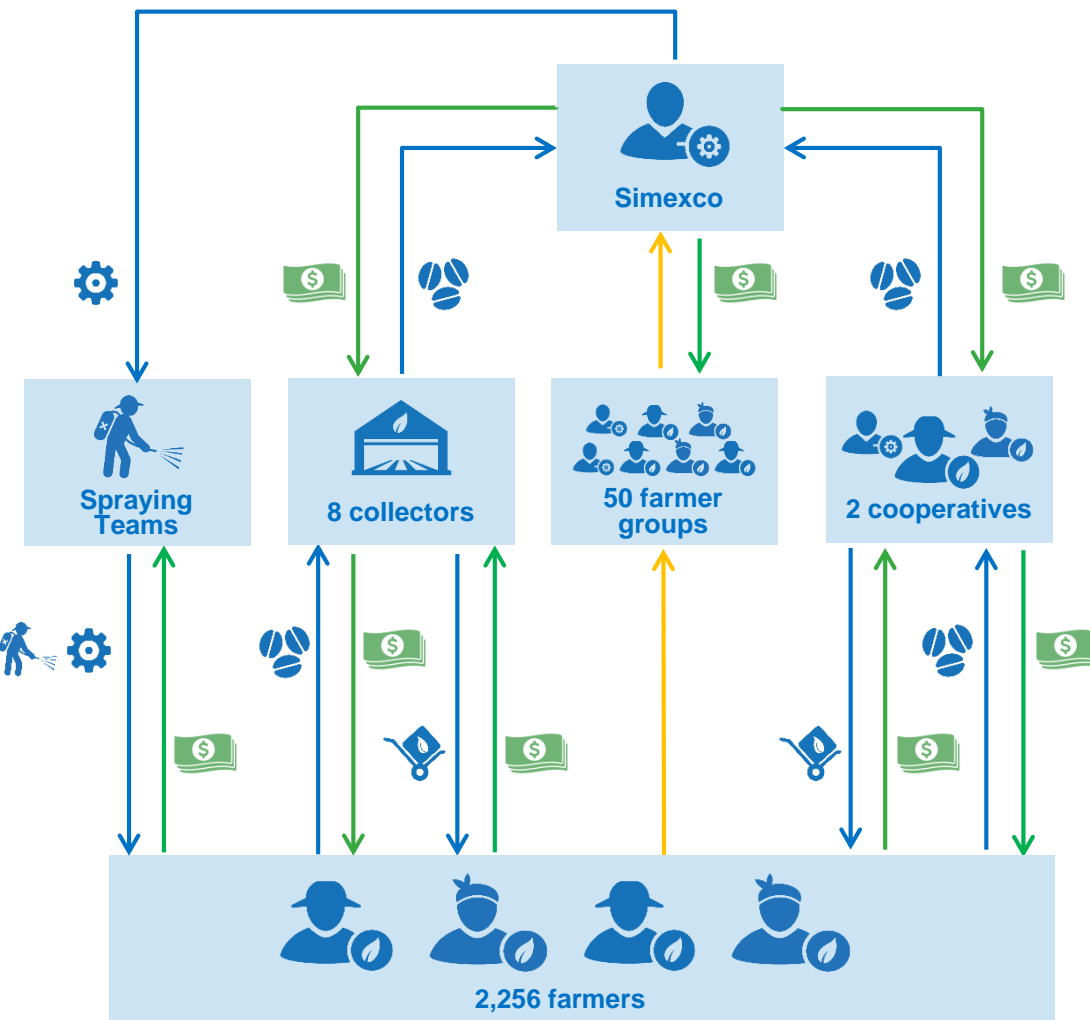
- 1 **Improve farmer income, and coffee productivity and quality**
- 2 **Ensure application of adequate, environmentally-sustainable agri-inputs**
- 3 **Capacity build and increasingly source coffee through cooperatives instead of collectors**

## SDM rationale:



\* For more info on SDM archetypes, see the [IDH Smallholder Engagement Report](#).

