



# Assessment of the Coffee and Farmer Equity (C.A.F.E.) Practices Program for FY08

## Final Report

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## Executive Summary

In March 2008 Starbucks Coffee Company and Conservation International agreed to undertake an assessment of the Coffee and Farmer Equity (C.A.F.E.) Practices program. The main objective of this initiative was to assess progress against the stated objective of improving the uptake of best practices by participating coffee producers over time. The results of the analysis could then be used as the basis for improving the program over time and to develop communications messages that would build awareness and support for the program.

Most of the publicly reported results to date on C.A.F.E. Practices (e.g. percentage of purchases, average criteria scores) have relied on analysis of application data which represents a particular supply chain. This assessment marks the first step toward diving more deeply into the verification reports to examine farm and mill performance for a given year and establishes a framework for analyzing results on an annual basis. Verifications that took place between October 1, 2006 and September 30, 2007 form the basis for Starbucks purchasing in FY08. Review of these reports enables an assessment of performance among farms and mills participating in C.A.F.E. Practices for that year and establishes a baseline that subsequent analyses can use to establish trends. While there are 215 indicators that could be analyzed based on the generic guidelines, this assessment has identified key indicators of social and environmental performance that can serve as the basis for subsequent assessments. The methodology used to carry out this assessment can also be incorporated into the VRS to automate the calculations and extrapolation process and thus expedite the analysis in future years.

This first assessment of C.A.F.E. Practices found:

- Small farms of less than 12 hectares make up the vast majority (e.g. 99 percent) of the nearly 141,000 farms participating in the program.
- The geographic reach of the program is vast for the three years analyzed included coffee producers in 20 countries across four continents. These countries significantly overlap with 8 of the world's most biologically rich but most threatened regions.
- Coffee suppliers achieved high levels of performance across the majority of the social and environmental indicators selected to assess performance among mills and farms.
- Starbucks buys significant volumes from small farms –this amounted to at least half of the company's coffee purchases in FY08.
- Coffee farms are making valuable contributions to the conservation of habitat in these globally important areas for conservation. Participating farms have designated 102,281 hectares as conservation areas and 99 percent have not converted any natural forest areas to coffee production during the since 2004.
- Coffee production is contributing to social and economic development in these regions. Participating farms employed 1.1 million workers and the majority of large and medium sized farms made efforts to extend health care and education benefits to workers and their families.

While this assessment has resulted in the ability to quantify results of the program, this information can also be used to guide improvements to the program. Specific recommendations from this report include:

- Strengthen some of the environmental requirements in the program without significantly affecting the number of applications achieving an approved status. In particular, Starbucks should consider making the indicator asking whether farmers had cleared natural habitat since 2004 a zero tolerance indicator. Other indicators to consider in this vein are those requiring any wood harvested for coffee drying to be sourced from sustainable sources.
- Review reporting rates for farms assessed on sets of indicators to improve consistency in reporting and enable further analysis of the data.
- Repeat the analysis on an annual basis to monitor and evaluate performance over time. The information gleaned from this analysis can be used to inform the verification process and identify training needs for suppliers while also providing important information for reporting and communications about the program.

## 1. Introduction and Objectives

In 2004 Starbucks launched the Coffee and Farmer Equity (C.A.F.E.) Practices sourcing guidelines which established a set of best practices for environmental and social performance among coffee producers. For the past five years Starbucks coffee purchases from producers implementing the C.A.F.E. Practices guidelines have expanded significantly and in 2008 accounted for the majority of the company's coffee purchases (77 % of coffee purchases in 2008), as has the participation of coffee producers in the program. The program has grown to include an increasing number of growers in 20 countries across 4 continents, 16 of which overlap with 8 of the biodiversity hotspots – the world's most biologically rich regions facing significant threat (Mittermeier et al, 2007). In addition, all of the countries supplying coffee via the C.A.F.E. Practices program are considered developing countries according to the World Bank, with over 20% falling in the low income category (The World Bank, 2009).

Starbucks developed C.A.F.E. Practices to encourage the adoption of best practices for social responsibility and environmental leadership in coffee growing and processing within the coffee value chain. In 2008 Starbucks set the following goal:

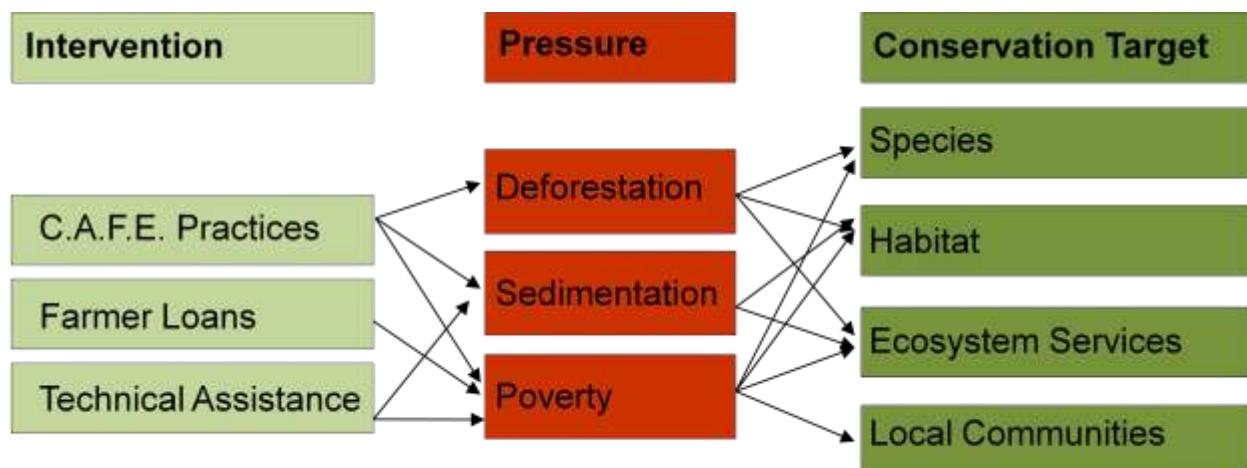
To purchase 100 percent responsibly grown and ethically traded coffee by 2015.  
When we cite “responsibly grown and ethically traded coffee,” we’re referring to coffee that is third-party verified or certified, either through C.A.F.E. Practices, Fair Trade, or another externally audited system. (Starbucks, 2009)

Starbucks worked in partnership with Scientific Certification Systems (SCS), to develop a third party inspection process that would verify changes in adoption levels of best practices related to hiring practices and working and living conditions for workers as well as conservation of water and soil resources, local wildlife and introduction of environmental management programs on farms.

In 2007, Starbucks and CI forged a renewed partnership focused on developing strategies to help understand and mitigate the impacts of climate change on coffee producers and hence ensure the long-term stability of the farms and the coffee. However, before taking this significant step and exploring opportunities to integrate climate considerations within C.A.F.E. Practices, understanding of the effectiveness of the program in its current form is necessary. As such, a major thrust of our current work together is to conduct an assessment of the program to determine the relative effectiveness of the program toward meeting its goals and identify opportunities for continued improvements.

The working hypothesis behind C.A.F.E. Practices and most certification programs is that the implementation of the program will result in the increased uptake of best practices within coffee production landscapes and that the further implementation of best practices will reduce pressures on these landscapes and also reduce poverty in these communities. The alleviation of these pressures would then result in improvements in both the environment and the socio-economic livelihoods of farmers and workers and be demonstrated by improvements in species and habitat conservation, the maintenance of ecosystem services, and improved livelihoods for local communities. (See Figure 1.) However, until this point these hypotheses have remained relatively untested aside from some site-level studies conducted. This was the case of C.A.F.E. Practices over the past 5 years. The overall objective of the assessment is to identify the

effectiveness of C.A.F.E. Practices in driving adoption of socio-economic and environmental best practices within the Starbucks coffee supply chain, and, where possible, to identify how adoption of these practices has influenced changes in grower income, health and education. In addition, the study is assessing how adoption of conservation best practices has influenced the environmental landscape within the coffee growing region by looking at the relationships between farmer participation, best practice implementation, changes in natural habitat and maintenance of ecosystem services in at least two key coffee sourcing regions.



**Figure 1: Conceptual Model of Starbucks Investment in the Coffee Supply Chain**

This report is the first in a series of three which will be developed over the course of the project. This first report discusses the results of an analysis of verification report data generated by third party verifiers and reported through a web based system for the FY08 applications. This was the first year Starbucks used the Verification Reporting System (VRS) to facilitate the reporting process via an on-line tool and it is for this reason that the first of the three reports focuses on FY08, or year 3 of the program. A subsequent report will be developed looking at FY09 and FY10 data and analyzing the overall trends in participation and compliance within the program. These first two reports will demonstrate changes in the adoption levels of best practices over time. A third report will capture the findings of the field surveys implemented among coffee farmers in key productive landscapes in Guatemala. CI and Starbucks will also conduct a field survey in one additional sourcing country and compile these findings in a fourth report. These field surveys are designed to better understand the contribution of C.A.F.E. Practices to driving changes in coffee production practices over time and the effects of these changes on the environment and local communities.

This report has three key objectives. First is to capture the findings of the assessment, draw conclusions and make recommendations for improvement of the C.A.F.E. Practices program to Starbucks. Second, it provides the basis for public reporting and communications about the C.A.F.E. Practices program as part of the Shared Planet platform. Finally, the report will serve as the methodological basis for subsequent analyses of verification report data that Starbucks can use to monitor the program and report on progress.

## 2. Methodology

Assessing the effectiveness of C.A.F.E. Practices in generating positive contributions to social conditions of coffee producer families and their workers and environmental sustainability within the coffee production landscape requires analysis at multiple scales over a given period of time. The assessment applies a holistic approach and also includes analysis of verification report data to identify changes in compliance rates over time, GIS analysis to identify important coffee production landscapes within the broader conservation context, and a survey of coffee farmers in at least two key sourcing countries. As part of the partnership with Starbucks, CI developed a monitoring framework that includes these various scales and allows for comparison of results over time. The stated goals and indicators within the C.A.F.E. Practices Guidelines and Generic Scorecard formed the basis for this framework. For each statement of intent within the Generic Guidelines CI and Starbucks drafted a number of targets followed by questions that the assessment should answer. We then identified at least one indicator to monitor over time for each question. Many of these indicators aligned with the data collected in the verification reports generated by third party verifiers conducting the audits at the farms and mills. The team identified some additional contextual indicators that would provide information on participation rates and trends in overall scores and approval status.

This report provides an analysis of verification reports for FY08 applications completed by third party auditors from October 1, 2006 to September 30, 2007 using Version 2.0 of the C.A.F.E. Practices Guidelines. FY08 represents the third year of C.A.F.E. Practices implementation, and where possible (e.g. the application analysis section) we include results from the two previous years (FY06 and FY07) to demonstrate the progression of the program over time. Data from FY06 and FY07, however, is based on Version 1.0 of the C.A.F.E. Practices guidelines whose requirements differ somewhat from the revised version of the scorecard used to verify performance in FY08.

For applications verified during this period, verifiers compiled information for each farm and mill verified and entered it into the Verification Reporting System (VRS). Starbucks staff worked with the VRS service provider to generate an export of application, farm, mill and producer support organization (PSO) data for applications verified between October 1, 2006 and September 30, 2007. In addition, Starbucks staff provided approval status reports for FY06 and FY07 to enable analysis of trends in overall performance and geographical scope. Starbucks also provided audited purchasing information for FY08 to enable links to be drawn between the applications verified and actual volumes entering the Starbucks supply chain. CI worked with Starbucks staff to review the data files provided and where necessary make minor corrections to the data.

The results reported in this document under-represent the actual number of active participants in the program for three reasons. First, Starbucks did not require applications receiving three-year validity during FY06 and FY07 to undergo re-verification in FY08 and these applications were not included in the analysis.<sup>1</sup> These suppliers do, however, represent a portion of Starbucks purchases for in FY08. Secondly, 16 applications underwent verification using Version 1.0 of

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<sup>1</sup> We based this analysis on the year the application underwent verification, recognizing that this does not align completely with fiscal year purchasing data. To correct for this, we would have to include applications verified during a previous year and still valid in FY08 as though the application had undergone verification during each year.

the C.A.F.E. Practices Guidelines prior to the launch of VRS. These 16 applications consisted of 3649 farms and 25 mills which are not included in the analysis. Finally, one application from Ethiopia completed the verification process after Starbucks transferred the data file to CI and thus is also not included in the analysis of farm, mill, or PSO results.

For each indicator verifiers assign a comply, non-comply or not-applicable rating to the farm, mill or PSO. Because verifiers can grant a not-applicable rating to any indicator, the number of farms reporting on any particular indicator can vary greatly and does. This is even the case with indicators in which some consistency would be expected. For this reason, results given in percentage compliance represent only those farms for which the indicator was applicable (compliance + non-compliance). Thus, it is difficult to compare compliance rates across indicators, and where this has been done the reporting rate has been noted. The percentage compliance rates are designed to show the relative performance of the various sizes of farms or types of mills for each individual indicator.

We used the application country as the basis for all country analyses as it represented the most complete set of country data within the VRS. Some corrections were made to data where countries were misspelled or regions or cities were recorded instead of countries. Using the application country assumed that all farms within a single application are located in the same country, when some applications included farms from two countries. We did not correct for this error, although we did correct for issues in which the trading company was based in a country that does not grow coffee.

We used Access and Excel software to extrapolate verification report data<sup>2</sup> to the population of farms participating in the program, given that small and medium farms are verified according to a stratified random sampling method based on established international standards for group certification (ISEAL Alliance, 2009). We then used the extrapolated data to determine compliance rates for a select group of agreed indicators included in the C.A.F.E. Practices Generic and Smallholder scorecards. Where possible we correlated the compliance rates to the hectares and worker data collected as part of the verification process to determine the amount of land or the number of people, respectively, affected by the practice. This report presents the findings at the global and country level for each subject area of the guidelines.

### **3. Applications**

Within the C.A.F.E. Practices program verifiers visit farms, mills, and producer support organizations (PSO) within a given supply chain and verify performance against a set of practices. The verifier then submits the reports for an application to Starbucks and the reporting system consolidates the scores into an overall score which leads to the assignment of an approval status for each application received. Analysis of the verification report data can focus at the application level can also dive more deeply into farm, mill and PSO performance. An application may represent a single farm or a group of thousands of farms along with dry and wet mills and a PSO, whose membership can change over time. The application serves as the basis

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<sup>2</sup> For more information on the methodologies used to extrapolate farm performance to the population, please see Appendices B (coffee growing) and E (coffee processing).

for determining sample sizes for small and medium farms that undergo group verification and represents the entity receiving an approval status (e.g. verified, preferred, strategic, or non-compliant). Thus, the application forms the basis for managing farm, mill, and PSO verification reports and hence any analysis conducted. However, the application information often aggregates results across farm sizes and mill types and requires disaggregation to answer key questions about adoption of best practices by farms or mills. For this reason, this section of the report focuses on farm, mill and PSO results at the global, regional and country levels. In addition, since the majority of the indicators apply to farms, the bulk of the analysis focuses on the farm level.

An application represents a specific grouping of farms, mills and in the case of small farms PSOs forming a single supply chain (from coffee cherry to green coffee) and represents the most aggregated level of data reported within the program. The type and number of farms in any given application varies greatly. In some cases an application consists of a single farm while in others it represents tens of thousands of farms. For instance, one application received from Colombia in 2007 consisted of over 24,400 small farms and was the largest application received during that year.

The C.A.F.E. Practices guidelines categorize farms according to size, with small farms having less than 12 hectares, medium farms having between 12 and 49 hectares, and large farms consisting of 50 or more hectares. Applications may consist of a group of farms representing a single size category (e.g. the Colombia application with over 24,400 small farms), or be a combination of the various farm sizes. An application can be quite fluid in terms of the farms and mills included in it from year to year. Farms and mills can move from one application to another and export companies and cooperatives can decide to segment or combine applications from year to year to achieve an improved approval status within the program or realize other efficiencies within the system. Suppliers may also decide to organize applications according to where the coffee is processed.

Starbucks has identified the following three objectives that can be assessed using application-level data:

- Achieve a high level of supplier performance on social responsibility and environmental best practices in coffee growing and processing.
- Purchase 100 percent of its coffee as responsibly grown and ethically traded by 2015, whether through C.A.F.E. Practices or another externally audited system;
- Over time increase the percentage of coffee purchases from applications receiving preferred and strategic approval status, all other things equal.

Starbucks assigns approval status (e.g. verified, preferred, strategic, non compliant), and calculates a total score, and subject area scores at the application level, which can provide some meaningful data and demonstrate some high-level trends. Based on this, we identified seven indicators to monitor progress against these stated objectives. They look at growth in participation across geographies, growth in the percentage of applications receiving verified, preferred or strategic status, growth in the amount of coffee purchases made from C.A.F.E. Practices suppliers, and change in the average application scores of suppliers. This section reports performance against these objectives and indicators and draw some conclusions at how the program has grown and performed as a whole during the 2005-2007 period.

### 3.1 Growth in Participation

- Number of applications verified
- Number of countries with applications verified

In FY06, the first year of the program, 554 applications underwent C.A.F.E. Practices verification. This figure increased to 682 in FY07 and to 804<sup>3</sup> in FY08. (See Table 1.)

Region	Number of Applications Verified		
	FY06	FY07	FY08
Africa	0	38	38
Asia	0	25	36
Latin America	554	619	730
<b>Grand Total</b>	<b>554</b>	<b>682</b>	<b>804</b>

Table 1: Regional participation and number of applications verified FY06-FY08

Between FY06 and FY08 the number of applications undergoing verification increased by 45 percent. In FY06 these applications spanned 10 countries, all of which were in Latin America. The geographic scope of the program nearly doubled in FY07 as applications in 19 countries in Africa, Asia and Latin America completed the verification process. (See Table 2.)

Country	Participation by Year		
	FY06	FY07	FY08
Brazil	x	X	
Bolivia		x	X
Burundi			X
Colombia	x	x	X
Costa Rica	x	x	X
East Timor		x	
El Salvador	x	x	X
Ethiopia		x	X
Guatemala	x	x	X
Honduras	x	x	X
Indonesia		x	X
Kenya		x	X
Mexico	x	x	X
Nicaragua	x	x	X
Panama	x	x	X
Papua New Guinea		x	X
Peru	x	x	X
Rwanda		x	X
Tanzania		x	X
Zambia		x	X

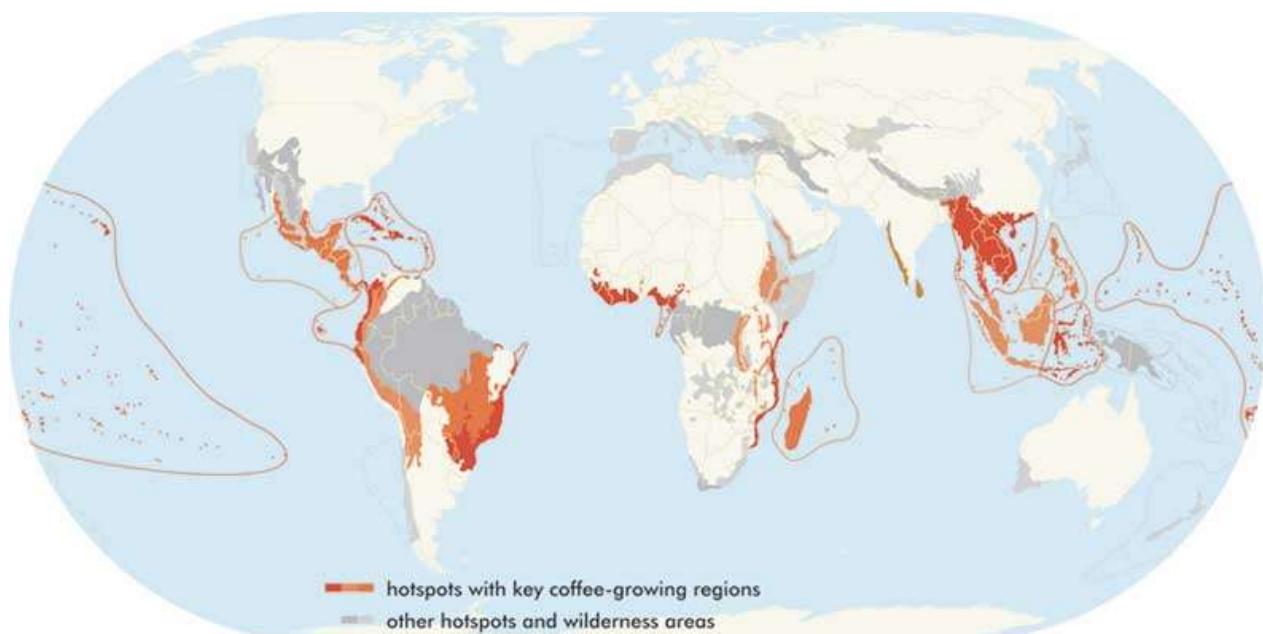
Table 2: Participation in C.A.F.E. Practices by Country from FY06 to FY08

<sup>3</sup> Although 804 applications underwent verification during FY08, the more detailed analysis for the year only includes 787 of these applications. One application completed verification after the data transfer was complete and 16 applications were verified against Version 1.0 of the C.A.F.E. Practices Guidelines and not included in the VRS.

In FY08 the number of countries participating in the program remained the same, although the list varied somewhat from that of the previous year. For example, in FY08 no applications from Brazil or East Timor underwent verification, but Burundi began participating for the first time in the program.

While the number of applications shows an increase over time, this does not necessarily mean that the number of farms or mills is increasing as some applications split and/or combine over time and the applications in a given year may represent different farm groups.

Analysis of the applications allows us to conclude that to-date coffee producers in 20 countries have participated in C.A.F.E. Practices by undergoing verification. The 20 countries participating in the program overlap with 8 of the Biodiversity Hotspots – the world's most biologically rich regions that are under significant threat. (See Figure 2.) The environmental indicators within the C.A.F.E. Practices guidelines provide important incentives for protecting the remaining habitat and wildlife in these regions and also ensuring critical ecosystem services such as freshwater quality and carbon storage are maintained.



**Figure 2: Overlap between Biodiversity Hotspots and Coffee-Growing Regions**

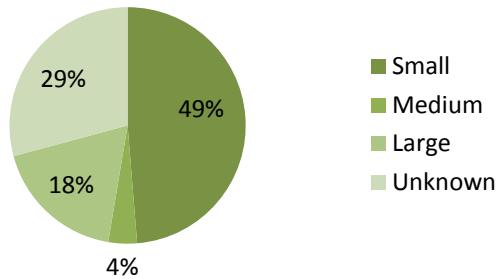
#### **4.1.1 Amount of coffee purchased through C.A.F.E. Practices**

- Pounds of coffee purchased from C.A.F.E. Practices approved suppliers
- Percentage of coffee purchases from large, medium and small farms

In FY08, Starbucks purchased nearly 295 million pounds of coffee through the C.A.F.E. Practices program. This represented 77 percent of total coffee purchases for that year. Starbucks purchased C.A.F.E. Practices verified coffee from 19 countries spanning 3 continents during this year. Only one country applied to the program and failed to comply with the guidelines such that Starbucks did not purchase C.A.F.E. Practices coffee from that country during the year analyzed. Of these 19 countries only Brazil and East Timor had no new applications verified during this

year. In each of these cases Starbucks purchased C.A.F.E. Practices coffee from applications that had undergone verification during a previous year and received a 2 or 3 year validity.

In FY08, Starbucks purchased C.A.F.E. Practices coffee from 645 different applications. The vast majority (e.g. 86 percent) of these applications consisted of farms from a single size category.<sup>4</sup> The other 13 percent of applications selling C.A.F.E. Practices coffee to Starbucks were a mix of small, medium and/or large farms. Knowing this allows us to draw some conclusions regarding the proportion of C.A.F.E. Practices coffee purchased from small farms versus that produced on medium or large farms. At least 49 percent of FY08 C.A.F.E. Practices coffee purchases were from small farms of less than 12 hectares, and 18 percent were from large farms of 50 hectares or more. (See Figure 3.) For 29 percent of purchases a correlation with farm size could not be made due to lack of data.<sup>5</sup> Thus, these results under-represent the actual percentages purchased from each size category.

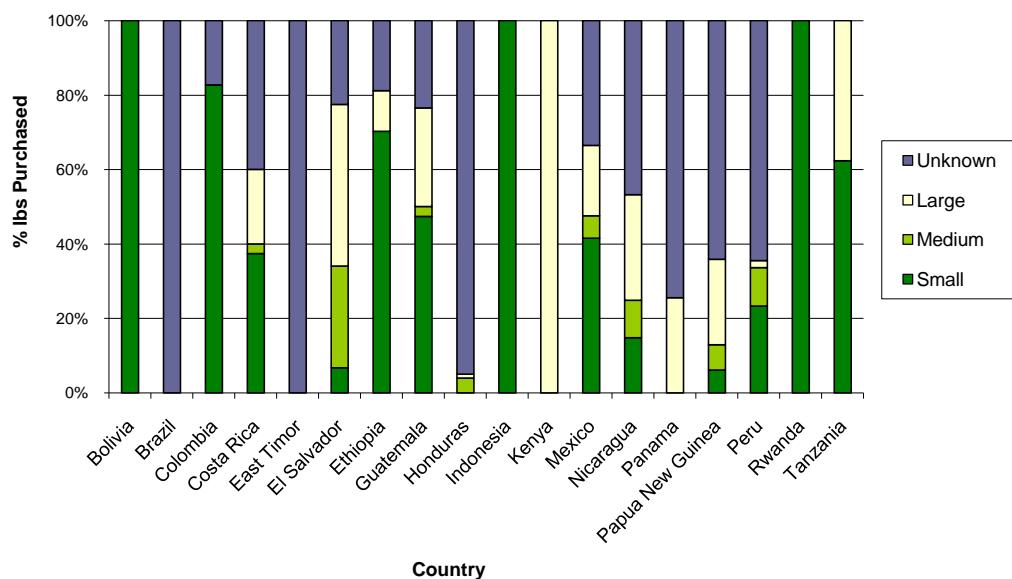


**Figure 3: FY08 Volume of Coffee Purchases by Farm Size**

Small farms dominated overall purchases in FY08, particularly from countries such as Bolivia, Colombia, Indonesia, Rwanda and Tanzania. (See Figure 4.) The supply of C.A.F.E. Practices from Kenya, El Salvador, Nicaragua, Panama and Papua New Guinea, however, came primarily from large farms. Costa Rica, El Salvador, Guatemala, Mexico, Nicaragua and Papua New Guinea had the most representative supply of coffee across the 3 farm size categories. Medium farms were the least represented group in terms of coffee purchases for FY08, with only El Salvador producing a large proportion of C.A.F.E. Practices coffee on farms of this size range. This may be due to the inclusion of medium farms in applications consisting of farms representing a range of sizes, which precludes this level of analysis.

