



Rainforest Alliance Certification in Coffee Production:
An analysis of Costs and Revenues in Latin America 2010-11



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Abstract

Producers' perceptions of costs and benefits play an important role in the motivation to become and stay certified. This study of the short-term, economic costs of the investments, in light of the price premiums paid for Rainforest Alliance Certified™ coffee, indicates how compliance costs may be favoring or hindering growth. It reveals a complex cost-benefit relationship in which a variety of contextual factors largely determine the profitability of certification. Data collected on the farms and at farmer group administration level indicated that implementation costs do not constitute an entry barrier and do yield positive returns, provided adequate guidance is given on cost-efficient technology, farm productivity and satisfactory price premiums are paid. To account for the diversity of influencing factors and the context-dependence of the cost-benefit relationship, a tool was developed that allows for testing of different possible solutions for each of the regions included in the study.

1. Introduction

The question “. . . but how much does it cost a farmer to get certified?” is a frequently-asked one, but one that is not easy to answer. The costs of certification depend on the size of the farm to be certified, initial conditions on the farm—such as the extent and frequency of use of agrochemicals and the number of contracted persons—and other factors. Despite the complexity of calculating this cost, knowing and understanding it is key, and motivated the initiation of data collection related to compliance costs.

The resulting study identifies which benefits being Rainforest Alliance certified brings, according to certified producers, the costs incurred by producers and group administrators to comply with the requirements established by the SAN Standard,³ and an analysis of how the relationship between the two can be favoring or hindering certification growth in certain regions.

The objective of this study was not to provide an impact analysis. This means that long-term benefits that have been researched with positive results in other studies, such as increased productivity and improved biodiversity, have not been included here. This study focuses exclusively on the *compliance* cost issue.

The study was conducted in five countries (Brazil, Colombia, Guatemala, El Salvador and Peru), in all countries, including Brazil the study only included Arabica coffee. It has its origins in the *Sustainable Landscapes Program* of the *Sustainable Agriculture Division* of the Rainforest Alliance

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³ To earn certification, a farm must meet the standards of the Sustainable Agriculture Network (SAN).

Office in Costa Rica. The Study was funded by the Biodiversity Conservation in Coffee Project, funded by UNDP through GEF, in the five aforementioned countries.

The study addresses the need to identify—in a quick and inexpensive manner—the possible bottlenecks for growth in certified producer numbers, in terms of the incentives and disincentives—especially *economic* ones—perceived by producers in the short-term. In other words, it seeks to pinpoint with greater accuracy the cost-related obstacles that may cause farmers to not enter, or to opt out of, certification. It also seeks to identify possible solutions for improving the cost-benefit relationship of the SAN standard's implementation on farms.

In order to reach the necessary understanding regarding costs and benefits, the following sub-objectives of the study are specified: (1) Determine *cost-reduction needs and possibilities* in SAN Standard implementation-related costs, and (2) Determine *benefit-improving needs and possibilities*, as well as the need and possibility to improve coffee producers' *perceptions of benefits* associated with Rainforest Alliance Certification.

The remainder of this **study** is structured in four sections. The data collection methodology is presented in section 2. Section 3 presents results in four parts: a characterization of the interviewed farmers, the perceived benefit of certification, and the costs of certification both at farm and administrator level. This section concludes with the presentation of some scenarios where compliance costs are related to price premium. Overall conclusions are presented in section 4.

2. Methodology

The data for this study were collected in August and September 2010, through surveys with certified farmers and interviews with farmer group administrators.⁴ Geographically, the study covers **seventeen regions** in the aforementioned **five countries** of Latin America.

At farm level 197 surveys of Rainforest Alliance Certified coffee producers were included in the analysis. The farmer survey collected information on farm data profile, farmers' perceived on-farm and market benefits and costs, including any eventual financial costs of the investments.

The group administrator interview collected information on the percentages of coffee produced that is sold with a price premium,⁵ as well as on understanding the variability and complexity of the price premium distribution between the administrator and the producer. The producers generally do not know how much of their coffee is ultimately sold for the certified price, and few know what percentage of the price they receive corresponds to recognition for being certified.

It was not possible to conduct the administrator survey among all the groups represented in the producer survey. An effort was made to include the greatest possible representation of groups and

⁴ All the farmers interviewed for this study were participating in a group certification scheme.

⁵ The RA certification system does not include a price premium, in practice market forces mean that producers are able to achieve one.

regions in the sample of administrators. The sample consists of fifteen group administrators, who represent fifteen groups in eight regions. For data analysis purposes, in the cases for which the information from the administrator survey is not available, the regional or national average of the group location, from the administrator survey results, is used.

3. Results

3.2 Profile of the respondents

The sample is heterogeneous in terms of the profiles of the production units (farms). The differences are particularly distinct between countries: the average farm size in Brazil is 239 hectares, yet on average only 61% of the surface area is used for coffee production. On the other extreme is Guatemala, where the average farm is 3 hectares, of which 91% is under coffee production.

The heterogeneity in farm size makes it necessary to analyze cost data per kilogram (kg) of green coffee and per hectare (ha). This is the only way to be able to make comparative between-region analyses of the investment costs. Table 1 characterizes the farms included in the study. The data are shown by regional averages.

There are significant differences in productivity level among farmers, which can be as high as the 2,808 kg of green coffee per ha reported in Brazil, or as low as the 374 kg per ha reported in Cundinamarca in Colombia. This is key, as at the end of the study the total annual compliance costs per ha will be divided by the total amount of kg per ha, to obtain the compliance cost per kg.

