

Assessment of Haitian Coffee Value Chain

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**A participatory
assessment
of coffee
chain actors in
southern Haiti**



ASSESSMENT

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chain actors in southern Haiti

July 12–August 30, 2010

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ABBREVIATIONS AND ACRONYMS

AER: Average Equivalent Rate

AVSF: Agronomes et Vétérinaires Sans Frontières, or Agronomists and Veterinarians Without Borders (France), <http://www.avsf.org/>

CACVA: Cooperative Agricole Caféière de Vachon (Haiti)

CAPOSAC: Caisse Populaire Sainte Anne de Camp–Perrin (Haiti)

CATIE: Centro Agronómico Tropical de Investigación y Enseñanza, or Tropical Agronomic Center for Research and Teaching (Costa Rica), <http://www.catieac.cr/>

CIAT: Centro Internacional de Agricultura Tropical, or International Center for Tropical Agriculture (Colombia), <http://www.ciat.cgiar.org/>

CICDA: Centre International de Coopération pour le Développement Agricole (now AVSF)

CRS: Catholic Relief Services (USA), <http://www.crs.org/>

FACN: Fédération des Associations Caféières Natives, or Federation of Native Coffee Associations (Haiti)

GDP: Gross Domestic Product

IADB: Inter-American Development Bank (USA), <http://www.iadb.org/>

ICEF: L'Institut de Consultation, d'Évaluation et de Formation pour le Développement Agricole (Haiti)

ICO: International Coffee Organization (UK), <http://www.ico.org/>

INCAH: Institut National du Café d'Haïti (Haiti)

ORE: Organization for the Rehabilitation of the Environment (Haiti), <http://www.oreworld.org/>

PNPCH: Plateforme Nationale des Producteurs de Café d'Haïti, or National Platform of Coffee Growers of Haiti (Haiti), <http://pnpch.wordpress.com/>

RECOCARNO: Réseau des Coopératives Cafétères de la Région Nord, or Network of Northern Coffee-Growing Cooperatives (Haiti), <http://www.recocarno.com/>

RECOCAS: Réseau des Coopératives Cafétères du Sud, or Network of Southern Coffee-Growing Cooperatives (Haiti)

RFA: Rainforest Alliance certification

1 EXECUTIVE SUMMARY

This document is structured in three main parts. The first part consists of an overview of the current coffee market at the international and national level as well as a description of the importance of agriculture and coffee in Haiti. The next two parts are a product of interviews and workshops with almost all actors of the coffee chain in southern Haiti; these parts include a description of the coffee chain for the region and its actors, constraints analysis and recommendations.

Priority was given to nine objectives that are considered strategic leverage points for three different links in the chain. These objectives were prepared together with chain actors during constraints and solutions identification workshops. Each objective includes general activities that if implemented can facilitate compliance with them. Table 1 briefly shows the constraints and objectives of the coffee chain to the south of Haiti.

Table 1. Summary of chain constraints and strategic objectives to address them

LINKS IN THE CHAIN	CONSTRAINTS	STRATEGIC OBJECTIVES TO ADDRESS CONSTRAINTS
Production	No effective state policy toward coffee subsector	Define state policies toward coffee subsector
	Low access to capital	Improve access to capital for coffee producers
	Insufficient technical assistance	Make technical assistance available, efficient and appropriate
	High incidence of pests and diseases	Reduce incidence and spread of pests and diseases
	Soil erosion	Foster soil protection
Transformation	Scarce infrastructure and local skill available for processing washed coffee	Promote basic infrastructure for processing washed coffee
		Local capacity building (focus on maintaining quality)
		Foster the development of cupping labs in selected cooperatives
Commercialization	Weak business management skills in grassroots level	Strengthen regional networks (and co-ops) in organizational and business management skills with a strong market orientation

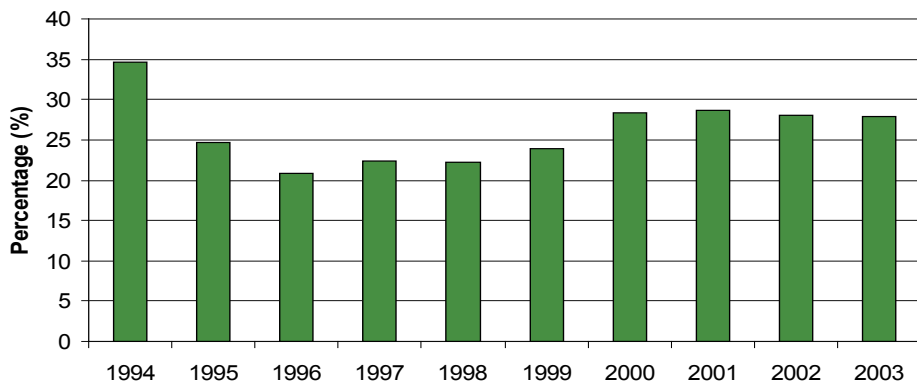
2 INTRODUCTION

CRS is in the process of developing strategies to support the recovery of Haiti, after the devastating earthquake of January 2010. As part of this work, CRS together with CIAT developed an assessment of the current state of Haitian coffee and mango chains. CIAT worked, together with CRS, partners and main chain actors during August 2010, to gather information in the field. The present document is the final report of the assessment of the southern Haitian coffee chain.

3 RELEVANCE OF COFFEE IN HAITI

Haiti is predominantly a rural country, with 53 percent of its population living in rural areas (The World Bank, 2010). Agriculture participation in total GDP has been decreasing steadily; nonetheless, the sector employs around 50 percent of the total labor force of the country, compared with 12 percent employed by the industrial sector.

Figure 1. Agricultural sector participation in total GDP



Source: The World Bank (2010).

Of the remaining forest coverage in Haiti, which corresponds to less than 2 percent of total land area, coffee farms represent about 50 percent of this coverage. Vegetation has been lost since the colonial period, when it was cleared to enlarge plantations (such as sugarcane and others). Since independence, deforestation has increased because of timber exploitation, land colonization and charcoal demand for cooking. This pattern of vegetation loss has resulted in accelerated erosion, decreased soil natural fertility, reduced water retention and waterways sedimentation. According to Arias, Brearly and Damais (2006), Haiti loses 10,000 to 15,000 fertile hectares per year due to erosion.

About 150,000 to 200,000 farm families obtain an important part of their revenues from coffee in the country. Varieties of Arabica (Typica and Borbon) are most commonly grown. More than 90 percent of coffee produced corresponds to natural (or dry-processed) coffee.

Due to cultivated varieties and specific microclimates, some authors suggest potential production areas for high-quality coffee, as shown below:

Table 2. Principal coffee growing areas and their potential to produce quality coffee

DEPARTMENT	MUNICIPALITIES
<p>High-quality coffee zones</p> <ul style="list-style-type: none"> • Grande Anse • South • Southeast • Centre • Artibonite 	<ul style="list-style-type: none"> • Beaumont, Roseaux, Jérémie • Tiburon, les Anglais, Rendel • Thiotte, Belle Anse, Marigot • Baptiste, Savanette • Les Cahos
<p>Average-quality coffee zones</p> <ul style="list-style-type: none"> • North • Northwest • Northeast • Nippes 	<ul style="list-style-type: none"> • Dondon, Plaisance, Pilate, Borgne, Grande rivière du nord, Bahon, Mermelade • Saint-Louis de Nord, Port de paix, Anse à Foleur • Sainte Suzanne, Valière, Carice, Mont Organisé • L'Asile, Baradères

Source: APROMA (1996) in Arias, Brearly and Damais (2006).

Current production is estimated to be between 350,000 to 450,000 bags (60 kg/bag), with yields of about 350 to 450 kilograms per hectare. Major threats to coffee production are old coffee plantations (almost 70 percent of all planted coffee corresponds to old stands); increasing incidence of the coffee borer (*Hypothenemus hampei*), coffee rust (*Hemileia vastatrix*) and root rotting; and low/null use of fertilizers.

Traditionally, coffee was marketed through the *voltigeur-spéculateur-exporter* system. Regional networks were created as alternative marketing structures in Haiti. There are five regional networks (FACN, RECOCARNO, COOPCAB, UCOCAB and FECOCAS) and two grassroots organizations (COOPACVOD and UPAB) that are currently exporting coffee, even though exported volumes are still low and a large fraction of coffee is still going to the local market as it does not meet export quality requirements.

Processing capacity in organizations/regional networks is frequently underutilized due to low volumes of available coffee.

Before the International Coffee Agreement breakdown in 1989,¹ coffee was one of the main agricultural products exported by Haiti. After this breakdown, the total surface under cultivation started to decrease as an effect of low and highly volatile prices.