# SDM structure and enabling environment



**Legend** → Flow of goods and services → Cash flow → Information/data

- Simexco intends to support the setup and capacity building of local cooperatives and spraying teams.
- Coffee is sourced through cooperatives and collectors. These source from farmers, while also trading agri-inputs.
- Farmers are part of farmer groups, who aggregate Farmer Field Book data to Simexco, for which they receive remuneration.

## Enabling environment

Farmers and Simexco are impacted by several factors within their enabling environment. Most important are:

### 1. Inputs & Financing

Locally available agri-inputs are regularly counterfeit, wrongly labelled, or even banned products. Government-financed schemes have allowed access to cheap inputs and incentivized over-use.

### 2. Pricing & Competitiveness

Farmers receive the highest share of the FOB price (95%) in the world due to large competition among collectors and traders. Counter-intuitively, this negatively impacts the ability to implement sustainability programs as farmers are reluctant to change practices as they already are (very) well off, and coffee traders earn a very small margin which then decreases the money available for sustainability programs.

# Services delivered and farmer segmentation



## Input provision

- Cooperatives and collectors will facilitate access to high-quality inputs (chemical & organic fertilizer and pesticides) to farmers
- Simexco recommends a group of reliable agrochemicals traders, selling high-quality fertilizer and pesticides, that cooperatives and collectors should preferably use



## Agri-teams

- Agri-teams will be set up, to offer: Spraying services providing safe and professional spraying with high-quality pesticides and fluid fertilizer and soil testing providing tailored recommendations on type and amount of input needed based on soil analyses



## Coop and collector support

- Simexco builds capacity in cooperatives for them to become independent business units sourcing coffee, selling inputs, and managing the agri-teams
- Simexco trains collectors on more sustainable, higher-quality inputs, stimulating them to increasingly sell those



## Facilitate training

- Simexco facilitates contact with input producers and enters into MoUs with them
- As part of the MoU, input producers commit to providing training on correct input application for free at cooperative and farm level



## Access to finance

- Simexco facilitates contact with banks and enters into MoUs with them
- Simexco ensures banks of long-term, trustworthy farmers able to handle loans appropriately
- Simexco supports farmers filling out loan application forms



## Monitoring and Evaluation

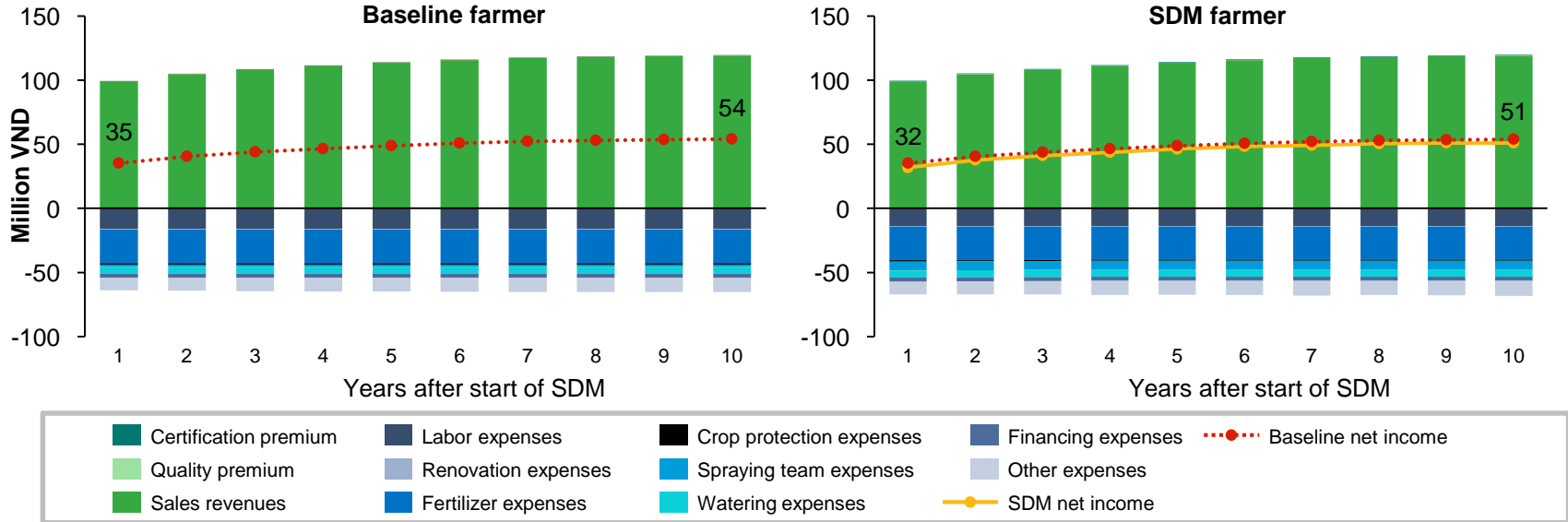
- Currently: Simexco currently uses farmer field books to monitor farmers' performance and adoption of inputs and other services
- Suggested for future adoption: Simexco should consider changing their M&E system to a cloud-based system such as FarmForce and expand the M&E system to monitor collectors and cooperatives