<sup>4</sup> Starbucks has defined farm size according to the following parameters: small farms are any farms of less than 12 hectares; Medium farms are any farms with 12 to 49.9 hectares, and: Large farms are any farms with 50 hectares or more. (See Starbucks, 2008)

<sup>5</sup> Either the application received a 2 or 3 year validity based on verification from a previous year or the application represented a heterogeneous mix of farm sizes.



**Figure 4: FY08 Volume of Coffee Purchases According to Farm Size**

### 3.2 Application Approval Status

- Percentage of applications achieving various approval status categories
- Percentage of small, medium and large farms in applications achieving various approval status categories
- Pounds of coffee deducted from the program due to non-compliance

Starbucks assigns an approval status for each application that has undergone verification based on the verification report entered by the verifier in the VRS. Applications receive scores for each of the following subject areas:

- Economic Accountability (pre-requisite)
- Social Responsibility
- Environmental Leadership - Coffee Growing
- Environmental Leadership - Coffee Processing

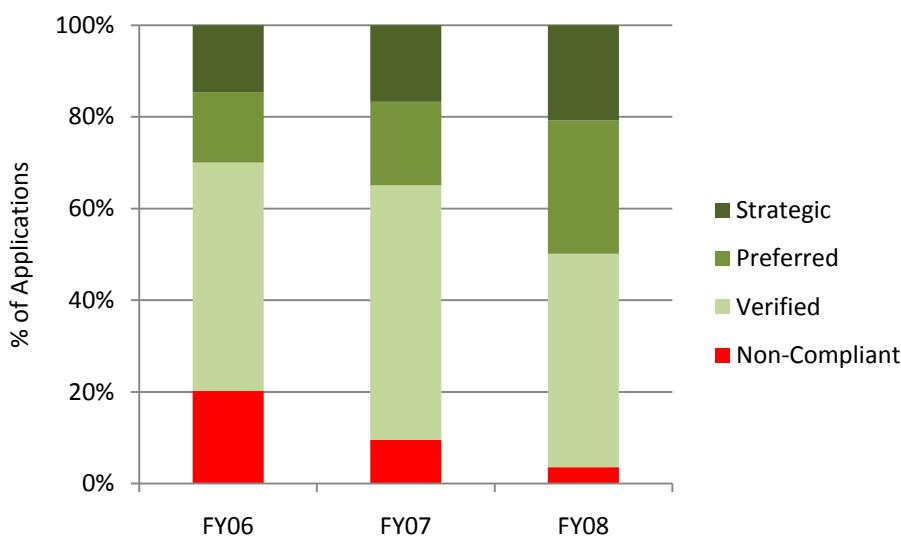
Strategic suppliers are those achieving the highest level of performance (over 80 percent) in each of the social responsibility and environmental leadership subject areas, followed by preferred (60-80 percent) and verified (less than 60 percent). To receive an approved status, all large farms and mills must perform at the given level in each subject area, and for small and medium-sized farms, the aggregate scores of the sampled farms must meet the agreed threshold for each subject area.

Starbucks takes into consideration the type of supply chain included in an application when assigning a non-compliant status. Applications consisting of a single medium or large farm that fail to comply with required zero tolerance indicators receive a non-compliant status. For

applications undergoing group verification<sup>6</sup>, at least 50 percent of verified farms have to meet the zero tolerance indicators to achieve an approved status in the program. In some cases there are applications assigned an approved status, but that contain a small number of sampled farms that did not comply with the zero tolerance indicators. In these cases, Starbucks deducts the percentage of volume the sampled farm represents from the total quantity of coffee available for purchase through the program and assigns a verified status to the application regardless of whether the overall performance of the application is above this threshold.

An increase in the percentage of applications achieving an improved status over time can serve as an important indicator of the success of the program. Ideally more applications would achieve preferred and strategic status over time and the number of non-compliant applications would decline. This is the trend among applications verified during the first 3 years of implementation. During this time when the number of applications achieving a preferred or strategic status rose from 30 percent in FY06 to 50 percent in FY08. (See Figure 5.) The percentage of applications receiving a non-compliant status declined precipitously over the same period. In FY08, 26 applications were non-compliant with the zero tolerance requirements and thus unable to sell coffee to Starbucks as C.A.F.E. Practices coffee. This was down from 112 applications in FY06 and thus represents a decline of 74 percent. In FY08 non-compliant applications represented over 15,000 mostly small farms and spanned 8 countries.

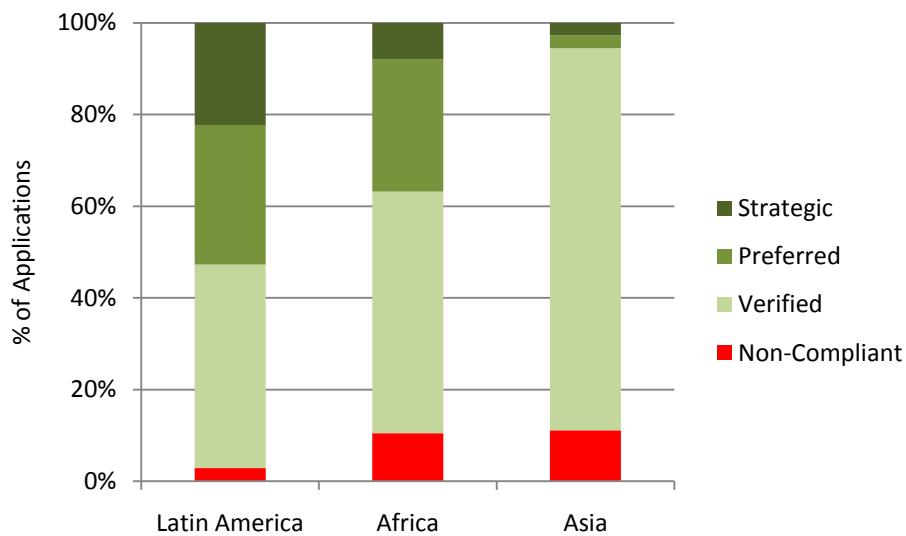
Because the number of applications received varies from year to year, as does the make-up of farms and mills in any given application, a change in the number of applications achieving the various approval status categories does not directly correlate to increased adoption of best practices by farms and/or mills over time. This indicator can, however, serve as a proxy for overall performance and demonstrates important improvements in the performance of participants as a whole.



**Figure 5: Application Approval Status FY06-FY08**

<sup>6</sup> Applications consisting of medium and/or small farms undergo group verification in which a sample of the total number of farms undergoes verification.

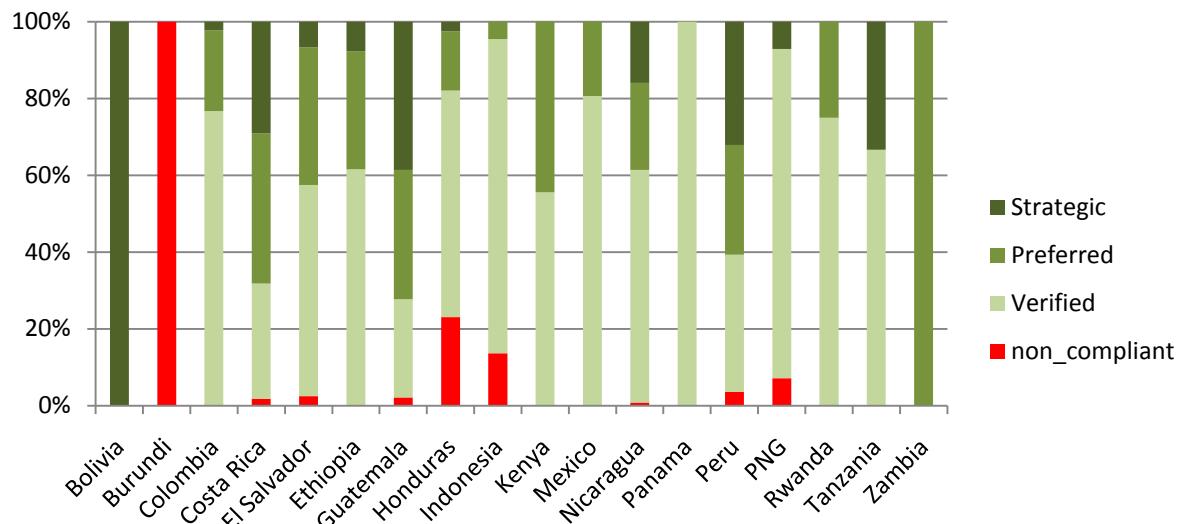
A further look at the approval status data by region in FY08 shows an expected trend in which countries participating the longest in the program demonstrated a higher proportion of applications achieving Strategic and Preferred approval status and lower levels of those failing to comply with minimum requirements of the program. (See Figure 6.) Latin America has the highest percentage of Strategic and Preferred applications. Within Latin America, Guatemala had the highest number of applications receiving Strategic status, with Costa Rica, and Nicaragua rounding out the top three countries. These same 3 countries along with El Salvador also had the highest number of applications achieving Preferred status.



**Figure 6: FY08 Approval Status by Region**

Country level analysis of applications achieving the various approval status levels can be misleading due to the variation in the number of applications received from suppliers in various countries. (See Figure 7.) For instance, in FY08 two countries had only a single application apply to the program whereas five countries had more than 100 applications undergoing verification. Those countries showing 100 percent of applications receiving a single approval status had only a few applications (e.g. 1-4) verified. Guatemala, Costa Rica, El Salvador and Nicaragua had the most applicants verified in FY08 and there is a high degree of variation in performance among these countries.

Guatemala, Costa Rica, Peru, Bolivia and Tanzania had the largest percentage of applications achieving strategic status. Eight countries, had applications receiving non-compliant status in FY08. Burundi had no applications achieving an approved status. Honduras had the second highest rate of non-compliance at over 20 percent.



**Figure 7: FY08 Approval Status by Country**

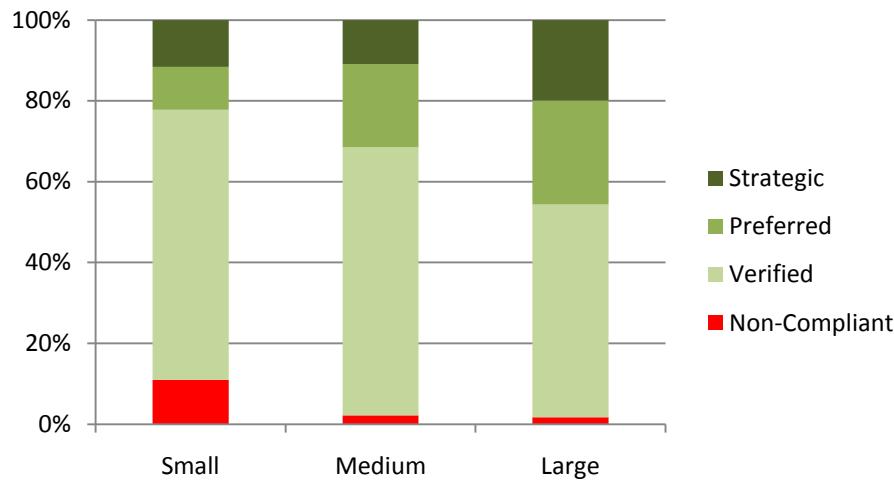
An increase in the number of farms included in applications achieving the Strategic and Preferred status can also serve as an indicator of improved performance over time. For this particular indicator, however, FY08 would serve as the baseline year. As mentioned above, an application may represent a single farm or a group of farms verified against the guidelines. For FY08, the vast majority (67 percent) of farms in each size category were in applications receiving a verified status. Another 22 percent achieved either a Strategic or Preferred status. The remaining 11 percent of farms were included in applications found non-compliant.

	Strategic	Preferred	Verified	Non-Compliant	Grand Total
<b>Small</b>	16,209	14,754	93,203	15,347	139,513
<b>Medium</b>	114	216	695	23	1,048
<b>Large</b>	82	106	217	7	412
<b>Total</b>	16,405	15,076	94,115	15,377	140,973

**Table 2: Number of farms by size included in applications receiving various approval status levels**

The approval status data when analyzed with farm size data permits an analysis of the percentage of small, medium and large farms achieving the various approval status levels. This provides some insight into whether any particular farm size is more likely to be included in applications achieving strategic or preferred status. The results show little difference between the percentage of small and medium farms achieving a verified or strategic status. Large farms were more likely to be in applications achieving strategic status and small farms were less likely to be included in applications receiving a preferred status. Small farms were also more likely to be in applications receiving a non-compliant status. These results suggest that the C.A.F.E. Practices program has been quite successful in enabling applications that include small farms to achieve high levels of performance. While more of the non-compliant applications included small farms, this could be due to the large number of small farms applying to the program. Applications with large farms appeared more likely to achieve a strategic status than those including medium and/or small farms. This may be due to the ability of large farms to participate in small groups or as individual applications within the program. Small farms undergo group certification which can make it more difficult for applications to achieve a high status as the entire group of farms

sampled have to perform at a high level to reach the required performance threshold. (See Figure 8.)



**Figure 8: Percentage of farms by size included in applications receiving various approval status levels**

Another indicator of improved performance among suppliers participating in the program is a decline in the total volume of coffee failing to qualify for purchase within the C.A.F.E. Practices program. These volumes represent coffee produced by farms in applications that received a non-compliant status or in the case of group certification, the proportion of farms found to be non-compliant with minimum requirements (e.g. green coffee deductions). Data from FY06-FY08 shows a dramatic decline in the amount of coffee not meeting the requirements for purchase through C.A.F.E. Practices. (See Table 3.) In FY06 the volume of coffee represented by non-compliant applications accounted for over 14 percent of the coffee verified, but this dropped to less than 2 percent in FY08. Between FY06 and FY07 an increase took place in both categories which may be explained by the overall growth of the program to include a larger number of farms and an expanded geographic scope to include applications from Africa and Asia. Other explanations for the change could be the release of a new version of the C.A.F.E. Practices guidelines in FY08 which introduced some changes to the way in which verifiers evaluated farms and the introduction of the on-line data reporting system.

	FY06	FY07	FY08
Green coffee deductions (lbs)	973,563	20,162,158	10,178,430
Non-compliant applications (lbs)	47,704,038	57,176,897	9,878,873
Total (lbs)	48,677,601	79,392,022	20,057,303

**Table 3: Coffee deductions from the C.A.F.E. Practices program**

One of the economic incentives built into the C.A.F.E. Practices program is the ability for an application to receive validity over multiple years if certain performance conditions are met. This results in cost savings as the supply chain does not need to undergo an annual audit and thus

pay the requisite fees for re-verification for another 2 to 3 years. During the three-year period between FY06 and FY08 applications could receive a 3 year validity if they achieved strategic or preferred status and starting in FY08 a policy was implemented that required the audits to be conducted during the harvest period to be eligible for this benefit. In FY06, 24 percent of applications received a 3-year validity, followed by a short drop in FY07 to 20 percent of applicants. Again, this decline may be due to the expansion of the program to new geographies and the large increase in participation the program experienced during that year. In FY08, 34 percent of applications verified received a multi-year validity – a figure that exceeds even the FY06 level.

### 3.3 Supplier Performance

- Average application score

In addition to looking at change in the percentage of applications achieving the various approval status categories over time, application scores can help determine trends in overall performance of program participants. Each application receives an overall score as well as subject area scores for social responsibility, coffee growing and coffee processing.<sup>7</sup> Since not every application undergoes verification each year and the make-up of farms and mills in any application can change from year to year as well, changes in these scores over time do not necessarily represent the adoption of better practices over time by participating farms, mills and PSOs. Rather, it provides a sense of the overall performance of the potential Starbucks coffee supply chain for each year. These scores do not represent the average score for coffee purchases in a given year, but can be used to assess general performance of supplier networks applying to the program in a given year.

Although Starbucks does not use average total scores to assign supplier status they can serve as an indicator of performance levels at both the global and country levels. Between FY06 and FY08 average total scores increased by 23 percentage points. (See Table 4.) From FY07 to FY08 social responsibility scores did not change significantly, although coffee growing scores did increase by 10 percentage points.

Year	Avg. Total Score	Avg. SR Score	Avg. CG Score	Avg. CP Score (wet)	Avg. CP Score (dry)
FY06	52%	NA	NA	NA	NA
FY07	73%	76%	62%	NA	NA
FY08*	77%	78%	72%	68%	87%

**Table 4: Average Application Scores FY06-FY08**

\*FY08 average total score data includes all 804 applications verified that year. The subject area average scores, however, do not include the 16 applications verified under Version 1.0 or the 1 application from Ethiopia completed after the data transfer

In looking at the country level average total scores an upward trend occurs for the majority of the countries participating in the program. (See Table 5.) Exceptions are in 4 Latin American countries where scores fell between 2 and 9 percent. Statistical analysis of FY08 data shows no significant correlation (.18) between the number of applications verified in a given year and the

<sup>7</sup> Subject area scores were only available starting in FY07, as these were not recorded in the Starbucks database prior to this year.

average total score. In FY08, 5 countries average total scores of 80 percent or greater. This is a significant change from FY06 when no countries achieved an average total score of more than 78 percent.

Region	FY06		FY07		FY08	
	No. of Apps	Avg. Score	No. of Apps	Avg. Score	No. of Apps	Avg. Score
Africa	0	0	38	67%	38	70%
Asia	0	0	25	65%	36	73%
North & Central America	519	50%	557	74%	658	74%
South America	35	73%	62	77%	72	87%
Total	554	52%	682	73%	804	77%

**Table 5: Number of Applications Verified and Average Total Score by Region, FY06-FY08**

### 3.4 Conclusions from Application-Level Analysis

The analysis of application indicators of C.A.F.E. Practices growth, purchases, and performance showed the following positive trends:

- The number of applications verified grew from 554 in the first year of the program to 804 in FY08 and the number of countries represented nearly doubled during the same period.
- Starbucks purchased nearly 294 million pounds of coffee from 645 applications in FY08. This represented 77 percent of coffee purchased by the company and at least 49 percent came from smallholder producers.
- The number of applications achieving a preferred or strategic status increased over the 3 years analyzed, and the number of non-compliant applications fell by nearly 75 percent during this same period.
- Average total scores for applications improved by 25 percentage points since the start of the program.

Performance trends on average total score and approval status need to acknowledge the lack of consistency in the applications verified during any given year as some receive multi-year validity. Thus, the upward trend is based on a different population in each year,

The application level analysis allows Starbucks to target certain countries for additional technical assistance and training, especially for the 8 countries where some applications failed to achieve an approved status. Of these Burundi and Honduras may warrant special attention as well as closer scrutiny in the future based on past failure to comply with the zero tolerance indicators. The average total score analysis also points to a need in Brazil and Papua New Guinea as these two countries had the lowest averages in both FY07 and FY08.

The analysis also identified some potential advantages to larger farms as these tended to achieve higher approval statuses and have fewer instances of non-compliance when compared to small farms, even though the large farms are audited against a greater number of indicators. Starbucks should continue to monitor these results over the next few years to determine the types of technical assistance necessary to increase performance among smaller farms.

## 4. Farms

Farms form the basis of the coffee supply chain and thus serve as a primary focus of the C.A.F.E. Practices program. The Generic C.A.F.E. Practices Evaluation Scorecard contains 179 indicators used to verify performance of medium and large farms. The smallholder scorecard is made up of 74 indicators, which are a subset of those included in the generic guidelines with one additional indicator to assess school attendance among children living on the farm. An additional 38 indicators are used to audit Producer Support Organizations that provide assistance to small farm applications.<sup>8</sup>

The guidelines assess social responsibility and coffee growing aspects of farm performance and at a minimum the guidelines are designed to ensure that farms do not employ underage, forced or bonded labor and that they pay workers the legal minimum wage. Yet the broader objective is to encourage the adoption of best practices over time to improve the working conditions and well-being of workers and to conserve natural resources and biodiversity. Using verification reports prepared by verifiers, we can determine the percentage of farms adopting the various best practices. These adoption rates can then be used to assess change over time using FY08 data as the baseline.<sup>9</sup>

Verifiers mark each indicator as comply, not comply, or not-applicable for each farm visited and provide written evidence in the report. We calculated the percentage of farms compliant with a given indicator made based on the number of farms for which that particular indicator was applicable (C/C+NC). Applications including small and medium farms undergo group certification in which verifiers visit a stratified sample of farms and prepare verification reports. The total number of farms included in this sample equaled 5141 (581 medium farms and 4560 small farms).<sup>10</sup> We extrapolated these results to the total population in the respective FY08 application for both medium and small farms. (See Appendix B for extrapolation methodology.)

We analyzed the farm data at the global, regional and country levels. The application country field formed the basis for country classification as many applications lacked data for the country field in the farm record as this was the field for which we had data for all farms that underwent the verification process.

While it is possible to analyze compliance rates for each of the 179 social responsibility and coffee growing indicators, this analysis focuses on a subset of these identified as the most relevant for ensuring social well-being of farmers and workers and conserving natural resources and the broader environment.<sup>11</sup> This section presents the findings of the analysis and presents some conclusions on farm level performance as well as recommendations for how Starbucks might improve the program moving forward.

### 4.1 Overview of Farms Participating in C.A.F.E. Practices in FY08

- Number of farms

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<sup>8</sup> See Section 4.3 for analysis of PSO performance.

<sup>9</sup> FY06 and FY07 farm level data was not collected in a way that permits farm level performance to be tracked over time, thus making FY08 the start date for trend analysis regarding farm-level performance.

<sup>10</sup> This is in addition to the 411 large farms verified, for a total of 5552 farms with verification reports in FY08.

<sup>11</sup> Some indicators were not analyzed due to time constraints, but could be analyzed in the future as the extrapolation process is automated in the VRS.

- Number of workers
- Number of coffee hectares
- Geographic distribution of farms by country and farm size

In FY08, 140,973 farms participated in the C.A.F.E. Practices program, 99 percent of which were small farms of less than 12 hectares. (See Table 6.) In total these farms represented 479,309 hectares, over two-thirds of which were located on small farms.

FY08	Farms		Hectares	
	Number	Percentage	Number	Percentage
Small	139,513	98.96%	297,787	62.13%
Medium	1048	0.74%	26,179	5.46%
Large	412*	0.29%	155,344	32.41%
All	140,973	100.00%	479,309	100.00%

**Table 6: Relative Participation and Area of Small, Medium and Large Farms in FY08**

\*The large farm count shows 412 farms, but only 411 were verified in FY08.

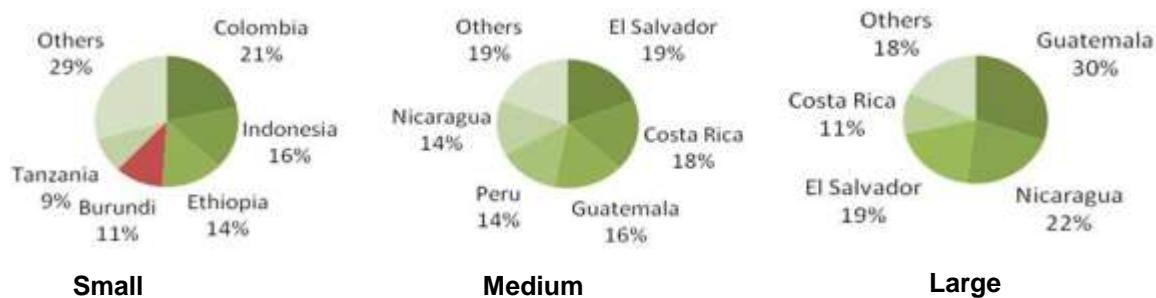
These farms provided over 1 million workers with full-time, part-time, or temporary employment. (See Table 7.) The majority of employment was based on the need for temporary workers on small farms, presumably during the harvest period. Farms also employed over 30,000 full-time, permanent workers, the vast majority of which worked on small farms.

FY08	Small Farms	Medium Farms	Large Farms	Total (by type)
<b>Permanent Workers</b>	18,815	2,491	9,057	30,362
<b>Part-Time Workers</b>	26,015	34,626	36,615	97,256
<b>Temporary Workers</b>	775,795	44,611	88,598	909,004
<b>Total (by size)</b>	820,626	81,727	134,270	1,036,622

**Table 7: Number and Type of Workers Employed by Participating Farms in FY08**

Of the farms sampled in FY08, 27 percent reported not employing any workers. The vast majority (99 percent) of these were small farms of less than 12 hectares that may have used family labor. However, 3 large and 15 medium farms also reported employing no workers, which may warrant further investigation to ensure the verifiers are accurately recording this information.

Small farms in three countries, Colombia, Indonesia and Ethiopia, made up over 50 percent of the small farm population participating in C.A.F.E. Practices in FY08. Guatemala, Nicaragua and El Salvador made up 71 percent of participating large farms during the same year. (See Figure 9.) Latin American countries represented nearly 80 percent of the medium and large farms applying to the program, whereas the countries with the largest number of small farms participating in the program were more representative across the three continents. Interesting to note is that the 4 applications from Burundi found to be non-compliant represented 11 percent of small farms applying to the program in FY08.



**Figure 9: Geographic Distribution of Farms by Size Categories in FY08**

## 4.2 Social Responsibility

Within C.A.F.E. Practices farms are verified against a set of practices for working conditions and hiring practices in the hope that the livelihoods of workers and farmers will improve over time. Most indicators in this section assess how farms treat their workers. By improving worker wages and benefits and providing improved access to education, medical care and other benefits over time, farmers can demonstrate a commitment to improving the livelihoods of workers. In addition, farms can make investments improving worker wages, living conditions and the quality of the education and medical care received. The Social Responsibility indicators are designed to provide assurance that minimum performance standards are met, that the most egregious practices are not part of the Starbucks coffee supply chain, and to encourage the further adoption of better practices over time.

Although there are 71 indicators in the Generic Evaluation Guidelines that focus on social responsibility, only 28 of these are also used to monitor conditions on small farms. Compliance rates for all 71 indicators can be tracked over time, but this section focuses on a select set identified as having the closest link to improved livelihoods for farmers, farm workers and their families.<sup>12</sup> This analysis provides a baseline from which Starbucks can monitor any changes in the adoption of best practices over time. To demonstrate actual impacts in these areas, further information is needed on disease incidence, school attendance and student performance as well as information on how workers on farms participating in C.A.F.E. Practices compare to regional averages.

### 4.2.1 Compliance with Minimum labor standards

- Number of farms with instances of child labor
- Number of farms with instances of forced or bonded labor
- Number of farms failing to pay the minimum wage to workers

Farm level analysis provides further insight into instances of non-compliance with the minimum labor standards, or zero tolerance indicators, within the C.A.F.E. Practices guidelines. Instances of non-compliance with the zero tolerance indicators, although not desired, demonstrate the

<sup>12</sup> See Appendix B for compliance rates for the majority of the Social Responsibility indicators.

capacity of the program to identify cases of non-compliance. We can identify the number of farms where issues arose, and extrapolate these results to the broader population of farms participating in the program.