Table 1. Basic characteristics of the farms

Countries	Regions	N	Farm Size	Ha. of Coffee	% of farm with coffee	Density (Plants per Ha.)	Total Production 2010 (Kgs)	Production per Ha 2010 (Kilograms per Ha)
Brazil	<i>Minas Gerais</i>	6	165.5	121	74%	3,671	302,000	2,808
	<i>Minas Gerais (Cerrado)</i>	21	236.1	130	60%	3,546	335,383	2,405
	<i>Minas Gerais (Sul de Minas)</i>	6	323.8	158.4	53%	3,259	332,200	1,812
Colombia	<i>Cundinamarca</i>	11	5.3	2.8	68%	4,706	1,085	374
	<i>Huila</i>	40	7.3	3.4	72%	5,031	2,667	756
El Salvador	<i>San Miguel</i>	3	92.3	75.6	77%	3,689	145,440	1,997
	<i>Sonsonate</i>	2	26.5	25.4	95%	6,400	31,815	1,202
	<i>La Libertad</i>	11	158.5	125	83%	2,991	120,649	1,060
	<i>Usulután</i>	2	47.7	46.2	97%	4,000	56,813	1,229
	<i>Santa Ana</i>	4	36.3	35.8	99%	3,250	74,993	2,351
	<i>Ahuachapán</i>	25	17	16.6	98%	2,564	36,196	2,199
	<i>San Vicente</i>	5	105.5	61.1	64%	2,520	100,899	1,702
Guatemala	<i>Huehuetenango</i>	21	2.9	2.6	91%	4,949	3,999	1,475
Peru	<i>Pasco</i>	3	34.9	18.7	53%	4,250	22,000	1,067
	<i>Junin</i>	15	9.5	5.4	67%	4,480	6,240	1,137
	<i>Cajamarca</i>	21	6.2	3.7	68%	4,129	4,688	1,004
	<i>San Martín</i>	1	30	3	10%	4,000	3,300	1,100
Per Country			60.8	37.8	77%	4,047	75,951	1,428
	Brazil	33	239.2	133.5	61%	3,516	328,735	2,370
	Colombia	51	6.9	3.3	71%	4,961	2,326	673
	El Salvador	52	62.8	50.2	90%	2,971	70,194	1,835
	Guatemala	21	2.9	2.6	91%	4,949	3,999	1,475
	Peru	40	10.2	5.5	65%	4,266	6,534	1,061

3.3 Perception of social, environmental and economic benefits

This study's emphasis is on the relationship between economic costs of Rainforest Alliance certification and the direct benefits perceived in a better price (price premium) for the coffee sold Rainforest Alliance Certified. However, the SAN Standard's objectives are broader and of a longer term than this focus. Moreover, the perception of other benefits—whether non-economic or economic but not directly related to pricing—may also contribute to how attractive or unattractive certification is. Therefore, a qualitative analysis of economic, social and environmental benefits perceived by certified producers has been included.

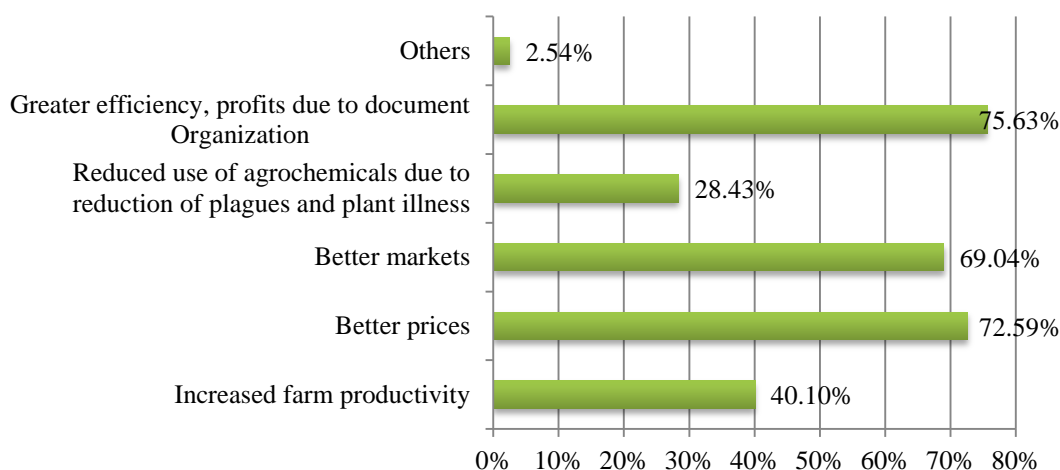
The information in this section was collected without any response induction; the graphs in this section thus show the percentage of participants who voluntarily mentioned each one of the specific benefits for each benefit category.

Economic Benefits

The most frequently mentioned economic benefits are (1) greater efficiency and profitability due to better organization of farm administration and documentation, (2) better prices for coffee sold and (3) better markets to which to sell the coffee. This result confirms the importance of the analyses that are prioritized in this study: those directly linked to prices and SAN Standard profitability.

For forty percent of respondents, the increase in farm productivity has also been a noteworthy economic benefit. Considering that on average the producers interviewed have not been certified for more than three years, this number—although not as high as that of the other benefits—can be considered significant. If in such a short amount of time 40% of producers emphasize a perceived improvement in farm productivity, this is important for the promotion of the Standard. Among the other benefits mentioned is “help getting financing for farm investments”.