## Farmers are not segmented in this SDM

In this SDM, all farmers receive the same services and have a similar profile in terms of farm characteristics.

Therefore, no distinction is made in terms of farmer segments. In the following farmer analyses, a distinction is made between a farmer outside the program (baseline farmer) and a farmer inside the program (SDM farmer)

# Overall SDM impact: Farmer P&



## Economic sustainability at farm level

Farming Robusta coffee is an economically profitable business earning farmers around 35 million VND per hectare (1,500 USD/ha). Therefore there are limited economic gains from joining the SDM and, in fact, SDM farmers have a lower net income as a result of higher production costs from change in input use and using spraying teams. This underlines the fact that, under the current conditions in the SDM, there is no business case for the farmer to adopt more environmentally sustainable practices.

SDM farmers were expected to increase net income due to lower production costs (following reduction of chemical fertilizer), but the increase in organic fertilizer use more than off-sets the cost savings. Moreover, farmers hire spraying teams that decrease risk of health concerns from unsafe application, but this incurs extra cost without any economic benefits.

With recent renovation practices with new improved varieties (see also page 45), yields are expected to increase in the coming years (converging to a constant yield after 10-15 years), leading to an expected increase in net income to ~51 million VND (USD 2,170) per hectare.

## Main revenue drivers

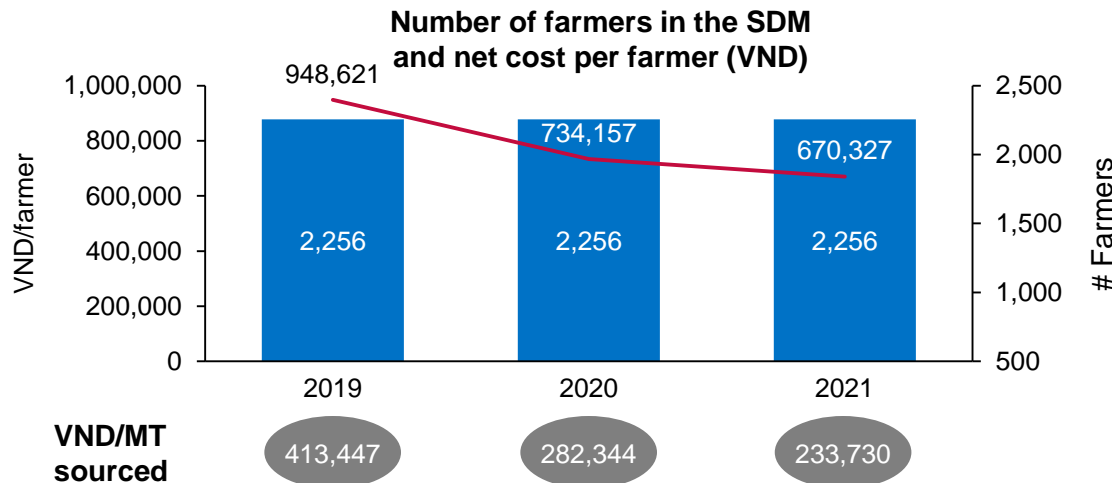
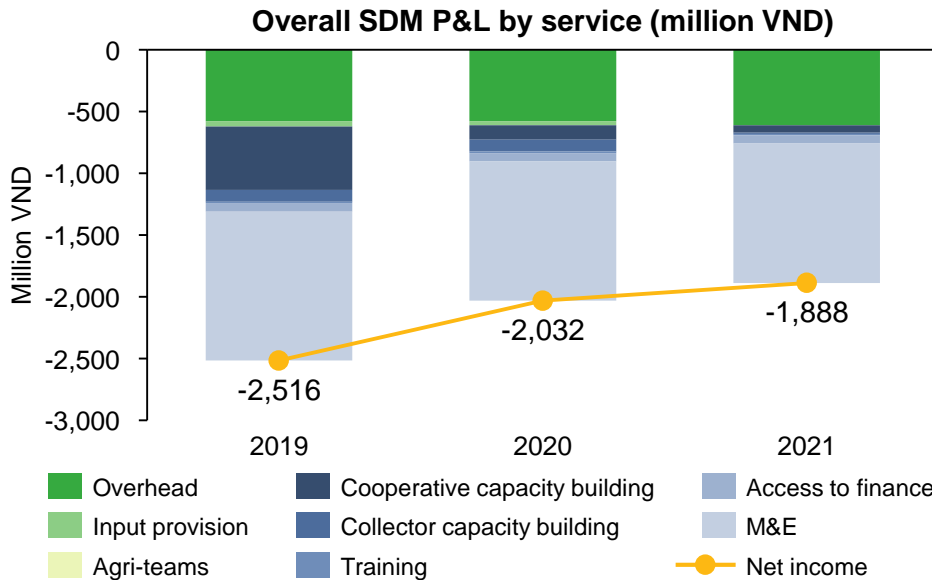
- **Coffee:** The base price drives revenues. Certification premiums only constitute 0.45% of the base price and quality premiums 0.60%.
- **Quality:** Simexco pays farmers a small quality bonus (200 VND/kg) if less than 14% of beans are defect. This leads to an annual bonus of ~600,000 VND/ha.
- **Certification:** SDM farmers sell about 80% of their produce certified leading to annual premiums of ~500,000 VND/ha. Baseline farmers only sell 10% as certified.

## Main cost drivers

- **Labor:** Coffee farming is labor intensive: a third of total labor needs (80 of 245 man-days/ha) must be hired each year, mainly to aid in harvesting.
- **Fertilizer:** Fertilizer is the largest cost of production at around 27 million VND/ha.
- **Spraying:** Farmers outside the SDM spray pesticides themselves whereas SDM farmers are encouraged to hire trained spraying teams from cooperatives at a total cost of 4 million VND/ha/annually.
- **Other:** This includes processing, transportation, energy, financing, and for SDM farmers soil tests.