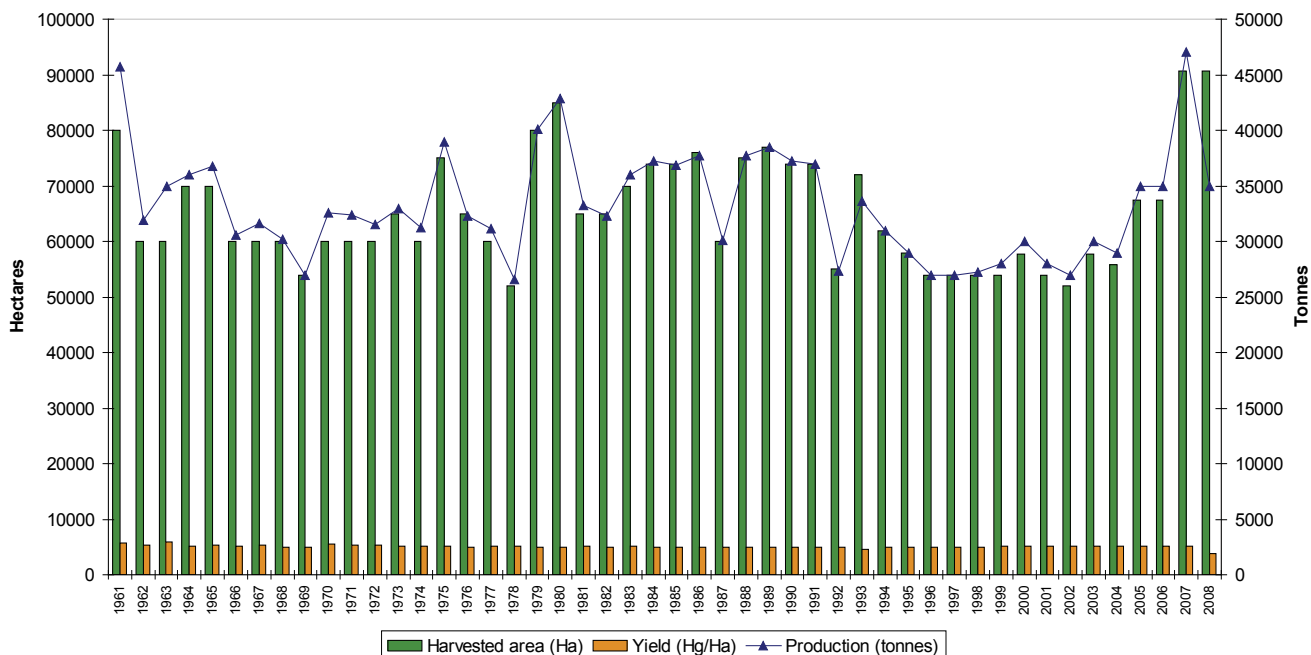
¹ This agreement established export quotas for coffee-producing countries, allowing them to have stabilized prices.

Table 3. Grassroots organizations and exporting regional networks

ORGANIZATION	REGION	MEMBERS	DONORS	TOP MARKET PRICE PER LB. (2004-5)
Réseau des coopératives cafetières de la région nord (RECOCARNO)	North, Northeast	5,000	Oxfam-GB, EU	European gourmet: 1.26 USD
Fédération des Associations Caféières Natives (FACN)	Southeast, Center, Artibonite, Grand'Anse	40,000	USAID/IICA, IADB, EU	Haitian Bleu: 3 USD (Japanese market)
Coopérative des Planteurs de Café de l'Arrondissement de Belle-Anse (COOPCAB)	Southeast	2,100	EU	Haitian Bleu: 2 USD (Japanese market)
CAB	Center	500	EU, International NGOs	European Fair Trade: 1.26 USD
Coopérative Agricole Vincent Oge De Dondon (COOPACVOD)	North	1,500		Organic: 1.39 USD
Domestic <i>café pilé</i>				0.8-0.9 USD

Source: Frisner and IADB (2005) and INCAH (2006) in Arias, Brearly and Damais (2006).

Figure 2. Coffee production

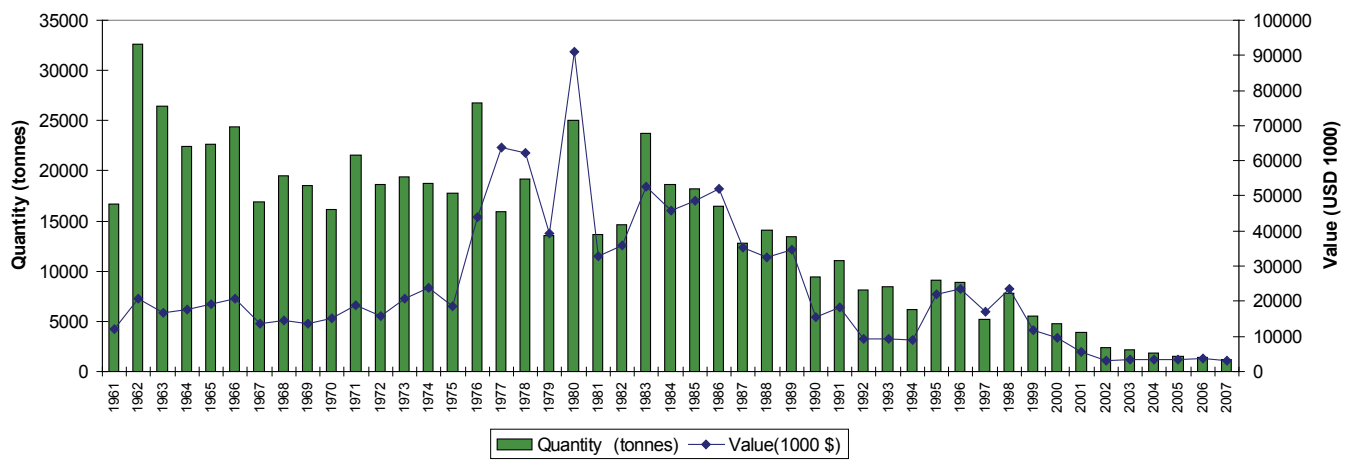


Source: FAO (2010).

As a strategy to overcome the effects of the breakdown, USAID, IADB and other donors supported the creation of Haitian Bleu coffee brand and FACN (Fédération des Associations Cafésières Natives). The latter owns the brand.

Current coffee exports are minimal compared to those before 1989. Internal demand has increased at a steady rate of 2 percent to 3 percent annually. In addition, since 1995 an important flow of coffee exports to the Dominican Republic—a flow that is currently estimated to be about 26 percent to 28 percent of total production—has emerged in the hands of informal actors whose transactions are unregistered (LARHEDO, 2005).

Figure 3. Haitian coffee exports



Source: FAO (2010).

Less than 5 percent of total production corresponds to washed coffee. Fifty-nine percent to 65 percent of total production is consumed locally, 10 percent to 12 percent is legally exported (whether as natural coffee or washed coffee) and 26 percent to 28 percent is exported informally to the Dominican Republic.

4 MARKETS

4.1 Coffee domestic market

Domestic coffee consumption has been increasing at an annual rate of 2 percent to 3 percent based on urban population growth. This local demand largely corresponds to milled coffee (*café pile*). According to Arias, Brearly and Damais (2006), this demand for *café pile* inhibits the production of higher-quality coffees, since the high-quality coffee export channel is constrained by financing considerations that require the sector to offer advance payments to producers while revenues are generated only when green coffee reaches the final market. On the other hand, the domestic market offers immediate payments upon the sale of coffee cherries.

4.2 International coffee market

Based on the latest data from the International Coffee Organization (ICO, 2010), total production for 2009/10 is estimated to be 123.1 million bags, which represents a decrease of 3.9 percent compared with the last harvest (2008/9). Decreases of about 10.3 percent and 6.3 percent are foreseen in South America and Africa, respectively. Production in Asia is increasing, and a significant 26 percent decrease is expected in El Salvador.

Exports in January 2010, compared with those in 2009, showed a decrease of 9.3 percent.

During 2008, global consumption continued steadily at 130 million coffee bags, compared with 128 million bags in 2007. This is largely due to internal consumption growth in exporting countries, especially Brazil and other emerging markets. For 2009, consumption was estimated to be 132 million bags. If the consumption trend continues for 2010, 134,000 bags can be expected.

As of August 2010, demand exceeds supply in the global coffee chain. This imbalance should lead to an increase in coffee prices by 35 percent in New York and by 22 percent in London.

