# **Case Report:** Exportadora Café California, México

Service Delivery Model assessment: Short version
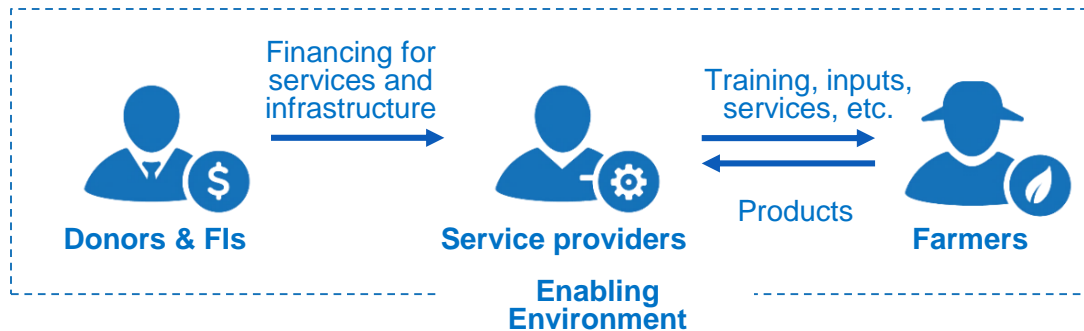
April 2018

Location:     Mexico
Commodity: Coffee
Services:     Extension services/training, inputs, finance & insurance,
               rejuvenation, and verification & certification



IDH the sustainable trade initiative    NewForesight    por más café

# 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.



Financing for services and infrastructure → Training, inputs, services, etc.

**Donors & FIs** → **Service providers** ⇄ **Farmers**

Products

**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 Exportadora de Café California SDM and objectives

## General SDM information:

| | |
|---|---|
| Location: | Mexico |
| Timing in analysis scope: | 2014-2022 |
| Scale (start of analysis): | 868  farmers |
| Scale (end of analysis): | 25,675  farmers |
| Funding: | Exportadora de Café California (ECC) |
| SDM Archetype*: | Local trader / processor |

Exportadora de Café California (ECC) is a leading coffee service company with 20% of the domestic market share in Mexico. ECC trades both Arabica and Robusta, with Arabica accounting for the majority of trading.

*Por más café* is an integrated supply chain program that Exportadora de Café California designed and implemented to secure sustainable production of Mexican coffee and the livelihood of thousands of producers for years to come.

\* For more info on SDM archetypes, see the IDH Smallholder Engagement Report

## SDM objectives:

**CORE OBJECTIVE**

Secure sustainable production of Mexican coffee and the livelihoods of thousands of producers for the years to come through strengthening its sourcing capacity

**OBJECTIVES**

1  Apply modern farming systems to integrate small producers into the coffee supply chain, turning them into agribusiness entrepreneurs