When extrapolating the results to the entire population, we find that for each of the 7 zero tolerance indicators between 82 and 100 percent of farms complied with these practices in FY08. (See Table 8.)

Indicator		Farm Size			All
		Large	Medium	Small	
SR-HP1.1	All <b>full-time workers</b> are paid the nationally or regionally established minimum wage	97%	95%	80%	82%
SR-HP1.2	All <b>part-time workers</b> are paid the nationally or regionally established minimum wage	98%	99%	100%	100%
SR-HP1.3	All <b>temporary/seasonal workers</b> are paid the nationally or regionally established minimum wage	99%	98%	95%	95%
SR-HP4.1	Employer does not directly contract any persons under the age of 14	100%	100%	100%	100%
SR-HP4.2	Employment of authorized minors older than 14 does not conflict with their access to education	99%	97%	98%	98%
SR-HP4.3	Management has an enforced policy prohibiting discrimination on the basis of gender, race, ethnicity, age or religion as per ILO Convention 111	99%	100%	NA	100%
SR-HP4.4	Employer prohibits the use of forced, bonded, indentured or involuntary convict labor	100%	100%	100%	100%

**Table 8: Extrapolated compliance rates for zero tolerance indicators in FY08**

The lowest level of compliance occurred among small farms failing to pay the minimum wage to full-time workers.

Of the 5552 farms sampled in FY08, 174 failed to comply with at least one of the zero tolerance indicators. This resulted in 3 percent of verified farms ineligible to sell coffee to Starbucks through the C.A.F.E. Practices program. Of these 174 farms, 12 employed child labor (0.2 percent of farms sampled), and 1 was reported to employ forced or bonded labor. (See Table 9.) Upon closer examination of the verification report for the farm where forced labor was reported, the evidence entered by the verifier did not support the not comply evaluation found in the report, suggesting that this incident may be a data entry error.

Indicator		Large	Medium	Small	Total
SR-HP1.1	All <b>full-time</b> workers are paid the nationally or regionally established minimum wage	10	16	25	51
SR-HP1.2	All <b>part-time</b> workers are paid the nationally or regionally established minimum wage	3	1	2	6
SR-HP1.3	All <b>temporary/seasonal</b> workers are paid the nationally or regionally established minimum wage	4	17	90	111
SR-HP4.1	Employer does not directly contract any persons under the age of 14	1	3	8	12
SR-HP4.2	Employment of authorized minors older than 14 does not conflict with their access to education	1	2	17	20
SR-HP4.3	Management has an enforced policy prohibiting discrimination on the basis of gender, race, ethnicity, age or religion as per ILO Convention 111	3	3	NA	6
SR-HP4.4	Employer prohibits the use of forced, bonded, indentured or involuntary convict labor	0	1*	0	1

\* May represent a reporting error

**Table 9: Incidents of non-compliance on sampled farms by indicator in FY08**

The majority of farms (97 percent) found non-compliant with a zero tolerance indicator failed to pay the legal minimum wage as set by the local government to their workers, especially to temporary or seasonal workers. The zero tolerance indicator that had the highest number of non-compliance issues was the payment of the minimum wage to temporary/seasonal workers, which is to be expected given that many farms only employed temporary/seasonal labor during the harvest. Thus, this particular indicator applied to a much larger number of farms.

There was no particular pattern of countries or regions with higher incidents of non-compliance with this set of indicators. (See Table 10.) Ten countries had farms failing to comply with at least one of these indicators. Rwanda and Burundi had the highest instances of non-compliance on 36 and 33 farms, respectively, although these were confined to a small number of applications. Guatemala and Costa Rica had the highest levels of non-compliance with a zero tolerance indicator as 15 and 12, respectively. Burundi and Rwanda, however, had high numbers of farms with incidents of non-compliance with these indicators that affected a very high percentage of applications. In most cases farms failed to comply with only a 1 of the 7 zero tolerance indicators. However, farms in 8 countries failed to comply with 2 of the zero tolerance indicators and Nicaragua had 2 large farms failing to comply with 3 of these indicators.

Region	# of Apps with ZTs	% of Apps	# of Farms with:			Total # of Farms
			1 ZT	2 ZT	3 ZT	
Africa	7	18%	58	11		69
Asia	5	14%	13	5		18
Latin America	56	8%	72	13	2	87
<b>Grand Total</b>	<b>68</b>	<b>8%</b>	<b>286</b>	<b>58</b>	<b>4</b>	<b>174</b>

**Table 10: Number of farms and applications with zero tolerance incidents by region**

Further analysis found that only a small proportion of farms with zero tolerance instances failed to comply with more than one of these indicators. None of the farms sampled failed to comply with more than 3 zero tolerance indicators. Two large farms failed to comply with 3 zero tolerance indicators and 29 farms failed to comply with 2. If a farm failed to pay full-time employees the minimum wage, they were much more likely to also pay temporary and seasonal workers less than the legal minimum.

Farm size does not appear to influence the likelihood of farms to have non-compliance issues with this set of indicators. Small farms sampled had the lowest rate of failure (e.g. 2.7 percent) and medium farms had the highest rate at 5.5 percent. Large farms had a failure rate of 3.6 percent.

#### 4.2.2 Worker compensation

- Number of workers receiving the minimum wage
- Number of workers paid above minimum wage
- Number of workers paid a living wage
- Percentage of farms paying overtime at or above the legal minimum requirement

The C.A.F.E. Practices program requires farms to pay workers the legal minimum wage and encourages them to exceed it by including additional wage indicators that ask whether workers receive more than the minimum, and whether they receive a living wage. Verifiers report on these indicators across 3 categories of workers: full-time, part-time, and seasonal. Verifiers also record the number of workers by category employed on each farm sampled. By linking the worker numbers to compliance rates for the various wage-related indicators and extrapolating the results, we can determine the number of workers receiving wages meeting the various strata.

Most farms participating in the program went beyond the legal requirements and paid wages that exceeded the minimum across all 3 categories of workers. (See Table 11.) Medium and large farms were more likely to comply with these indicators than small farms. Farms were also significantly more likely to pay wages exceeding the legal minimum to part-time workers. This may be due to the relatively small number of farms that employed this category of worker. Interestingly, full-time workers on small farms did not fare as well as part-time and seasonal employees in receiving wages that exceeded the legal minimum. For instance only 48 percent of small farms paid their full-time workers wages that exceeded the legal minimum requirements, but 92 percent paid such wages to part-time workers and 73 percent paid them to temporary workers.

Indicator		Compliance			
		Large	Medium	Small	All
SR-HP1.11	All <b>full-time</b> workers are paid more than the nationally or regionally established minimum wage	74%	76%	48%	52%
SR-HP1.12	All <b>part-time</b> workers are paid more than the nationally or regionally established minimum wage	76%	72%	92%	91%
SR-HP1.13	All <b>temporary/seasonal</b> workers are paid more than the nationally or regionally established minimum wage	74%	76%	73%	73%
SR-HP1.14	<b>Full-time</b> workers are paid at least a living wage	86%	87%	55%	58%

**Table 11: Percentage of farms paying above the minimum wage in FY08**

The FY08 verification reports show that over 996,500 workers received the minimum wage set by national or local governments. The majority of these workers were temporary workers employed on small farms. Over 785,000 farm workers were paid more than the minimum wage. When overtime was required, 91 percent of farms paid their workers the legal overtime wage for this time and 51 percent exceeded this minimum.

In addition 58 percent of farms paid full-time workers a living wage sufficient to meet the basic living needs of an average-sized family in the particular economy.<sup>13</sup> This benefitted over 18,000 workers. (See Table 12.)

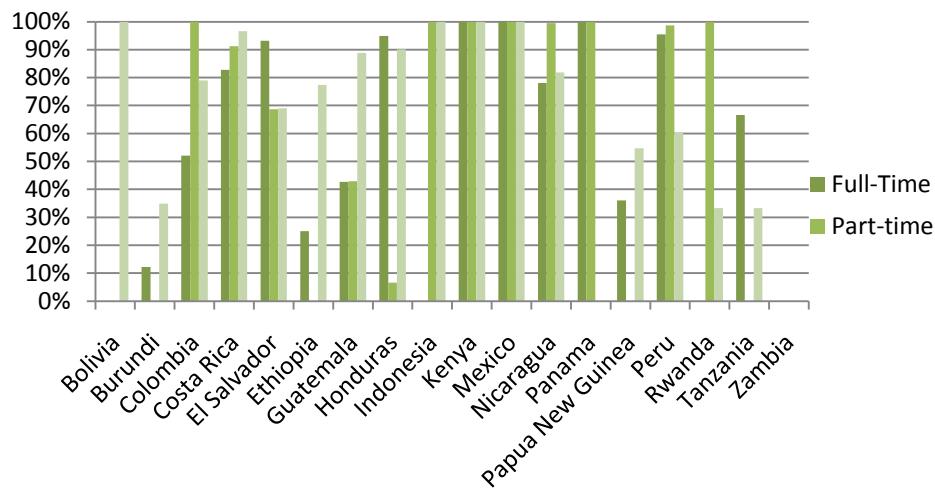
Farm Size	Indicator	Full-Time	Part-Time	Temporary	Total Workers
Small	Greater than minimum wage	6,241	22,407	601,844	630,492
	Living wage	5,880	NA	NA	5,880
Medium	Greater than minimum wage	2,759	2,420	66,787	71,966
	Living wage	3,795	NA	NA	3,795
Large	Greater than minimum wage	5,267	4,298	73,810	83,375
	Living wage	8,363	NA	NA	8,363
Total	Greater than minimum wage	14,266	29,125	742,441	785,832
	Living wage	18,038	NA	NA	18,038

**Table 12: Number of farm workers earning wages above the legal minimum**

The number of farms reporting on these indicators is quite inconsistent. For instance, the number of farms reporting that they used full-time workers ranged from 5525 (SR-HP1.11) to 8859 farms (SR-HP1.14). This could explain the counter-intuitive trend that emerges among medium and large farms in which a larger number of full-time workers received a living wage than were paid wages exceeding the legal minimum. Another explanation might be that the government-established minimum wage for some countries or regions was considered sufficient to cover the basic needs of workers, but even in such cases it would seem that the percentages should be more aligned. In either case, this may warrant further exploration to determine whether verifiers require further training on these indicators.

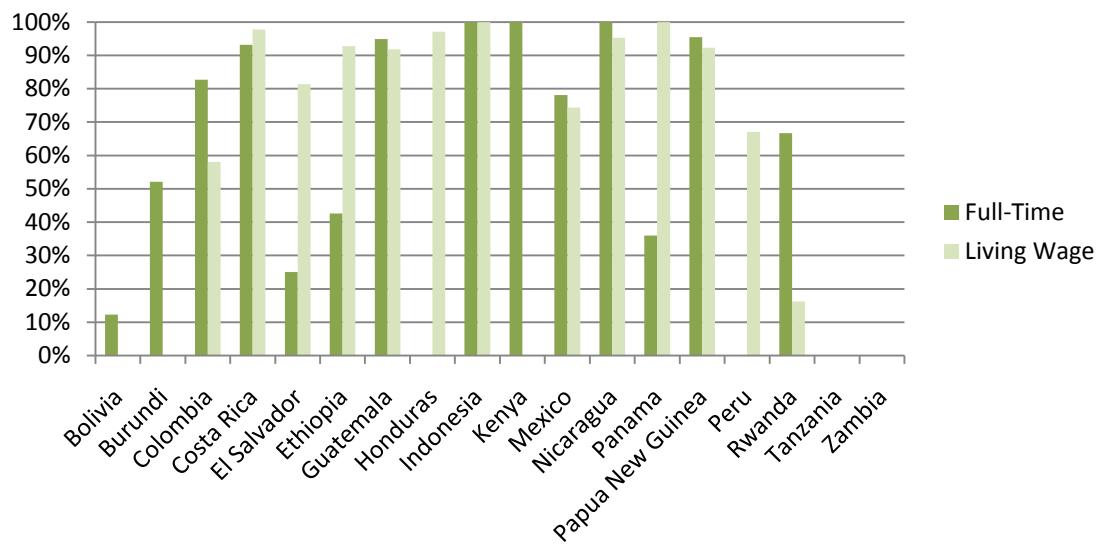
<sup>13</sup> International Labor Organization. [www.ilo.org](http://www.ilo.org)

In most countries some proportion of farm workers received wages that exceeded the minimum legal requirements. (See Figure 10.) Analysis of these indicators at the country level is complicated by the fact that not all countries had farms employing full-time or part-time workers due to the type of farms applying to the program. For instance Indonesia, Rwanda and Bolivia did not have any farms employing full-time workers, while in Bolivia, Ethiopia, Papua New Guinea and Tanzanian participating farms did not employ part-time workers. Farms in only 2 countries -- Kenya and Mexico --employed all three categories of workers and paid all of them above the minimum wage. Costa Rican and Guatemalan farms also employed full-time, part-time and temporary workers and in both cases were more likely to pay temporary workers above the minimum wage than full-time or part-time workers.



**Figure 10: Percent of farms paying greater than minimum wage to workers in FY08 by worker type**

Indonesia, Panama, Costa Rica and Honduras had the highest compliance rates for farms paying full-time workers a living wage. (See Figure 11.) While Panama had only a single farm apply to the program in FY08, Indonesia demonstrated an ability for all small farms employing full-time workers (n=15) to comply with this indicator. Costa Rica had one of the larger reporting rates for this particular indicator (n=1654) and still achieved a compliance rate of 97 percent. In Burundi and Kenya (1038 small and 8 large farms, respectively) no farms paid a living wage to workers, although some did pay beyond the minimum wage. Six countries had higher rates of paying living wages to full-time employees than paying wages exceeding the legal minimum (e.g. Costa Rica, El Salvador, Ethiopia, Honduras, Panama and Peru). In Honduras no farms paid wages exceeding the legal minimum, but nearly all the farms paid a living wage. This could be due to a high minimum wage requirement, but may warrant further examination and training of verifiers.



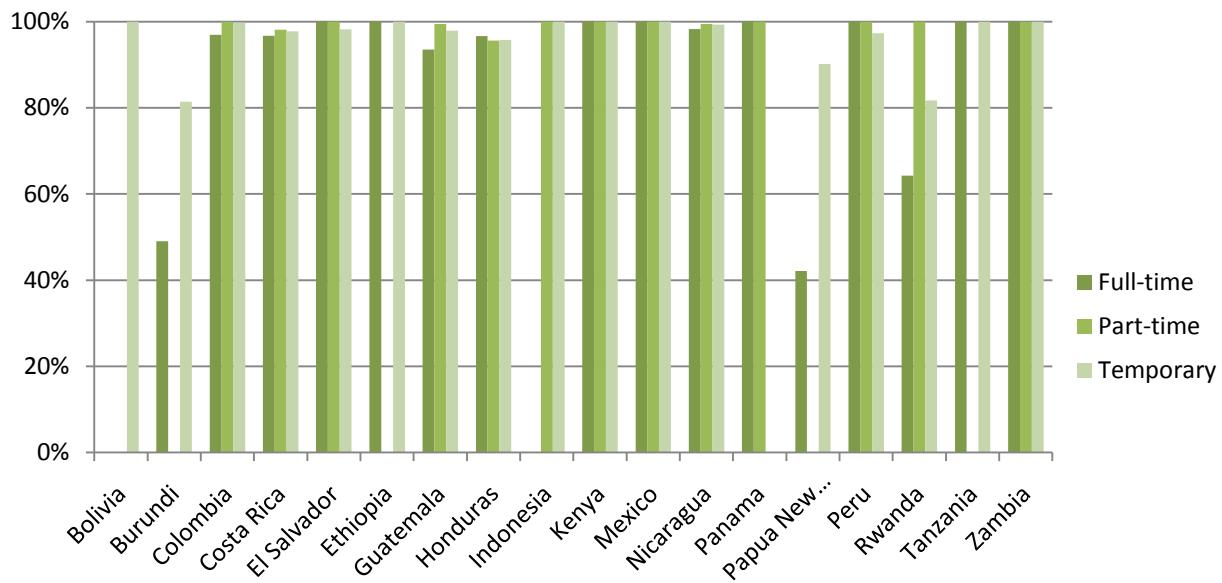
**Figure 11: Percent of farms paying full-time workers above minimum wage or living wage**

#### 4.2.3 Worker access to benefits

- Number of workers receiving legally mandated benefits
- Number of full-time farm workers receiving pension plans that exceed the national standard
- Number of workers receiving paid sick leave
- Number of workers receiving paid vacation

The C.A.F.E. Practices guidelines include indicators on the provision of benefits to workers. These include those that government regulations require of employers as well as those that may exceed those requirements, such as paid sick leave, paid vacation and pension plans. Verifiers collect information on the number of workers employed on the sampled farms which allows for extrapolation of results to report on the number of workers receiving these types of benefits.

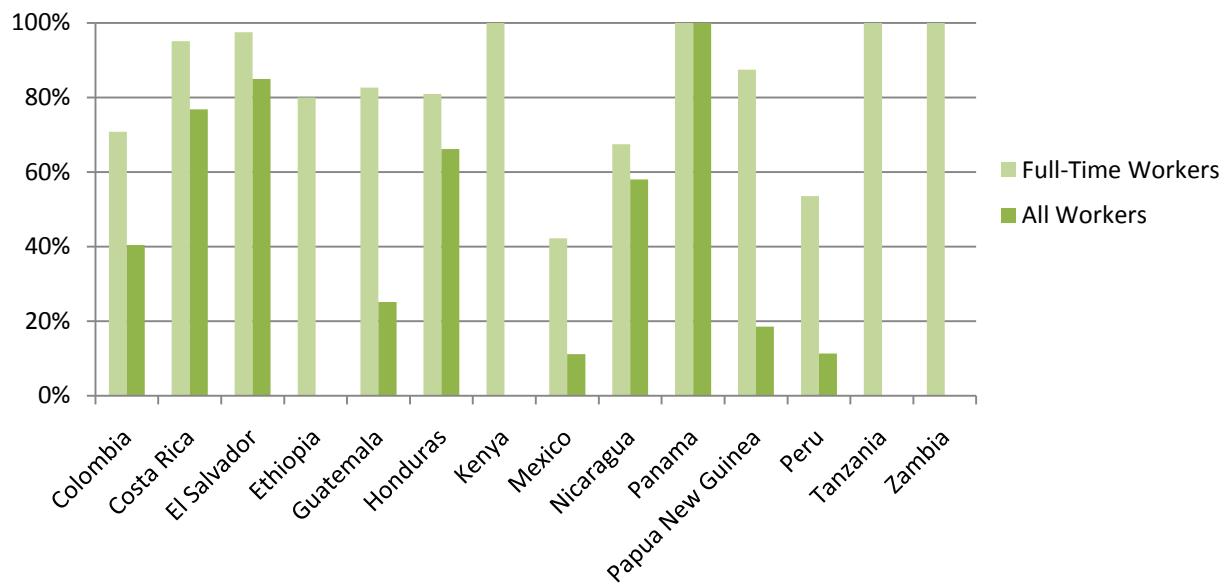
**Legally mandated benefits:** In countries where legislation requires the provision of some benefits to workers, the majority of farms complied with this legislation in FY08. Extrapolated data from the verification reports shows that 82 percent of farms paid full-time employees these benefits, whereas 99.5 and 94 percent of farms provided these benefits to their part-time and temporary employees, respectively. Thus, farms were more likely to pay benefits meeting the legal requirements to part-time and temporary workers. Papua New Guinea, Burundi and Rwanda had the lowest levels of farm compliance for full-time employees, and in each case these figures were significantly lower than the compliance rates achieved by the same country for part-time and/or temporary workers. (See Figure 12.) These trends may be due to some countries having stricter legal requirements to guide the employment of full-time workers, whereas there may be fewer benefits mandated for the other categories, thus making it less costly to achieve compliance. The reason for this trend may warrant further exploration in the future.



**Figure 12: Percentage of farms providing legally-mandated benefits to workers in FY08 by country**

**Pension:** This indicator asks whether medium and large farms provide a pension plan that exceeds national legal requirements for full-time workers. It is not verified on small farms, as many small farms do not employ full-time labor. As might be expected, the compliance rate for this indicator was rather low at only a little over 22 percent of farms. Farms providing this benefit employed 3700 full-time workers in FY08. Three countries – Ethiopia, Panama and Zambia – had no farms comply with this particular indicator. Tanzania had the highest level of compliance at 67 percent (n=3). Costa Rica, Guatemala and Colombia each had much higher numbers of farms verified against this indicator and compliance rates above 30 percent.

**Paid sick leave program:** The C.A.F.E. Practices guidelines include 2 indicators on paid sick leave benefits to distinguish between paying these to full-time versus all workers. As with the pension indicator, the sick leave indicators are verified only on medium and large farms. In FY08, 83 percent of the medium and large farms participating in the program provided paid sick leave to their full-time employees. These farms employed 12,708 full-time workers. When looking at the percentage of farms extending these programs to all of their workers the compliance rate falls slightly to 71 percent, but the number of workers benefitting rises significantly to 221,041 workers due to the inclusion of part-time and full-time workers in the equation. During the FY08 verification year, medium and large farms applied to the program from 14 countries and of these 10 extended paid sick leave to at least a portion of their part-time and temporary workers. (See Figure 13.) Farms in Mexico and Peru had the lowest compliance levels for both of these indicators, whereas the majority (10) of the countries had at least 80 percent of their farms providing sick leave to full-time workers. Farms in El Salvador and Costa Rican were the most likely to extend these benefits to all workers. Panama also shows a high compliance rate, but this is based on just a single large farm applying to the program in FY08.



**Figure 13: Percent of medium and large farms with paid sick leave program for workers in FY08**

**Annual Leave (Vacation):** Medium and large farms providing annual leave of at least 10 days per year employed 10,792 full-time workers in FY08.<sup>14</sup> On average 75 percent of medium and large farms provided this benefit to workers according to the legal requirements. Due to the way in which this indicator is worded the degree to which these benefits extended to part-time employees is unknown and would depend on whether this was a legal requirement of the respective national government. Each of the farms participating from Kenya, Zambia and Panama provided this benefit to their workers (e.g. compliance rate of 100 percent). Farms in Colombia and Costa Rica had compliance rates over 90 percent as well. Farms in Mexico and Nicaragua were the least likely to provide this benefit to workers, but still achieved compliance rates of 64 percent.

#### 4.2.4 Worker living conditions

- Number of farms that provided habitable dwellings to workers
- Number of workers with access to potable water

**Habitable Dwellings:** Over 14,400 farms applying to C.A.F.E. Practices in FY08 provided housing for some portion of their work force.<sup>15</sup> The majority of farms that provided housing for some portion of their work force were large and medium sized farms, as 66 percent of medium farms and 91 percent of large farms provided housing for workers while only 10 percent of small farms did the same.

<sup>14</sup> This indicator does not apply to small farms.

<sup>15</sup> This figure is based on extrapolation of reporting rates for SR-WC1.1 based on a weighted average according to farm size.

Verifiers characterized the vast majority (e.g. 90 percent) of the housing provided as habitable. Compliance rates varied by only 4 percentage points among the 3 farm size categories. In FY08, 418,756 workers were employed by farms that provided habitable dwellings to those workers living on the site. The actual number of these workers who received housing as part of their employment is unknown, however, as verifiers do not collect this information. Of the 18 countries applying to the program in FY08 17 provided housing to at least some of their workers. Indonesia, Kenya, Zambia and Panama all achieved 100 percent compliance with this indicator and all but one country had compliance rates above 85 percent. Burundi was the only outlier with only 39 percent compliance for this indicator..

On 69 percent of medium and large farms worker housing was a safe distance from the productive area and agrochemical storage facilities to prevent exposure to pesticides. Compliance levels ranged from 100 percent in Ethiopia, Panama and Zambia to 58 percent in Costa Rica and El Salvador.

**Potable Water:** In FY08, 905,780 workers were employed by farms that provided access to potable water. This represents a 94 percent compliance rate for this particular indicator. (See Table 13.) Interestingly small farms had the highest level of compliance outperforming medium and large farms by 15 and 4 percent, respectively. Eight countries had compliance rates of 100 percent for this indicator. Honduras had the lowest compliance level at 34 percent.

Farm Size	% Compliance	# of Workers
Small	94%	649,371
Medium	79%	92,811
Large	89%	163,598
All	94%	905,780

**Table 13: Percentage of farms providing potable water to workers**

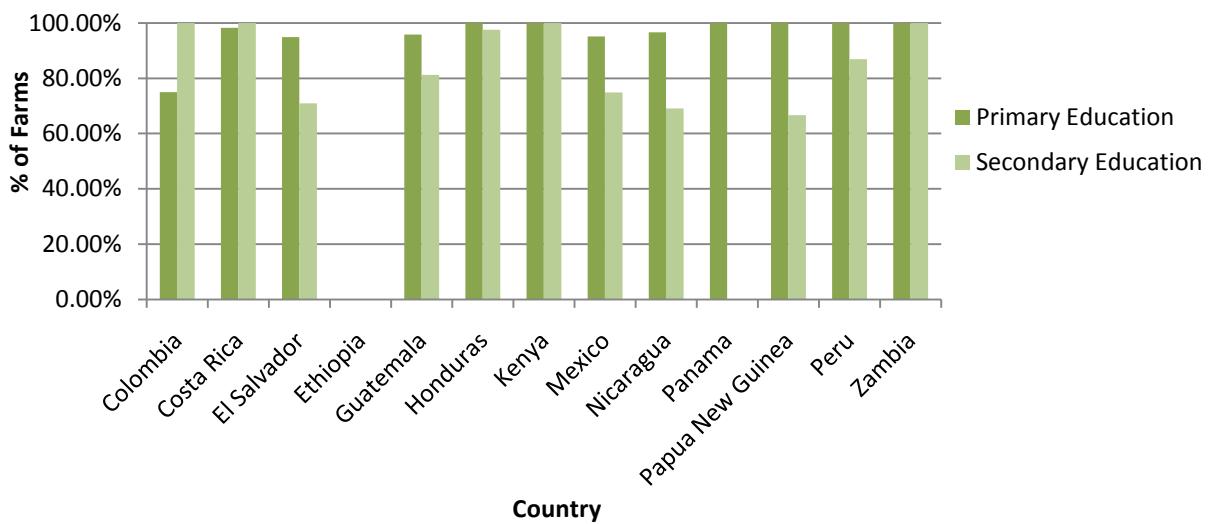
There are some instances of verifiers stating this indicator is not applicable (NA) for a farm. This should only occur on small, family-run farms that do not employ workers, but some verifiers marked this on medium and large farms. Thus this is one indicator for which verifiers may require further training and guidance.