5 COFFEE CHAIN ANALYSIS

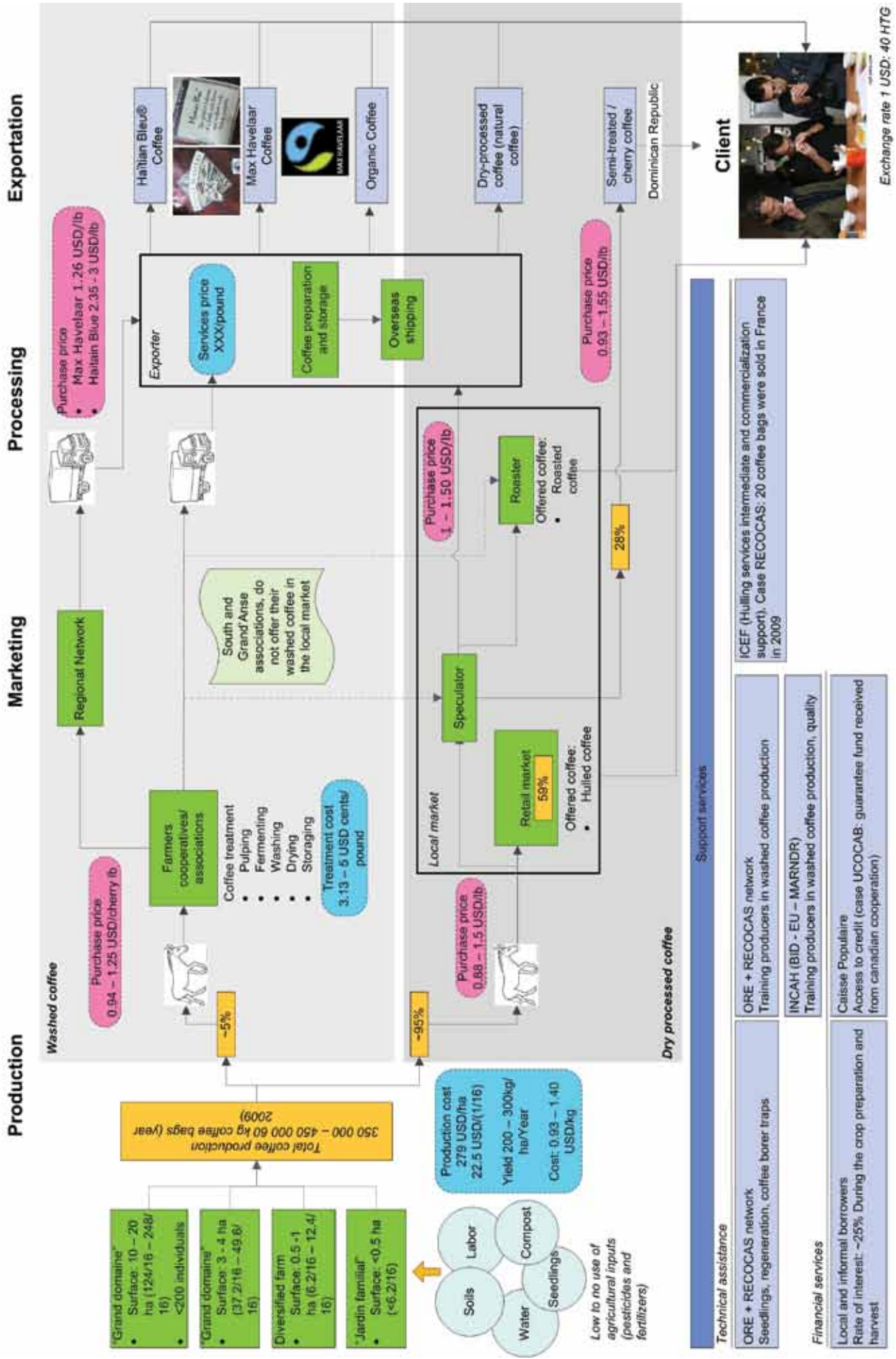
5.1 Coffee chain description

Coffee producers in Haiti can be divided into two large groups according to the size of their plantations' cropped surface. The first group, with a surface area of 5–20 hectares per farmer, is composed of less than 200 producers. They are located across the country. These types of farms are frequently named *Grand domaine*, or large estate. The second group, the biggest, is composed of producers with cropped areas of fewer than 3 hectares per farmer. The common factor for these two groups is the low to null use of agricultural inputs such as fertilizers and pesticides. Total production was about 21,000 metric tons (MT) to 27,000 metric tons (350,000 to 450,000 60-kg bags) in 2009.

Some farmers' cooperatives have nurseries to grow coffee plants and obtain seedlings. Women work filling bags with soil and planting seeds on them, men gather and transport soil to the nursery and prepare the terrain where bags will be placed. Men and women water the new seedlings together. Men also prepare the plot where plants will be definitely established and maintain the crop year by year. Women, as well as men, participate in the harvest. During the harvest, green and red coffee beans are picked, hampering the quality of the final coffee.

Low yields in Haiti (200 to 300 kg/ha/year) are caused by old trees and the high incidence of pest and disease that result in part from poor fertilization, inappropriate farming practices and inadequate new planting materials. Costs of production are 186 to 420 USD per hectare, about 0.47–0.7 USD per pound, according to INCAH (personal interview).

Figure 4 Coffee chain in southern Haiti



There are two coffee processing methods in Haiti. The *dry process* is the most common. (Almost 95 percent of all coffee in Haiti is processed with this method.) Coffee beans are spread over a concrete surface or fibers (e.g., bags or sacks) after harvest and are left to dry in the sun for a period of three to four months. When the coffee is dry, it is milled by rudimentary means (e.g., mortar and pestle) at a farm, thereby producing *café pilé*. Women are usually in charge of this task. Alternatively, the coffee may be milled in facilities that are equipped to produce *natural coffee*. Almost 95 percent of Haiti's coffee production uses the dry process. The *wet process* is used by very few farmers' organizations in the south. The process requires specialized equipment and a qualified workforce as well as clients willing to recognize the quality of this type of product. The following steps produce washed coffee:

- *Pulping*. The coffee beans' skin and part of the pulp are removed by mechanical means.
- *Fermentation*. The pulp remainder is eliminated by immersing the beans in clean water for several hours. (Time varies according to environmental conditions.)
- *Washing*. Final impurities are removed with water.

Wet processing is conducted at cooperatives' facilities (not on individual farm premises), but few organizations in the south own infrastructure to produce washed coffee. (Exceptions include some organizations from Beaumont, KAPKAB in Baradères, CACVA in Cavaillon and COCAM in Cavaillon.) Men are in charge of pulping and fermentation. Women are in charge of drying. Men lift coffee bags and take them to trucks that will transport coffee to Tombe Gâteau (Southeast department) or Port-au-Prince, where the milling process occurs.

Café pilé and natural coffee reach the local market, where 59 percent of this coffee is commercialized through the retail channel. Coffee also reaches speculators who may sell coffee to exporters, local roasters or agents along the border with the Dominican Republic. Twenty-eight percent of the total coffee production is exported to the Dominican Republic as unregistered exports. (This behavior is accentuated in coffee-growing areas along the border, such as Baptiste.)

Washed coffee is mainly commercialized through regional networks (second-level organizations that gather grassroots organizations) as a means to collect significant volumes of the product. In the south, washed coffee is commercialized with FACN, RECOCAS and UCOCAB. Cooperatives in other regions in the country sell washed coffee directly to exporters or local roasters. Before FACN's bankruptcy, coffee was collected by each organization, transported to Tombe Gâteau (Southeast) where it was milled, and then taken to Port-au-Prince to be sent abroad. However, since current FACN operations were reduced, some cooperatives send their coffee directly to Port-au-Prince, where exporters offer the service of milling and oversee shipping. At dry-milling stations (whether those of FACN or exporters), coffee is hand sorted exclusively by women.

FACN classifies coffee into three categories: big beans for Haitian Bleu (a registered brand that is commercialized through exclusive distributors

abroad, reaching prices of 3 USD/lb.), average-size beans for Max Havelaar (which has fair trade certification for Europe) and rejected beans that stay in the local market.

An aspect to highlight is the role of women in commercialization of coffee, which includes selling coffee in the local market, selling natural coffee to middlemen or associations, and usually, buying coffee at the associations.

Identified support services in this chain are technical assistance, financial services, and agricultural suppliers. Technical assistance is provided by ORE and RECOCAS (principally, through the MarChE project) targeting seedlings production, plantations renewal, dissemination of coffee borer traps and training for farmers on washed coffee production. Other service providers under this same category are INCAH and ICEF; however, their work is more focused in the Center, West and Southeast Departments.

Financial services are mainly offered by informal lenders. There are different banks, microfinance institutions and credit unions in the region; however, none of them offers an exclusive product adapted for agriculture or coffee.

Agricultural inputs suppliers based in Les Cayes (Gerly Distribution) offer coffee seeds (Arabica) and pesticides to control coffee rust and the coffee borer, but most farmers are not interested in perennials (like coffee). They prefer short-term crops (legumes and vegetables).

5.2 Coffee chain actors

Coffee chain actors include agricultural input providers, coffee farmers, cooperatives and regional networks, middlemen, local roasters, exporters and service providers.

5.2.1 Agricultural input providers

These actors sell agricultural inputs, such as pesticides, fertilizers, seeds and tools. Gerly Distribution (located in Les Cayes, Port-au-Prince and Port-à-Piment), Darbouco (located in Port-au-Prince) and Agrotechnique (located in Port-au-Prince) offer technical support to their clients. Highly specialized support for coffee farmers is not available.

Currently, farmers dedicated to growing short-term crops (e.g., vegetables, beans and rice) are considered by input providers to be their most interesting market segment, due to these farmers' consistent demand for inputs. Coffee is widely recognized as a low to null input crop in Haiti, thus reducing the interest of input suppliers in this sector. In interviews, Gerly Distribution mentioned some pesticides that are in demand to control coffee borer (lambda cihalotrin, malathion, profenofos) and coffee rust (mancozeb, benomyl).

Normally, pesticides come from the Dominican Republic as well as from Venezuela and China, among other countries. During some periods, fertilizers are directly imported and subsidized by the Haitian government.