2  Rejuvenate coffee farms in Mexico using best available agricultural practices

3  Improve smallholders' organization, skills and capacities

4  Develop the capacity, labor and productive enterprise of women and vulnerable populations

## SDM rationale:
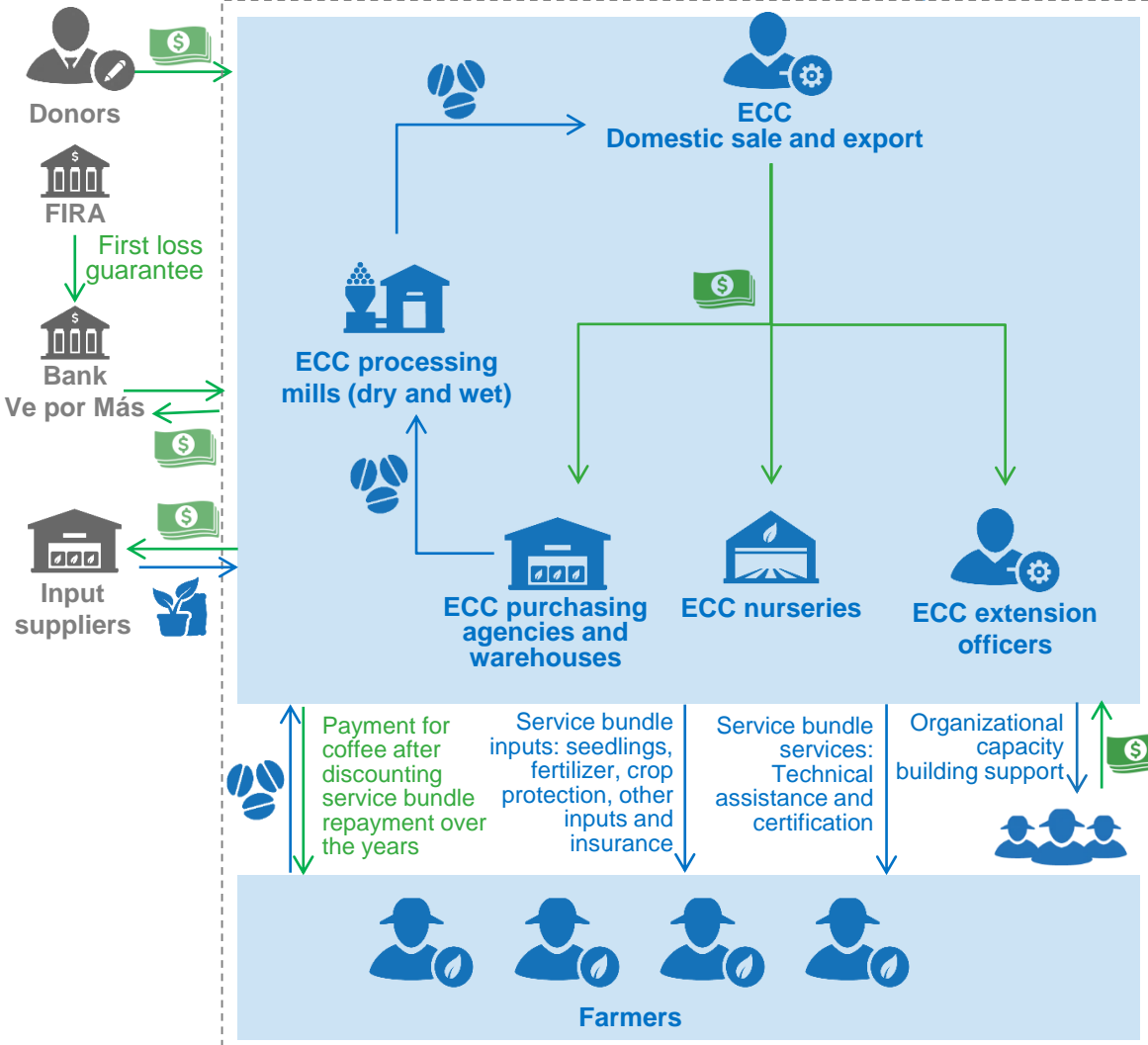
Strengthening sourcing capacity

Secured production and livelihoods

# Overview of SDM services and revenue flow

**Legend** → Flow of goods and services → Cash flow

*Scope of SDM analysis*

Donors

FIRA

First loss guarantee

Bank
Ve por Más

Input suppliers

**ECC
Domestic sale and export**

**ECC processing
mills (dry and wet)**

**ECC purchasing
agencies and
warehouses**

**ECC nurseries**

**ECC extension
officers**

Payment for coffee after discounting service bundle repayment over the years

Service bundle inputs: seedlings, fertilizer, crop protection, other inputs and insurance

Service bundle services: Technical assistance and certification

Organizational capacity building support

**Farmers**

## Enabling environment

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

### 1. Trading system
The coffee companies have well-developed marketing channels enabling farmers to easily reach markets. Farmers also successfully use co-ops as intermediaries.

### 2. Environmental (issues)
Ca 80% of coffee farms are old and need rejuvenation[2] and are therefore vulnerable to pests and diseases and have extremely low productivity.

### 3. Inputs & financing
Farmers underutilize fertilizer and crop protection due to lack of knowledge and access, in effect intensifying the low productivity and proneness of old trees.

### 4. Social (issues)
Chiapas and Oaxaca are the poorest provinces, and farmers rely on coffee for economic survival. Most farmers are indigenous with low access to education, and some do not speak Spanish.

### 5. Pricing & competitiveness
Coffee prices are highly volatile following the international market price. Between 2000 and 2008, prices to growers varied between 0.99 and 2.34 US\$/kg[3] making future farm decisions difficult for farmers.

Source: **1)** FAO (2006): http://www.fao.org/ag/AGP/AGPC/doc/Counprof/Mexico/Mexico.htm#1. **2)** USDA (2015). Ibid., p. 14. **3)** ICO (2017). Historical Data on the Global Coffee Trade. Available online: http://www.ico.org/new_historical.asp

# Services delivered and farmer segmentation

### Extension services
- ECC provides technical assistance through extension officers that are specialized in the regions' context.
- ECC constantly trains its personnel on state-of-the-art agronomical know-how and works with international coffee consultants to continuously provide producers with the most updated knowledge.