# SDM P&L, scale and sustainability



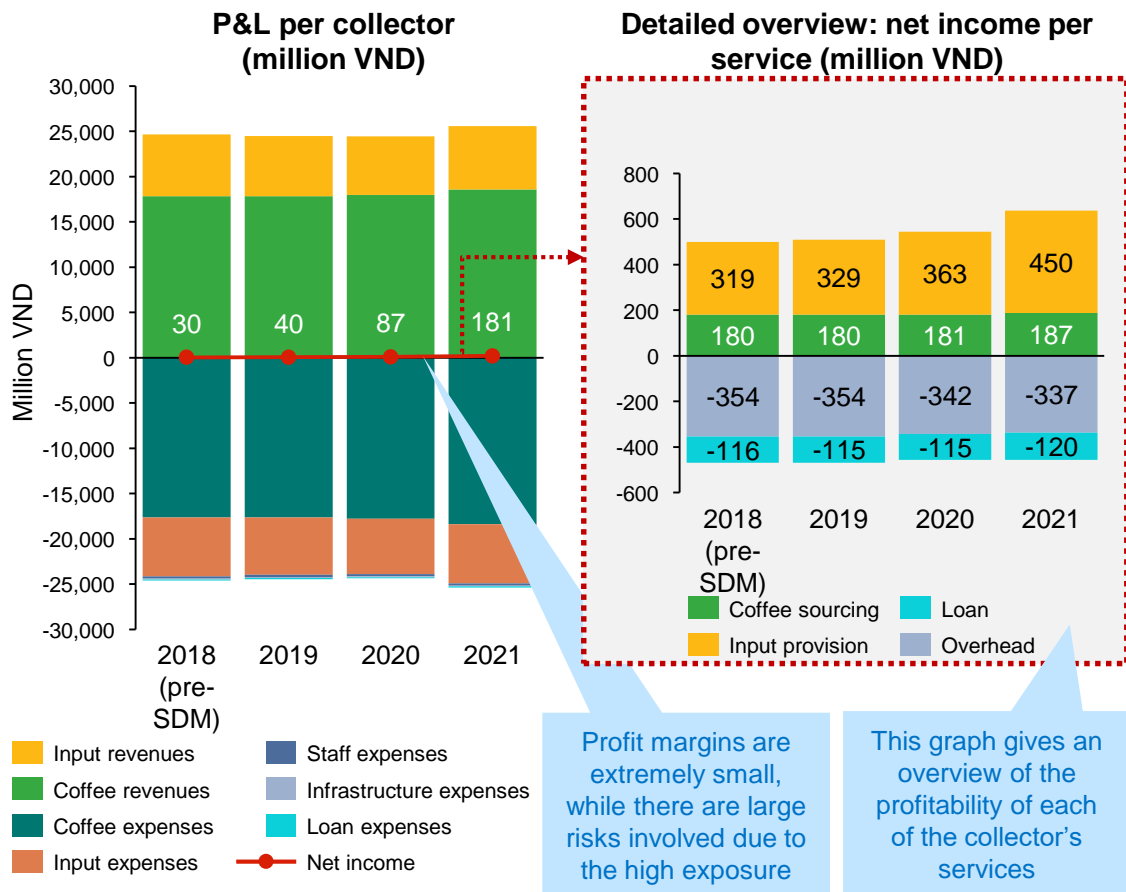
## Economic sustainability of the SDM

- The SDM is not economically sustainable in the short nor the long run. Simexco receives no revenues and only incurs costs. Within the three-year project finance by IDH, all costs are covered through IDH funding (see page 55).
- Costs vary from 2,516 million VND (109,000 USD) in 2019 to 1,888 million VND (82,100 USD) in 2021.
- The SDM becomes more cost-efficient over the three-year period measured on cost per farmer decreasing from 950,000 VND/farmer (41 USD/farmer) to 670,000 VND/farmer (29 USD/farmer).
- The SDM will not become economically sustainable without a source of revenues, which Simexco currently does not have, and there are no clear revenue opportunities as all service provision (and thus service payments) is outsourced to collectors and cooperatives.
- Additional commercial revenues enabled through the SDM (e.g. through increased volume, base price, premiums) are not accounted for here but will in any case be limited as farmers do not increase productivity, certification is not included, and Robusta coffee does not earn any quality (improvement) premiums on the world market.

## Main cost drivers

- Majority of costs are overhead (staff costs) related to facilitating the various services (see next page too)

# Commercial viability analysis: Collectors



Profit margins are extremely small, while there are large risks involved due to the high exposure

This graph gives an overview of the profitability of each of the collector's services

## Key assumptions per collector

	2018	2019	2020	2021
# farmers sourced from & buying inputs	268	254	226	212
# farmers buying recommended fertilizer	34	34	60	84
# farmers buying recommended pesticide	17	17	35	56