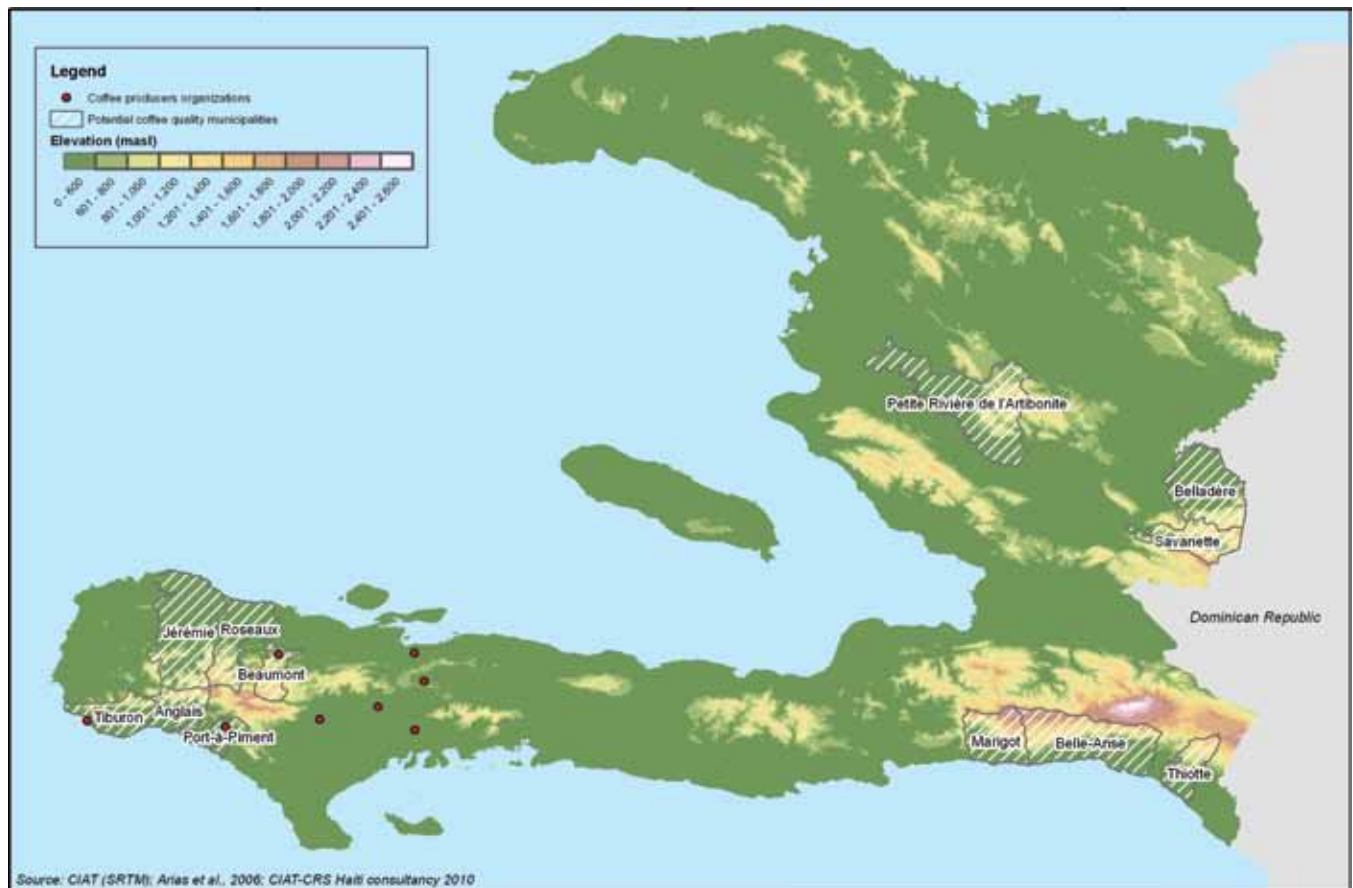
5.2.2 Coffee farmers

Southwestern Haiti includes the Southern and Grand-Anse Departments. Land tenure in the country is highly atomized, and southwestern departments are not an exception to this trend; more than 60 percent of southwestern land plots are smaller than 2 hectares.

Coffee-producing areas in the south are mostly concentrated in the Grand-Anse Department. By 1995, the Grand-Anse, South and North Departments included 47 percent of the total national coffee plantations.

Six municipalities in the southwest are potential regions to produce high-quality coffee (see Table 1): Beaumont, Roseaux, Jérémie, Tiburon, Les Anglais, Port-à-Piment.

Figure 5. Potential high-quality coffee municipalities in Haiti



Red points represent populated places for each coffee organization included in the assessment. These points do not represent the actual locations of these co-ops.

Table 4 Land distribution by plot size

PLOT SIZE	ARTIBONITE (%)	CENTER (%)	GRAND-ANSE (%)	NORTH (%)	NORTHEAST (%)	NORTHWEST (%)	WEST (%)	SOUTH (%)	SOUTHEAST (%)	TOTAL (%)
0-0.5 ha	22.5	12.7	14.0	42.0	23.4	16.3	18.5	27.6	19.6	21.5
0.5-1 ha	32.7	25.8	27.5	28.4	33.0	26.5	31.1	28.2	25.4	28.6
1-2 ha	26.6	32.8	28.4	18.0	25.9	31.6	24.7	27.8	30.3	27.6
2-4 ha	11.2	19.7	13.1	7.6	11.7	15.9	15.7	9.8	17.3	13.7
4-7 ha	2.7	5.2	10.2	2.0	3.6	5.9	4.9	4.4	4.7	4.9
7-10 ha	1.7	2.0	3.2	1.0	2.5	2.1	2.4	1.9	1.3	2.0
10-20 ha	1.5	1.7	2.7	0.8	0.0	1.5	1.8	0.2	0.4	1.2
> 20 ha	1.0	0.2	0.9	0.3	0.0	0.2	0.9	0.2	0.9	0.6

Source: HLCS (2001) in Sullivan et al. (2010).

Table 5 Coffee crop area per department in 1995

DEPARTMENT	COFFEE SURFACE (%)
Artibonite	7.4
West	10.0
Northwest	6.1
Centre	7.8
Northeast	4.3
South	12.1
North	15.2
Grande-Anse	21.2
Southeast	16.0

Source: CIRAD (1999) in Damais, Bellande and Duret (2005).

Coffee crops are usually grown together with other food crops (e.g., plantain, yam, taro, citrus, avocado) as well as tree species in random spatial arrangements. Coffee is mostly grown in diversified farms (*ferme diversifiée*) ranging from 0.5 to 1 hectare and in *jardins familiaux* (plots occupying less than 1 ha of coffee bushes around farmers' houses).

Practices such as pruning and crop regeneration are not widespread among farmers. Neither are the use of agricultural inputs nor the use of strict control or monitoring of pests (particularly the coffee borer—*Hypothenemus hampei*). Farmers located close to pulping facilities use composted coffee pulp as fertilizer in their farms.

Coffee farmers usually obtain working capital from local informal lenders (usually local wealthy families) to cover harvest costs. Capital required to establish a hectare of coffee is estimated to be about 375 to 688 USD; meanwhile, maintaining an established coffee crop requires about 279 USD. The main cost of production is labor for cleaning and harvesting (INCAH and REBO interview, August 2010). Recently, due to restricted access to capital, farmers in the region have not been able to contract harvesters, resulting in failure to harvest the entire crop. Farmers frequently offer coffee with different steps of treatment through two distribution channels. Coffee cherries are sold to cooperatives/associations where wet process facilities are available while natural coffee and *café pilé* are sold in local markets. For transportation to cooperative and local markets, farmers rely on donkeys and humans.

5.2.3 Cooperatives and regional networks

Cooperatives buy coffee cherries directly from farmers. Cooperatives then process and sell dried coffee either to an exporter, or they send it abroad through a regional network. Only a small percentage of coffee follows this path—some 5 percent of total production—while the rest is marketed as natural coffee via local market channels.

Generally, coffee farmers deliver their produce in the cooperative, and they receive a price close to the local market price. After the coffee is sold and delivered abroad, they receive a price premium based on the price differential at final sale. However, after various negative experiences, an important segment of Haitian coffee growers no longer trust this process. For example, coffee associations mentioned during interviews that farmers who contributed to the 2008–9 harvest, marketed through FACN, had not been paid as of the time of our visit in August 2010.

The following cooperatives are currently operational: KATI (Tiburon), KAPKAM (Cavailon), CCR (Rendel), KAPKAB (Baradères), COCAM (Cavailon), CACEM, CACVA (Camp-Perrin), KOKAP (Plaisance), KAPKAK (Plaisance), KAPKAD (Dory), APK2 (Beaumont), AMNMD (Beaumont), FNDPS (Beaumont), ODEB (Beaumont).

Table 6. Organizations in potential high-quality coffee municipalities

ORGANIZATION	MUNICIPALITY	WASHED-COFFEE FACILITIES
KATI	Tiburon	No
CCR	Rendel (Port-à-Piment)	No
APK2	Beaumont	Not available
AMNMD	Beaumont	Not available
FNDPS	Beaumont	Not available
ODEB	Beaumont	Yes
CACVA	Camp Perrin	Yes
KAPKAB	Baradères	Yes
COCAM	Cavaillon	No

Only three co-ops in the south are currently producing washed coffee: CACVA (Camp Perrin), KAPKAB (Baradères) and COCAM (Cavaillon). CACVA and KAPKAB have facilities to produce washed coffee. COCAM has pulping facilities and a drying patio, but the organization ferments and washes coffee in plastic containers.

CACVA sells coffee through FACN and UCOCAB (L'Union des coopératives caféières de Belladère), which export coffee to Japan. CACVA also owns a plot where they produce plantains and fruits for sale. While the cooperative processing capacity is assessed to be 60,000 pounds, CACVA produced only a fraction of this capacity, 1,263 pounds, during the 2008–9 coffee harvest.

Table 7. Current and potential washed coffee production in the region

COOPERATIVE	WASHED COFFEE PRODUCED IN 2008–9 (LBS.)	POTENTIAL PRODUCTION (LBS.)
KAPKAB	1,920	200,000
CCR	0	10,500
KAPKAD	0	15,000
CATI	0	40,000
KAPKAK	0	Not available
KAPKAM	0	15,000
CACVA	1,263	60,000
COCAM	0	Not available
KOKAP	0	44,000
CACEM	0	2,000
APK2	N/A	N/A
AMNMD	N/A	N/A
FNDPS	N/A	N/A
ODEB	N/A	N/A
TOTAL	3,183	386,500

Source: Henri Sargelin, personal interview (RECOCAS).

RECOCAS (Réseau des Coopératives Caféières du Sud) is a regional network that encompasses 10 coffee producers' organizations in the region, for

a total of 1,910 members. This network is a member of the Plateforme Nationale des Producteurs de Café d'Haïti (PNCPH). RECOCAS has started pilot marketing exercises, with support of ICEF, to directly export their coffee like other regional networks in the country. In 2010 they sold fewer than 20 bags (60 kg/bag) in France.

5.2.4 Middlemen

In the traditional coffee chain, there are two types of intermediaries: upper-level (speculators) and lower-level (*voltigeurs*, *sous-marins* and *madam sarahs*). However, in the southwestern region these actors are changing their roles and modes of action. In the past, and still in some areas, speculators had a network of lower-level intermediaries that directly bought coffee from farmers; they had a direct relationship with exporters and could give farmers credit during nonharvest seasons. At present, *voltigeurs* and *madam sarahs* are found in the local market. They do not offer credit anymore, and they store coffee until reaching an acceptable volume to sell to speculators who then resell to local roasters and private exporters or act as informal exporters by sending coffee to the Dominican Republic.

5.2.5 Local coffee roasters

Local coffee roasters commonly buy coffee from speculators and occasionally from farmers' associations. Small and medium enterprises are involved in coffee roasting and grinding.