Graph1. Economic benefits mentioned by respondents
(% of respondents that mentioned the benefit)

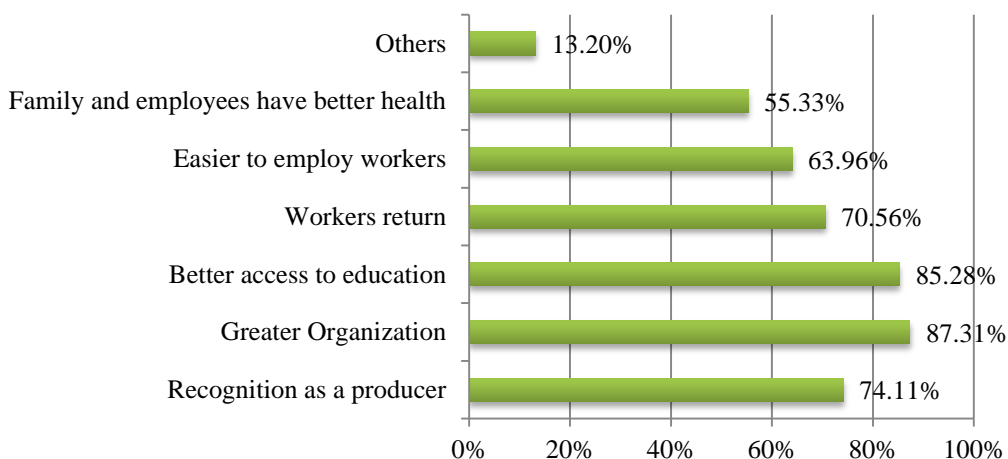


Social Benefits

The social benefits as a whole are the most-often mentioned of the three (economic, social, and environmental). None of the social benefits was mentioned by less than half the participants. Among the most frequently highlighted are (1) Greater organization on the farm and at home (*“We have a more organized life now.”*), (2) more access to learning and education, capacity building and technical assistance opportunities, (3) recognition as a producer (*“I feel recognized as a producer”*) and (4) the return of seasonal workers, which is an indicator of workers’ satisfaction with the labor conditions.

The other benefits mentioned reinforce the motivation that is promoted by a good working environment, for employees as well as for producers’ families and the community. It is noteworthy that in most regions of **El Salvador** and **Peru** most social benefits are mentioned by 100% of respondents and—like all other benefits—without prompting.

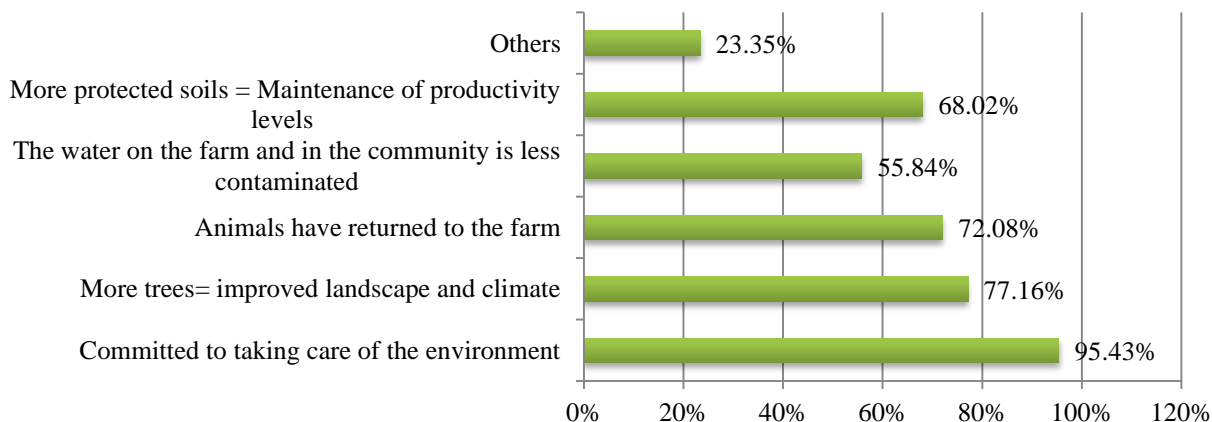
Graph 2: Social Benefits mentioned by respondents
(% of respondents who mentioned the benefit)



Environmental Benefits

Creating environmental benefits is one of the foundations of the SAN Standard. As with the social benefits, all the environmental benefits were underlined by more than half of respondents. Most (95%) stress commitment to caring for the environment as the most important environmental benefit. This is noteworthy not only because it indicates a successful fulfillment of one of the standard's main objectives, but also because it is the necessary basis on which all environmental benefits are built. Environmental benefits like better climate and landscapes due to more trees, the return of animals to the farms and better soil quality, are perceived by a significant proportion of producers who have been certified for a relatively short period of time.

Graph 3: Environmental benefits mentioned by respondents
(% of respondents who mentioned the benefit)



3.4 Costs at farm level

The costs of implementing the Standard at farm level are provided with two different foci: the first is the average on-farm investment in certification per ha and per kg; the second looks at the specific cost of each of the different types of investments made.

Table 2 below summarizes the first cost analysis: how much producers invested on average in each region, and how much these investments cost annually, per hectare and kilogram of green coffee. Costs are presented per unit in order to enable comparisons between regions and farms, regardless of farm size, and to allow for comparison with the economic benefits of the price premium.