#### 4.2.5 Access to education

- Percentage of small farms where children of legal school age attend school where available and do not work during school hours
- Percentage of farms with insufficient access to education providing primary or secondary education to children of workers living on site
- Percentage of farms with convenient access to education supporting schools through in-kind or financial support
- Percentage of farms providing direct incentives for education

**Children living on small farms:** The C.A.F.E. Practices program recognizes the distinctive conditions on small farms when compared to medium and large farms and has identified a unique indicator for monitoring access to education on small farms. Small farms are verified against only one education indicator that looks at whether school-age children attend school in communities where a school is available to the children. The same indicator also assures that children are not working on coffee farms during school hours. In FY08, 74 percent of small farms participating in the program had children living on the farm. Of these farms, 99 complied with this indicator and made sure children attended school. The actual number of children this represents is unknown as this information is not collected during the verification process. Eight countries achieved 100 percent compliance for this indicator. Rwanda at 98 percent compliance had the lowest level of performance for this indicator. Thus, the majority of small farms had children living on the farm and the vast majority of these children attended school.

**Children living on medium and large farms:** A couple of the indicators are applicable only on farms in communities where verifiers have noted an *insufficient* access to education. By analyzing reporting rates for these we can identify the percentage of medium and large farms located in remote areas where public primary or secondary schools are not available to children. In FY08, 40 percent of medium and large farms were in areas that lacked sufficient access to primary schools and 32 percent to secondary schools. An overwhelming majority (e.g. 97 percent) of medium and large farms in areas lacking access to primary education provided educational instruction, facilities and materials that met national requirements. Of the 12 countries where these conditions exist, 11 achieved compliance rates above 95 percent. Of the farms located in regions without sufficient access to secondary schools, 84 percent provided secondary education to children living on the farm. In most countries medium and large farms were more likely to provide supplementary primary than secondary education. (See Figure 14.) Costa Rica and Colombia, however, were unique in that they were more likely to provide supplementary secondary education. Results for Panama and Ethiopia are based on a single farm reporting, and in Ethiopia the farm did not provide supplemental primary or secondary education for children of workers.



**Figure 14: Percentage of medium and large farms providing primary and secondary education in areas with insufficient access**

In addition to filling this critical need, nearly half (e.g. 49 percent) of medium and large farms are providing scholarships and other incentives for education to children. Finally, in regions where public schools are available, 58 percent of medium and large farms are providing either in-kind or financial support to these facilities.

#### 4.2.6 Access to medical care

- Percentage of farms with convenient access to public medical care
- Percentage of farms supporting local medical facilities through in-kind or financial support
- Percentage of farms offsetting the cost of health services for workers

The smallholder scorecard does not include an indicator to evaluate access to medical care, so this section focuses solely on medium and large farms applying to the program in FY08. During that year, 84 percent of medium and large farms were located in sites with convenient access to medical care. Of these farms, 34 percent provided in-kind or financial support to these facilities. Countries with the highest number of farms reporting on the indicator (e.g. Costa Rica, El Salvador, Guatemala, Kenya, and Mexico) tended to have compliance rates between 20 and 48 percent. Those with fewer farms reporting (e.g. Ethiopia, Kenya and Panama) were more likely to have all farms complying (e.g. Panama, Colombia and Kenya) or failing to comply (e.g. Ethiopia).

In addition to supporting local clinics, some farms are offsetting the cost of health services for their workers. While 82 percent of medium and large farms offset these costs for full-time workers, 71 percent extended these benefits to all workers on the farm. This practice benefitted 221,041 workers. Panama, Tanzania, Costa Rica, Colombia and El Salvador had the highest rates of compliance when only full-time workers were considered. Panama, Colombia and Peru rose to the top in extending these benefits to all workers. (See Figure 15.)

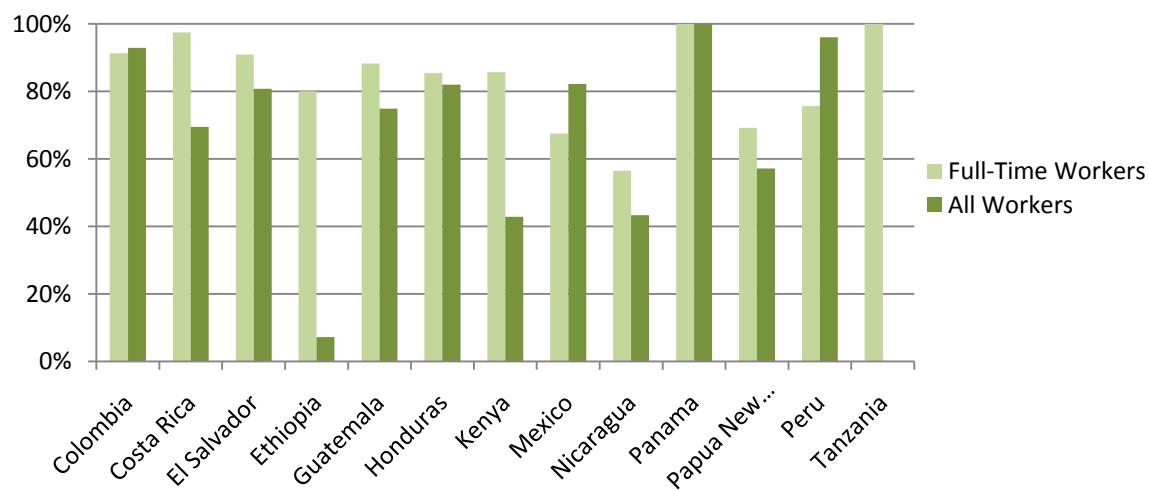


Figure 15: Percentage of medium and large farms offsetting health care for workers in FY08

#### 4.2.7 Social Responsibility Conclusions and Recommendations

Overall, farms provided important employment opportunities in the regions and performed at a high level across the majority of indicators analyzed.

- Participating farms employed 1.1 million workers and over 14,400 farms provided housing to at least a portion of their workers.
- Most farms participating in the program went beyond the legal requirements and paid wages that exceeded the minimum to full-time, part-time and temporary workers. 58 percent paid a living wage to full-time workers.
- Farms are ensuring children have access to education, even when they are located in remote areas. Nearly all medium and large farms located in areas without access to primary schools provided supplemental facilities for workers' children living on the farm, and 99 percent of small farms ensured that children living on the farm attended school.
- The majority of large and medium sized farms made efforts to extend health care and education benefits to workers and their families.
- Over half of medium and large farms have a paid sick leave program for workers and three-quarters have annual leave programs.

The compliance rates achieved in FY08 clearly demarcate the zero tolerance indicators and criteria requirements from others included in the guidelines and farmers strove to meet these performance requirements. For instance, compliance rates for criteria requirements tended to range from 80-90 percent. Compliance rates then tended to fall significantly (e.g. to 30-50 percent for those indicators requiring a larger up-front investment (e.g. in-kind or financial support of schools, medical facilities) and not designated as criteria requirements in the program.

Of the indicators analyzed for the social responsibility section of the guidelines, 16 were relevant to all farm sizes. Farms tended to perform well across these 16 indicators, achieving average compliance rates above 50 percent for all but one indicator.<sup>16</sup> Small farms did struggle to pay full-time workers wages that exceeded the national or regional minimum rate.<sup>17</sup> In this case small farms achieved only a 48 percent compliance rate. Small farms in Burundi, Guatemala, Rwanda and Papua New Guinea appeared to have the most difficulty complying with this indicator.

The majority of the indicators analyzed were applicable only on medium and large farms. From among these, the provision of a pension plan for full-time employees demonstrated the lowest compliance rate (e.g. 23%) and was consistent across both farm size categories. Low compliance rates were also consistent across countries, with only Tanzania achieving a compliance rate exceeding 50 percent. Available data also shows that medium farms faced more challenges than large farms in complying with this particular indicator. Farms were also unlikely to provide in-kind or financial support to public health clinics, with only 34 percent of farms complying with this practice. In both of these cases the indicators in question represent a move

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<sup>16</sup>. This one exception concerns the provision of personal protective equipment for employees who apply chemicals (32% compliance) and is based on a low percentage of small farms complying with the indicator. Medium and large farms both achieved compliance rates of over 65 percent. Small farms in Papua New Guinea, Rwanda, Burundi, Tanzania, Mexico, Colombia, Nicaragua, Ethiopia and El Salvador are of particular interest for this indicator as each country had compliance rates below 50 percent.

<sup>17</sup> SR-HP1.11

beyond compliance to best practice for a farm and thus help distinguish farms making additional investments in the safety and welfare of their workers.

When looking at the data on a country-by-country basis across the indicators analyzed some trends occur that could help inform Starbucks investment in training and farmer outreach. Most countries (n=10) achieved average compliance rates of at or above 80 percent for the hiring practices section of the guidelines. Exceptions were Burundi, Ethiopia, Papua New Guinea, Rwanda, Tanzania and Zambia. Thus, Starbucks may consider undertaking further training on these practices in East Africa. For the working conditions indicators most countries (n=12) achieved average compliance rates of 70 percent or more across those indicators included in the analysis. Burundi, El Salvador, Ethiopia, Mexico, Nicaragua and Papua New Guinea did not achieve this level of performance and may warrant further training on these particular indicators. Given the lower level of performance for both criteria hiring practices and working conditions in Papua New Guinea, Ethiopia and Burundi, priority might be given to these countries for investments in training.

This analysis also identified some key data gaps, areas for clarification within the guidelines which can inform future implementation of the program and future analyses of the results.

Some data gaps restrict the development of strong communications messages based on this analysis – especially regarding the number of children living on the farms who would benefit from investments made in improving access to primary and secondary schools. The same gap occurs when looking at the number of workers living on participating farms. Collecting this type of supplemental information could result in improved communications about the program to Starbucks partners and customers.

There is also a gap in what we are able to learn about the farm owner, especially in the cases of small farms as the majority of the indicators in this section focus on the treatment of workers. There may be opportunities to expand the smallholder scorecard to include some further information on changes to the household over time (e.g. improved housing, potable water, etc.) even in cases where only family labor is used.

There were also instances where further definition of the indicator could prove helpful to ensure verification is conducted in a standardized way. For instance, the indicators for access to housing and potable water could be strengthened by adding definitions for each of these terms. Finally, when verifiers mark an indicator not applicable they note the rationale for this (e.g. no children live on the farm, no workers employed, etc.), but this qualitative information was not available to CI during the analysis. Having this information would have assisted in the validation of assumptions made regarding the use of reporting rates to determine the number of farms fitting a given profile (e.g. number of farms with children living on the premises, number of farms lacking access to primary or secondary education, etc.) and help explain unexpected trends. Starbucks may wish to undertake further analysis to better understand the reasons for these results and to identify any necessary actions.

## 4.3 Coffee Growing

Farms participating in C.A.F.E. Practices are verified against 108 coffee growing indicators, although 45 are included in the smallholder scorecard used to verify small farms of less than 12 hectares. For applications including small farms, verifiers apply an additional 38 indicators to verify Producer Support Organizations (PSOs), entities that provide technical assistance services to participating small farms and facilitate group verification.<sup>18</sup> Across the suite of indicators used to assess coffee growing, applications achieved an average score of 73 percent. Scores ranged from 100 percent in Bolivia to 59 percent in Panama. While these figures provide a general understanding of performance, a more detailed analysis of the indicators can identify target areas for training, technical assistance and other types of support.

Starbucks could choose to track performance improvements in all of the 108 indicators over time, but instead we have focused on key indicators identified as having the greatest potential to contribute to positive conservation outcomes within coffee growing landscapes. The C.A.F.E. Practices program is designed to provide assurance that minimum performance standards are met and encourage farmers to adopt better practices over time. None of the coffee growing indicators has the status of a zero tolerance indicator which would result in coffee ineligible for sale to Starbucks as part of C.A.F.E. Practices. Nine coffee growing indicators serve as criteria requirements that if failed result in a zero points for that particular criteria.

Key areas identified for assessing results of C.A.F.E. Practices and the role the program has played in encouraging the adoption of best practices for environmental conservation include soil conservation, watercourse protection, and the preservation of natural habitat. Another key area of analysis is the development of environmental management plans by farmers to guide investments in improved practices over the long term. Across the suite of focal areas a core set of objectives has been developed which highlights the broad objectives of the program. While the overall objective of the Coffee Growing portion of the guidelines is to improve environmental performance among coffee growers, more specific objectives can be set for the specific criteria. For instance, one specific objective is to conserve biodiversity on farms and within the broader landscape and to conserve natural resources (e.g. soil and water) important for sustaining coffee production. For each of stated objectives, we identified a set of indicators to track performance over time. This section presents the results of an analysis of best practice adoption rates among farmers according to farm size and country.<sup>19</sup>

### 4.3.1 Water and soil resource Conservation

- Percentage of farms maintaining buffer zones next to watercourses
- Percentage of farms using native woody vegetation to maintain watercourse buffer zones
- Number of farms managing for steep slopes to control erosion
- Percentage of farms maintaining vegetative cover to reduce erosion

**Water resources:** The establishment and maintenance of riparian buffer zones along water bodies is the primary focus of the water resource indicators. This includes maintaining a buffer

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<sup>18</sup> An analysis of PSO performance is presented in Section 4.3.

<sup>19</sup> To demonstrate actual impacts on biodiversity, natural habitat, and water quality within a given production landscape, additional studies would be needed that correlate species populations and forest cover, and water quality trends to the adoption of best practices.

between water bodies and areas of agrochemical application and waste dump sites on the farm. The set of indicators on riparian buffer zones allows the verifier to acknowledge progress the farm is making to establish these zones along water bodies over time by establishing a series of percentage and width thresholds. In FY08, 62 percent of participating farms with water bodies on or adjacent to the farm maintained a 2 meter buffer zone along all water bodies. Large farms had the highest compliance levels of 72 percent. (See Table 14.) In looking at performance by country, it becomes clear that countries with very low numbers of farms reporting on this indicator (e.g. Panama and Zambia with 1 and 2 farms, respectively) achieved the highest performance for this indicator with all of their farms having a 2 meter buffer along all water bodies. Countries with higher reporting rates across all 3 farm sizes tended to have somewhat lower compliance rates. Several countries with a high number of farms reporting achieved high compliance rates, however. For instance, Honduras (n=305) and El Salvador (n=106) achieved rates of 89 and 87 percent respectively. Farms in Nicaragua (n=1871) had the lowest compliance rate at 32 percent.

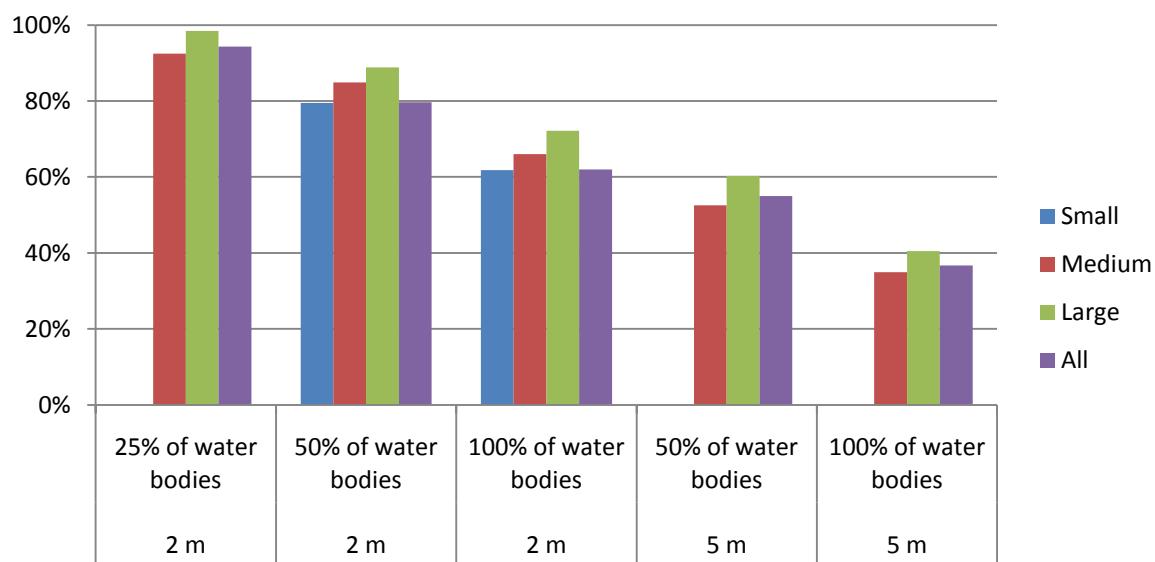
Indicator		Farm Size			All
		Small	Medium	Large	
CG-WR1.1	Watercourse buffer zones are maintained adjacent to at least 25% of water bodies (>2m in width)	NA	92.43%	98.44%	94.28%
CG-WR1.2	Watercourse buffer zones are maintained adjacent to at least 50% of water bodies (>2m in width)	79.50%	84.85%	88.82%	79.67%
CG-WR1.3	Watercourse buffer zones are maintained adjacent to all of water bodies (>2m in width)	61.82%	65.99%	72.14%	61.98%
CG-WR1.4	Watercourse buffer zones are maintained adjacent to at least 50% of seasonal/intermittent watercourses (>2m in width)	NA	64.65%	72.27%	67.17%
CG-WR1.5	Watercourse buffer zones are maintained adjacent to all seasonal/intermittent watercourses (>2m in width)	NA	43.85%	46.27%	44.65%
CG-WR1.6	Watercourse buffer zones of at least 5m per side are maintained adjacent to at least 50% of seasonal/intermittent watercourses and water bodies	NA	52.51%	60.31%	54.99%
CG-WR1.7	Watercourse buffer zones of at least 5m per side are maintained adjacent to all seasonal/intermittent watercourses and water bodies	NA	34.95%	40.48%	36.70%
CG-WR1.12	There is a plan to restore native vegetation within the buffers	NA	51.84%	59.69%	54.37%
CG-WR1.14	At least 50% of watercourse buffer zones are composed of native woody vegetation	75.52%	80.72%	84.07%	75.70%
CG-WR1.15	All watercourse buffer zones are composed of native woody vegetation	59.32%	54.23%	49.42%	59.12%

Table 14: Watercourse buffer indicator results for FY08

Increasing the width of the buffer zone to 5 meters and including both permanent and intermittent water bodies in the indicator results in a dramatic decline in compliance rates. While this particular indicator is not used to assess small farms, average compliance levels for medium and large farms fell by 25 percentage points from 62 to 37 percent.

In this case countries with only 1-2 farms reporting were more likely to be at opposite extremes of performance. Panama had the lowest compliance rate, with its one farm failing to meet this threshold and Zambia had 100 percent compliance (n=2). Nicaragua and Papua New Guinea had the lowest rates of compliance. Colombia (n=29), at 69 percent, had the second highest rate of compliance.

The majority (e.g. 76 percent) of farms with buffer zones used native woody vegetation on at least half of the buffer zones, but this figure dropped to 59 percent when all buffer zones were considered. (See Figure 16.) This trend held true for many of the individual countries, although in Ethiopia compliance rates dropped by only 10 percent when all buffer zones were considered.



**Figure 16: Percentage of farms with 2 and 5 meter watercourse buffer zones by farm size**

The majority of farms also took precautions to protect waterways against agrochemical contamination. In FY08, 77 percent of participating farms did not apply chemicals within 10 meters of water bodies or watercourses, and in this case small farms had the highest compliance rates. This may be due to a smaller proportion of small farms actually using agrochemicals on their farms. The vast majority of medium and large farms took additional steps to avoid applying nematicides within 20 meters of any water body, with compliance rates of 95 and 92 percent, respectively. Countries demonstrated a wide range of performance among farms applying chemicals. In Burundi (n=142) and Zambia (n=2) all participating farms maintained 10 meters of buffer between areas treated with chemicals and water bodies, but in Panama the one participating farm did not. Papua New Guinea had the second lowest compliance rate at 30 percent (n=312). Farms achieved much higher compliance rates for the indicator on nematicide application. Five countries achieved 100 percent compliance, and the lowest level of performance was in Nicaragua which still had 73 percent of farms in compliance.

For many of these water indicators, there is inconsistency in reporting, as the number of farms where the indicators were not applicable varies across groups of indicators. For instance 40,108 farms reported on the indicator stating that watercourse buffer zones are maintained adjacent to

at least 50 percent of water bodies, but only 39,011 reported against the indicator asking whether such buffers were maintained adjacent to all water bodies. This point is particularly noticeable in reviewing Rwanda data for maintaining natural woody vegetation in buffer zones. In this case, an 11 percent higher compliance rate was achieved for farms having all buffer zones under woody vegetation than those having such vegetation on only half of the area. This inconsistency is due to the fact that 75 more farms reported on indicator CG-WR1.15 than reported on CG-WR1.14. To address this issue, Starbucks should explore opportunities to add functionality to the VRS which requires verifiers to report on all of the indicators in a given related set based on the response to the first indicator within the group.

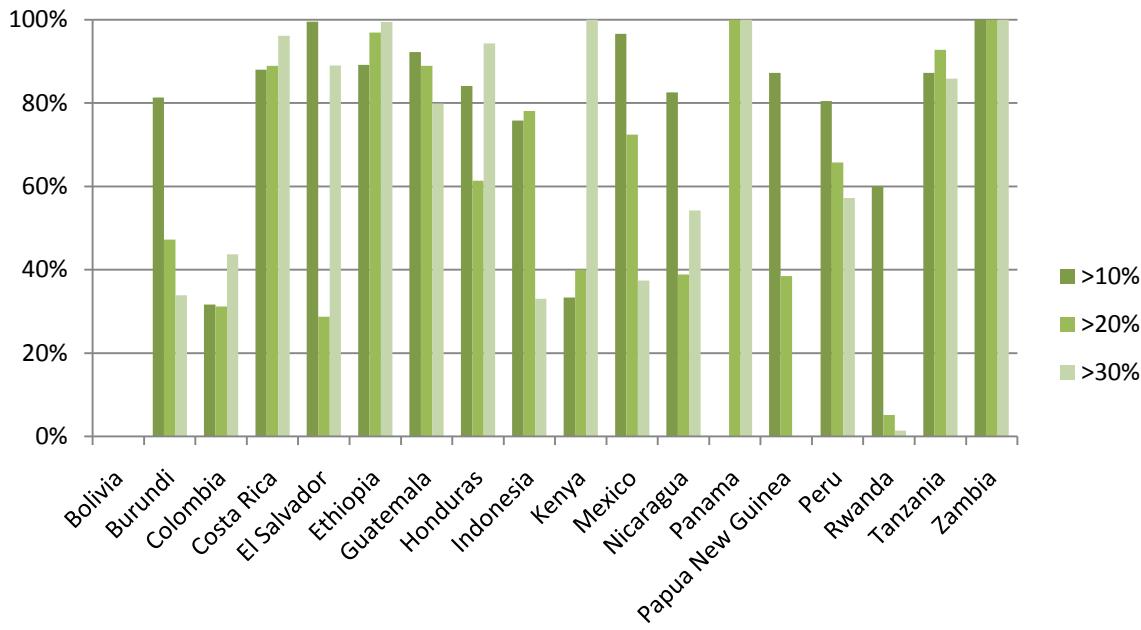
**Soil resources:** The soil resource indicators included in the C.A.F.E. Practices guidelines focus primarily on preventing erosion on steep slopes (10 indicators) and using leguminous trees and cover crops in lieu of chemical fertilizers to maintain soil fertility (7 indicators). The majority of the indicators (19 of 21) included in the analysis applied to all farm sizes, which makes this section somewhat unique in that results can be reported across the entire population of farms participating in the program.

The indicators associated with the protection of steep slopes verify the percent of slope under protection for various grades of slope. Farms performed best in protecting at least 25 percent of slopes over 10 percent, with 98 percent complying with this practice. (See Table 15.) However, these are the lowest grade slopes and it could be argued that the most important slopes to be protected are those at greatest risk of landslide (CG-SR1.16) and those over 30 percent in grade (CG-SR1.10-12). Thus, an unexpected trend appears in which farms appear more likely to conserve slopes of between 10 and 20 percent than those at greatest risk of erosion (e.g. over 30 percent). While compliance rates for using shade trees and/or cover vegetation on slopes of over 30 percent are still high, averaging 63 percent if all slopes of this grade are included, this is 8 percentage points lower than that for slopes of over 10 percent. Variation in the number of farms reporting against these indicators could explain this trend. For instance, while over 103,000 farms reported having slopes over 10 percent on their farms, only 77,000 reported having slopes over 30 percent.

Compliance levels for conserving slopes of 20-30 percent varied significantly at the country level. (See Figure 17.) For farms protecting all slopes of at least 10 percent, most countries achieved compliance rates of 75 percent or higher. Colombia (n=27,683) and Kenya (n=6) were exceptions with compliance rates of 32 percent and 33 percent, respectively. For farms protecting all slopes of at least 20 percent compliance rates ranged from 5 percent in Rwanda (n=1036) to 100 percent in Panama (n=1) and Zambia (n=2). A similar range occurred for farms protecting all slopes of over 30 percent, with only no farms in Papua New Guinea complying (n=117), but 100 percent compliance in Panama (n=1), Kenya (n=1) and Zambia (n=2). The latter appears to be a case where countries with low numbers of farms reporting on the indicator were much more likely to achieve the highest compliance rates. Ethiopia, with 15,079 farms reporting on this indicator managed to achieve a 99 percent compliance rate, however.

Indicator	Farm Size				All
	Small	Medium	Large		
CG-SR1.4	Productive areas on at least 25% of slopes over 10% slope are covered by shade trees and/or cover crops/vegetation	98%	99%	98%	98%
CG-SR1.5	Productive areas on at least 50% of slopes over 10% slope are covered by shade trees and/or cover crops/vegetation	91%	96%	94%	91%
CG-SR1.6	Productive areas on all of slopes over 10% slope are covered by shade trees and/or cover crops/vegetation	71%	82%	85%	71%
CG-SR1.7	Productive areas on at least 25% of slopes over 20% slope are covered by shade trees and/or cover crops/vegetation	96%	93%	95%	96%
CG-SR1.8	Productive areas on at least 50% of slopes over 20% slope are covered by shade trees and/or cover crops/vegetation	87%	79%	79%	87%
CG-SR1.9	Productive areas on all of slopes over 20% slope are covered by shade trees and/or cover crops/vegetation	67%	52%	62%	67%
CG-SR1.10	Productive areas on at least 25% of slopes over 30% slope are covered by shade trees and/or cover crops/vegetation	89%	90%	97%	89%
CG-SR1.11	Productive areas on at least 50% of slopes over 30% slope are covered by shade trees and/or cover crops/vegetation	77%	80%	89%	77%
CG-SR1.12	Productive areas on all of slopes over 30% slope are covered by shade trees and/or cover crops/vegetation	63%	62%	77%	63%
CG-SR1.16	Areas in which the risk of landslides is extreme are not cultivated, are left or taken out of production and restored with native vegetation where practicable	NA	56%	56%	56%

Table 15: Slope management results for FY08



**Figure 17: Percentage of farms protecting steep slopes by degree**

This set of indicators also demonstrates some inconsistency in reporting by verifiers. For instance, there is a different number of farms reporting on CG-SR1.4 (N=103,967) from that reporting on CG-SR1.6 (N=102,939). The number of farms reporting should be consistent across CG-SR1.4, CG-SR1.5 and CG-SR1.6 as they are simply gradients of compliance (e.g. 25%, 50% and 100%) against the same indicator (slopes over 10% covered by shade trees and/or cover crops/vegetation). Reporting on medium and large farms was fairly consistent across these 3 indicators, with the highest degree of variation occurring among small farms. There is also a higher degree of consistency between CG-SR1.4 and CG-SR1.5 than between these and CG-SR1.6. The pattern of inconsistency occurs throughout this suite of indicators. To address this issue, Starbucks might require verifiers to report on each of these indicators for a farm and not allow verifier to submit the report if reporting rates are not consistent across the related indicators.