## Economic sustainability of collectors

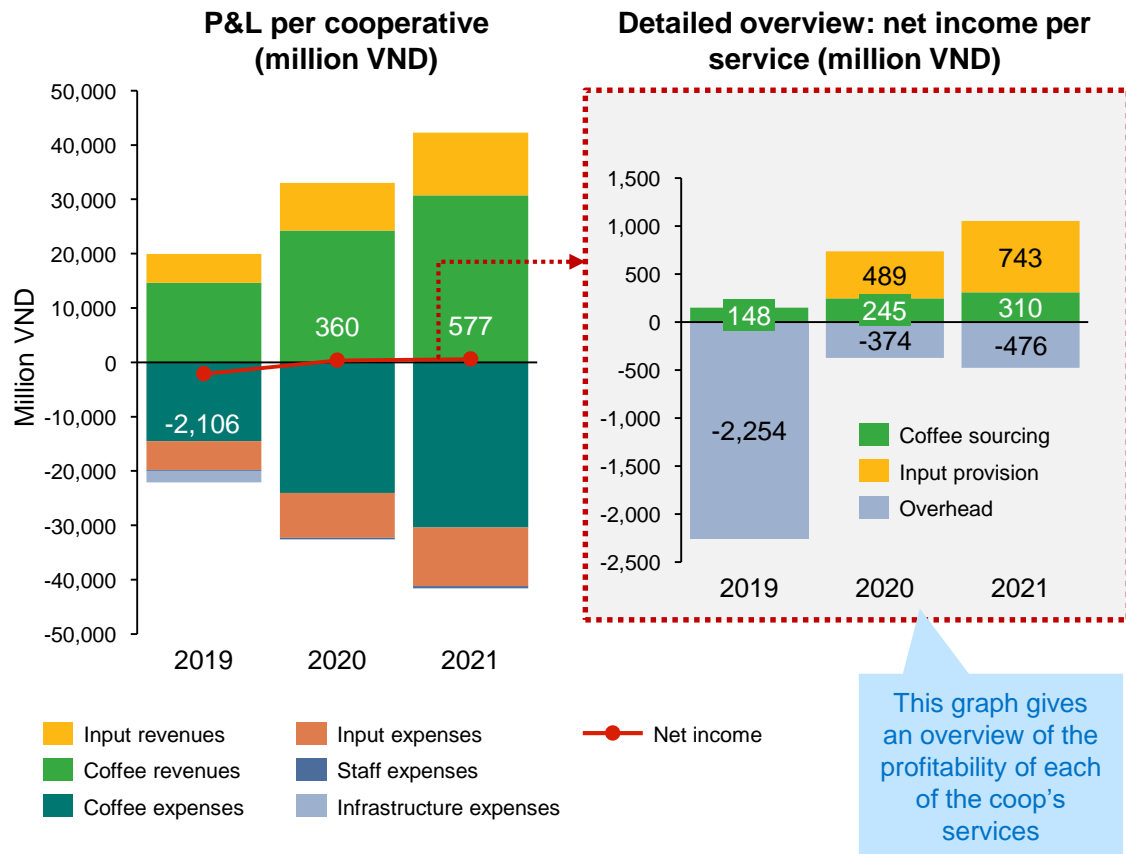
There are eight official collectors in the region that source green beans from SDM farmers and sell it to Simexco. Besides coffee sourcing they also sell fertilizers and pesticides to farmers. All in all, collectors are economically viable, with current profits of around 30 million VND in 2018 expected to increase to 181 million VND by 2021 shown in the first graph. However, profit margins are very low at 0.12%, while risks are high to the enormous exposure involved.

Over the next years, Simexco intends on sourcing a smaller share of coffee from collectors, so the number of farmers in the collectors' supplier base is projected to decrease. At the same time, farmer loyalty is expected to increase, so that the amount of coffee sourced per collector remains more or less constant. Total coffee sourcing expenses and revenues of collectors lie around 18 billion VND, with a small profit of ~180 million VND.