### Input provision
- ECC provides access to fertilizer and inputs to producers in and outside the SDM (only if they sell to ECC).
- ECC is not an ordinary input supplier but in its ability to buy inputs in bulk at lower costs, ECC offers producers access to high-quality fertilizer, crop protection and other agro-inputs at competitive prices.

### Financing and insurance
- In collaboration with FIRA and Banco Ve por Más, ECC offers a pre-financing model and credit scheme for rejuvenation, inputs and labor.
- ECC pre-finances farmers to facilitate a "grace period" of 2 years.
- The service bundles also include crop insurance.

### Rejuvenation
- ECC produces improved planting material using select varieties, such as Sarchimor, Parainema, Obatá, Anacafé 14, and Marsallesa.
- These plants are rust- and nematodes-resistant, more productive, and more adaptable to varying weather conditions.

### Verification & certification
- ECC offers support and technical assistance for 4C verification, and for certification such as Organic, Fairtrade, Rainforest, UTZ, and Starbucks' C.A.F.E. Practices.

### Organizational capacity building support
- ECC requires producers to be organized in groups.
- ECC supports producers organize and finances any fees related to the legal formation, when needed.
- This service is NOT included in the service bundle

## Farmers are segmented in this SDM:

**Segment 1**
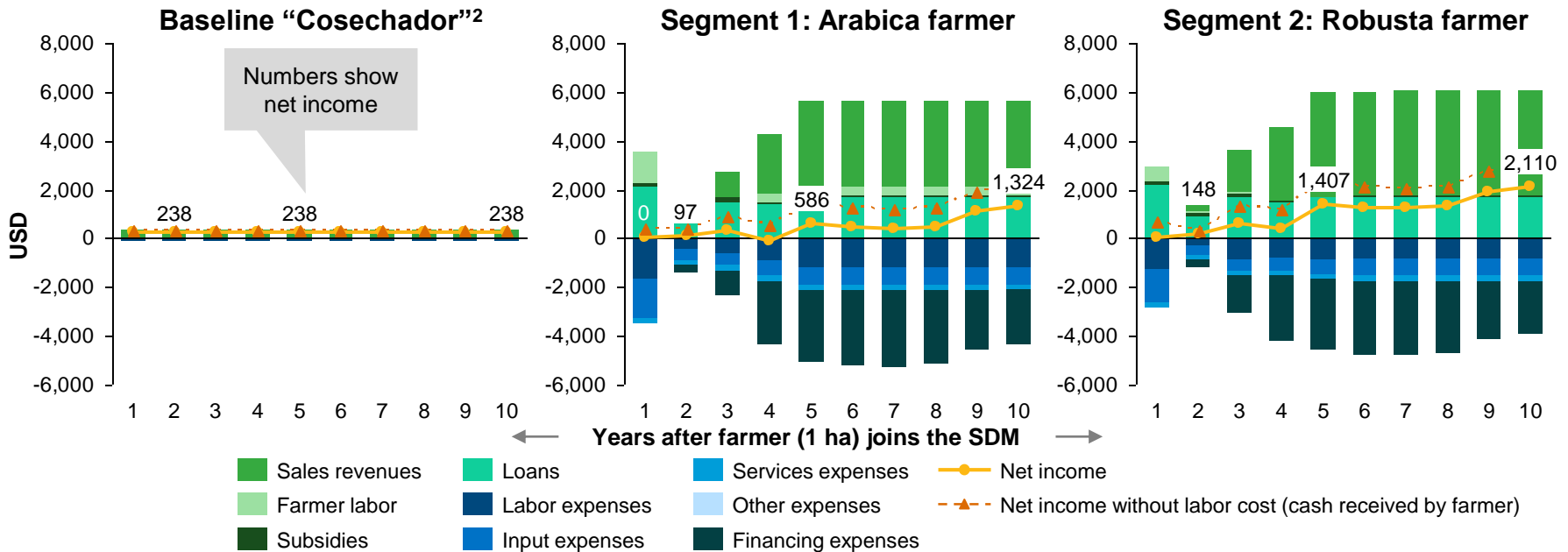Farmers are considered **segment 1** if they:
- Have the conditions to plant Arabica coffee
- Contract a service bundle for Arabica for at least 1 hectare
- Adopt best practices for Arabica coffee

**Segment 2**
Farmers are considered **segment 2** if they:
- Have the conditions to plant Robusta coffee
- Contract a service bundle for Robusta for at least 1 hectare
- Adopt best practices for Robusta coffee