**Organic matter and leguminous trees:** The other focal area of the soil resources section of the scorecard is the use of natural sources of nutrients such as nitrogen-fixing cover crops and leguminous trees. Like the slope indicators, these are graded by the percentage of the farm covered by these types of vegetation. Only 36 percent of farms had leguminous trees throughout the entire productive area of farm, although 73 percent of farms applied this practice on at least 25 percent of the area. Medium and large farms were twice as likely to apply this practice than small farms.<sup>20</sup> This may be due to the variation in growing conditions across the 18 countries. As might be expected, East Africa had low rates of compliance with this set of indicators, with compliance rates in most countries below 7 percent. Ethiopia, however, is an interesting exception with 77 percent of the farms reporting on this indicator using leguminous trees

<sup>20</sup> This is the only indicator measuring the extent of shade-grown cultivation on a farm (see shade section) even though leguminous trees signify only one type of shade coffee system and does not capture rustic shade systems which may consist of nitrogen-fixing trees combined with larger native trees.

throughout the productive area of the farm. Bolivia and El Salvador at 100 percent compliance had the highest levels of farms maintaining leguminous trees throughout the productive area.

Farms demonstrated higher compliance rates for cover crop use, with 64 percent applying them on the entire productive area, and 98 percent applying them on at least a quarter of the productive area. (See Table 16.) Farms using cover crops on the entire productive area cover over 304,000 hectares of land. Interestingly, Zambia Panama and Bolivia all had compliance rates of 100 percent for the use of cover crops across the entire productive area of the farm. Zambia and Panama only had 2 and 1 farms reporting, respectively, but Bolivia had 168 small farms all in compliance with this indicator. At the other end of the spectrum, Colombia (n=29,844) and Kenya (n=7) had the lowest rates at 27 and 25 percent, respectively.

Indicator		Farm Size			All
		Small	Medium	Large	
CG-SR2.1	At least 25% of the productive area is covered by an organic matter layer and/or nitrogen-fixing cover crops	98%	100%	99%	98%
CG-SR2.2	At least 50% of the productive area is covered by an organic matter layer and/or nitrogen-fixing cover crops	87%	97%	93%	87%
CG-SR2.3	All of the productive area is covered by an organic matter layer and/or nitrogen-fixing cover crops	64%	74%	74%	64%
CG-SR2.5	At least 25% of the productive area is planted with nitrogen-fixing, leguminous trees	73%	97%	96%	73%
CG-SR2.6	At least 50% of the productive area is planted with nitrogen-fixing, leguminous trees	55%	90%	89%	56%
CG-SR2.7	All of the productive area is planted with nitrogen-fixing, leguminous trees	35%	71%	71%	36%

Table 16: Organic nutrient management results for FY08

#### 4.3.2 Appropriate chemical use on farms

- Percentage of farms not using WHO Type 1A and 1B chemicals
- Percentage of farms demonstrating a decrease in toxic load over time
- Percentage of farms using pesticides and/or herbicides only as a last resort
- Percentage of farms not using synthetic fertilizers (and no. of hectares)
- Percentage of farms that are certified organic

**WHO Type 1A and 1B Chemicals:** In FY08, 98 percent of farms participating in the program did not use chemicals classified as WHO Type 1A or 1B on their farms, except under certain conditions explained in the nematode amendment. Small farms at 98 percent had the highest level of compliance, probably due to the low level of chemical use by smallholders. Large farms, the most likely to apply chemicals had the lowest compliance rates of 85 percent. (See Table 17.) Eight countries achieved 100 percent compliance with this particular indicator, and most of them were in Asia and Africa. Panama and Zambia had no farms achieving compliance, due in part to only a small number of large farms participating from each country.

Indicator	Farm Size			All	
	Small	Medium	Large		
CG-EM1.1	Farms do not use chemicals that are listed by the World Health Organization as Type 1A or 1B, except as specified by the nematode amendment	98%	92%	85%	98%

Table 17: Use of WHO Type 1A or 1B chemicals

**Toxic load:** This indicator applies to only large and medium sized farms and would demonstrate a decline in the eco and/or human toxicity of chemicals used on the farm over time for those farms actually monitoring toxicity levels in this way. There are several inconsistencies in reporting that make it difficult to determine compliance rates with these two indicators for FY08. First, only 1050 farms reported on this particular indicator, a figure which does not equal the total number of medium and large farms. (See Table 17.) Verifiers may have considered this particular indicator not applicable for some farms. The reason could be that only those farms applying chemicals were verified against this indicator. Yet, when comparing reporting rates on this indicator with the one asking whether any agrochemicals are applied within 10 meters of a water body, some inconsistency still remains.

Secondly, of these 1050 farms reporting on the indicator asking whether the farm calculated the toxic load, 201 complied. 875 farms reported on the indicator asking whether farms demonstrated a decline in toxic load - a figure that is not consistent with the 1050 farms reporting on the previous indicator. 171 of these 875 farms showed a decline in the toxic load, a figure that is actually less than the 201 farms reporting that they monitored toxic load, so it is feasible that 171 of 201 farms complied with this indicator (a compliance rate of 85 percent). These inconsistencies in reporting are quite uniform across all the countries, except for those with no farms reporting on this particular indicator (e.g. Bolivia, Burundi, Indonesia and Rwanda). A case in point is the one large farm in Panama verified that reported non-compliance in calculating the toxic load but then compliant in decreasing this load over time. To address these inconsistencies, Starbucks might require verifiers to report comply/not comply for CG-EM1.8 unless an NA rating was received for CG-EM1.7 in which case both indicators would receive an NA rating.

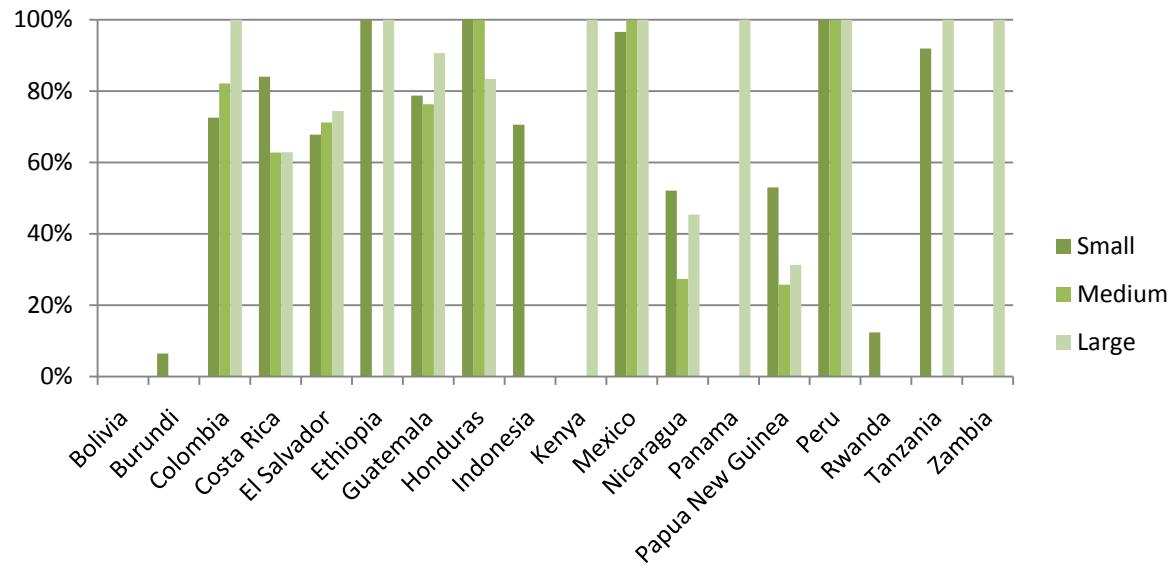
To work around this issue, we identified the medium and large farms complying with CG-EM1.7 and used this data to determine the percentage that showed a decrease in toxic load, or complied with CG-EM1.8. The results show that 63 percent of medium farms and 56 percent of large farms that completed a toxic load calculation saw a decrease in the load over time.

**Pesticides:** In FY08, 57 percent of farms only used pesticides as a last resort after cultural and physical controls have failed. Large farms had a 14 percent higher compliance rate for this particular indicator than small farms. (See Table 18.) This trend suggests that although larger farms may be more likely to use pesticides overall, they do so primarily as a last resort.

Indicator	Farm Size			All	
	Small	Medium	Large		
CG-EM1.18	Agrochemicals are only applied as a last resort (after cultural and physical controls have failed)	57%	62%	71%	57%

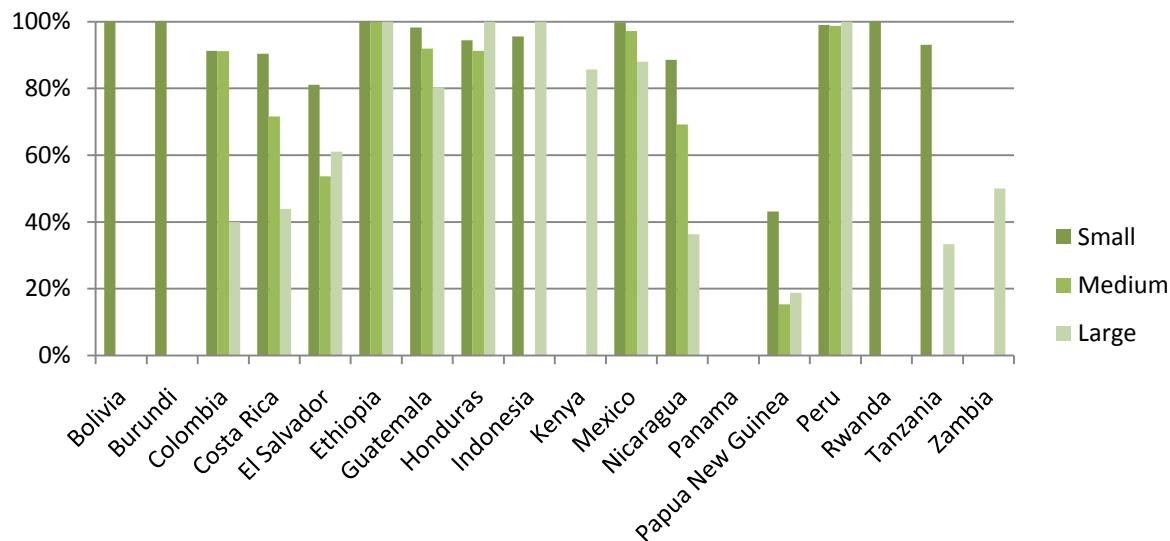
Table 18: Agrochemical use in FY08

Burundi had the lowest level of farmers complying with these indicators (6 percent). Rwanda, Panama and Nicaragua also had relatively low compliance rates. Ethiopia, Kenya, Panama, Peru and Zambia each had all of their farms in compliance. (See Figure 18.)



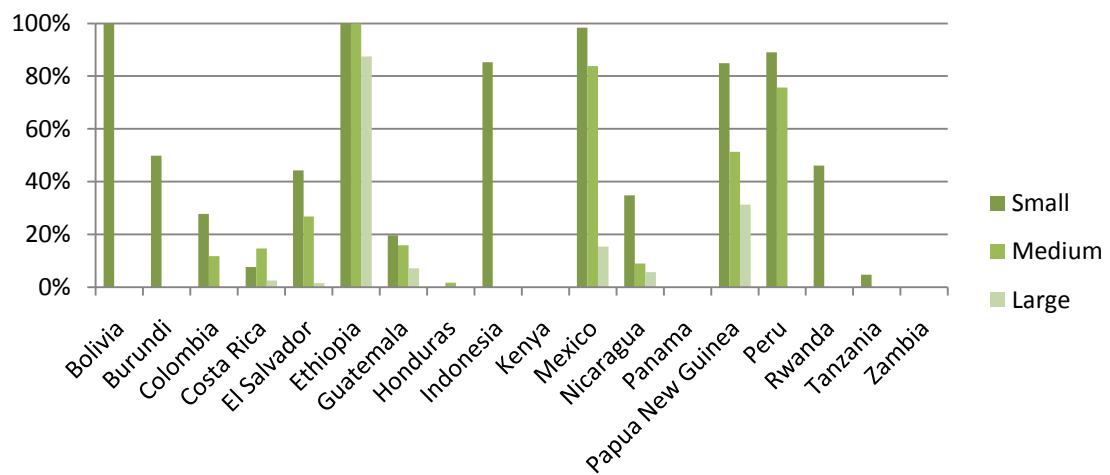
**Figure 18: Percentage of farms using agrochemicals only as a last resort by country and farm size (CG-EM1.18)**

**Herbicides:** In FY08, 95 percent of participating farms did not use herbicides to control ground cover, and applied them only during aggressive weed outbreaks. This represents over 341,000 hectares managed under this practice. Unlike the trend for pesticides, small farms far outperformed larger farms in limiting herbicide use with a compliance rate of 96 percent while medium and large farms achieved only 75 and 61 percent compliance, respectively. This suggests that small farms can more easily manage weeds through other means (e.g. cultural practices) than larger farms. Most countries achieved compliance rates of between 90 and 100 percent for this particular indicator, with Papua New Guinea, Zambia and El Salvador reporting the lowest rates. (See Figure 19.)



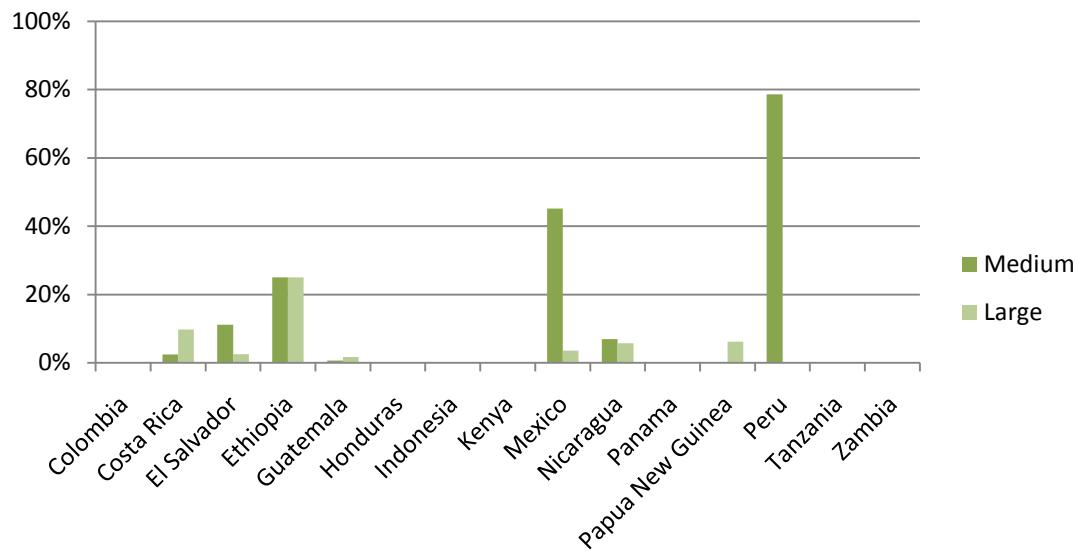
**Figure 19: Percentage of farms limiting herbicide use by country and farm size (CG-SR1.13)**

**Chemical Fertilizers:** Verifiers report on whether farms apply synthetic fertilizers and Starbucks considers this when scoring applications as one among many indicators. Starbucks recognizes applications that refrain from using synthetic fertilizers, but does not consider a movement towards organic production as the ultimate goal of the program. Instead the focus is on sustaining production of high-quality coffee. In FY08, 51 percent of farms representing 143,000 hectares did not use synthetic fertilizers. An overwhelming majority of the farms complying with this indicator were small ones of less than 12 hectares. In comparing small farms to medium farms the compliance levels fell by half. A small percentage (e.g. 8 percent) of large farms were also able to comply with this indicator. Bolivia was the only country achieving 100 percent compliance with this indicator. Those countries such as Panama, Zambia and Kenya, in which only large farms applied to the program in FY08 tended to fare poorly with no instances of compliance. Honduras also had lower levels of compliance than expected (e.g. less than 1 percent) due in part to all small farms using some chemical fertilizers during this year. (See Figure 20.)



**Figure 20: Percentage of farms not using chemical fertilizers by country and farm size (CG-WR2.4)**

**Organic Production:** This indicator is only used to verify medium and large farms. In FY08 13 percent of medium farms and 4 percent of large farms were certified organic, representing 25,500 hectares. Of the 128 organic coffee farms participating in the program, 17 were large farms. The remainder (n=111) consisted of medium-size farms. An overwhelming majority of these farms were in Peru, followed by Ethiopia and Mexico. (See Figure 21.)



**Figure 21: Percentage of certified organic farms participating in C.A.F.E. Practices by country and farm size (CG-SR2.12)**

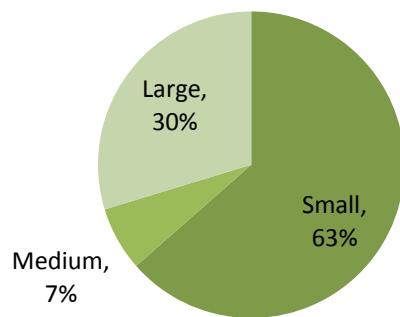
#### 4.3.3 Biodiversity conservation on farms and within the broader landscape

- Number of conservation hectares on participating farms (and percentage by farm size)
- Percentage of farms with shade cover on at least part of the farm
- Percentage of farms that have not cleared natural habitat since March 2004
- Percentage of farms that have established conservation set-asides.
- Percentage of farms managing areas of high ecological value

**Conservation hectares:** Participating farms managed 102,281 hectares as conservation areas.<sup>21</sup> These are areas where conservation is the primary objective of land management, although some coffee cultivation may take place as well. Small farms were responsible for nearly three quarters (e.g. 72 percent) of the conservation areas, but 20 percent were from large farms. (See Figure 22.) Colombia and Guatemala each had over 20,000 hectares of conservation hectares managed by coffee farms.<sup>22</sup> The Colombian hectares are spread across a large number of small farms, whereas for Guatemala the majority are located on large farms.

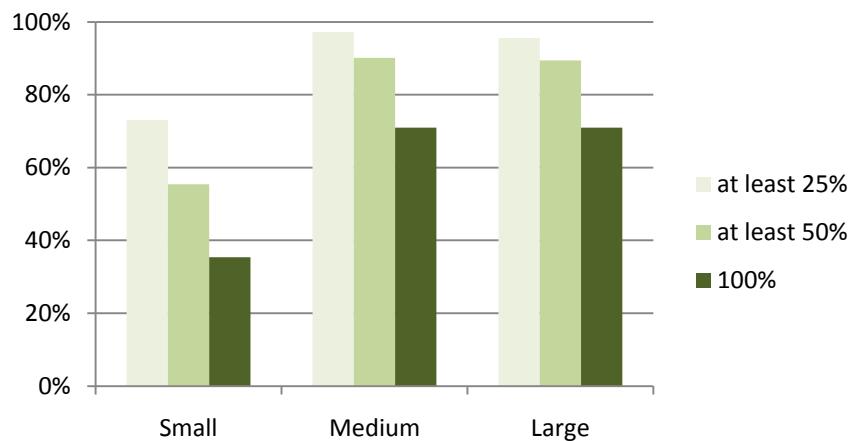
<sup>21</sup> This figure is based on an extrapolation of the conservation hectares data for each verified farm. Set aside figures are provided in a subsequent section.

<sup>22</sup> Compared to 90,758 (29%) coffee hectares in the program for Colombia and 79,355 (26%) hectares in Guatemala.



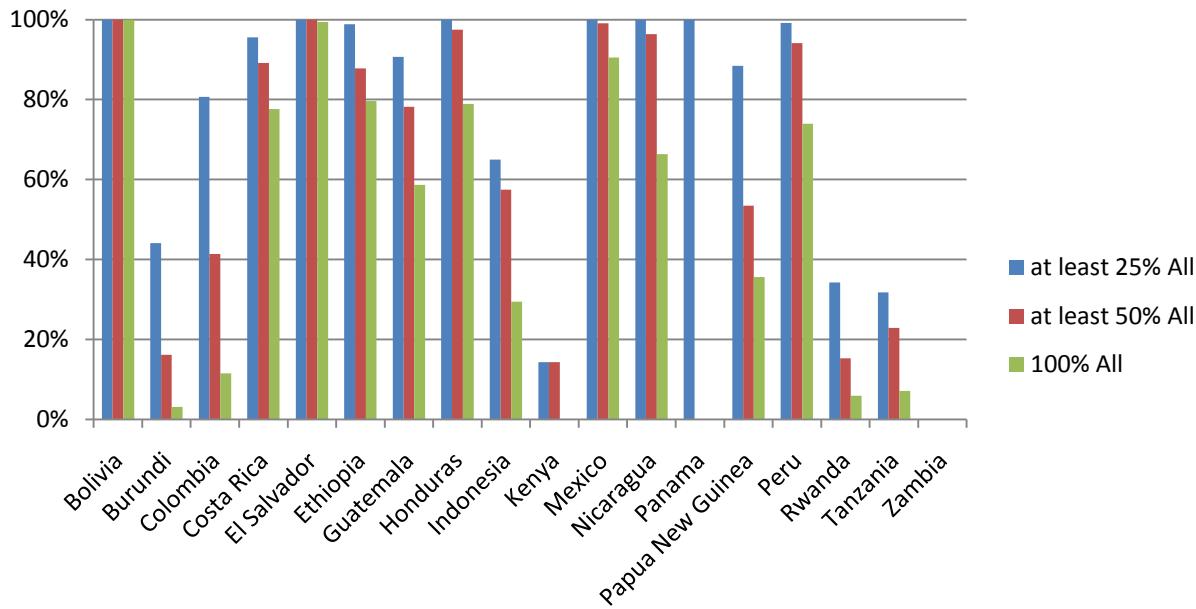
**Figure 22: Percentage conservation hectares by farm size in FY08**

**Shade coffee systems:** One indicator of the prevalence of shade coffee production systems was analyzed in the soil resources section. That indicator found that 36 percent of farms applied shade throughout the coffee production area (an equivalent of 246,213 hectares) by planting leguminous trees. Seventy-three percent of farms applied these practices on at least a quarter of the productive area (105,860 hectares) and 56 percent applied them on at least half (181,564 hectares). Medium sized farms had the highest compliance rates across all 3 gradients of this particular practice, with small farms having the lowest compliance rates. (See Figure 23.)



**Figure 23: Adoption rates of nitrogen-fixing shade on farms by farm size and percentage of productive area**

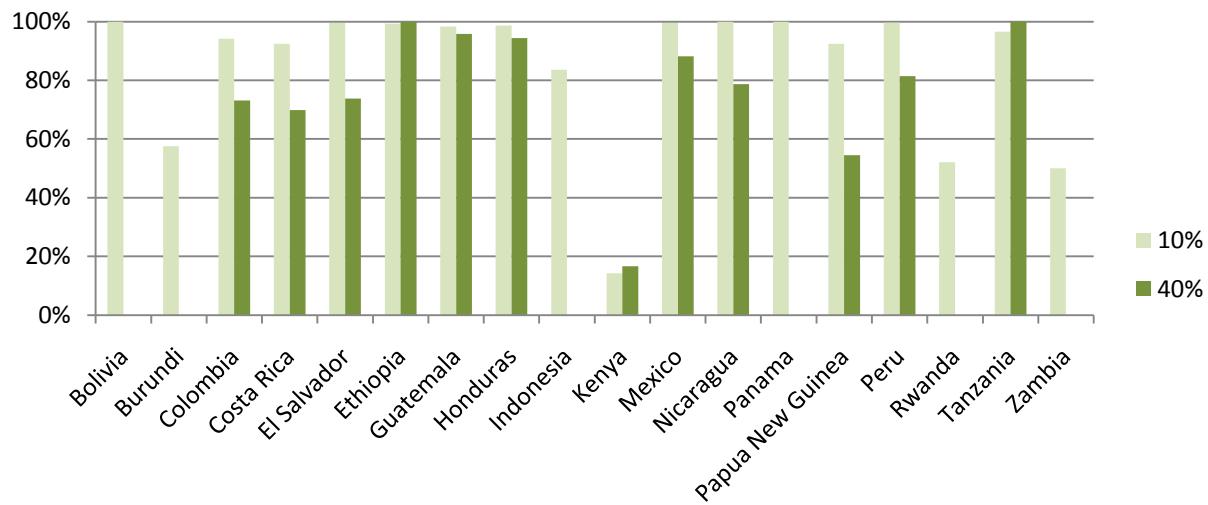
Countries in Latin America were the most likely to plant nitrogen fixing trees on at least a quarter of their farms. (See Figure 24.) East African growers, on the other hand, were the least likely. The only exception occurred in Ethiopia where 99 percent of farms had at least a quarter of their coffee planted under these trees.



**Figure 24: Adoption rates of nitrogen-fixing shade on farms by country**

The indicator measuring the extent of canopy cover within the productive area of the farm provides another method of determining the prevalence of shade production systems. This indicator (CG-CB1.4) applies to all 3 categories of farm sizes and thus serves as a proxy for determining the percentage of farms with a 10 percent canopy cover (e.g. density). According to the canopy cover indicator 87, percent of farms used shade production systems (on 451,000 hectares), which is actually a higher percentage than those using nitrogen fixing trees. This difference could be based on the use of more rustic shade systems consisting of native canopy trees rather than leguminous species. According to this indicator, farms in each country used shade systems, although the extent of adoption ranged from 25 percent in Kenya to 100 percent in Bolivia, Nicaragua and Panama. Of the 18 countries with farms verified in FY08, 13 countries scored above 90 percent compliance for this particular indicator.

Increasing the threshold of canopy cover to 40 percent (CG-CB1.8) leads to an 8 percentage point drop in compliance rates, although this indicator is not used to assess small farms.(See Figure 25.) Ethiopia and Tanzania both achieved 100 percent compliance for this particular indicator followed by Guatemala and Honduras which had scores above 90 percent. It is interesting to note that Tanzania and Kenya both had higher compliance rates for the 40 percent threshold, but this is due to small farms not being assessed against this threshold.