Column 1 of the table, “Total Average Cost of Investments” refers to how much each producer spent on average on all the *long-term* investments made to comply with the Standard. These include such costs as housing, latrines, tanks, and other infrastructure that depreciate over long periods of time (five to ten years). If the producer were to make all these investments at once at the beginning of the certification process, this would be the sum of all the *initial* investments. This category does *not* include investments that are incurred annually, like salaries for paid workers.

Since investments have different lifetimes—some are depreciated over several years, while others are renewed annually—total costs are analyzed throughout the rest of the Table in terms of *annual* costs. Column 2 shows the total of these annual costs, which are the sum of one year’s worth of recurring costs like salaries plus one year’s worth of all the depreciation costs of the longer-term investments. Column 3 and 4 show how much this yearly cost is per hectare, to control for farm size, and per kilogram of green coffee, to allow for comparison with the price premium, which is paid by weight.⁶

⁶The total annual cost is divided by the average number of kilograms of green coffee produced by the producer *in the past three years*. A three-year average is taken to correct for potential causal effects of extremes in the cyclical fluctuation of production levels that are normal in coffee production.

Table 2. Annual investment per region, year, hectare and kilogram of green coffee⁷

		Column 1	Column 2	Column 3	Column 4
		Total Average Cost of Investments (USD)	Total Average Annual Costs (USD)	Average Annual Costs per ha of coffee (USD)	Average Annual Costs per kg of coffee (USD)
Brazil	Minas Gerais	\$27.841	\$3.411	\$28	\$0,01
	Minas Gerais (Cerrado)	\$12.965	\$1.460	\$11	\$0,01
	Minas Gerais	\$15.234	\$2.279	\$14	\$0,01
Colombia	Cundinamarca	\$785	\$268	\$95	\$0,31
	Huila	\$1.056	\$224	\$65	\$0,09
El Salvador	San Miguel	\$8.917	\$4.282	\$57	\$0,03
	Sonsonate	\$1.073	\$143	\$6	\$0,00
	La Libertad	\$13.111	\$1.881	\$15	\$0,02
	Usulután	\$2.100	\$420	\$9	\$0,01
	Santa Ana	\$4.265	\$544	\$15	\$0,01
	Ahuachapán	\$2.482	\$343	\$21	\$0,01
	San Vicente	\$3.024	\$553	\$9	\$0,01
Guatemala	Huehuetenango	\$150	\$247	\$94	\$0,07
Peru	Pasco	\$1.699	\$698	\$37	\$0,03
	Junin	\$5.167	\$614	\$113	\$0,12
	Cajamarca	\$3.080	\$372	\$100	\$0,10
	San Martín	\$1.776	\$184	\$61	\$0,04

The highest costs of SAN Standard implementation per *kilogram* of coffee are in **Cundinamarca**, Colombia and **Junin** and **Cajamarca**, Peru. The lowest were found in **Brazil** and **El Salvador**. In **Sonsonate**, El Salvador, the cost is less than one cent per kilo. The cost per *hectare* is highest in Junin and Cajamarca. However, total production in these regions is greater than production in Cundinamarca, so in terms of cost per kilogram, the cost is lower.

Cundinamarca has the *highest cost per kilogram*, which is particularly striking because in terms of *total average cost* it has the second lowest cost. This high cost per kilogram is mainly due to a low per hectare productivity on the farms included in this area. It can be inferred that due to low productivity, certification is more expensive per kilogram in Cundinamarca than in any other region in the study. This case highlights that socio-environmental sustainability cannot be achieved without a productive and economic sustainability the costs that the former implies cannot be sustained without the latter.

The importance of economies of scale is evident in the comparison between Brazil and Guatemala. The average investment in Minas Gerais is over 185 times higher than in Huehuetenango, but the cost per hectare in Guatemala is more than 3 times higher than in Minas Gerais; in terms of cost per kilogram of coffee, the difference is \$0,06 per kilogram.

The standard implementation costs that respondents identified are categorized according to SAN Standard Principles⁸. Table 3 below gives an indication of which Principles were most heavily invested in per country. Although inter-regional differences exist, patterns at country level are clear.

⁷All amounts are in U.S. Dollars. See text above for a detailed explanation of each column's content.

Table 3. SAN Standard Principles in which most was invested per country

	1: Social and Environmental Management	2: Ecosystem Conservation	4: Water Conservation	5: Fair Treatment of Workers	6: Occupational Health and Safety	8: Integrated Crop Management	9: Soil Conservation and Management	Integrated Waste Management
Brazil			*		*			
Colombia			*	*				
El Salvador ⁹				*	*			
Guatemala				*				
Peru				*	*			

Regional differences may be due to several factors, including that (1) a greater or lesser number of producers in the region had to make the investment, (2) there was no need to make certain investments because the situation on the farm prior to certification already fulfilled SAN Standard standards, (3) the same investment was made in one region for a higher cost than another. These factors are taken into account by using the aforementioned second focus of cost analysis: the absolute cost of each investment item separately. Only data from the producers who made the investment under scrutiny were used. Thus what is compared is, for example, how much a well of residual milling water in Pasco, Peru costs, compared with a well of residual milling water in Junin. This makes it possible to compare the costs *per investment item* between the regions, which makes it possible to identify where less expensive technologies are being used and where it is necessary and potentially possible to reduce costs.