# Farm P&Ls: overall impact[1]



**Baseline "Cosechador"[2]**

Numbers show net income

238   238   238

**Segment 1: Arabica farmer**

0   97   586   1,324

**Segment 2: Robusta farmer**

148   1,407   2,110

**Years after farmer (1 ha) joins the SDM**

USD

Legend:
- Sales revenues
- Farmer labor
- Subsidies
- Loans
- Labor expenses
- Input expenses
- Services expenses
- Other expenses
- Financing expenses
- Net income
- Net income without labor cost (cash received by farmer)

## Economic sustainability at farm level

*Por más café* helps farmers rejuvenate their farms with high-yielding varieties of coffee, while providing them with a service bundle designed to optimize productivity. Farmers have access to personalized technical assistance, and in return they commit to apply all the recommendations and learn to manage the land as a business. ECC considers labor as an expense (6.5 USD/day per farmer) in the SDM, so the effort of the farmer is considered as an active contribution. The design of the service bundle provides the farmer with all he/she needs to reach optimal productivity. In the future, ECC plans to include intercropping with maize, coconut or eucalyptus to strengthen the farmer business case by diversifying the production. In addition to this, ECC is looking for solutions such as mechanization to help farmers prepare the land and plant seedlings so the SDM is easier to scale.

## Main revenue drivers
- **Production:** coffee is the main revenue for the farmer. The price paid to farmer includes a premium for 4C or UTZ.
- **Loans**: as part of the service bundle, farmers have access to 3 different loans
- **Contributions/subsidies**: ECC provides a contribution for technical assistance and occasionally FIRA provides subsidies

## Main cost drivers
- **Inputs:** planting material, fertilizer and crop protection
- **Labor:** ECC considers labor as a cost, however labor is provided by the farmer himself.
- **Services**: farmers pay fees for technical assistance and insurance
- **Financing:** interest and loan repayment are the main cost drivers in the model.

[1] *Based on a combination of measured data, assumptions and projections. Figures will be checked periodically against actual data.*
[2] *The baseline farmer is an Arabica farmer. Most 'baseline' Robusta farmers grow a diverse range of crops (chili, maize, palm oil), and therefore it is difficult to provide an estimate.*

# Sensitivity analysis for different pricing and production scenarios for an average farmer (1.5 ha)

The price of coffee fluctuates heavily, and production is sensitive to extreme weather events such as droughts that can have a detrimental effect on yields, and thus net income of the farmer. The impact of changes in productivity and price on the net income of farmers is modelled below. The red boxes indicate the current situation for farmers.

**Net income of a Arabica farmer for different pricing and productivity scenarios after year 10, 1.5 ha**

**Price received (USD/kg)**

Change in price received

| Production (qq, kg) | | 1.75 | 1.90 | 2.05 | 2.20 | 2.35 |
|---|---|---|---|---|---|---|
| 10 | 575 | (1,535) | (1,405) | (1,276) | (1,147) | (1,017) |
| 20 | 1,150 | (29) | 230 | 489 | 748 | 1,006 |
| 30 | 1,725 | 1,478 | 1,866 | 2,254 | 2,642 | 3,030 |
| 40 | 2,300 | 2,984 | 3,501 | 4,019 | 4,536 | 5,054 |
| 50 | 2,875 | 4,490 | 5,137 | 5,784 | 6,431 | 7,077 |

**Net income of a Robusta farmer for different pricing and productivity scenarios after year 10, 1.5 ha**

**Price received (USD/kg)**

Change in price received

| Production (qq, kg) | | 0.87 | 0.97 | 1.07 | 1.17 | 1.27 |
|---|---|---|---|---|---|---|
| 20 | 1,600 | (974) | (734) | (494) | (254) | (14) |
| 30 | 2,400 | 65 | 425 | 785 | 1,145 | 1,505 |
| 40 | 3,200 | 1,105 | 1,585 | 2,065 | 2,545 | 3,025 |
| 50 | 4,000 | 2,145 | 2,745 | 3,345 | 3,945 | 4,545 |
| 60 | 4,800 | 3,185 | 3,905 | 4,625 | 5,345 | 6,065 |

## Observations

An average farmer has 1.5 ha of coffee. Under the current assumptions, an Arabica farmer's income is slightly higher than the minimum salary in Mexico of 1,742 USD annually. However if production drops 575 kg (10 quintals, roughly 30% of the current productivity projection), and the farm-gate price remains unchanged, the farmer income decreases substantially. In the case of Robusta farmers, if price and productivity drop, the income remains closer to the minimum salary, and remains relatively more attractive for farmers.