The second graph shows the key drivers of the net income. Currently, collectors sell many different fertilizers and pesticides to farmers, leading to profits of 319 million VND. Over the next years, collectors are encouraged by Simexco to sell certain reputable inputs, less NPK fertilizer but much more organic fertilizer. Collectors benefit from this new approach with additional margins from organic inputs, increasing to 450 million VND in 2021. If more farmers adopt the new (recommended) input practices, profits for collectors increase even further.



# Commercial viability analysis: Cooperatives



## Key assumptions per cooperative

	year	2019	2020	2021
# farmers sourced from & buying inputs		112	226	282
# farmers buying recommended fertilizer		15	60	113
# farmers buying recommended pesticide		8	35	75

## Economic sustainability of cooperatives

Two cooperatives in the region are to be scaled up as part of this SDM to start sourcing coffee from farmers and Initially, large investments are required. After 2019 the cooperatives become profitable with annual profits around 500 million VND. As such, by 2024 initial investments have been recovered.

In 2019 the cooperatives incur large costs by buying a large truck to transport coffee for 2 billion VND. Sourcing and input revenues are still low in that year. Over the years Simexco intends to increase their coffee sourcing through these cooperatives. As a result these will grow and also increase their sales of inputs to farmers. As such, from 2019 to 2021 the cooperatives' profits from coffee sourcing are expected to increase from 148 to 310 million VND, and profits from input sales from 0 to 743 million VND.

However, profit margins on inputs and coffee sourcing are extremely small (0.12%). As such the exposure of 20-40 billion VND per year leads to high financial risks that will be challenging to bear. As such the cooperatives as such can not be considered financially sustainable operations. Higher margins are required to reduce the financial risks.

# SDM projected outcomes and main learning questions

*These results do not represent an official assessment of SDM success or failure by IDH or NewForesight. An indication is given based on the analysis done in this forward-looking study and assumptions provided by Simexco. Actual assessment should be done during and after the SDM, using measured data*

SDM objectives	Projected outcomes
<p><b>1</b> Improve farmer income, coffee productivity and quality</p>	<ul style="list-style-type: none"> <li>The SDM has no impact on coffee productivity or farmer net income. Instead, services are aimed at non-financial advantages such as health (through spraying teams), input reliability and environmental sustainability (through soil tests and access to reputable inputs) as well as farmer empowerment (through cooperatives).</li> </ul>
<p><b>2</b> Ensure application of adequate, environmentally-sustainable agri-inputs</p>	<ul style="list-style-type: none"> <li>Simexco connects cooperatives and collectors to recommended input suppliers to provide them with reliable inputs. Moreover, Simexco recommends certain inputs to farmers, in particular the use of less NPK and more organic fertilizer. Soil tests aid the farmer in more tailored recommendations. This has environmental benefits due to less nutrient leaching, but there is no direct financial gain for farmers. At the same time collectors and cooperatives are free to keep distributing non-recommended inputs, so low adoption is a risk.</li> </ul>
<p><b>3</b> Capacity build and increasingly source coffee through cooperatives</p>	<ul style="list-style-type: none"> <li>In the next three years, Simexco intends to increase coffee sourcing through cooperatives from 10 to 25% of Simexco's total sourcing from SDM farmers. This implies that the cooperatives will increase in size during this period, requiring significant capacity building to succeed. Simexco will aid in training of cooperative staff.</li> </ul>
Learning question	SDM insights
<p><b>How are services delivered to smallholder farmers?</b></p>	<p>The SDM is to a large extent mirroring the existing value chain where collectors play a central role in sourcing coffee and selling inputs to farmers. Building upon this structure, the SDM sets up two new cooperatives that are intended to take over part of the dominant sourcing role of collectors, while also offering additional services (input sales, spraying and soil testing teams). These services are slowly scaled up as the cooperatives are set up and their capacity is built.</p>
<p><b>How can spraying teams be set up to ensure profitability of service delivery?</b></p>	<p>The costs of setting up the spraying teams are rather low; each team just needs three sprayers and a set of pressure pipes, spraying rod, and plastic containers for a combined cost of 4.5 million VND/team (200 USD). This is easily earned back the same year of establishment through service payments. Therefore spraying teams are profitable and economically sustainable in both the short and long run.</p>

# Key insights



## Key drivers of success

- As the farmer business case is currently worse, Simexco needs to introduce additional incentives for farmers to participate in the SDM or align their fertilizer recommendations with MARD.
- There is an economic benefit for collectors to sell higher quality and more environmentally sustainable inputs. It is important that collectors understand the added value of following such Simexco recommendations.
- Simexco needs to ensure that cooperatives will be able to quickly handle the large volumes of coffee sourcing, input sales and management of agri-teams.