REBO is one of the local coffee roasters, located in Port-au-Prince, that mostly sells this type of product in the domestic market, though some sales abroad have been made. They offer four different types of roasted coffee:

- *Café deluxe*: roasted natural coffee
- *Café classique*: roasted natural coffee (small beans)
- *Café gourmet espresso*: roasted wet-process coffee
- *Café li pi bon*: roasted coffee (smallest beans)

5.2.6 Exporters

After experiencing profound changes since the 1970s, when there were 20 private exporters, the coffee chain currently has four private exporters including REBO and WIENER. These two exporters are the only ones marketing natural and washed coffee abroad.

REBO offers the services of coffee dehusking and packaging to farmers' organizations. Separately, REBO distributes imported food products in the country.

Regional networks (FACN, RECOCARNO, COOPCAB, UCOCAB and FECOCAS) and grassroots organizations (COOPACVOD and UPAB) also export. Volumes shipped account for about 1 percent of total coffee exports.

The Fédération des Associations Caféières Natives (FACN) brings together

25 farmers' organizations operating in the Southeast, North and Grand'Anse Departments. This federation receives parchment coffee from its associates, dehusks the coffee, sorts it, blends it and exports it directly to overseas clients as fair trade and Haitian Bleu coffee (LARHEDO, 2005; Lenaghan, 2005). The Haitian Bleu business model follows this plan:

- Roasters act as exclusive distributors. They set up contracts to buy directly from FACN on a multiyear basis at fixed prices.
- The FACN does not sell Haitian Bleu to other roasters in the same geographical area of any exclusive distributor.
- Exclusive distributors do not resell green Haitian Bleu coffee.

Table 8. Haitian Bleu exclusive distributors

COUNTRY	DISTRIBUTOR
United States	Barnie's Coffee & Tea Company, Orlando, Florida
	Coffee Bean International, Portland, Oregon
	Coffee Masters, Spring Grove, Illinois
	Heritage Coffee Company, Juneau, Alaska
Denmark	Coffee Masters-AQUA VELOX Aps, Skovlunde
France	Cafés Malongo, Nice
Germany	Kaffee-Compagnie Gourmetkaffees weltweit Rosterei, Mössingen
Japan	Hamaya Company, Ltd.
Haiti	Compagnie Haitienne de Café, Port-au-Prince

Source: Lenaghan (2006).

The best coffee is sold as Haitian Bleu (2 to 3 USD per pound) and second-category coffee is sold as Max Haavelar (fair trade coffee) in Europe.

Since its creation, FACN has faced several managerial and institutional issues. FACN's current debt is estimated to be about 920,000 USD. Nowadays, Haitian Bleu exports are made through other actors (such as REBO) with FACN certification and approval.

5.2.7 Support services

5.2.7.1 Financial service providers

The main activity of these providers is to grant credit to organized producer associations and individual farmers to enable them to produce coffee. Few providers in the region have special lines of credit targeting the agricultural sector. Others offer diverse services that are not financially related. The rate of interest in the country was about 30 percent in 2010.

Lending to the agriculture sector in Haiti is commonly perceived as a high-risk activity, due to climatic events (hurricanes, storms, floods) and, therefore, crop failures.

Caisse Populaire (CAPOSAC). Located in Camp-Perrin, CAPOSAC was founded in 1949 as an initiative of a Canadian priest. The organization currently has assets worth 240 million gourdes (approximately 6 million USD) and offers services to almost 13,000 people. Among their services are currency exchange, current and savings accounts, money transfers, credits and check cashing.

CAPOSAC offers four lines of credit: consumption, commercial, construction and agriculture. There are several advantages of an agricultural credit: After repaying the whole credit, the client receives 20 percent of the total paid interests at a differential rate. The grace period before repayment is flexible and can be extended by a month, though the length depends on the type of crop grown, perennial or annual. The minimum credit loan is 2,500 gourdes (about 62.50 USD) up to 750,000 gourdes (about 18,750 USD).

Fonkoze. This organization was founded in Haiti in 1994 and has 41 offices in Haiti (including Les Cayes). It is recognized as Haiti's Alternative Bank for the Organized Poor and is the largest microfinance institution offering services to the rural poor in the country. They offer small loans, saving products, currency exchanges and direct deposits from overseas. They also offer nonfinancial services such as basic literacy instruction and basic life skills training (including training for business skills and sexual and reproductive health).

Fonkoze has four main credit programs:

- Chemen Lavi Miyò, an 18-month program to strengthen productive assets and asset management skills. It targets ultrapoor people. After 18 months, program participants are expected to move into the Small Credit program or Solidarity credit.
- TiKredi, the Small Credit program, is a six month lending program. It offers loans of 25 to 75 USD.
- Kredi solidè, Solidarity credit, is a type of credit for groups of 5 to 10 individuals. Loans are 75 to 1,300 USD.
- Business Development, an individual credit program. The average credit for this program is 1,685 USD.

UNIBANK. UNIBANK does not offer an exclusive line of credit for agriculture; instead, anyone interested in farming could use an ordinary loan with a 30 percent to 32 percent annual equivalent rate with a maximum repayment time of 36 months. The procedure to obtain a credit involves filling out a form and presenting the project portfolio and a letter of credit request. All decisions regarding credits are made in Port-au-Prince by a credit committee, and this might take about a month.

Table 9. Average loan per program

LOAN PROGRAM	AVERAGE LOAN SIZE (USD) IN 2009
Chemen Lavi Miyò	No credit
TiKredi	42
Kredi solidè	221
Business Development	1,685

Source: Fonkoze (2009).

5.2.7.2 Nonfinancial service providers

Organization for the Rehabilitation of the Environment (ORE). ORE is a nonprofit local organization located at Camp Perrin. ORE's team, made up of technical, management and support staff, includes up to 30 people, depending on the current activities and projects the team is implementing. ORE promotes high-value fruit tree grafting as a mean to improve livelihoods and protect the environment. ORE also has extensive experience in propagating quality-improved seeds, soil conservation techniques and farmers' training as well.

In the South and Grand-Anse Departments, ORE has supported coffee associations in the implementation of coffee nurseries; given technical support to produce washed coffee and to implement coffee borer management techniques (such as installing traps and producing wasps for biological control); and helped associations build capacity in management and business.

l'Institut de Consultation, d'Evaluation et de Formation pour le Développement Agricole (ICEF). ICEF was founded in 1996. It is located in Port-au-Prince and works with coffee producers. Currently led by a former Haitian minister of agriculture, ICEF coaches coffee associations in topics such as production and commercialization. ICEF has worked with RECOCAS and supported them in a coffee exporting exercise, as mentioned previously. ICEF also offers a coffee dehusking service (as an intermediary).

Agronomes & Vétérinaires sans frontières (AVSF). Founded in 2004 as a merging of Vétérinaires sans frontières (VSF) and the Centre International de Coopération pour le Développement Agricole (CICDA), AVSF manages projects related to agricultural development around the world. They also raise funds and offer technical assistance according to the expertise required by the project. In Haiti, they have worked with coffee associations in Thiotte (Southeast Department) and Baptiste (Bas Plateau Central).

Oxfam-Italy (formerly, UCODEP). Oxfam-Italy is currently starting a three-year project on coffee in the South and Grand-Anse Departments. It will focus on the following areas:

- Strengthening farmers' cooperatives through legal framework, statutes, accounting and transparency.

- Fostering advocacy activities of the Plateforme Nationale des Producteurs de Café d'Haïti (PNPCH).
- Renovating coffee plantations to produce about 800,000 coffee seedlings and 100,000 tree species seedlings.
- Improving coffee quality through equipment and processing facilities (eight in total). A dehusking facility and a quality lab are planned for Les Cayes. Fair trade certifications are currently being explored by Oxfam as an alternative way to add value to the coffee.
- Increasing commercialization through international market training (quality, certifications requirements).
- Promoting diversification at the farm level as a means to achieve food security.

Beneficiaries of this project will be members and associations involved in RECOCAS.

l'Institut National du Café d'Haïti (INCAH). INCAH is a national institution established in 2003. It is in charge of overseeing coffee production in Haiti and coordinating projects promoting the coffee chain in the country. INCAH is partially funded by the central government and by projects from the European Union and IADB.

INCAH's functions include the following:

- Formulate national policy, strategies and action plans for the coffee subsector.
- Draft and upgrade coffee legislation as needed.
- Promote, regulate and coordinate actions on behalf of the coffee chain.
- Manage the National Coffee Fund (not yet operational).
- Keep records of coffee chain actors (exporters, roasters, speculators, producers).
- Provide statistical data and economic analyses of the coffee subsector.
- Provide training and disseminate technical data to chain actors.

Plateforme Nationale des Producteurs de Café d'Haïti (PNPCH). The PNPCH is composed of six regional networks: RECOCANO, northern regional network; RECOCARNO, northeastern regional network; APCAB and COOPCAB, southeastern regional network; UCOCAB, center regional network; RECOCAS, southern regional network; FACN and COHIMRU, Grand'Anse network.

PNPCH's principal objective is to organize advocacy activities in favor of the coffee chain, mainly for coffee producers and their organizations.

6 CONSTRAINTS ANALYSES

Constraints were identified and validated together with all chain actors for each link of the chain (production, transformation and commercialization). Steps followed were: (1) participative chain diagram construction, (2) semistructured interviews with chain actors, (3) chain diagram validation, (4) identification (brainstorming) of probable constraints, (5) participative constraints prioritization per link of the chain, (6) selection of main constraints and (7) cause and effect analysis for each main constraint using problem trees (see annexes).

6.1 Production link constraints

6.1.1 No effective state policy toward coffee subsector

Efforts made by the Haitian government to enable a more competitive environment for coffee production remain insufficient due to the low levels of resources (financial, infrastructural, staff) invested and lack of a clear joint competitiveness agenda among government, NGO and farmers' associations and among regional networks, cooperation agencies, speculators, exporters and other chain actors.