This is relevant because in cases where significant differences are identified, it pays to find out why these differences exist. Is it because producers in Pasco found a way to make the well using more economical or handmade techniques than in Junin, but with the same result, and complying with SAN Standard principles? If this is the case, it is possible to replicate this innovative technology in Junin and the rest of the country, to make certification more accessible and more profitable for farmers.

Clear differences were found in the investments made in meeting the criteria. Some are attributable to farm size and economies of scale. Most, however, are due entirely to the type of technology employed and indicate the potential to reduce the costs of certification compliance through cost-efficient technology adaptation.

⁸Respondents were asked which expenses they incurred in to comply with RA certification standards; *responses were not led by suggestions*. The data collected thus shows exclusively what farmers consider costs related to certification.

⁹Fair Treatment of Workers was the most invested-in Principle in San Miguel only, comprising 73% of total investment.

3.5 Certification costs at group administrator level

The results of the interview conducted among the *administrators* of Rainforest Alliance Certified producer groups collect information on the costs of SAN Standard implementation that are not incurred in on the farm, but at the administration of the group, such as audit and establishment of internal management systems (IMS), and technical assistance costs. Data on price premiums paid for Rainforest Alliance Certified coffee were also collected through this survey. Through these interviews it was also possible to identify other certifications that the producers have and the volumes sold certified at group level.

There are also some important considerations when interpreting available information for the calculation of the price premium received by producers for their certified coffee. Three principal considerations stand out:

- The price of certified coffee can vary on a daily basis
- The producer generally does not know what part of the price received corresponds to which certification's premium, or to quality standards premiums.
- It is practically impossible to trace which percentage of the total price premium stays at the administrative level, and which proportion is paid to the producer. This information is generally only held internally by the group administration, and although it was asked for as part of the survey, the information provided cannot be assumed to be 100% reliable, as the risk of having received responses adjusted for social acceptability is high.
- The actor incurring the cost varies between situations.

The Box below provides, by means of example of the complexity of the situation, an explanation from Peru of how the premium is paid. This example highlights the main factors to take into account during the analysis.

Box 1 : Considerations for price premium Calculations, example from Peru

"The commercialization of group producers' [coffee] generally goes like this:

The manager establishes a delivery price. The price premium for this or that certification is not specified. There can be two or three differentiated prices [premiums]:

- *Certified coffees, at xprice. The next day it's another and then another*
- *Transition [to organic] coffee or just Fair Trade*
- *Coffees with in-house quality characteristics, or without certifications*

At the end of the harvest, the cooperatives give producers a "reimbursement." They also don't tell them that it's for that coffee or the other.

The Ltd.-type companies —the ones that don't have an associative legal form—pay one final price for the delivery of all certified coffees. I never heard them say that it's "this much" for organic, Fair Trade or Rainforest Alliance. At producer level, it's impossible to know what the real price premium for certification is. Several producers —those who are leaders—will give an amount just to answer a question, but they don't know what the price premium is."

The administrator survey gathers all the Rainforest Alliance certification-related costs at group administration level. This distribution of costs incurred in *exclusively* for Rainforest Alliance certification and costs incurred for compliance with other certifications is taken into account.

Table 5. Distribution of certification costs at group level

Cost type	Exclusively RA	Shared with other certifications
Internal Control/ Internal Audit		✓
RA Audit	✓	
Capacity Building	✓	✓
IMS		✓
Certification Documents	✓	

The results vary significantly from country to country and, again, underline the effect of productivity and sales volume on costs. In Brazil, where about 150,000 kilograms of Rainforest Alliance Certified coffee were sold in 2010, the administrative cost (group level) is \$0,01 per kilogram sold. Costs are calculated based both on the average Rainforest Alliance Certified kilograms *harvested*, as on the volume *sold* for the price premium. If the cost were to be applied only to the part that has been sold as Rainforest Alliance Certified the costs may also be over-estimated, as possibly—and likely—the rest of the harvest is being sold with one of the other seals such as Fair Trade or Organic. This probably means that most of the costs will be covered by the price premiums of the other, or combined seals. No specific data are available on these details, but this is expected to be true, especially in Peru. Table 6 also presents information on the percentage of the producers in each group whose farms hold non-RA certifications and are also Rainforest Alliance Certified.

Table 6. Costs and characteristics of certification at group level

		% of producers certified RAC within group	Avg. total RAC costs per <i>harvested</i> KG. at group level	Average of total RAC costs per Rainforest Alliance Certified <i>sold</i> KG at group level
Brazil	<i>Minas Gerais</i>	63%	\$0,007	\$0,010
	<i>Minas Gerais (Cerrado)</i>	63%	\$0,007	\$0,010
	<i>Minas Gerais (Sul de Minas)</i>	63%	\$0,007	\$0,010
Colombia	<i>Cundinamarca</i>	82%	\$0,013	\$0,088
	<i>Huila</i>	82%	\$0,013	\$0,088
El Salvador	<i>San Miguel</i>	85%	\$0,025	\$0,041
	<i>Sonsonate</i>	100%	\$0,023	\$0,033
	<i>La Libertad</i>	100%	\$0,027	\$0,053
	<i>Usulután</i>	85%	\$0,025	\$0,041
	<i>Santa Ana</i>	40%	\$0,027	\$0,036
	<i>Ahuachapán</i>	100%	\$0,022	\$0,041
	<i>San Vicente</i>	85%	\$0,025	\$0,041
Guatemala	<i>Huehuetenango</i>	89%	\$0,042	\$0,034
Peru	<i>Pasco</i>	51%	\$0,042	\$0,078
	<i>Junin</i>	51%	\$0,042	\$0,078
	<i>Cajamarca</i>	51%	\$0,042	\$0,078
	<i>San Martín</i>	85%	\$0,025	\$0,041