Even more importantly, the productivity increase in both of the packages allow farmers to close the gap to –or even surpass- the poverty line, which is 2,900 USD (Gallup 2013).

**Assumptions used in this analysis**

# SDM projected outcomes and main learning questions

| SDM objectives | Projected outcomes |
|---|---|
| **CORE OBJECTIVE** — **Secure sustainable production of coffee and the livelihoods of thousands of producers** | • Currently, more than 5,600 farmers have joined the program, and more farmers are looking to join.<br>• Participating farmers have already increased their productivity |
| **OBJECTIVES** — 1 **Farmers become agribusiness entrepreneurs by applying modern farming systems** | • Adoption of best practices has been successful due to a personalized follow-up. In 2018, the first farmers will reach their peak productivity and impact will be assessed. |
| 2 **Rejuvenate coffee farms in Mexico** | • ECC has developed the know-how and ability to implement temporary nurseries in strategic locations in order to reach farmers and rejuvenate 4,000 ha until now. |
| 3 **Improve smallholders organization, skills and capacities** | • Farmers in the program have improved their capacities in good agricultural practices and farm management. |
| 4 **Develop the capacities, labor and productive enterprises of women and vulnerable population** | • The program supports entrepreneurial, mostly indigenous farmers; some of them women. ECC aspires to develop women empowerment and youth development programs. |

| Learning question | SDM insights |
|---|---|
| How much of this SDM is currently subsidized? | In the 2014-2017 period, based on historic figures, only 3.7% of the costs have been subsidized by government (FIRA/SAGARPA) and private donors. |
| How can the subsidized portion be absorbed in a commercial manner? | The subsidized portion of the costs is currently absorbed in the commercial part of the SDM. Subsidies do not impact the cost of the SDM for ECC, as these are applied to the prices and fees paid by farmers, thus increasing their net income. |
| How can the increased competitiveness of ECC as a result of the SDM be quantified? | Too early to assess, but based on the current projections, it could be established that ECC will definitely be able to increase the volume and quality of coffee sourced. |

# Key insights

## Key drivers of success

- The **service bundle approach** has been a success factor for the correct implementation of the good agricultural practices, along with the right use of inputs.
- The **integration of the access to finance** in the service bundle has been key for the adoption of the SDM.
- The **knowledge of the diverse regions** and the trust that extension officers develop with the famers have also been very important.
- **Considering labor a cost, and paying in cash for part** of the establishment work has been relevant for farmers to understand their work in valuable and as assurance of implementation.

## Key factors in replication

- The financing construction is the most important factor to consider when replicating the model. **The financing structure allows farmers to rejuvenate low yielding farms without having to invest money upfront**.
- **The detailed design of the service bundle** has to a large extent contributed to the success of the program and should be considered when scaling or replicating the program.
- **Individualized technical assistance** has been key for the successful adoption of the practices. Extension officers provide personalized guidance and follow-up meetings to each farmer, building trust and enabling adoption and loyalty.

## Key risks

- **Despite ECCs** state-of-the-art technical knowledge of the planting material, **coffee rust and other diseases** are a key risk to farm  productivity and thus the farmer business case.
- **Low farmer loyalty to sell back their production** is also a potential risk in this SDM, if price fluctuations suddenly present a more attractive farm-gate price and other traders overbid ECC.
- **Rural migration and the lack of available labor force** are risks when scaling up the model, since farms are mostly managed by aging farmers that are used to having low yields.
- **The model is based on projections that considers high yielding material with the optimal conditions.** However, if the productivity is lower than expected, it will be difficult for farmers to pay back their loans in time.

## Opportunities for improvement

- In order to succeed, **internal capacity building** is needed so that locals and frontrunners in the communities **can become extension officers.**
- If ECC is able to **make the program more cost-efficient**, the price paid by farmers would adjust accordingly.
- ECC's planned **macro-nurseries could also operate commercially** and provide other farmers outside the SDM with planting materials.
- **Integrating diversification in the service bundle** would contribute to improving the farmer business case.
- **M&E needs to be formally established** to track progress and assess impact and risk accurately.
- **Service sequencing** and **farmer segmentation** based on adoption would mitigate risks of low adoption and loyalty**.**

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**DRIVING INNOVATIONS IN SMALLHOLDER ENGAGEMENT**

Insights in Service Delivery and Finance

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.