## Key factors in replication

- Simexco is taking advantage of the existing supply chain structures to further disseminate the intended SDM services. This substantially lowers the overall costs involved in setting up the SDM (just ~2 billion VND annually equivalent to 86,000 USD).
- This SDM is mainly set up to mitigate environmental degradation following overuse of resources. Collectors are known as contributors to the issue, but rather than establishing SDM structures to try to circumvent collectors, Simexco is tackling the root problem by including collectors into a model that should make them financially better off too.



## Key risks

- The SDM is not economically sustainable as it runs at a loss and is entirely donor-funded. Simexco has no revenue sources from services but is set to receive donor support from IDH. Although the model is sustainable accounting for the commercial margins, it's important to underline that Simexco would earn the same margins sourcing from farmers outside the SDM.
- Simexco's plans are far from sufficiently developed to start implementation of the SDM.
- Simexco normally runs sustainability projects on a project-financed basis when there is donor funding available. There are no clear ideas of what to do with the SDM after the projected three-year IDH-financed period.
- There is no clear incentive for all parties to participate.



## Opportunities for improvement

- In its current form, there is no clear benefit for Simexco of establishing cooperatives, but large risks of unsuccessful establishment. This establishment should be reconsidered.
- Input use should be decreased further for higher environmental impact and a better farmer business case. The Simexco recommendation still leads to overuse of nitrogen and phosphorus with scope for decreasing use of mixed NPK and rather use single-ingredient fertilizers.
- A digital monitoring tool could be implemented. The costs of training lead farmers to use such a tool is easily out-weighed by the efficiency gains.
- Facilitate access of services to more farmers. Not all farmers are receiving access to each service, mainly due to lack of capacity from Simexco's side to facilitate further access.

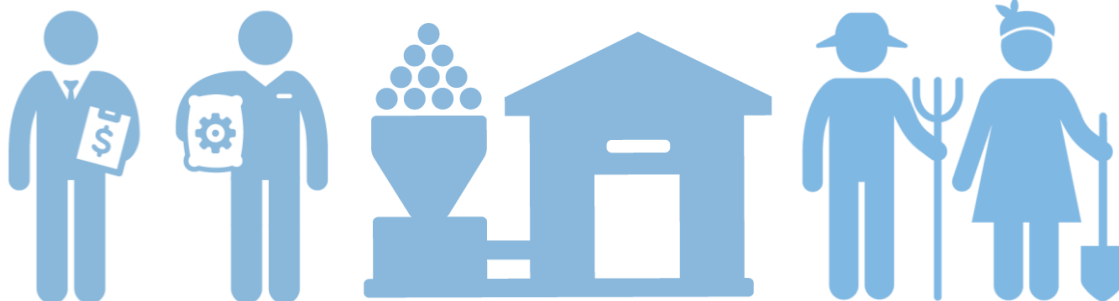
**Tessa Meulensteen**  
Program Officer Coffee  
meulensteen@idhtrade.org



**Daniel Pedersen**  
Associate Consultant  
daniel.pedersen@newforesight.com



**Victor Dagnelie**  
Analyst  
victor.dagnelie@newforesight.com



For more information, see the [IDH Smallholder Engagement Report](#). This report, gathered by analyzing over 30 individual SDMs in 16 countries, provides insights into IDH's data-driven business analytics. The findings identify drivers of farmer resilience, cost reduction and financial sustainability in service models and the conditions needed for a supporting enabling environment.