3.6 Cost-Benefit Including Participation Agreement

One of the costs incurred in certification in the value chain at importer level is the Participation agreement charge, introduced in 2011. The Participation agreement charge is levied on volumes of traded crops sourced from Rainforest Alliance Certified farms and registered in a traceability system. The amount varies by commodity and it is charged only **once** in the supply chain. The Participation agreement is an agreement among the Rainforest Alliance, the SAN and the companies that buy and sell goods from certified farms. Crops paying the Participation Agreement charge such as coffee, **do not pay the annual fees** charged to farmers in the past. For coffee, the contribution is \$0,015 per pound of green coffee (charged to the importer/first buyer).

In order to visualize how the Participation Agreement influences the cost- benefit relationship of certification in the value chain as a whole, the Participation agreement charge has been added to the costs in the following table.

Table 7. Total Costs at Group Level Including the charge related to Participation Agreement

		Costs per kg RAC sold, including the charge related with the Participation Agreement
Brazil	<i>Minas Gerais</i>	\$ 0.043
	<i>Minas Gerais (Cerrado)</i>	\$ 0.043
	<i>Minas Gerais (Sul de Minas)</i>	\$ 0.043
Colombia	<i>Cundinamarca</i>	\$ 0.121
	<i>Huila</i>	\$ 0.121
El Salvador	<i>San Miguel</i>	\$ 0.074
	<i>Sonsonate</i>	\$ 0.066
	<i>La Libertad</i>	\$ 0.086
	<i>Usulután</i>	\$ 0.074
	<i>Santa Ana</i>	\$ 0.069
	<i>Ahuachapán</i>	\$ 0.074
	<i>San Vicente</i>	\$ 0.074
Guatemala	<i>Huehuetenango</i>	\$ 0.067
Peru	<i>Pasco</i>	\$ 0.111
	<i>Junin</i>	\$ 0.111
	<i>Cajamarca</i>	\$ 0.111
	<i>San Martín</i>	\$ 0.074

The cost shown in Table 7 is the total overall cost of certification at group level; that is, outside of the farm. It brings together the costs incurred by group administrators and importers. As a comparative glance between Table 6 and 7 makes clear, the Participation Agreement contributes \$0.033 per kilogram of coffee sold. In some borderline cases, make the difference between reaching a break-even point or a negative net result in the overall value chain.

However, The Participation Agreement is not charged directly by the producer or the group administrator, and should therefore not constitute a direct incentive or disincentive; it has a significant potential impact on the profitability—and therefore attractiveness—of the certification

throughout the chain, even at producer level. The Participation Agreement may be paid for by the importer, but the cost of this royalty is unlikely to be absorbed entirely by the importer; importers use market mechanisms to distribute the costs among the different actors in the chain.

3.7 SAN Standard Implementation Costs vs. Price Premium

Determining price premiums

The coffee sold Rainforest Alliance Certified receives a monetary recognition referred to in this report as the *price premium*. To determine whether the cost-benefit relationship of SAN Standard implementation is positive, it is necessary to compare the cost per kilogram of coffee sold, with the price premium per kilogram received by the producer.

However, there are obstacles to deriving definitive conclusions from this analysis. First of all, the price premium varies per year, harvest and even month. For example, at the end of 2010 there was a variation of \$12,-per 100-lb. at the same point in time, in the same country. Secondly, the level of disinformation among the producers regarding the price premium is high. Moreover, the negotiations are heterogeneous even within regions and depend on the sales channel, and market demand for the coffee's origin.

Given the variability of price premium assignation, a flexible alternative for analyzing the cost – premium relationship, has been opted for. As part of the study, a tool was developed in Excel that allows for the creation of possible sales scenarios for the different regions included. Through this Scenario Creation Tool, it is possible to determine how profitable Rainforest Alliance certification is under different circumstances, depending on—among others—the premium received per Kilogram of coffee. Other variables that the tool can control for are the percent of coffee produced that is sold for the premium, and possible cost reductions in implementation investments.

The tool has been designed to explore possible strategies for improving cost-benefit ratios. It is possible to create hypothetical scenarios in which (a) a greater part of the production is sold with the premium, (b) premiums are adjusted, (c) the costs of certain investments are reduced, (d) on-farm administration costs are included, according to local wage standards.

A sample comparative analysis

In order to provide indicative results of the cost – premium relationship for the regions included in the study, the tool has been applied using a “standard” situation. The price premium and labor costs chosen for the hypothetical scenarios below are considered realistic for *most* situations. The real percentage of coffee for which the premium was paid in each region at the time of the study is used, and no costs are reduced. In reality, the premiums and administrative labor costs are not the same across regions. However, these examples provide a point of departure for analysis.