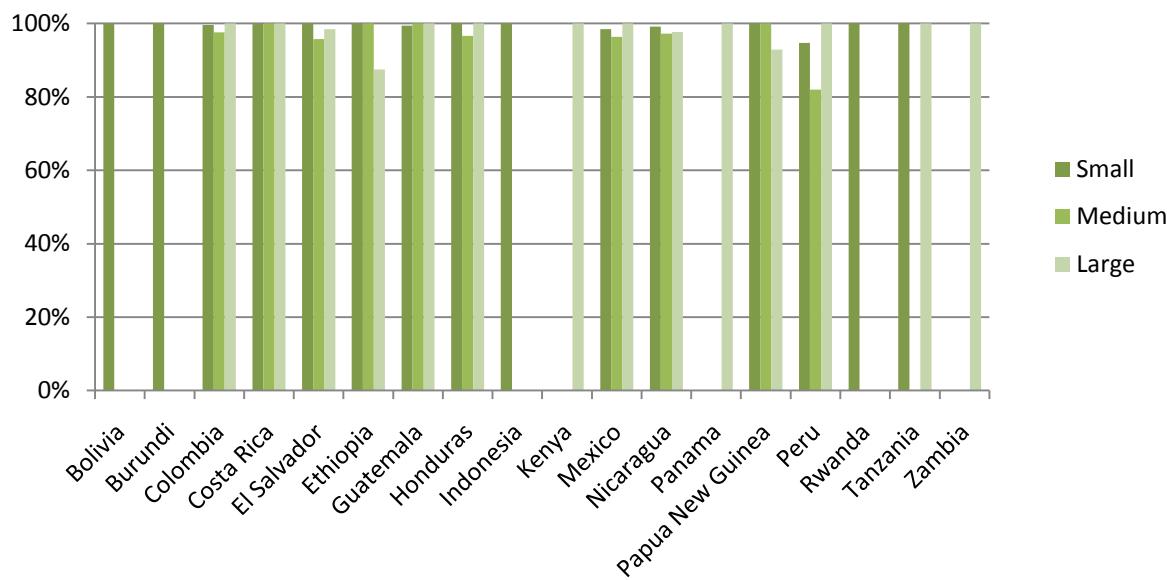
**Figure 25: Average compliance rates for 10 and 40 percent shade density\***

\*The 40% canopy cover indicator does not apply to small farms

Other shade indicators verify the quality of the canopy in terms of tree species diversity and number of strata. Results show that 63 percent of farms used locally native species for at least three quarters of the canopy cover (CG-CB1.9). Large farms were 6 percent more likely to have this level of shade than medium farms and 16 percent more likely than small farms. Bolivia (n=168) and Panama (n=1) each achieved 100 percent compliance with this indicator. Countries in East Africa did not fare as well, with Burundi, Rwanda, and Tanzania each achieving less than 10 percent compliance and Tanzania below 20 percent.

The number of strata present within a shade production system (CG-CB1.10) is only assessed on medium and large farms. In FY08, 59 percent of medium and large farms maintained at least 2 strata within the shade canopy. Large farms had the highest compliance rates, outperforming medium farms by a difference of 6 percentage points. Once again Ethiopia (n=14) and Tanzania (n=1) performed extremely well with all farms in both countries having at least 2 distinguishable strata within the shade canopy.

**Forest Conversion:** The overwhelming majority of farms verified in FY08 - 98 percent - had some natural habitat on their farm (e.g. verifiers recorded a comply/non-comply rating for CG-CB3.1), and 99.6 percent of these farms had not cleared natural habitat over the past 3 years. This means that participating farms maintained 102,281 hectares of conservation area during this period. Small farms had the highest compliance rates for this indicator and medium farms the lowest at 96 percent. At the country level 8 of 18 countries achieved 100 percent compliance for this particular indicator, thus conserving all remaining natural habitat on their farms. (See Figure 26.) Peru, at 94 percent, had the lowest performance level. Peru also had the lowest compliance rates across all countries for small and medium farms. Ethiopia had the lowest rate for large farms (e.g. 88 percent). All of the other countries had at least 98 percent of participating farms complying with this indicator.



**Figure 26: Compliance rates for no forest conversion indicator by farm size and country (CG-CB3.1)**

If medium and large farms did convert natural habitat, most took steps to ensure that the areas cleared were not areas of high ecological value and established equivalent set-asides. Only 42 farms cleared areas of ecological value during FY08. Ethiopia had the lowest compliance rate for this indicator at 7 percent, followed by Kenya at 50 percent, which suggests there may be some outreach and training needed in these countries to conserve natural habitat in coffee production landscapes.

In addition to natural habitat, 79 percent of farms reported having native trees on the farm (CG-CB1.1). Of these, 94 percent removed them only when they constituted a human hazard or competed significantly with coffee production. Compliance levels varied by only 3 percentage points across the different farm sizes when taken as an aggregate across all participating farms. At the country level, Rwanda, Zambia, Kenya, Panama and Bolivia each had no farms clearing native trees unless these conditions were met. Burundi appeared to struggle the most with this particular indicator, with only 51 percent of farms in compliance, a rate that is 35 percentage points lower than that of the next lowest country (e.g. Ethiopia).

**Conservation Set-Asides:** The two set aside indicators (CG-CB3.9 and CG-CB3.10) apply only to medium and large farms participating in the program. To achieve compliance farms must set aside either 3 or 5 percent of their farm as a conservation emphasis area, and make conservation the primary objective of management activities. Across both farm size categories 76 percent set aside 3 percent of their farm (approximately 11,550 hectares), but this rate dropped to 68 percent when the threshold was raised to 5 percent of the farm (approximately 17,492 hectares).<sup>23</sup> Large farms had higher compliance rates in both instances. Most countries achieved over 80 percent compliance for setting aside 3 percent of their farm. Papua New Guinea at 13 percent compliance was the only country with very low compliance for this particular indicator and no

<sup>23</sup> The hectares calculations are based on an extrapolation of *total area* data recorded for each verified farm.

farms in that country complied with the 5 percent set aside indicator. Ethiopia had an interesting trend in that all of the medium and large farms set aside at least 3 percent of their land, but only 7.4 percent of them had set aside 5 percent.

**Areas of High Ecological Value:** While the indicator on clearing natural forest applies to all farm size categories, those assessing areas of high ecological value (CG-CB3.3 through CG-CB3.8) are only used to assess medium and large farms. Thus the results reported in this section are applicable only to the 1460 medium and large farms exceeding 12 hectares in size. Of these farms, only 1316 were assessed against the indicator asking whether an assessment of the farm has been completed to identify areas of high ecological value (CG-CB3.3). This may be due to the lack of natural habitat remaining on some of the farms participating in the program. Of the farms reporting on this indicator, 53 percent complied, with large farms 11 percentage points more likely to have undertaken the assessment.

By comparing the number of farms reporting on the assessment indicator (CG-CB3.3) with that asking whether the farmer has taken steps to protect these areas (CG-CB3.5), the number of farms with and without areas of high ecological value can be calculated. However, for this entire suite of indicators there is some inconsistency in verifier reporting. For instance, 240 large farms completed an assessment, but 252 were taking steps to manage and protect these areas. It is unclear how a farm can be compliant in protecting areas of high ecological value if no assessment to identify these areas was undertaken. The same type of discrepancy occurred for medium farms, although to a lesser degree, with 461 reporting that an assessment had been undertaken and 468 reporting that they were managing and protecting these areas. This is an instance where the information collected to score farms renders it difficult to identify consistencies and trends across a series of indicators. Current guidance provided to verifiers is to evaluate all of the indicators as applicable regardless of whether or not an assessment was completed, thus potentially increasing the level of reporting and the percentage of farms found to be non-compliant.

We conducted a more detailed analysis across this set of indicators using only those farms found compliant with the assessment indicator (CG-CB3.3). This analysis found that of the 701 farms that had undertaken an assessment, 671 were taking steps to conserve areas identified as having high ecological value. However, only 315 of these 671 farms reported on whether they were taking steps to legally protect these areas (e.g. reported on indicator CG-CB3.8). The reason for this large drop in reporting levels is unclear. For those farms reporting on this indicator, 107 or 34 percent sought legal protection for these areas.<sup>24</sup> This is another indicator of best practices which explains the relatively low compliance rate. Also, some countries have incentive structures that discourage farmers and other landowners from setting land aside under legal protected status.

The number of farms reporting on the legal protection indicator does not align with the number found to be compliant with the conservation indicator even when corrections were made to only include farms complying with indicator CG-CB3.6. For this reason a calculation of the number of assessed farms that actually had areas of high ecological value could not be completed based

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<sup>24</sup> Given that verifiers are instructed to rate farms as non-compliant for this indicator if they were also found to be non-compliant with CG-CB3.5, we have corrected for this by eliminating from the sample those farms reported non compliant with CG-CB3.5.

on CG-CB3.5, as it returned a figure larger than the original 701 farms. However, in looking at the restoration indicators, it becomes obvious that the majority of farms that undertook an assessment found that they did have areas of high ecological value on their lands.

Reporting rates on the restoration indicator (CG-CB3.6) can provide a sense of the number of farms that had no areas of ecological value. In FY08, only 81 of the 701 farms that had conducted an assessment were found to have no areas of high ecological value on their land.<sup>25</sup> Of these 81 farms, 38 had habitat restoration plans and 24 were implementing them.

#### 4.3.4 Environmental management planning on coffee farms

- Number of farms with written environmental management plans
- Number of farms with soil management plans
- Number of farms with IPM plans
- Number of farms with wildlife management plans
- Number of farms with shade management plans
- Number of farms with monitoring programs in place

The development and implementation of management plans is a consistent theme throughout the Coffee Growing section of the C.A.F.E. Practices scorecard, although the indicators on management plans apply only to medium and large farms. There is some variation on the types of indicators included in the scorecard for each type of management plan, with some having separate indicators for development and implementation. Only the environmental management plan includes an indicator on whether the plan is updated annually. (See Table 19.)

Type of Plan	Developed	Implemented	Updated
Soil	CG-SR1.2	NA	NA
Shade	CG-CB1.2	CG-CB1.3	NA
IPM	CG-EM1.19	CG-EM1.19	NA
Wildlife	CG-CB2.5	CG-CB2.6	NA
Environmental	CG-EM2.3	CG-EM2.4	CG-EM2.5

Table 19: Indicators used to assess management planning

For each type of management plan included in the scorecard assessment, reporting on the percentage of farms that have both developed plans and are implementing them is challenging as verifiers mark the implementation indicator as non-compliant in cases where farms have not developed a management plan. Using the standard extrapolation methodology, this deflates the compliance rates for the implementation indicators as the non-compliant figure includes farms that never developed plans. For instance, 715 of 1402 farms reported having shade management plans. Yet, this indicator was used to assess 1215 farms (based on extrapolated figure), a figure that does not align with the 1402 farms originally assessed for the CG-CB1.2. Thus, for farms verified in FY08, a deeper analysis that only includes those farms that complied with indicators asking whether a plan was developed is required for each indicator that asks whether the plan was implemented or updated. A closer look at verification reports revealed that verifiers rated some farms as compliant for implementing plans when they were not marked as compliant in having developed plans. The VRS could be used to correct for this type of reporting error using

<sup>25</sup> This figure is based on the number of farms reporting on CG-CB3.6 and the number found to be compliant with CG-CB3.3.

an auto-fill function that does not permit the verifier to report a C or NC for an indicator that is dependent on achieving a compliance rating for another indicator.

**Environmental management plans:** Of the medium and large farms 58 percent had written management plans to guide farming practices and decisions. Correlation of this figure with the number of coffee hectares on each of these farms shows that participating farms managed over 85,000 hectares according to an environmental management plan. Large farms were 13 percentage points more likely to comply with this indicator than medium farms. The majority (e.g. 75 percent) of farms that had developed management plans were implementing them as well. Large farms outperformed medium ones in this regard with an 88 percent implementation rate. Medium sized farms had a rate of only 74 percent. Of those farms having environmental management plans in place, 72 percent were updating them on an annual basis. Once again large farms were more likely to keep their management plans current.

When looking at individual countries a trend appears in which countries with only a few large farms participating in the program (and no medium farms) were the most likely to have environmental management plans for all of their farms (e.g. Kenya, Panama and Zambia). Ethiopia and Papua New Guinea had the lowest percentage of farms with management plans, with respective compliance rates of 14 and 22 percent.

**Soil management plans:** In addition to environmental management plans, verifiers look for soil management plans on large and medium sized farms. A larger proportion of medium and large farms (i.e. 61 percent vs. 58 percent for environmental plans) had soil management plans to minimize erosion than those having broader environmental management plans. Once again large farms had a higher level of compliance than medium farms. The range of compliance varied greatly by country with Kenya, Panama, Tanzania and Zambia all achieving 100 percent compliance, whereas Papua New Guinea and Ethiopia only achieved 13 and 14 percent compliance, respectively. These rates appear to correlate with the number of farms reporting on the indicator, as those with 100 percent compliance had relatively few farms reporting.

**Integrated Pest Management (IPM) plans:** The proportion of farms having IPM plans was lower than that for either soil or environmental plans, with only 52 percent of medium and large farms having a plan that is being properly implemented on the farm. Once again larger farms had a greater likelihood of having such plans than medium farms, with a difference of 12 percent. This trend was also reflected in the country data, with only Tanzania and Zambia achieving 100 percent compliance rates. Papua New Guinea and Ethiopia continued to have the lowest compliance rates of less than 10 percent each. Medium-sized farms in Colombia had extremely high rates of compliance at over 97 percent.

**Shade management plans:** Shade management plans were even less common on large and medium sized farms than IPM plans with only a 51 percent compliance rate. This translates to over 123,000 hectares of land managed under a shade plan. The trend of large farms having higher rates of compliance continues for this indicator, with the difference extending to 17 percentage points. Of the 532 farms that had shade management plans, 492 (92 percent) were implementing them in accordance with the established timeline. At the country level, compliance rates for having shade management plans ranged from 18 percent for El Salvador to 100 percent for Ethiopia, Indonesia, Kenya, Panama, Tanzania and Zambia. However, not all of the countries that achieved 100 percent compliance for farms having shade management plans

had the same level of compliance for the implementation of the plans. For example, in Kenya only half of the farms with shade management plans were implementing them.

**Wildlife management plans:** Farms were the least likely to have wildlife management plans than any other type of plan included in the C.A.F.E. Practices guidelines. Only 24 percent of medium and large farms had developed plans to ensure the conservation of wildlife on their land. Large farms outperformed medium farms by 11 percentage points in this case. Of the 326 farms that had wildlife management plans, 286 (88 percent) were implementing them. At the country level there was a wide range of performance for the indicator asking if farms had developed wildlife management plans. For instance, Panama and Papua New Guinea had no farms with wildlife management plans, while in Tanzania the one farm participating had a plan, thus making the country compliance rate 100 percent. Interesting to note is that 11 percent of Ethiopian farms had management plans, but none of them were found to be properly implementing these plans.

**Monitoring systems:** Medium and large farms are also assessed on whether they are implementing a monitoring program to track activities and improvements over time. Results show that 59 percent of these farms were implementing such a program. Large farms were more likely to have such programs, outperforming medium farms by 18 percent. At the country level, Panama, Tanzania, Peru, Panama and Zambia each had all of their participating farms in compliance with this indicator, whereas Papua New Guinea and Ethiopia continued to struggle with compliance rates of 23 and 25 percent, respectively.

#### **4.3.5 Coffee Growing Conclusions and Recommendations**

Participating farms achieved compliance rates of over 50 percent for the vast majority of the best practice indicators analyzed for this study. Only 18 of the 73 indicators analyzed had average compliance rates below this level and many of these had low rates of applicability (e.g. farms applying irrigation or farms without areas of high ecological value). This demonstrates a relatively high level of performance among participating farms for this section of the scorecard. Compliance rates for the various indicators did vary according to farm size but for the most part this variation did not exceed 10 percentage points.

Compliance rates were even higher for indicators identified as “Criteria Requirements” within the C.A.F.E. Practices scorecard. The Coffee Growing section of the scorecard includes 9 criteria requirement indicators that farms must meet to generate points from the other indicators in the respective criterion. We included 7 of these 9 indicators in this analysis.<sup>26</sup> Of these 7 indicators, 5 had average compliance rates of over 94 percent. The indicator prohibiting forest conversion after March 2004 had the highest level of compliance (99.6 percent). Given this extremely high compliance rate, Starbucks might consider designating this indicator as a zero tolerance requirement as it would only affect a small number of farms and would send an important message stating the relative importance of conservation within the C.A.F.E. Practices program. This is an important step in balancing the focus of the program between the social responsibility and coffee growing sections of the scorecard as there are no zero tolerance indicators currently within the latter.

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<sup>26</sup> Two of the criteria requirement indicators for the Ecological Pest and Disease Control section were not analyzed for this first report (CG-EM1.2 and CG-EM1.3) but will be included in subsequent analyses.

The requirement that farm managers implement a monitoring program had the lowest compliance rate (59.2 percent) of all the criteria requirements, yet still more than half the farms complied with this indicator. The high level of compliance for the criteria requirement indicators reflects the relative importance given to them within the C.A.F.E. Practices guidelines and demonstrates the effectiveness of weighting certain indicators as higher priority. The message to growers was clear and the vast majority took steps to meet these requirements. Although coffee is often grown on steep slopes and the guidelines place a strong emphasis on maintaining coffee productivity and water quality, there is currently no criteria requirement for the soil resources section of the scorecard. Given the high levels of compliance achieved for many of the soil resources indicators, Starbucks might consider making one of the indicators (e.g. knowledge of areas prone to erosion) a criteria requirement.

Compliance rates for the other indicators included in the analysis experienced a higher degree of variation. Indicators with the lowest compliance rates were usually those in which a written document was required for small farms as well as medium and large ones (e.g. CG-SR1.3) and those which were only applicable to a small number of farms (e.g. irrigation, farms without an area of high ecological value, etc.). Some sets of indicators were designed to recognize incremental progress toward implementing a best practice across all of the coffee production area of a farm. In these cases the higher the threshold, the lower the compliance rate. There were a few exceptions, however (e.g. conversion of steep slopes) that call into question the level of verifier and grower understanding of the indicator. There were other cases where the barrier to achieving compliance was quite high (e.g. certified organic) which resulted in lower compliance rates. An interesting aside on organic certification is that Mexico and Peru had the highest percentage of participating farms certified organic – two regions where Starbucks and Conservation International have worked with farmers to promote the adoption of conservation coffee best practices and organic certification. Starbucks core coffee line-up also includes Starbucks shade grown Mexico which is Organic.

This analysis highlighted 2 areas of farm management where additional investments in technical assistance could prove helpful: chemical and disease control, and; wildlife management. Within chemical and disease control, particular emphasis should be given to the calculation of toxic loads and the development of Integrated Pest Management plans for farms. Growers could also use assistance in identifying wildlife species that may occur on their lands and developing management plans to conserve critical habitat. There is also a need for some assistance in the development and implementation of restoration plans for those farms having no remaining natural habitat of ecological value.

More specific results are provided below.

**Shade Coffee:** A high proportion of participating farms used some shade production system. 87 percent of farms reporting having at least 10 percent canopy cover and 36 percent had leguminous shade trees planted throughout the farm. Shade production systems featured more prominently among medium and large farms in Latin America. The indicators on shade do not provide sufficient information to determine the actual percentage of farms adopting shade-grown practices on a portion of the productive area. The soil resources indicators on leguminous trees provide a rich level of detail on the percentage of farm with these trees as shade, but there is no equivalent for other types of shade systems. To determine the extent of the farm under shade,

Starbucks might consider adding some additional indicators asking whether 25, 50 or 100 percent of the coffee is under a shade canopy.

**Soil Resources:** Farms appeared more likely to implement soil conservation practices on slopes that were of a lower grade. This may be due to some confusion on the relative importance of the gradation of the indicators in this section and even the order in which the indicators appear on the scorecard or cost of implementation on steeper slopes. By starting with the 10 percent slope indicators and working up to 30 percent, it would appear that the 10 percent slope indicators would be the easiest to comply with as this is the way indicators are presented in the other sections of the scorecard. Yet, in this case areas of 30 percent slope or greater may represent a relatively small percentage of the land under production and be the easiest for the farmer to comply with. In addition, it could be argued that it is most important for these lands to be under conservation practices as they are at the greatest risk of erosion. In revisiting the guidelines, it might be helpful to re-order these indicators so the 30 percent slope indicators appear first in the list.

**Water Resources:** The majority of farms (62 percent) maintained riparian buffer zones on all water bodies and 77 percent did not apply agrochemicals within 10 meters of water bodies. There is a high degree of emphasis on buffer zones along water bodies and watercourses on or adjacent to coffee farms, yet there is no information on the amount of land under this type of management. Having data on the area under such practices (e.g. by adding a data point on length) would be beneficial for reporting purposes, as it would allow the calculation of hectares under these practices. Most farms did not use irrigation, but those that did had low levels of compliance with the irrigation indicators. The barriers for complying with these indicators should be further explored to determine whether they are financial or technical.

**Chemical Use:** Nearly all of the farms verified in FY08 were not using pesticides classified as Type 1A or 1B by the World Health Organization. At such a high compliance rate, Starbucks might consider making this a zero tolerance indicator. 51 percent of farms used no chemicals on their farms and 13 percent were certified organic. The level of chemical use on small farms was higher than might be expected based on the economics of these production systems. This might be an area where further technical assistance to small farmers could improve performance levels. Information on particular disease and pest issues in particular regions could greatly enrich this analysis and is an area where further input from agronomists within the Starbucks Farmer Support Centers could help determine the cause of this trend and develop strategies to improve performance in the future.

**Conserving Biodiversity:** Nearly all of the farms verified had not cleared natural forest since March 2004. In addition, these farms had set aside over 100,000 hectares for conservation. Most farms are taking steps to conserve biodiversity, primarily through the protection of natural habitat and the retention of shade cover. The vast majority of medium and large farms had areas of high ecological value that should be managed for conservation. Some practices appeared to require a high degree of expertise to implement (e.g. identification of endangered species, development of wildlife management plans) and this was reflected in the lower compliance rates for wildlife management and restoration. More guidance and technical assistance may be necessary to improve performance in these areas.

**Management Planning and Monitoring:** Only medium and large farms reported on these indicators and they were more likely to have a soil management plan than any of the other types of plans included in the guidelines. They were least likely to have a wildlife management plan. There appears to be a high degree of correlation among compliance rates for the various planning and monitoring indicators that occurred throughout this section of the scorecard. Those countries with few numbers of large and medium farms fared quite well, whereas those with greater numbers of farms in both categories were more likely to achieve lower compliance rates. In addition, those countries struggling to comply with one of these indicators tended to struggle with the others as well. Such was the case for Papua New Guinea and Ethiopia across most of the indicators in this section.

## 5. Producer Support Organizations

Producer Support Organizations (PSOs) provide assistance to smallholder coffee growers participating in C.A.F.E. Practices. These entities may take the form of a cooperative, an export company, a mill, an NGO or other entity that works with farmers to improve farm management and provide technical assistance that enables the adoption of better practices over time. They are included in the verification process for small farms and evaluated based on the support provided to these farms. The objective of including PSOs in the C.A.F.E. Practices program is to send a message to these entities regarding the need to raise awareness among smallholders and provide them real support. Starbucks launched the PSO section of the smallholder scorecard March 1<sup>st</sup>, 2007, thus making FY08 the first year they were verified and the first year for which data is available.

### 5.1 Methodology

The smallholder scorecard includes 38 indicators designed to assess PSO performance. The indicators evaluate performance on issues ranging from management and tracking systems to maintaining healthy soils and protecting wildlife. In FY08, Starbucks received 355 PSO verification reports from 15 different countries. (See Table 20.) The actual number of entities performing the role of a PSO in FY08 is much lower than 355 as some PSOs (n=105) provided services to multiple applications and thus had multiple verification reports associated with them. We treated each verification report as a separate PSO and did not eliminate duplicate PSO identification numbers given that Starbucks treats them as separate records within the program (and they occur within separate applications).

For each application with smallholders there is also a verification report for the PSO which enables analysis of all participating PSOs without requiring data extrapolation. We analyzed the PSO data to determine overall performance across all applications including small farms (less than 12 hectares) and performance at the individual country level. The results of this analysis are presented below.

<b>Country</b>	<b>No. of PSOs</b>	<b>No. of Farms</b>
Bolivia	1	168
Burundi	5	15,144
Colombia	34	29,955
Costa Rica	70	7,868
El Salvador	12	253
Ethiopia	14	19,513
Guatemala	69	9,821
Honduras	22	358
Indonesia	34	21,627
Mexico	21	4,735
Nicaragua	34	2,048
Papua New Guinea	4	370
Peru	21	5,441
Rwanda	10	9,960
Tanzania	4	12,251
<b>Grand Total</b>	<b>355</b>	<b>139,512</b>

Table 20: Number of participating PSOs by country

## 5.2 Management and Tracking Systems

- Percentage of PSOs with tracking systems from purchase to point of export
- Number of PSOs with an annually updated list of producers participating in the C.A.F.E. Practices program.
- Number of small farms that receive a receipt for their coffee
- Number of small farms that received a written agreement or identification card upon their commitment to comply with C.A.F.E. Practices
- Percentage of PSOs maintaining farm inspection reports, maps and description

Verification of PSOs includes an assessment of its management systems. Starbucks asks PSOs to keep records of the farms participating in the program, to ensure farmers receive receipts for the coffee sold and that the farmers voluntarily agree to participate in C.A.F.E. Practices. Each of these indicators has zero tolerance status within the program, although since FY08 was the first year Starbucks implemented the PSO verification, the company did not assign a non-compliance status to an application solely based on PSO performance related to these indicators.

Of the PSOs assessed in FY08, 97 percent had tracking systems in place to monitor the flow of product from the initial purchase point through the point of export (PS-MT1.1). Only Colombia, Costa Rica, Guatemala and Mexico had a small number of PSOs failing to comply with this indicator. The PSOs in the other 11 countries were all in compliance with this requirement. Mexico had the lowest performance with an 87 percent compliance rate (e.g. 13 of 15 PSOs).

The vast majority (e.g. 98 percent) of PSOs maintained a list of the smallholders participating in the program (PS-MT1.2). Once again 11 of the 15 countries achieved 100 percent compliance. Only Colombia, Ethiopia, Guatemala and Peru had some PSOs that did not comply with this practice, although each of these countries had compliance rates of 90 percent or higher.

Ninety-two percent of PSOs ensured each small farm within its supply chain received a receipt for their coffee (PS-MT1.3). This is significant in that means that 127,044 small farms received a receipt for the transfer of their coffee. Some PSOs in Colombia, Guatemala, Indonesia,

Mexico and Rwanda failed to provide receipts to all of the farms in their supply chain. Indonesia had a compliance rate significantly lower than any of the other countries with only 35 percent of the PSOs providing receipts to small farmers in their supply chain. This is of concern and should warrant further investigation by Starbucks, as all of the other countries had compliance rates of 90 percent or higher.