6.1.2 Low access to capital

Rates of interest offered for coffee production are high compared with the low productivity of farms. Taking loans under this circumstance leads to low profitability rates for farmers. A lack of guaranteed funds for agriculture in the region (particularly for coffee) is reflected in the low amount of existing credit lines. This lack of cash flow at the farm level reduces the capacity of farmers to hire coffee pickers during harvest, thus leaving unharvested coffee beans on the bushes and providing a clear incentive to sell coffee as soon as possible to the highest bidder, usually within the local market, which can offer prices of 35–60 gourdes per pound. Meanwhile co-ops may immediately offer prices of 37.50–50 gourdes per pound plus a price premium that could take more than a month to be paid.

6.1.3 Insufficient technical assistance

At present, the technical assistance offered by governmental institutions and local NGOs does not cover all coffee producers. There have been projects from the government and international cooperation to identify and control the coffee borer in different coffee-producing regions; however, because of current financing mechanisms, technical assistance strategies are not consistently transferring knowledge to producers. Technical assistance is supported through individual projects, and there is no orientation to create a sustainable local service.

6.1.4 High incidence of pests and diseases

A high incidence of pests such as the coffee borer (*Hypothenemus hampei*) and diseases such as coffee rust (*Hemileia vastatrix*) and root rot have strong negative effects on yields and coffee quality. The prevalence of these problems is a result of an absence of crop management technology packages that are adapted to different coffee producing areas, low technical assistance coverage, use of low-quality seeds, and climatic hazards (such as hurricanes and floods).

6.1.5 Soil erosion

Poor soil management techniques have promoted continuous soil erosion, reflected in depleted soil nutrition, poor development of coffee crops and low yields.

6.2 Transformation link constraints

6.2.1 Inadequate infrastructure for processing washed coffee

Inadequate infrastructure and skills to maintain coffee quality from harvest (farm) through processing (pulping, fermentation, washing, drying and storage), results in coffee being sold in lower-value channels. Farmers therefore receive less revenue. Few organizations have facilities where coffee can be wet processed (exceptions are CACVA, KAPKAB, COCAM and associations in Beaumont).

6.2.2 Disincentives for producing washed coffee

The price for exportable washed coffee is higher than the price for natural coffee. But organizations with facilities for wet processing do not often make punctual payments for delivered harvests, and in some cases, they do not make any payments at all. (The 2008–9 harvest still has not been paid for as of August 2010.) This situation has discouraged farmers from delivering their coffee to processing associations and encouraged them to produce natural coffee for the local market, where payment is smaller but delivered on time.

Along the border of the Dominican Republic, the offered prices for coffee cherries or wet pulped coffee are more attractive than the regular price for washed coffee, and payments are received more quickly than they are for dry-washed coffee.

Weak business and organizational management leads to low negotiation skills at the moment of coffee sales and a low responsiveness to threats and opportunities.

7 RECOMMENDATIONS

Plantation renewal will allow growers to introduce more productive plants and boost coffee production in stands younger than 10 years old. Strategies that encourage farmers to implement such renewals in *jardins familiaux* and diversified farms are the promotion of associated local tree species and crops focused on food security (e.g., beans, plantains, corn, tree fruits, legumes and vegetables), soil conservation, charcoal production (energy forests) and multipurpose forages. We suggest that plantation renewal should be gradual. Plots could be divided into four areas. During the first year, one of the plots could be completely cleaned and coffee seedlings could be planted on it together with associated crops. In the second plot, coffee trees could be cut back. Coffee trees in the third plot could be pruned, and trees could remain untouched in the fourth plot.

We recommend adapting and evaluating crop technology packages per region. For the case of the coffee borer, we recommend establishing the elevation range in which coffee is economically profitable. Lowlands usually have a high incidence of this pest, and the cost of production, including pest management, may exceed incomes gained from the sale of coffee. After economically profitable regions have been identified, farmers and associations should work together to implement practices to reduce pest and disease incidence. These practices should include weed control and weekly removal of ripened, over-ripened and infested coffee beans from the tree. Growers should also pick beans from soil.

We suggest that local schools are needed in order to train qualified personnel from the region. Curricula should include in-field training, internships and specializations. This could be achieved through alliances between national universities and international agricultural schools (e.g., CATIE). Field trips to successful smallholders who produce quality coffee under similar environmental conditions (e.g., smallholders in the Dominican Republic) may contribute as a training activity as well as a way to benchmark production systems at the farm level. In an enabled environment, technical assistants can start small businesses to offer their services to producers. It will be necessary for co-ops to determine financial contributions needed to at least partially cover the cost of technical assistance.

Desirable objectives for production include ensuring an increase of at least 20 percent of current coffee production and a growth of at least 15 percent of the current price. This will allow a producer with only one third of a hectare to earn an income close to 50 percent the current per capita GDP. Associated crops (beans, fruits, tubers) will increase food security for coffee farmers and their families, and surplus could be exchanged or sold in the local market to also increase livelihood security.

We recommend that CRS should select areas with the highest potential to produce high-quality coffee (especially areas with less incidence of pests and diseases). CRS will need to perform a thorough analysis of each of these productive clusters to determine current available volumes, number of producers, genera, cropped area and elevation, among other variables that are related to quality and quantity potential. Dry coffee samples from these zones should be taken for physical quality assessment as well as for cupping, with the aim of obtaining coffee profiles for each geographic area. Together with the private sector (including allied roasters abroad), CRS should identify the current quality of plantations' coffee and the specific aspects in the coffee production process (e.g., production, harvest, coffee processing, drying) that should be improved to obtain an acceptable quality for specialty markets. A step to ensure inclusion, transparency, development of co-innovation and adoption of technologies is to involve different chain actors (roasters, importers, certifiers, grassroots, CRS, others) at the outset of each project.

Institutions such as Oxfam–Italy can support the implementation of quality improvement activities in the south; by the time of our August 2010 visit, they were identifying which organizations have potential for producing washed coffee. ICEF is well known in Haiti for its work with coffee grassroots organizations in providing technical assistance, in strengthening local production and processing, and in supporting washed coffee commercialization. Developing and improving the infrastructure for washed coffee (infrastructure for storing, depulping, fermenting, washing and drying) and evaluating current practices for producing natural coffee are necessary to produce interesting flavors that will add value.

Building local capacities should enable co-op personnel to maintain coffee quality in processes such as fermentation and coffee drying. Training could be offered by national and international experts. During this phase, process

standardization is also necessary to allow coffee to reach its potential. This will require the support of a cupping laboratory.

Fostering local cupping laboratories in those areas with the highest potential for quality and quantity will enable cooperatives to control their own quality and give feedback through technical assistance to each farmer. Cupping labs will need to train at least four local cuppers with support from external roasters who are involved in the process.

Certifications may have a role in training grassroots participants during the first stages of implementation. Fair trade could play a fundamental role during implementation, as fair trade requires associations to be strengthened in associative, business and organizational ways that enable fair trade importers to assist during negotiations and sales. Fair trade also fosters networking between the participants of a negotiation. Additionally, Rainforest Alliance could promote conservation in coffee-growing regions, thereby improving coffee quality, fostering edible tree plants, improving soil fertility and increasing long-term biodiversity. Fair trade certification requires hard work in organizational aspects. Organic certification could be an immediate alternative for adding value due to farms' current low/null use of pesticides; however, organizations must meet other requirements such as internal audits (which might not be sustainable in the long run, as the high effort demanded for renewing annual certifications may not always match received price premiums).

Before implementing any certification process, a market for these products must be targeted. This is reachable by different strategies, such as working together with interested roasters, ensuring that clients support the total or a fraction of the certification costs and negotiating each part through a contract of sale.

Business development and organizational strengthening should start with farmers' organizations. Focus should be given to leadership development, roles definition, orientation to markets, financial skills and participatory markets.

GLOSSARY

Café pile Natural coffee dehusked by rudimentary means (e.g., mortar and pestle).

Coffee borer A coffee pest (*Hypothenemus hampei*) that feeds and reproduces in fruits of coffee plants. Affected fruits receive lower prices in the market due to the direct injury to quality.

Coffee cherry Ripened coffee fruit that is ready for harvest. Colors may vary from yellow to red, depending on the variety. Also called coffee berry, coffee cherry is composed of (1) the bean (or endosperm), which is edible after roasting; (2) the parchment, which protects the bean; and (3) the pulp and skin, which are the most external layers of the fruit.

Coffee rust A coffee disease caused by a fungus (*Hemileia vastatrix*). It is considered to be the most destructive disease of coffee. In 1870–80, it destroyed all coffee crops in southeast Asia.

Dehusking (milling) The process of removing the coffee parchment from the bean.

Ferme diversifiée (diversified farm) Productive units ranging from 0.5 to 1 hectare in which coffee is grown together with other food crops (e.g., plantain, yam, taro, citrus and avocado).

Grand domaine Large estate, with about 5 to 20 hectares.

Green coffee Dried coffee without skin or parchment.

Haitian Bleu Specialty coffee brand, developed with support of USAID and IABD and owned by FACN.

Hulled coffee Coffee without parchment.

Jardin familial A Haitian spatial arrangement in which a few coffee bushes grow around the farmer's house. The bushes occupy less than 1 hectare and produce small volumes of the bean.

Madam sarah Female retailers who sell different basic products in the local market. They may sell *café pilé* as retailers and in some cases may gather large volumes of the product and act as a wholesaler.

Natural coffee Coffee produced through the dry (or natural) method, in which harvested cherries are directly dried under the sun for about four weeks.

Price premium The difference between the final price given and the coffee stock price. The price premium is assigned according to the coffee quality, origin and/or certifications.

Root rot Plant disease that largely affects coffee plantations in Haiti. Root rot and coffee rust are the main diseases of this crop.

Sous-marin See *voltigeur*.

Spéculateur An upper-level middleman who gathers significant volumes of coffee to sell directly to local roasters or coffee sellers along the border.

Torréfacteur A local coffee roaster.