The base conditions used for this comparative analysis are the following:

Adjustable variables	Applied hypothetical value
• Region:	Region to be analyzed
• % of total production that is sold for the price premium:	Real current % for each region
• RA price premium paid per kilogram of coffee:	\$0,20
• Labor cost of the financial administration (the cost of 1 working day for admin/accounting):	\$5.00
• Possible cost reductions in investments (type and cost):	None

Table 8. Results of the cost-benefit analysis cost-benefit for each region in the “standard” hypothetical scenario¹⁰

		Established Conditions			Results per Kg. of Coffee Sold ¹¹		
		Average Ha. of coffee	% of coffee sold with premium (% sold as certified)	price premium (fixed for this exercise)	Cost at group admin. level	Cost at production unit (farm) level ¹²	Net result (USD per Kg)
Brazil	Minas Gerais	121,0	46,2%	\$0,20	(\$0.04)	(\$0,03)	\$0.13
	Minas Gerais (Cerrado)	130,0	59,3%	\$0,20	(\$0.04)	(\$0,01)	\$0.15
	Minas Gerais (Sul de Minas)	158,4	32,1%	\$0,20	(\$0.04)	(\$0,02)	\$0.14
Colombia	Cundinamarca	2,8	48,4%	\$0,20	(\$0.12)	(\$0,51)	\$(0.43)
	Huila	3,4	48,8%	\$0,20	(\$0.12)	(\$0,21)	\$(0.13)
El Salvador	San Miguel	75,6	80,0%	\$0,20	(\$0.07)	(\$0,04)	\$0.09
	Sonsonate	25,4	95,0%	\$0,20	(\$0.07)	(\$0,00)	\$0.13
	La Libertad	125,0	69,1%	\$0,20	(\$0.09)	(\$0,03)	\$0.08
	Usulután	46,2	60,0%	\$0,20	(\$0.07)	(\$0,02)	\$0.11
	Santa Ana	35,8	60,0%	\$0,20	(\$0.07)	(\$0,02)	\$0.11
	Ahuachapán	16,6	69,7%	\$0,20	(\$0.07)	(\$0,02)	\$0.11
	San Vicente	61,1	60,0%	\$0,20	(\$0.07)	(\$0,01)	\$0.12
Guatemala							
	Huehuetenango	2,6	27,6%	\$0,20	(\$0.07)	(\$0,23)	\$(0.10)
Peru	Pasco	18,7	53,2%	\$0,20	(\$0.11)	(\$0,06)	\$0.03
	Junin	5,4	85,1%	\$0,20	(\$0.11)	(\$0,12)	\$0.00
	Cajamarca	3,7	69,0%	\$0,20	(\$0.11)	(\$0,12)	\$(0.01)
	San Martín	3,0	83,3%	\$0,20	(\$0.07)	(\$0,07)	\$0.07

¹⁰The premium for the calculations of these scenarios were set at \$0,20 per Kg. of green coffee, *real* % of total production that is sold certified, no cost reductions applied, \$5,- per day administrative labor costs.

¹¹The examples given are based on the Participation agreement charge currently in effect.

¹²The data of this column represent the same costs as those represented in Table 2, but this time “represented” *only* by the part of the production that was actually *sold* RA certified. Another part of the difference is due to the fact that in the trial scenarios, a \$5,- daily wage for on-farm administration was included. This is a regional average developed in order to be able to carry out trial scenarios. Real costs may be slightly higher or lower.

The final result generated by the tool indicates the *potential* positive result for the producer, not necessarily the amount that actually reaches the producer under the analyzed conditions. This is because the distribution of the price premium between group administrators and producers varies from situation to situation, and is normally fungible with the premiums of other certifications.

Brazil is an example of how the variables price premium and percentage of coffee sold Rainforest Alliance Certified influence the relationship between the costs and benefits of SAN Standard implementation. The combination of satisfactory price premiums and the economies of scale made possible by farm size means that selling even a fraction of production for the premium paid for Rainforest Alliance Certified coffee results in additional income, after taking standard implementation costs into account.¹³ This result is fairly unique to these regions of Brazil (and some regions of El Salvador), and is worth taking into consideration for internal policy formulation as well as for incentivizing certification in farmers. Since significant margins could be possible even when selling only a fraction of production with the premium, it (1) should be attractive for farmers to certify, as an additional income is a fairly “safe bet” and (2) is possible to certify a greater number of farms, thereby multiplying SAN Standard impact and diversifying certified coffee sources.

In **Colombia** and **Guatemala** the standard premium of \$0,20 used for this analysis does not cover implementation costs of compliance with the SAN Standard on the farm. Without reducing costs and increasing the price premium, a positive result cannot be reached, even if 100% of production is sold with the premium. In Cundinamarca, for example, one of the following changes would be necessary to achieve the break-even point: (1) an increase in the premium (2) on-farm implementation cost reduction or (3) overall productivity increase. In light of the cost analysis (which indicated potential for cost reduction in several investments in Cundinamarca) and the complexity of negotiating a better price premium, it is clear there is a need to reduce on-farm SAN Standard implementation costs and to increase both farm productivity and the volume of Rainforest Alliance sales.

In **El Salvador**, as in Brazil, volume is a determining factor. A second contributing factor is low costs; the importance of costs cannot be underestimated. In this region, the percent of coffee sold for the premium could go as low as 17% before it would begin to generate \$0,- returns. As in Brazil, this information can constitute an important incentivizing tool to get and/or keep farmers on board.

Guatemala's Huehuetenango producers would need to sell 60% of their certified production in order to break even (\$0,- per kilogram) with this price premium. High costs in Huehuetenango are primarily related to the annual wage correction that farmers needed to pay in order to comply with minimum wages, making cost reduction virtually impossible and the need for a favorable premium imperative. In the case of **Peru**, the relatively high costs on the farm have a bearing on the results.