Within the suite of indicators used to assess management and tracking systems, two had lower compliance rates than the others. Only 58 percent of PSOs provided participating farmers with a written agreement and identification card once the farmer committed to complying with C.A.F.E. Practices requirements, and 52 percent maintained farm inspection reports. There were a wide range of compliance rates across the 14 countries for these two indicators. Only Bolivia (n=1) and Honduras (n=22) had all of their PSOs provide written agreements to their farmers, while compliance rates for other countries ranged from 20 percent in Burundi (n=5) to 73 percent in Nicaragua (n=34). Burundi also had the lowest performance for PSOs maintaining farm inspection reports, with none of the 5 participating PSOs in complying with this practice. In Bolivia (n=1) and Mexico (n=20) all participating PSOs maintained these records.

### **5.3 Soil Erosion and Productivity**

- Percentage of PSOs with soil management plans
- Percentage of PSOs that facilitate distribution of erosion controls to 5, 15 and 25 percent of producers in network
- Percentage of PSOs using synthetic fertilizers on small farms
- Percentage of PSOs implementing soil and foliar testing strategy

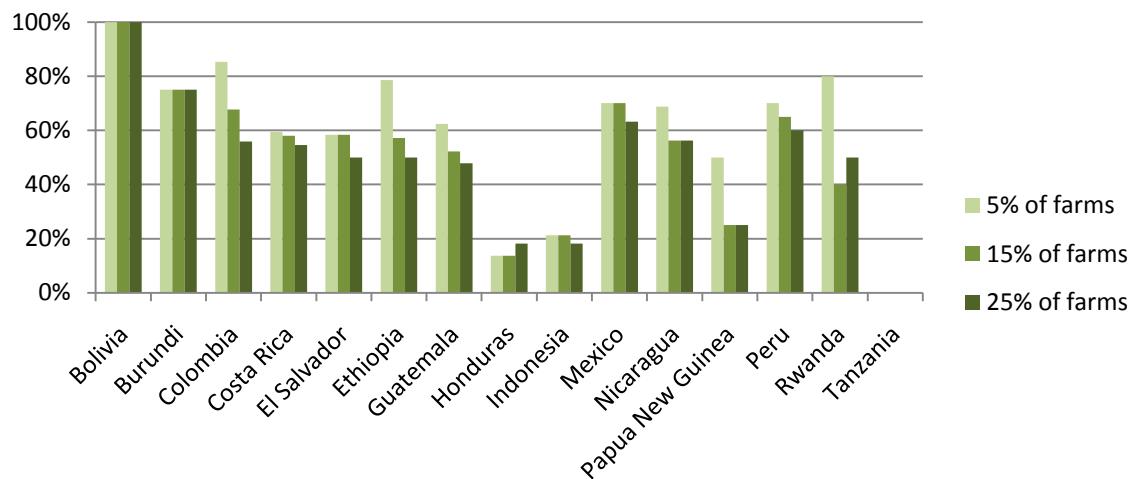
Within C.A.F.E. Practices, PSOs are responsible for assisting small farmers in developing erosion control strategies and accessing erosion controls. In FY08, 74 percent of PSOs had developed an explicit soil management plan that included erosion reduction strategies (PS-SR1.1). All PSOs in Bolivia and Burundi had these plans in place, and Costa Rica had a compliance rate of 94 percent. None of the Tanzanian PSOs had developed soil management plans meeting these requirements, and less than a third of participating PSOs in Indonesia and Nicaragua had these plans.

PSOs also assist small farms with accessing erosion control materials. The indicators used to rate PSO performance on this practice establish a continuum of performance that assesses the percentage of producers receiving the service (e.g. 5, 15 or 25 percent).<sup>27</sup> Across all PSOs, 59 percent facilitated access for 5 percent of producers in their network, but this figure fell to 51 percent when the threshold was raised to 15 percent of producers. Finally, only 47 percent of PSOs were helping 25 percent of the farmers in their network access erosion controls. (See Figure 27.) Across this set of indicators only Bolivia, with its one PSO achieved 100 percent compliance for all three thresholds. No other country achieved 100 percent for even the 5 percent threshold, although five achieved rates of 70 percent or higher. In Tanzania none of the participating PSOs facilitated access to erosion controls for the farmers in their network. Honduras and Indonesia also had low performance rates (e.g. below 25 percent) across all three indicators. Rwanda and Honduras had instances of reporting inconsistencies within this set of indicators, where the percentage of PSOs that complied with the 15 percent threshold, was less

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<sup>27</sup> Since this was the first year of implementation for the PSO verification, the thresholds established are relatively low.

than the percentage complying with the 25 percent threshold. This leads to the conclusion that some additional training may be required for verifiers working in these countries.



**Figure 27: Percentage of PSOs facilitating distribution of soil erosion controls (PS-SR1.3, 1.4 and 1.5)**

PSOs also assist small farms with synthetic fertilizer management. However, there were 83 PSOs whose farmers did not use synthetic fertilizers, which represents 23 percent of all PSOs verified during this year. The remaining 77 percent of PSOs worked with farmers using synthetic fertilizers and 74 percent of these had soil management plans that included strategies for conducting soil analyses to identify any nutrient and/or organic matter deficiencies. Papua New Guinea was the only country where all of the PSOs had soil management plans that included this strategy for managing application rates. In Ethiopia and Burundi, on the other hand, none of the PSOs had developed these strategies. In fact, none of the East African countries participating in the program were very likely to have such strategies in place, as no country achieved compliance rates exceeding 25 percent.

Among the 201 PSOs that had strategies for soil analysis included in their soil management plans, 99 were implementing these strategies according to the established timeline. Some countries, such as El Salvador, Mexico, Papua New Guinea and Rwanda had all of their PSOs implementing their soil management plans. Others like Colombia, Honduras and Guatemala had implementation levels below 30 percent. There were a number of instances where a PSO that had a soil management plan that included a soil analysis strategy but was not assessed against the indicator asking if the strategy was being implemented. This was particularly the case for Indonesia, Tanzania, Costa Rica, Mexico, and El Salvador. It is not clear why some verifiers would report performance in this way, and this might be a point to discuss during subsequent verifier trainings in these countries.

#### 5.4 Shade Canopy and Wildlife Protection

- Percentage of PSOs with shade management plans
- Percentage of PSOs that have identified resources for distribution of shade trees or seedlings
- Percentage of PSOs with lists of wildlife species native to the region

PSOs participating in C.A.F.E. Practices are encouraged to assist small farmers with shade management by developing a shade management plan across the network of farms that identifies gaps in shade canopy cover and areas with invasive, non-native species and sets forth steps to replant these areas. In FY08, 71 percent of PSOs had shade management plans that identified these areas. In Bolivia and Papua New Guinea all of the participating PSOs had these plans in place. PSOs in Peru, Costa Rica, Colombia and Ethiopia also performed well, with compliance rates of over 80 percent. In Tanzania none of the 4 participating PSOs had such plans. PSOs in El Salvador were also very unlikely to have these plans in place, with only 25 percent of them complying with this indicator.

Verifiers also determine whether PSOs are helping farms identify resources for distributing shade trees or seedlings. In FY08, 68 percent of PSOs had identified these resources for the network of small farms in their supply chain. Costa Rica and Colombia and Bolivia all had compliance rates of over 95 percent. PSOs in El Salvador, Honduras, Mexico and Tanzania were the least likely to assist small farmers in identifying shade tree and seedling suppliers, with only a third or less complying with this indicator. The reason for low performance in these countries is not clear, although it may be due to the lack of readily available seedling sources.

The only wildlife protection indicator applied to PSOs looks at whether they have created a list of wildlife species that are native to the region, using the IUCN Red List of Threatened Species. 52 percent of PSOs had these lists of species for the region. Costa Rican PSOs, at 77 percent, were the most likely to have compiled these lists. None of the PSOs in Bolivia, Burundi, Rwanda or Tanzania had compiled these lists. This may suggest PSOs do not have relationships with universities or NGOs who could assist with this process. Starbucks might consider conducting regional workshops with PSOs to assist with this indicator. Another alternative is to use the Integrated Biodiversity Assessment Tool (IBAT – see [www.ibatforbusiness.org](http://www.ibatforbusiness.org)) to identify overlap of coffee farms with critical sites for conservation and generate an initial list of important species.

## 5.5 Ecological Pest and Disease Control

- Percentage of PSO not using Type 1A or 1B chemicals as listed by the World Health Organization<sup>28</sup>
- Number of small farms applying agrochemicals only as a last resort
- Number of small farms where coffee berry borer infestation is an issue
- Percentage of PSOs facilitating distribution of biological control agents or traps for 5, 15 or 25 percent of the producer network

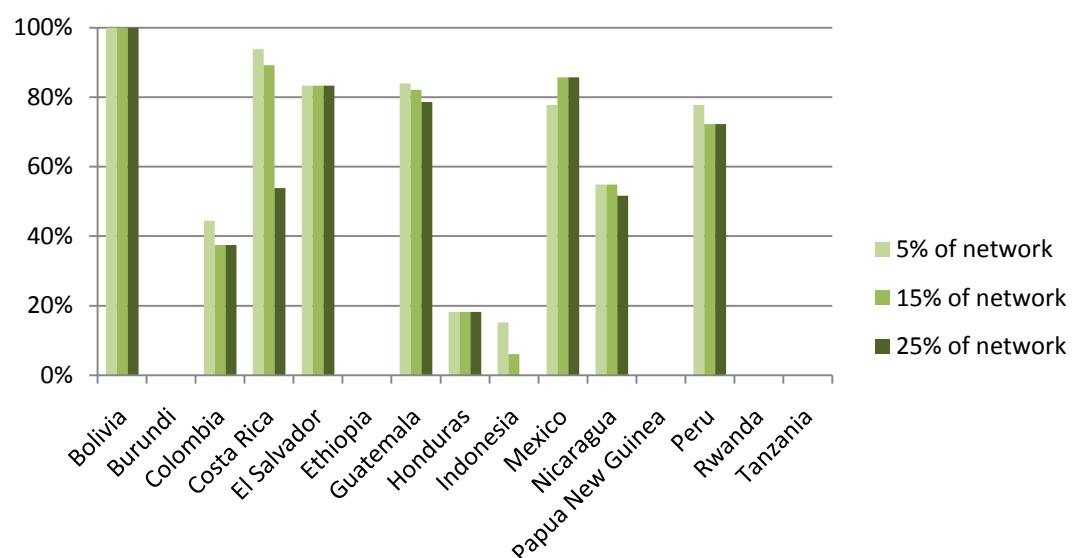
PSOs provide assistance to small farms in managing pest and disease outbreaks. This may take the form of guidance on types of control interventions to apply, be they biological or chemical. In FY08, 93 percent of PSOs refrained from using Type 1A and 1B chemicals as classified by the World Health Organization. PSOs achieved 100 percent compliance with this practice in 8 of the 15 countries with smallholder farms. An additional 5 had performance levels of 90 percent or better. Nicaragua, with a 57 percent compliance rate had the highest levels of WHO Type 1A and 1B chemical use.

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<sup>28</sup> Except those allowed under the nematode amendment.

In most cases small farms working with PSOs applied chemicals only as a last resort. The verification records show that 81 percent of PSOs used chemicals only after cultural and physical controls had failed to produce the necessary results. This translates to 35,874 small farms applying cultural physical controls to manage pest and disease outbreaks. In many cases, however, verifiers found this indicator to not apply to the PSO verified and this affected over 101,000 small farms. Many of these farms were in Bolivia, Burundi, and Ethiopia, where verifiers reported that the indicator was not applicable to any of the PSOs in these countries. Of those countries where the indicator did apply, 7 achieved 100 percent compliance across all of their PSOs. The lowest level of performance was in Nicaragua where only 29 percent of PSOs worked with the small farms in its network to apply alternative, non-chemical controls for pest and disease outbreaks.

C.A.F.E. Practices recognizes the severity of coffee berry borer infestation among small farms participating in the program and asks PSOs to facilitate the distribution of biological control agents or methane/ethanol traps to producers facing this risk. The suite of indicators used to assess PSOs on this practice applied to 271 of the 355 PSOs verified in FY08. Thus it can be concluded that 61,930 small farms faced the threat of coffee berry borer infestation during that year – a number representing nearly half of the small farms participating in the program. The majority (e.g. 65 percent) of PSOs facilitated access to alternative control mechanisms to at least 5 percent of affected producers. This figure declines to 62 percent when the threshold of affected producers is increased to 15 percent and to 52 percent when the threshold is set at 25 percent of affected producers. Bolivia, with its single PSO, was the only country with a 100 percent compliance rate across all 3 indicators. (See Figure 28.) El Salvador, Guatemala and Peru also had high levels of performance at the 25 percent threshold. Four countries – Ethiopia, Papua New Guinea, Rwanda and Tanzania – had none of their PSOs providing these services to small farms. Other countries with low performance include Honduras and Indonesia. Mexico was the only country in which the trend across the three indicators showed some inconsistency in reporting, as the percentage of PSOs meeting the 25 percent threshold exceeded that meeting the 5 percent threshold.



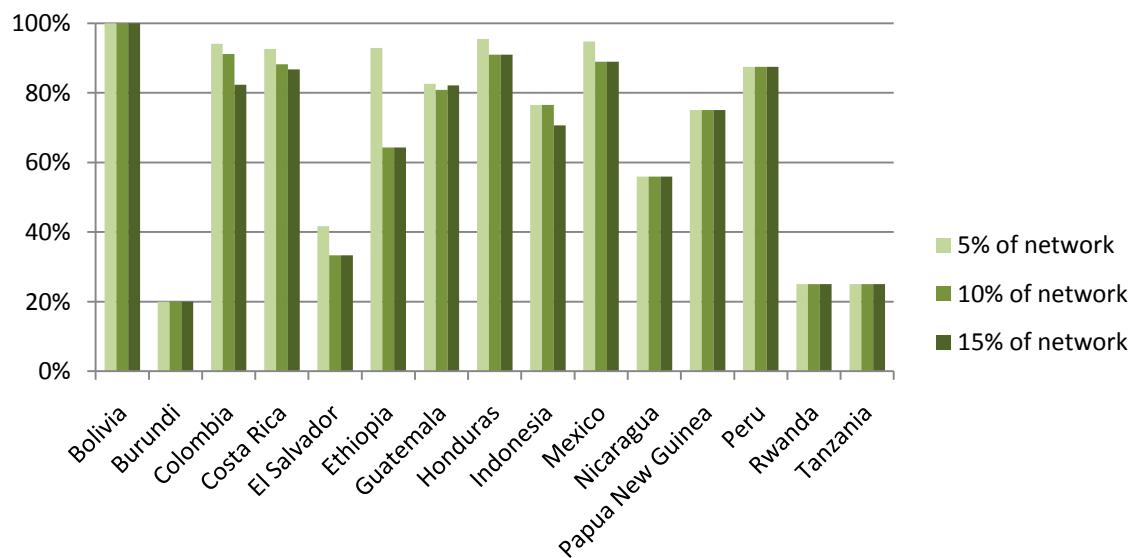
**Figure 28: Percentage of PSOs facilitating distribution of non-chemical controls for coffee berry borer (PS-EM1.6, 1.7 and 1.8)**

## 5.6 Environmental Management and Monitoring

- Percentage of PSOs with monitoring programs to track farm activities across 5, 10 and 15% of their network
- Percentage of PSOs with written management plan
- Percentage of PSOs implementing management plan with more than 5, 15 and 25% of their network
- Percentage of PSOs training more than 5, 15 and 25% of their network

The management and monitoring section of the PSO scorecard includes more indicators than any other section used to assess these organizations. This section looks at whether the PSO has a monitoring program, a written management plan that is implemented, and if the PSO is training farmers within the network on key issues.

**Monitoring Program:** In analyzing the percentage of PSOs with monitoring programs, there was only a 5 percent difference between the percentage of PSOs monitoring 5 percent and 15 percent of their network. This suggests that the 15 percent threshold could be raised to 25 percent to push the PSOs to extend these programs even further. The only exception to this at the country level was in Ethiopia where 93 percent of PSOs implemented these programs among 5 percent of their networks, but this figure dropped to 64 percent for the 10 and 15 percent threshold levels. (See Figure 29.) Bolivia was the only country achieving 100 percent compliance for the 15 percent threshold. Across most countries the trend shows that verifiers understood the continuum of indicators, but in Guatemala auditors reported a higher percentage of farms complying with the 15 percent threshold indicator than complied with the 10 percent one. It appears that this is based on a single occurrence of a verifier reporting an indicator was not applicable to a PSO when it should have been applicable.

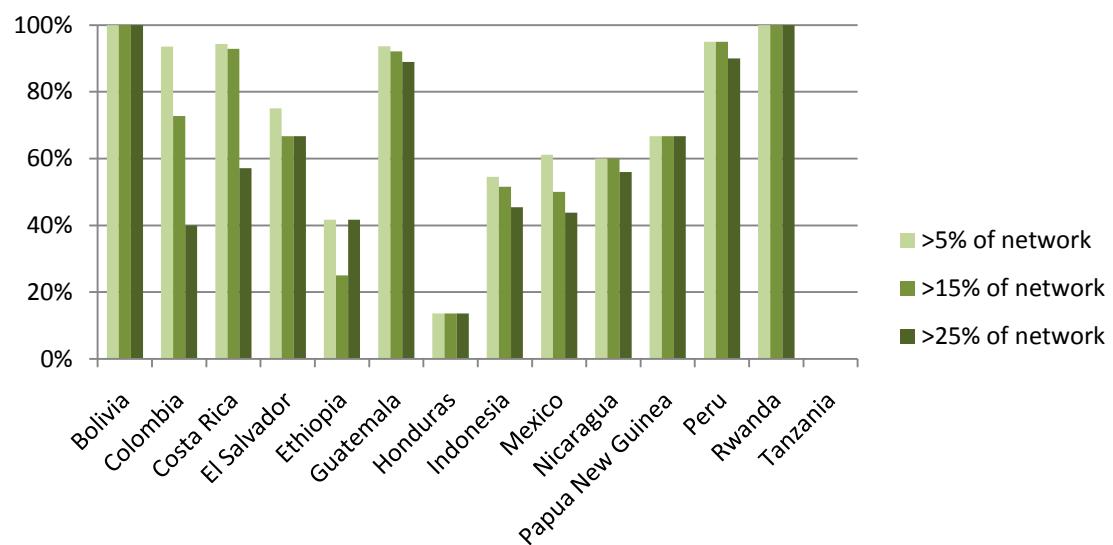


**Figure 29: Percentage of PSOs monitoring farm performance across 5, 10 and 15 percent of their networks (PS-EM2.1, 2.2 and 2.3)**

**Written Management Plans:** C.A.F.E. Practices also evaluates if PSOs have developed written management plans that include types of farm production systems in the network and information

on coffee productivity, farmer training, ecological pest and disease management measures, soil quality improvement strategies, and PSO farmer resource sharing. The analysis shows that 58 percent of PSOs had developed management plans that included this information. Once again Bolivia (n=1) was the only country achieving 100 percent compliance for this indicator. Colombia and Peru followed with rates of 90 percent or higher. None of the PSOs in Tanzania or Burundi had these written management plans in place, however. Honduras at 14 percent compliance also fared poorly against this indicator.

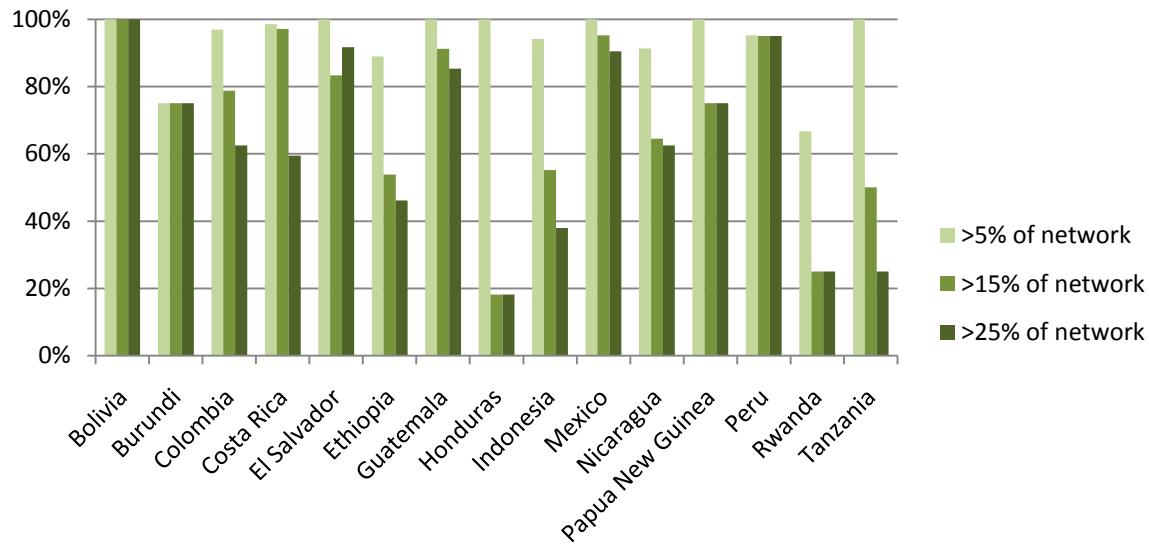
A subsequent set of indicators looks at the level of implementation for the management plan across 5, 15 and 25 percent of producers within the PSO network. There was little significant difference between the percentage of PSOs implementing the management plan across 5 and 15 percent of producers, with compliance rates only differing by 4 percent. When the threshold is raised from 15 to 25 percent of the network, however, the compliance rate drops from 72 to 59 percent – 13 percentage points. In analyzing the results at the country level, there is a high level of consistency in the performance of PSOs across the 3 thresholds for a number of countries. For instance, in Bolivia, Honduras, Peru, Rwanda and Tanzania there was no difference between the percentages applying the plan to 5 and 25 percent of producers in their networks. (See Figure 30.) Bolivia and Rwanda both achieved 100 percent compliance for this indicator; while Tanzania had no PSOs comply. The latter, however, is due to the fact that none of the Tanzanian PSOs even developed a written plan in the first place. The only other anomaly occurs with Ethiopia, where verifiers reported more farms in compliance with the 25 percent threshold indicator than with the 15 percent one.



**Figure 30: Percentage of PSOs implementing the management plan with more than 5, 15 and 25 percent of producers in their network (PS-EM2.6, 2.7 and 2.8)**

**Training:** Finally, Starbucks asks that PSOs provide training to small farmers within their network according to the C.A.F.E. Practices guidelines. Among participating PSOs in FY08, 80 percent trained more than 5 percent of its network. When this threshold is raised to 15 and 25 percent of the network, the compliance rate fell to 77 percent and 75 percent, respectively. PSOs in 7 countries trained more than 5 percent of producers in their networks, but only Bolivia did the same for 25 percent of the network. (See Figure 31.) PSOs in Guatemala, Peru and Mexico had

the highest rates of compliance for training more than 25 percent of its network of producers, while those in Honduras, Rwanda and Tanzania had the lowest. This trend suggests that the length of time in the program may correlate with performance levels at the highest threshold level. For this set of indicators, El Salvador was the only country where reporting rates appear to be inconsistent, with more PSOs meeting the 25 percent threshold than those meeting the 15 percent one.



**Figure 31: Percentage of PSOs training more than 5, 15 and 25 percent of producers in their network (PS-EM2.11, 2.12 and 2.13)**

## 5.7 PSO Conclusions and Recommendations

Producer support organizations play a key role in assisting small farms in accessing technical support, resources and training. Across the suite of indicators used to assess the performance of the PSOs participating in C.A.F.E. Practices, compliance rates ranged from 98 percent of PSOs maintaining an annually updated list of participating producers to 42 percent of PSOs implementing their soil and foliar testing strategies according to the established timeline. Starbucks has designated three of the management and tracking indicators zero tolerance requirements for participation in the program. These require PSOs to track the product from purchase through export, maintain an updated list of producers participating in the program, and ensure each farm within the supply chain receives a receipt for their coffee. PSOs performed well against these indicators, with compliance rates of 97, 98 and 92 percent. More PSOs failed to ensure receipts for the coffee farmers sold (e.g. 28 PSOs) than for the other 2 indicators.

Based on this analysis it appears that most verifiers understand the indicators and how they relate to one another. There were only a small number of instances where trends in compliance rates across a set of related indicators demonstrated errors. Ethiopia had the most instances of this occurring and may require additional verifier training.

PSOs performed well across the majority of indicators, with compliance rates exceeding 50 percent for all but 3 indicators. Working with farmers to manage fertilizer application according

to a management plan appeared to be the greatest challenge for PSOs. Two of the 3 indicators with compliance rates below 50 percent were in the Maintaining Soil Productivity section of the scorecard. Starbucks might consider working with PSOs to conduct further training to improve these rates.

The single PSO in Bolivia performed extremely well across the suite of indicators – 100 percent compliance for all but one indicator. Costa Rican PSOs also achieved high performance across the entire set of indicators in this section, with a rate above 50 percent for all but one indicator.<sup>29</sup> Guatemala also performed well across many of the indicators, especially in the ecological control of pests and diseases and the environmental management sections. Tanzanian PSOs had the poorest performance across the set of indicators, with compliance rates of less than 50 percent for 27 indicators. PSOs in Honduras, Rwanda and Indonesia also struggled with these criteria, each with less than half of them complying with 18 or more indicators.

For those sets of indicators designed to monitor improvements in reaching a broader portion of the network of producers within a PSO, Starbucks should consider revisiting the established thresholds as there was often no significant change in performance between the 5 and 15 percent thresholds. For instance, Starbucks could choose to keep an entry-level threshold (perhaps of 10 percent) and then reward PSOs that extend their services to a wider range of smallholders in their supply chain on a continuous improvement basis. The only exception to this was in the training indicators, where there appeared to be a significant barrier to extending this service to a larger extent of smallholders. This is most likely due to the human and capital investments required to provide training to a large portion of the PSO networks. The way in which these indicators are written does not enable the recognition of those PSOs providing the specified services to significantly more than 25 percent of the producers in their networks. Starbucks might consider collecting information on the percent of producers receiving these services and then scoring them based on the indicators established. This would allow the company to revisit the thresholds over time and determine when the top one needs to be expanded to 35 percent or higher. It would also enable Starbucks to recognize those PSOs greatly exceeding the expectations set within the guidelines.

Starbucks might also consider creating a standardized list of type of entity that serve the PSO function within C.A.F.E. Practices. Within the current framework, a verifier can use any term (in any language) to describe the PSO. The lack of standard categories does not allow us to determine whether there is any correlation between the type of entity providing this service and the compliance rates achieved. In the future it would be interesting to see whether cooperatives, exporters, or mills appear to provide the highest level of service to networks of small farmers.