Voltigeur A low-level middleman, acting as retailer in the local market.

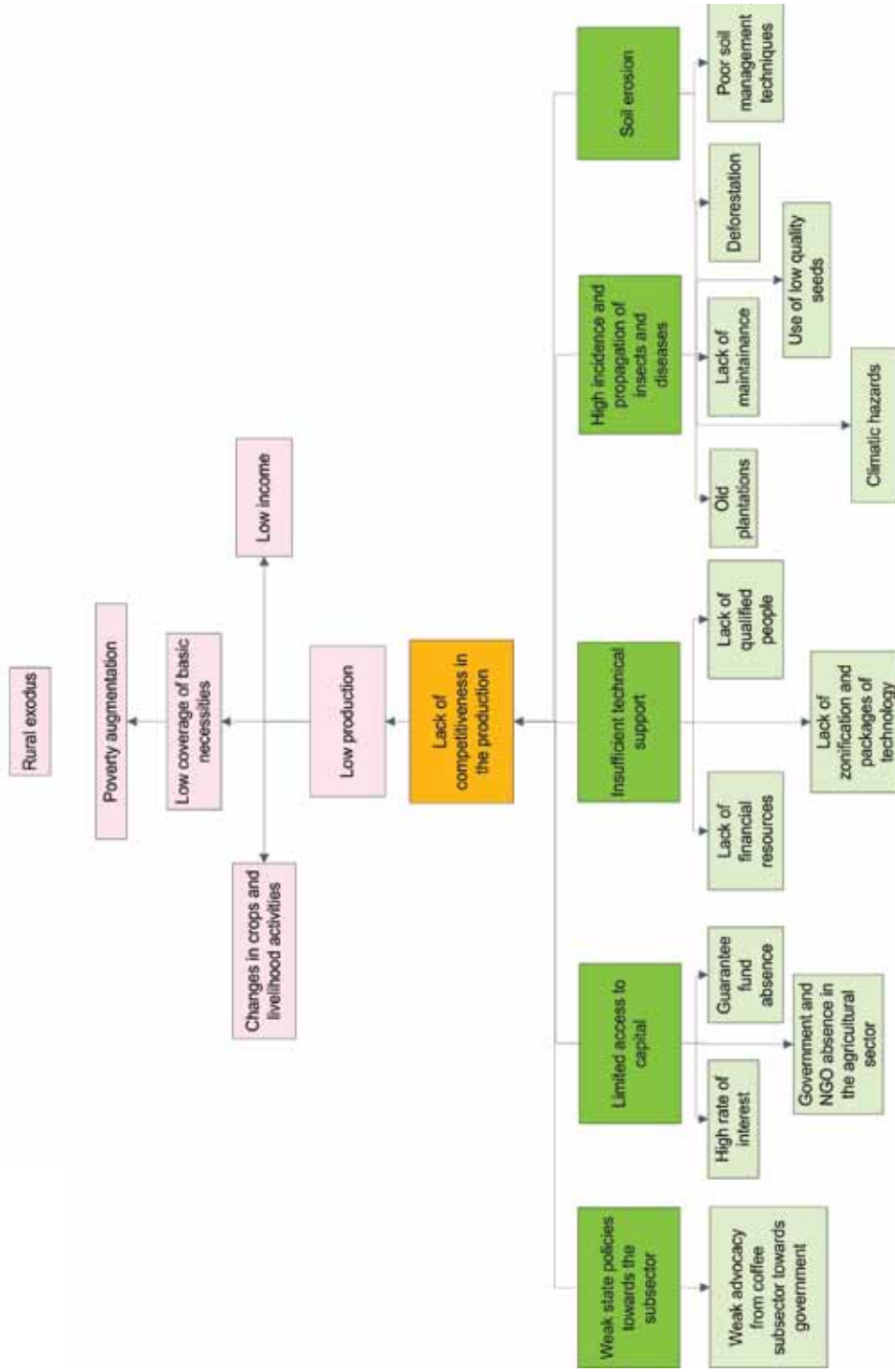
Washed coffee Coffee produced through the wet (or washed) method.

Wet process Coffee processing method that requires specific equipment and clean water availability in order to remove the pulp and skin from each coffee bean.

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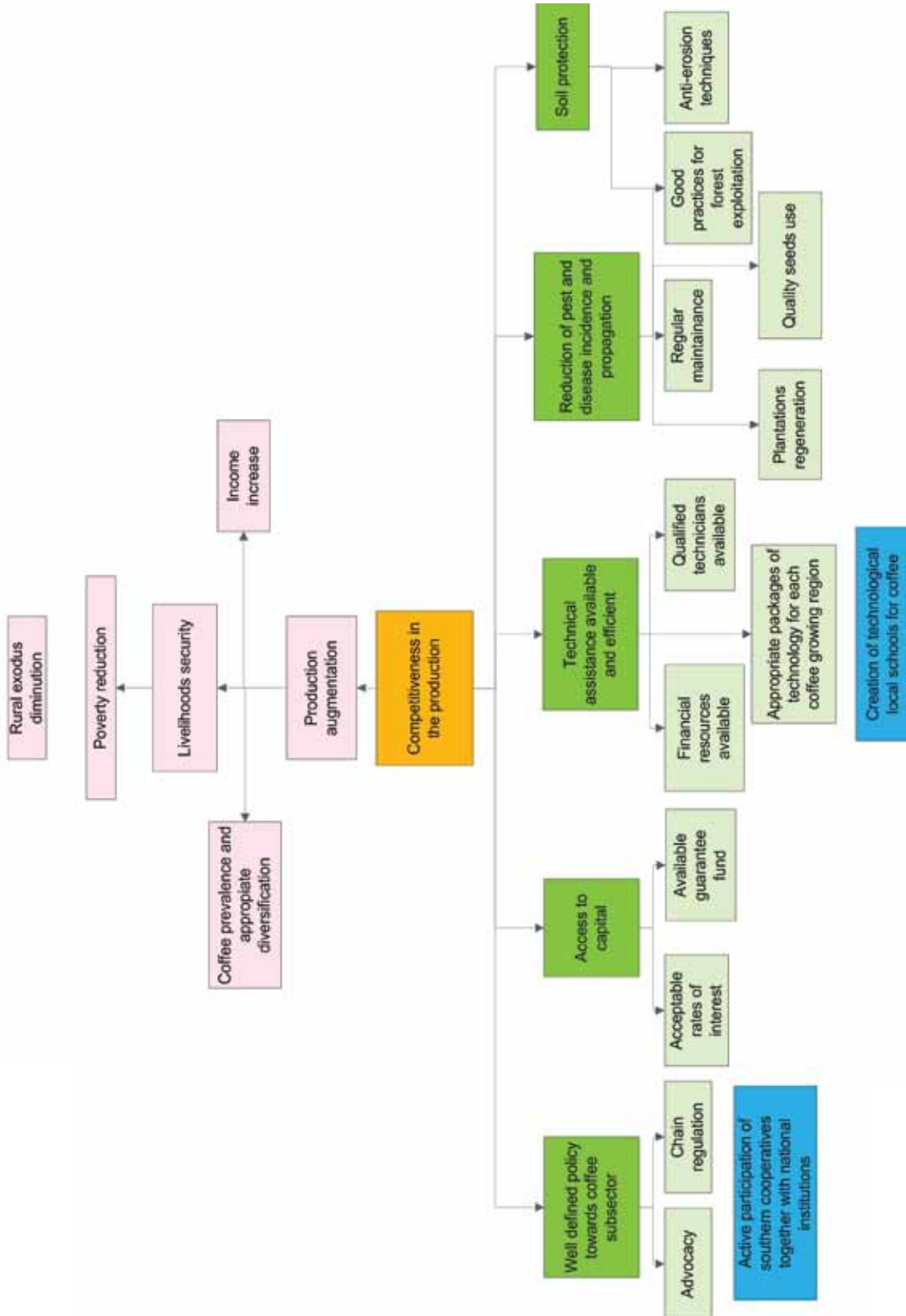
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Effects