¹³ It is important to take into account that, since these are farmers organized in cooperatives, the full sum of price premium returns does not go directly to farmers. Nevertheless, these results show that in general terms, the investments made in certifying are covered by the premiums and have the potential to be profitable for both farmer and cooperative.

However, as the cost analysis points out, a cost reduction approach appears to be feasible and more favorable than an increase in price premium or in the portion of production sold for that premium. Additionally, for Peru it is important to take into account that farmers are frequently certified in double or triple certification schemes and combine Rainforest Alliance Certified with Fair Trade and Organic, which add up to price premiums of \$0,30 or more per Kg. Moreover, a high percentage of the investments made in the case of Peru were related to the (non-compulsory) improvements in producers' families' housing. It is likely that farmers consciously opted for investing their premiums in the improvement of their houses and related these costs to the SAN Standard, while these improvements in housing could also be interpreted as impact.

4. Conclusions

This study approached the perceptions and realities of SAN Standard implementation costs versus the premium received for Rainforest Alliance Certified coffee, from different methodological and informational angles. It provides information on (1) certified producers' *perception* of the benefits of Rainforest Alliance certification, (2) the types of investments that are most important and/or costly in each region, (3) disparities between the costs of different technologies, and related learning opportunities, and (4) how to identify under which conditions the relationship between costs and price premium becomes favorable for the producer.

Regarding producers' perceptions on economic benefits, the most frequently mentioned are greater efficiency and profitability due to better organization, better prices and access to better markets. Moreover, forty percent of respondents emphasize a perceived improvement in farm productivity, which is notable, as most of the interviewed farmers have only been certified for 3 years. The most frequently highlighted social benefits are greater organization on the farm and at home, more access to learning and education, recognition as producers and the return of seasonal workers. As with the social benefits, all the environmental benefits were underlined by more than half of respondents. Most (95%) stress commitment to caring for the environment as the most important environmental benefit. Other perceived environmental benefits were improved soil health and the resulting maintained productivity levels (68%) and improved climate due to increased tree coverage (77%).

In the **cost analysis**, the **diversity** of situations also stands out. While in some regions raising salaries for fair treatment of workers (Huehuetenango, Cundinamarca, San Miguel, Pasco) comprises an important part of implementation costs, in others it is the building of homes for workers or families (Peru), and in yet others conservation of water resources (Colombia) and occupational safety (El Salvador), or both (Brazil). The high levels of investment related to the social requirements of the Standard are a reflection of producers' sub-valued efforts to prioritize the **social focus** of the Standard, as it is not a topic that is explicitly emphasized by Rainforest Alliance, or partner organization, technicians.

Possibly one of the most important lessons to be drawn from this analysis is the importance of **technological creativity for cost control** in SAN Standard implementation. A garbage separation system for a 4 hectare farm in one region can cost five times as much as a garbage separation

system for a farm of the same size in another. In most cases, the explanation lies in the type of technology and materials used. Both systems fulfill the desired purpose, yet one turns SAN Standard compliance into something potentially expensive. One of the greatest strengths of the SAN Standard is the flexibility it allows for on this matter. The results of this study not only confirm that this flexibility exists; they are also an alert to the possible negative consequences when producers are uninformed about available alternatives.

Finally, the cost-benefit analysis sought to answer key strategic questions. Where is the key to achieving a more favorable relationship between the costs and the benefits of SAN Standard implementation? Is it in cost reduction, or the negotiation of a better price premium and a greater volume of certified sales? Which of these variables can be adjusted more easily?

The answers to these questions are—once more—variable by **context**. In a few regions it will only be possible to achieve a positive return for producers by increasing the **volume of coffee sold** certified, that is, increasing the amount of coffee for which the price premium is paid (Huehuetenango). However, in some cases, selling 100% of production for the premium received for Rainforest Alliance Certified coffee would be insufficient to cover current implementation costs (Cundinamarca), or even unfavorable for overall certification growth (Brazil).

Cost management is key in all regions, and this report has shown that important cost reduction opportunities can be found by sharing ideas for more cost-efficient technologies between neighboring regions and countries. However, reducing costs is not always enough; selling a higher percentage of coffee for the premium may be necessary in some cases. The cost analysis highlighted that adequate productivity levels are necessary in order for farmers to take full advantage of the benefits of the standard implementation and the certification.

Achieving **economies of scale** contributes to covering costs of certification by maintaining unitary costs relatively low, thereby achieving a cost-benefit relationship that favors the benefits. Conditions are favorable enough for farmers could sell as little under 8% of production at a \$0,20 premium and still cover costs. This information could become a key tool for motivating growth in the number of certified farms.

The strategic implications of these results are simultaneously clear and pluralistic: it is absolutely necessary to evaluate options on a **case-by-case basis** for controlling costs, increasing volumes sold for price premium (be it through higher percentages sold Rainforest Alliance Certified, or general improvement of farm productivity), or negotiating better premiums. It is precisely for this purpose that the Scenario Creation Tool with adjustable variables has been developed.

The information that comes out of this study also invites country coordinators to revise meticulously the potential obstacles in each region, be they disproportionate costs, productivity problems or a deficient monetary recognition to the producer. There is no single obstacle to producers in the certification process; they are different in each context. This heterogeneity in the field requires a similarly varied and creative approach to the reduction and removal of entry barriers that SAN Standard growth faces in each region.