Causes

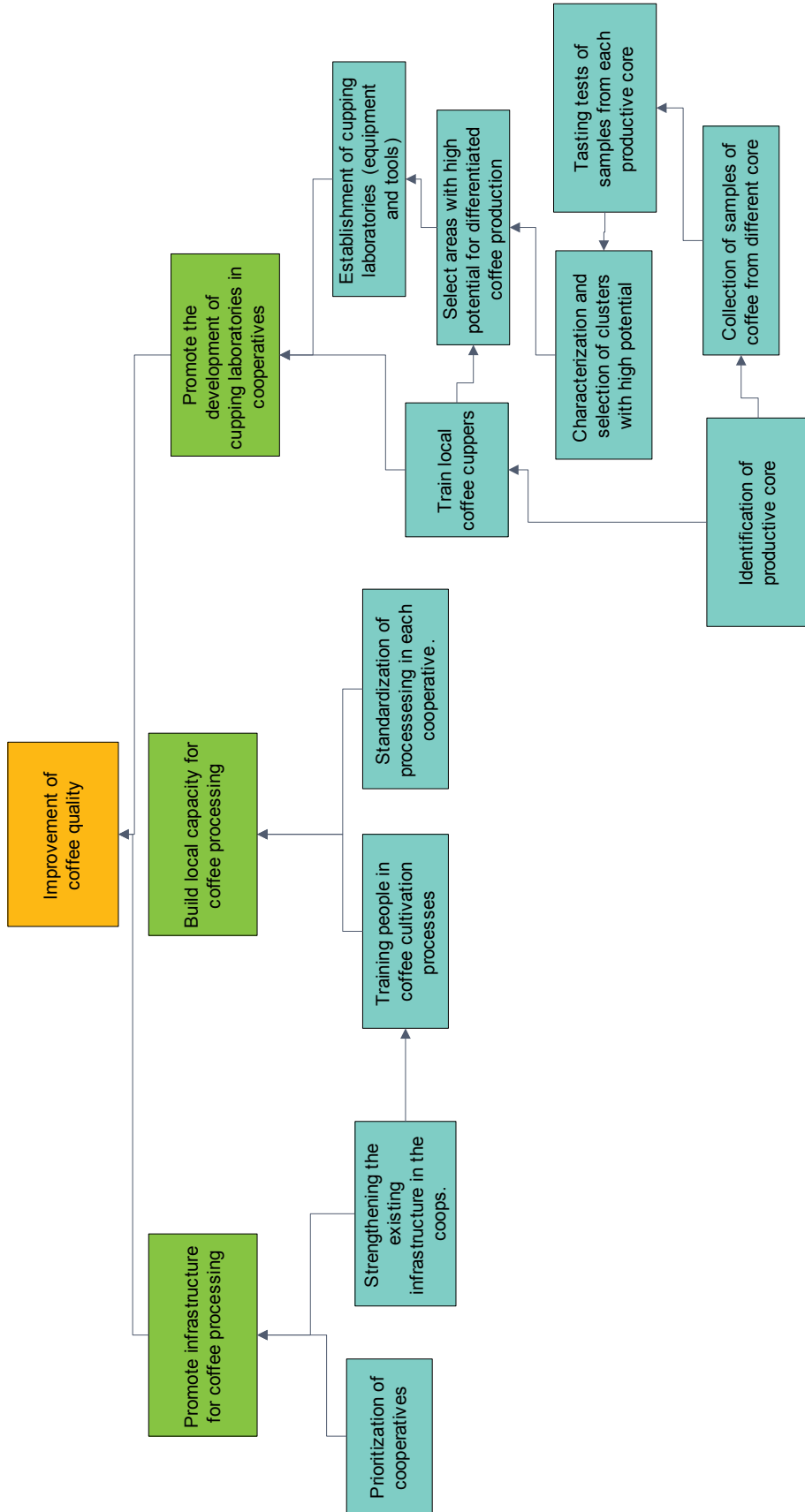
Products



Activities

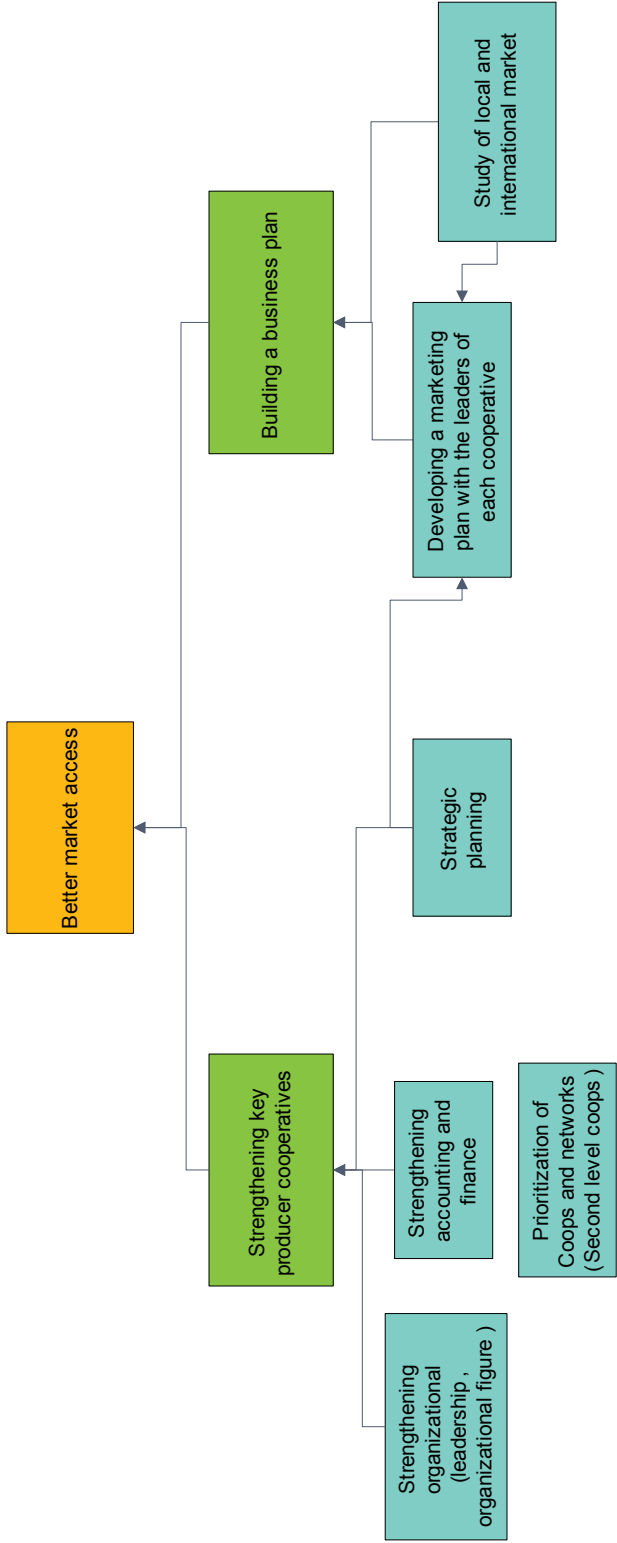
ANNEX 3

Postharvest solution tree



ANNEX 4

Marketing solution tree



Activities

ANNEX 5

Conclusions obtained with workshops participants

Recommended strategic objectives for the production link

Define policies toward the coffee subsector

- Encourage regional actors—networks (e.g., RECOCAS), associations and technical services, among others—to participate in meetings/congresses/symposia with actors in the country to define a joint agenda.
- Define a joint agenda with coffee institutions and regional networks to promote chain regulation.
- Negotiate a joint agenda with the government.

Improve access to capital for coffee producers

- Foster revolving funds with mixed funding that includes internal resources (dues from members) and external resources (government and international cooperation, among other sources) with well-defined internal rules.
- Negotiate a guarantee fund with institutions, regional networks, donors, financial institutions and the State for the coffee subsector.

Make technical assistance available, efficient and appropriate

- Define financial contribution from cooperative/association members to partially cover technical assistance costs.
- Obtain financial support from NGOs, donors and the State to cover the balance of technical assistance cost.
- Increase availability of trained personnel to provide technical assistance.
- Evaluate technology packages that are focused on management of the coffee borer, coffee rust and root rot with an orientation toward product quality according to different environmental niches.

Reduce incidence and spread of pests and diseases

- Train producers in crop-related topics through technical assistance (extension service).
- Evaluate current levels of coffee borer infestation in coffee-producing zones.
- Establish regular maintenance of coffee plots through the implementation of farm management practices that are adapted to local conditions.
- Engage in coffee plantation renewal.
- Select varieties that are tolerant or resistant to the coffee borer, coffee rust and root rot.

Foster soil protection

- Educate farmers about the importance of tree management.
- Promote native species that regenerate the soil and that also offer other benefits to farmers (e.g., high-value fruit trees that are adapted to coffee niches, energy forests, multipurpose forage species, soil protection and livestock feeding).

- Produce and plant seedlings to reforest main basins.
- Disseminate best planting practices (e.g., contour planting) among producers.

Recommendations

The following recommendations are not directly reflected in the problem tree; still, they are included here because of their importance in supporting value generation and distribution along the chain.

Production

This study agrees with the five objectives proposed by chain actors. It also provides contributions to each one of the objectives:

- Policies objective: Foster activities that enable the participation of grassroots organizations and regional networks from the southwest, as presented in INCAH's and PNPCH's plans.
- Technical assistance objective: Create local schools to train qualified personnel (through in-field training, internships and specialization). This could be achieved through alliances between national universities and international agricultural schools (e.g., CATIE). Field trips to successful smallholders who produce quality coffee under similar environmental conditions (e.g., smallholders in the Dominican Republic), may contribute as a training activity as well as a way to benchmark production systems at the farm level.
- Low incidence of pests and diseases objective: Adapt and evaluate technology packages per region. In the case of the coffee borer, we should establish the altitude above which coffee is economically profitable. (Lowlands usually have a high incidence of this pest, and the cost of production, including pest management, may exceed incomes gained from the sale of coffee.)

Strategic objectives for the transformation link

Objectives of this link should be assessed in alliance with Oxfam–Italy given their current focus on improving coffee quality. This topic could also be explored with one or more international coffee roasters. Their vision may provide guidance to support this process as well as help to build trust-based relationships.

Promote basic infrastructure for storage, depulping, fermentation, washing and drying of coffee, according to production clusters:

- Prioritize major coffee production areas in the region with quality coffee potential.
- Strengthen and renew existing infrastructure owned by producers' co-ops.
- Prioritize these co-ops/associations for business and organizational strengthening that is focused on marketing.

Encourage local capacity building to maintain quality in fermentation and drying:

- Train co-op personnel in charge of coffee processing. This training should be managed by a national or international expert.
- With the support of a cupping laboratory, determine times and optimal movements to allow coffee to express its potential (i.e., coffee process standardization).

Foster the development of cupping laboratories in co-ops (or regional networks) in strategic zones:

- Characterize productive clusters (e.g., available volume, number of producers, genera, area under cultivation and altitude above sea level, among other variables that are related to potential quality and quantity).
- Collect coffee samples from different productive clusters and start cupping tests for each of these samples.
- Characterize coffee potential for each geographic zone according to its cupping profile.

Prioritize one to two zones that have strong potential to produce high-quality coffee, and foster one to two labs for quality identification in these zones:

- Train at least four local cuppers.

Strategic objectives for the commercialization link

Strengthen regional networks' organizational and business management skills, and promote a strong market orientation:

- Prioritize associations and regional networks.
- Engage in organizational strengthening (leadership, duties, rights, organizational hierarchy and strategic planning).
- Develop a market plan with members of each organization.
- Strengthen networks' bookkeeping and financial skills.

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