## 6. Wet and Dry Mills - Coffee Processing

In addition to verifying social and environmental performance of suppliers for coffee growing, C.A.F.E. Practices also includes guidelines, criteria and indicators for coffee processing. Suppliers use a range of processes to convert the coffee cherry into green coffee ready for export to Starbucks. These include small-scale wet processing on small farms, larger-scale wet processing, and dry processing. All of the social indicators analyzed in the coffee growing

<sup>29</sup> The one indicator where Costa Rica did not achieve 50 percent compliance was PS-MT1.5 – maintaining farm inspection reports along with a map and description of the farm.

section of this report also apply to mills. In addition, specific environmental indicators are used to verify the performance of wet and dry mills on water use and discharge, waste management, and energy conservation. Similar to the coffee growing section of the guidelines, verifiers use only a subset of indicators in evaluating processing conducted on small farms.

## 6.1 Methodology

Coffee processing data underwent a somewhat different process from that used in the coffee growing section due to some unique features of the program. For instance, the environmental indicators for wet and dry mills have their own codes and thus do not overlap, although the social responsibility indicators are the same. To address these variations in supply systems, we first categorized all mill reports according to 4 categories: small farms doing wet processing; wet mills; dry mills, and; mills doing both wet and dry processing. In cases where a single mill did both wet and dry processing, we counted the mill twice – once as wet and once as dry – in the environmental section as the indicators applicable for the coffee processing section are uniquely coded for whether wet or dry processing took place at the facility. Social responsibility data was analyzed only for the stand-alone mills, as the working conditions and hiring practices on small farms were already analyzed in the farm section of this report.

In cases where the environmental indicators were the same for wet and dry milling but given separate codes, we combined them into a single indicator grouping for reporting purposes. We extrapolated performance of on-farm wet processing based on mill counts provided by the coffee agronomy database, as only a sample of small farms were actually verified and the number of farms with on-site wet milling was not captured in the VRS. We double-checked all of the data for duplicate mill entries, as several mills processed coffee for multiple applications, and removed these duplicates for the purposes of analyzing indicator-level compliance rates.<sup>30</sup> Two additional mill records were excluded from the analysis based on errors in recording the mill type included in the application (e.g. all indicators were marked not applicable). For more information on the methodology, see Appendix E.

## 6.2 General Participation Data

- Number of mills by type
- Number of workers employed by stand-alone mills

In FY08 54,375 operations reported processing coffee. (See Table 21.) The vast majority of these (53,400) were small farms that conducted some wet-milling prior to transporting the coffee to the cooperative or export company for further processing. This represented 38 percent of small farms participating in the program in FY08. There were a couple of countries (e.g. Costa Rica, Bolivia) where no on-farm processing of coffee was done by small-scale growers.

The remaining 975 operations verified against the coffee processing indicators were wet and dry mills that either processed coffee produced by multiple farms (including coffee produced by small farms) or coffee produced by a medium or large farm. These mills may process coffee from cooperatives or multiple supply chains, and hence applications. We refer to these as “stand-alone” mills for the purposes of this analysis. Of the stand-alone mills, the majority (e.g.

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<sup>30</sup> Removing these duplicates could affect the results of the analysis if the compliance rating for practices varied across the reports. We randomly deleted the duplicate records to minimize the effects of this on the results reported.

73 percent) did wet coffee processing. Only a small percentage (20 percent) did dry processing. An additional 69 mills did both wet and dry processing.

Mill Type	Number Participating
Wet - stand alone	715
Wet - on farm	53,400
Wet and Dry	69
Dry	191
Total	54,375

**Table 21: Number of mills participating in the program in FY08**

The 975 stand-alone mills participating in C.A.F.E. Practices span 18 countries and the number of mills participating in any particular country varies from just one in Bolivia to 211 in Nicaragua. (See Table 22.) For most countries the number of wet mills exceeded the number of dry mills. The only exception occurred in Indonesia which had 89 dry mills and only 55 wet. Some countries appear to have consolidated coffee milling substantially, with a few mills having the capacity to conduct both wet and dry processing handling the majority of the coffee. This was the case in Bolivia, Zambia, Costa Rica, El Salvador and Papua New Guinea.

Country	Wet	Dry	Both	Total
Bolivia	-	-	1	1
Burundi	5	3	-	8
Colombia	30	11	-	41
Costa Rica	4	3	35	42
El Salvador	10	3	13	26
Ethiopia	19	12	3	34
Guatemala	189	10	6	205
Honduras	43	6	1	50
Indonesia	55	89	-	144
Kenya	8	1	-	9
Mexico	51	5	2	58
Nicaragua	187	24	-	211
Panama	1	1	-	2
Papua New Guinea	5	2	6	13
Peru	46	13	-	59
Rwanda	10	4	-	14
Tanzania	52	4	-	56
Zambia	-	-	2	2
<b>Grand Total</b>	<b>715</b>	<b>191</b>	<b>69</b>	<b>975</b>

**Table 22: Number of stand-alone mills participating in C.A.F.E. Practices in FY08 by country**

Stand-alone mills participating in C.A.F.E. Practices employed 44,445 workers in FY08, the vast majority of which were seasonal or temporary employees who worked during the harvest season.

(See Table 23.) These figures include only stand-alone mills as the on-farm labor for smallholder processing was captured in the farm analysis.

Mill Type	Full-Time	Part-Time	Temporary	Total
Wet	1,165	397	13,026	14,588
Dry	3,289	776	18,583	22,648
Both	1,098	2,800	3,311	7,209
Total	5,552	3,973	34,920	44,445

**Table 23: Number of workers employed by stand-alone mills participating in C.A.F.E. Practices in FY08**

### **6.3 Social Responsibility (stand-alone mills)**

As seen above, mills employ large numbers of workers and C.A.F.E. Practices verification looks at mill performance across a range of social responsibility indicators. The indicators used for mills are the same as those used to verify farms and as such the particular indicators and analyses presented here mirror those presented in the farm section of this report. This section analyzes performance of only the 975 stand-alone mills and does not include labor practices on small farms that process coffee using wet milling processes, as the social responsibility data for these farms was already included in the coffee growing section of this report.

#### **6.3.1 Minimum labor standards**

- Number of mills where child labor occurred
- Number of mills where forced or bonded labor occurred
- Number of mills where minimum wage was not paid to workers
- Number of mills non-compliant with more than one of the minimum labor standards

Of the mills verified in FY08, 25 failed to comply with at least one of the zero tolerance indicators, resulting in a non-compliant status for the application. (See Table 24.) None of the mills that did both wet and dry processing failed to comply with these indicators. Wet mills had the highest number of incidents and across a larger number of the indicators. This may be due to the significantly larger number of wet mills verified.

The indicator with the most incidents of non-compliance across both types of mills was the failure to pay seasonal or temporary workers the legally established minimum wage. This was followed by the failure to pay full-time workers the minimum wage. Two wet mills, one in Peru and another in Nicaragua, had incidents of child labor. The majority of the mills failing to comply with the zero tolerance indicators were from Burundi (4 applications) and Honduras (7 applications). In the case of Burundi all of the associated applications received a non-compliant status and no coffee was purchased from that country as part of the C.A.F.E. Practices program.

Indicator		Wet Mills	Dry Mills
SR-HP1.1	All full-time workers are paid the nationally or regionally established minimum wage	6	1
SR-HP1.2	All part-time workers are paid the nationally or regionally established minimum wage	2	0
SR-HP1.3	All temporary/seasonal workers are paid the nationally or regionally established minimum wage	12	3
SR-HP4.1	Employer does not directly contract any persons under the age of 14	2	0
SR-HP4.2	Employment of authorized minors older than 14 does not conflict with their access to education	0	0
SR-HP4.3	Management has an enforced policy prohibiting discrimination on the basis of gender, race, ethnicity, age or religion as per ILO Convention 111	5	0
SR-HP4.4	Employer prohibits the use of forced, bonded, indentured or involuntary convict labor	0	0

**Table 24: Incidents of non-compliance on participating mills by indicator in FY08**

A small number of wet mills failed to comply with multiple zero tolerance indicators. (See Table 25.) One mill in Nicaragua failed to comply with three of these indicators, two regarding minimum wage and one on child labor. Four mills (3 from Honduras, 1 from Burundi) failed to comply with two indicators. The majority of these were based on a failure to pay workers the minimum wage across 2 worker categories. One, however, was due to a minimum wage issue as well lacking a policy prohibiting discrimination in the workplace.

No. of mills NC with:	Wet Mills	Dry Mills	Total
3 ZT Indicators	1	0	1
2 ZT Indicators	4	0	4
1 ZT Indicator	16	4	20

**Table 25: FY08 Mill incidence of non-compliance with zero tolerance indicators**

On the more positive side, these incidents of non-compliance with minimum labor standards represent a very minor proportion of mills participating in the program. In FY08 compliance rates were 98 percent and higher for each of these indicators. (See Table 26.) All mills audited ensured that any employment of minors over 14 did not conflict with their access to education and there were no incidents of forced, bonded, indentured or involuntary labor. Dry mills also achieved 100 percent compliance for paying part-time workers the minimum wage and not contracting any persons under 14 years of age. Mills that did both wet and dry processing had no incidents of non-compliance with any of the zero tolerance indicators.

<b>Indicator</b>		<b>Wet</b>	<b>Dry</b>	<b>Both</b>	<b>All</b>
SR-HP1.1	All full-time workers are paid the nationally or regionally established minimum wage	98.2%	99.4%	100%	98.8%
SR-HP1.2	All part-time workers are paid the nationally or regionally established minimum wage	97.4%	100%	100%	98.7%
SR-HP1.3	All temporary/seasonal workers are paid the nationally or regionally established minimum wage	98.0%	98.1%	100%	98.2%
SR-HP4.1	Employer does not directly contract any persons under the age of 14	99.7%	100%	100%	99.8%
SR-HP4.2	Employment of authorized minors older than 14 does not conflict with their access to education	100%	100%	100%	100%
SR-HP4.3	Management has an enforced policy prohibiting discrimination on the basis of gender, race, ethnicity, age or religion as per ILO Convention 111	99.2%	100%	100%	99.5%
SR-HP4.4	Employer prohibits the use of forced, bonded, indentured or involuntary convict labor	100%	100.0%	100%	100%

**Table 26: Mill compliance rates for zero tolerance indicators in FY08**

### **6.3.2 Improved compensation**

- Number of mill workers paid at and above minimum wage
- Number of mill workers paid a living wage
- Percentage of mills paying overtime at or above the legal minimum requirement

As noted above the overwhelming majority of mills participating in the program paid their workers at least the minimum wage in FY08. This benefitted 39,815 workers, the majority of which were temporary workers employed by the wet and dry mills. The vast majority of mills participating in the program paid their workers more than the minimum wage, regardless of whether they were full-time, part-time or seasonal. (See Table 27.) For instance 23,871 workers received wages that exceeded the legal minimum, representing over half of the total mill workers. Dry mills had the highest compliance rates across all worker types except for temporary workers. Interestingly, dry mills were more likely to pay their part-time workers wages that exceeded the legal minimum than either full-time or temporary workers. This may be due to the relatively low number of part-time workers employed by these particular mills.

Indicator		Wet	Dry	Both	All
SR-HP1.11	All full-time workers are paid more than the nationally or regionally established minimum wage	80%	85%	84%	82%
SR-HP1.12	All part-time workers are paid more than the nationally or regionally established minimum wage	76%	98%	76%	84%
SR-HP1.13	All temporary/seasonal workers are paid more than the nationally or regionally established minimum wage	82%	73%	75%	80%
SR-HP1.14	Full-time workers are paid at least a living wage	83%	87%	92%	85%

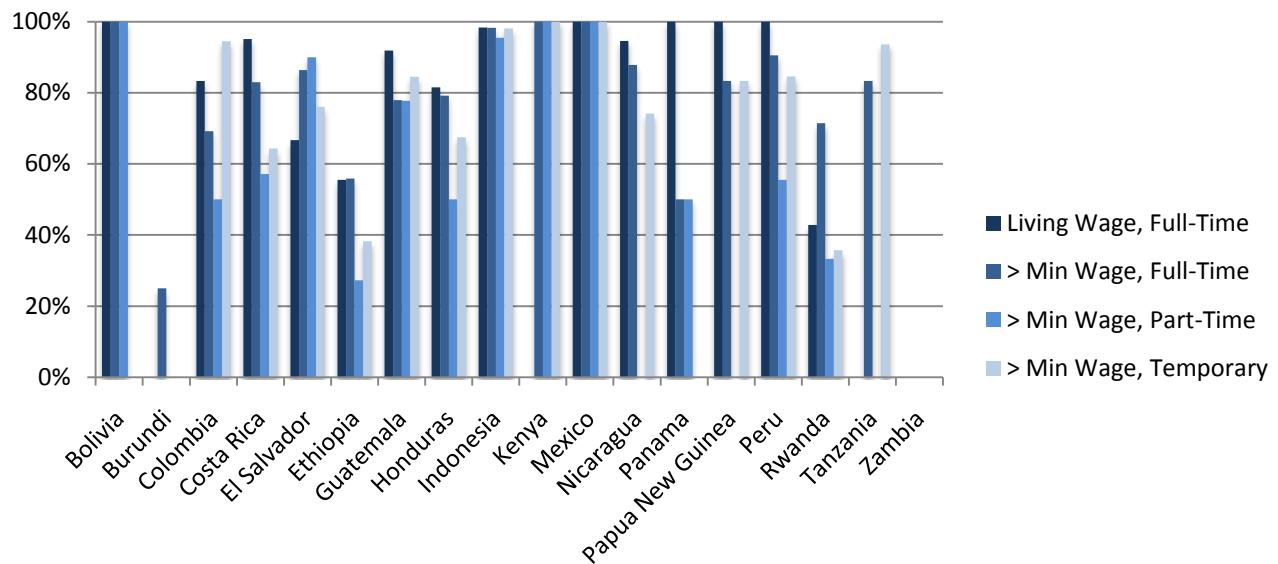
**Table 27: Percentage of mills paying above the minimum wage in FY08**

In addition, participating mills paid 4307 full-time workers a living wage. (See Table 28.) As with the coffee growing data, the number of mills reporting that they used full-time labor is inconsistent between the two indicators used to assess wages paid to these workers. For instance, 559 mills reported employing full-time labor according to indicator SR-HP1.11, whereas 594 reported doing so for indicator SR-HP1.14, and both figures are different from the number of mills reporting on SR-HP1.1. The range of reporting differs by 35 mills, or roughly 6 percent of the population using the 594 figure as the population size. This is another area where the VRS could be used to ensure greater consistency in reporting across these related indicators. For instance, if a mill reported using full-time workers, the verifier would be required to report on all three of these indicators.

Mill Type	Indicator	Full-Time	Part-Time	Temporary	Total
Wet	Greater than minimum wage	876	295	7423	8594
	Living wage	795	NA	NA	795
Dry	Greater than minimum wage	2435	721	8326	11482
	Living wage	2686	NA	NA	2686
Both	Greater than minimum wage	937	342	2516	3795
	Living wage	826	NA	NA	826
Total	Greater than minimum wage	4248	1358	18,265	23,871
	Living wage	4307	NA	NA	4307

**Table 28: Number of mill workers earning wages above the legal minimum**

All participating mills in Bolivia, Mexico, Panama, Papua New Guinea and Peru paid full-time workers a living wage. (See Figure 32.) This is interesting in that for some of these countries compliance with the living wage indicator was greater than the minimum wage compliance rate for full-time workers. This could be due to minimum wage standards in some countries being based on living wage standards, but this assumption should be further tested to ensure verifiers understand the difference between these indicators. Zambia had no mills paying workers wages that exceeded the minimum, but this was the only country where this was the case.



**Figure 32: Percentage of mills paying workers more than minimum wage, by country in FY08**

The majority of mills participating in the program also paid overtime wages that met the national legal requirements (81 percent), with wet and dry mills achieving compliance rates 81 and 75 percent, respectively. Mills that did both wet and dry processing greatly outperformed mills only doing one type of processing with a compliance rate of 91 percent. However, these percentages are cut in half when asked if overtime pay exceeded the legal requirements. These sharp drops in percentages are also reflected in the country level analyses although the wet mill data shows some exceptions. For instance, Colombian wet mills achieved 100 percent compliance for paying overtime at the legal rate and also for exceeding these levels. Indonesian wet mills also demonstrated consistency in this regard with 96 percent compliance for both indicators.

### 6.3.3 Worker benefits

- Number of workers receiving legally mandated benefits
- Number of full-time workers receiving pension plans that exceed the national standard
- Number of workers receiving paid sick leave
- Number of workers receiving paid vacation
- Percentage of mills where hours worked by employees did not exceed legal requirements

**Legally mandated benefits:** The vast majority of mills participating in the program paid the legally mandated benefits to their workers, regardless of whether they were full-time, part-time or temporary. (See Table 29.) Dry mills at 96 percent compliance slightly outperformed wet mills (at 78%) on these particular indicators, especially for paying these benefits to temporary employees.

<b>Indicator</b>		<b>Wet</b>	<b>Dry</b>	<b>Both</b>	<b>All</b>
SR-HP1.6	If nationally legally mandated benefits are required for <b>full-time</b> workers, then these are paid by employer	94%	98%	100%	96%
SR-HP1.7	If nationally legally mandated benefits are required for <b>part-time</b> workers, then these are paid by employer	95%	100%	93%	95%
SR-HP1.8	If nationally legally mandated benefits are required for <b>seasonal/temporary</b> workers, then these are paid by employer	78%	96%	95%	83%

**Table 29: Percentage of mills providing legally-mandated benefits to workers**

These compliance rates resulted in 21,154 workers receiving the required benefits. (See Table 30.) The majority of these workers were temporary or seasonal employees. Participating mills in El Salvador and Panama achieved 100 percent compliance for full-time, part-time and temporary workers. Mills in Mexico, struggled the most to achieve compliance for paying these benefits to workers, with the lowest rate of compliance for full-time and temporary workers. .

<b>Type of Worker</b>	<b>Wet</b>	<b>Dry</b>	<b>Both</b>	<b>Total</b>
Full-Time	973	3077	1019	5069
Part-Time	317	534	332	1183
Temporary	6949	10,704	2249	19,902
Total	8239	14,315	3600	26,154

**Table 30: Number of mill workers receiving legally-mandated benefits in FY08**

When considering only wet mills, Bolivia, El Salvador, Kenya, Panama, Rwanda and Tanzania had the highest compliance rates for paying workers the required benefits. (See Table 31.) Colombia had the lowest level of compliance for providing these benefits to full-time workers at 33 percent, but only 3 mills reported even using full-time employees. Most other countries achieved compliance rates of 80 percent of higher for full-time workers. When looking at temporary workers, Mexican wet mills had the lowest levels of compliance, with only 11 percent (e.g. 2 of 18 mills) paying these benefits to their workers. All of the other countries were above 67 percent compliance for this particular indicator. Starbucks may wish to further explore the reason for low performance of wet mills in both Mexico and Colombia.

Country	Full-Time			Part-Time			Temporary		
	Wet	Dry	Both	Wet	Dry	Both	Wet	Dry	Both
Bolivia	-	-	100%	-	-	100%	-	-	-
Burundi	100%	67%	-	-	-	-	-	-	-
Colombia	33%	100%	-	-	100%	-	75%	100%	-
Costa Rica	100%	100%	100%	-	-	100%	67%	100%	95%
El Salvador	100%	100%	100%	100%	100%	100%	100%	100%	100%
Ethiopia	100%	100%	100%	-	-	-	100%	100%	100%
Guatemala	99%	100%	100%	96%	100%	100%	93%	100%	100%
Honduras	83%	100%	100%	100%	100%	100%	71%	83%	100%
Indonesia	-	96%	-	-	100%	-	96%	97%	-
Kenya	100%	100%	-	100%	-	-	100%	-	-
Mexico	60%	100%	100%	67%	100%	-	11%	67%	100%
Nicaragua	92%	100%	-	67%	-	-	68%	96%	-
Panama	100%	100%	-	100%	100%	-	-	100%	-
Papua New Guinea	100%	100%	100%	-	-	-	-	100%	-
Peru	90%	100%	100%	-	-	-	100%	100%	-
Rwanda	100%	100%	-	-	-	-	100%	100%	-
Tanzania	100%	100%	-	-	-	-	100%	100%	-
Zambia	-	-	100%	-	-	50%	-	-	50%

Table 31: Percentage of mills paying legally-mandated benefits to workers

For dry mills all but 2 countries (Indonesia and Burundi) achieved full compliance for paying the legally required benefits to full-time workers. All of the countries will mills employing part-time workers achieved 100 percent compliance for this indicator. Compliance for temporary workers was similarly high with all countries achieving at least 67 percent compliance and 10 countries with all participating mills in compliance.

Mills that did both dry and wet processing also had high compliance rates across all categories of workers. Of those countries having combined wet and dry milling operations, most achieved 100 percent compliance for each worker type although only half of the Zambian mills (n=2) provided these benefits to part-time and temporary employees.

**Pension:** While the previous indicators would have included pension plans where they were legally mandated, this indicator focuses on those mills providing pension plans that exceed these minimum legal requirements to full-time workers. As such the compliance rates are expectedly low, with dry mills achieving 35 percent compliance and wet mills at 22 percent. Mills that did both wet and dry processing, however, had much higher compliance rates averaging 52 percent. Bolivia achieved a 100 percent compliance rate for this indicator, but only had one mill ( doing both wet and dry processing) participating in the program for the given year. For wet mills compliance rates ranged from 100% compliance in Panama (n=1) to zero percent compliance in Indonesia (n=13) and Kenya (n=8). (See Table 32.) Nicaragua and Guatemala had the highest number of wet mills verified in FY08 and their compliance rates varied significantly at 2 and 35 percent, respectively. All participating dry mills in Papua New Guinea (n=4) and Kenya (n=1) achieved 100 percent compliance, whereas none in Panama (n=1) or Tanzania (n=4) did.

Indonesia had the highest number of dry mills reporting on this indicator and had a somewhat low level of compliance. Those mills doing both types of processing had a wide range of compliance – from 0 percent in Honduras and Zambia to 100 percent in Bolivia and Ethiopia.

Country	Wet	Dry	Both
Bolivia	-	-	100%
Burundi	20%	33%	-
Colombia	67%	60%	-
Costa Rica	50%	67%	52%
El Salvador	50%	33%	62%
Ethiopia	37%	36%	100%
Guatemala	35%	44%	33%
Honduras	11%	50%	0%
Indonesia	0%	23%	-
Kenya	0%	100%	-
Mexico	18%	60%	50%
Nicaragua	2%	17%	-
Panama	100%	0%	-
Papua New Guinea	40%	100%	50%
Peru	20%	55%	-
Rwanda	20%	75%	-
Tanzania	43%	0%	-
Zambia	-	-	0%

**Table 32: Percentage of mills providing pension plans exceeding legal requirements to full-time workers**

**Paid sick leave program:** The majority of mills paid sick leave to full-time workers, with average compliance rates of 85 percent for wet mills, 97 percent for dry, and 96 percent for mills doing both. These percentages dropped precipitously when extended to include all workers employed by the mills, with 47 percent compliance for wet mills, 50 percent for dry and 83 percent for mills doing both. Based on these compliance rates, one can conclude that 17,504 mill workers received paid sick leave benefits in FY08. However, there is a large discrepancy in the number of workers receiving sick leave benefits according to SR-HP3.5 which looks at only full-time workers and SR-HP3.6 which includes all workers. When only full-time workers were included in the analysis of both indicators, a much higher number of workers appear to be receiving paid sick leave based on compliance rates achieved for SR-HP3.5 than for SR-HP3.6. For instance 5373 full-time workers received paid sick leave according to SR-HP3.5, while only 2892 full-time workers received this benefit according to SR-HP3.6. The same trend occurs for wet mills as well. The reason for this is unclear, but may be due to a difference in the number of mills reporting on these indicators.

Analysis of the data by country shows a high level of compliance for providing paid sick leave to full-time workers in most countries, especially for dry mills where only 3 of the 16 countries reporting on this indicator had compliance rates below 100 percent, and the lowest rate was 90 percent in Nicaragua. Wet mills also had high compliance levels across all countries, but a lower number of countries (e.g. 7) achieved 100 percent compliance, and Honduras had the lowest

level at 62 percent, which is still quite high. Mills doing both wet and dry processing had the widest range of performance when looking at country level performance, with 6 countries achieving 100 percent compliance, including Costa Rica with 36 mills reporting. However, the sole mill doing both wet and dry processing in Honduras was not in compliance with this indicator.

When the threshold is raised to include all workers compliance rates dropped for most countries, as expected. However, El Salvador and Panama continued to achieve 100 percent compliance across all mill types. Burundi, Ethiopia and Kenya had no wet or dry mills providing paid sick leave to all of their workers.

**Annual leave (vacation):** Most mills provided annual leave benefits that met legal requirements, with 90 percent complying with this particular indicator. In FY08, 40,912 workers were employed by mills that had annual leave programs that complied with local laws. Dry mills and mills doing both wet and dry processing were 10 percent more likely to provide vacation to workers than wet mills. The country data shows compliance rates ranging from 100 percent for 5 countries to 53 percent for Tanzania. Of the 16 countries participating, 12 achieved 100 percent compliance for this indicator across all of their dry mills – a very high level of performance. Countries with mills doing both wet and dry processing also had high rates of compliance, although the range of scores varied the greatest within this sub-category: 6 countries achieved 100 percent compliance whereas Honduras' sole mill did not comply with this indicator.

**Hours worked per week:** Most mills ensured that their workers did not work more total hours in a day or week than is permitted under local laws (SR-HP3.3). For instance, 91 percent of all mills complied with this indicator and there was no significant difference in compliance rates between the 3 types of mills. Wet mills did have a slightly higher compliance rate than the others, but only by 3 to 4 percentage points. Country level results show that 6 of the 18 countries achieved 100 percent compliance across all mill types. However, in East Africa, mills in Tanzania and Burundi had compliance rates of 19 and 25 percent, respectively. In Tanzania this was mostly due to a very small percentage of wet mills in compliance with the legal requirements. Across the 18 countries there was no evident trend in one type of mill being more likely to comply with this indicator than another.

#### **6.3.4 Worker living conditions**

- Number of mills offering housing to a portion of their workers
- Number of workers with access to potable water

**Housing:** The majority of mills participating in the program offered housing to some of their workers. Where this was the case, the housing was deemed habitable for the overwhelming majority. Mills that did both wet and dry processing had 100 percent compliance with this indicator, while 98 percent of dry mills also complied. Wet mills had the lowest compliance rates of 93 percent. Looking at compliance rates by country shows that 11 countries had all of their mills complying with this indicator. Ethiopian wet mills had the lowest performance, with 71 percent offering habitable dwellings to the workers living on site – a figure that is still quite high.

In the future Starbucks might consider collecting information on the number of workers living on site and the percentage of the workforce that this figure represents. This will enable reporting on the number of workers benefitting from this provision, which may be useful for communications purposes. Further definition of “habitable” (e.g. cement vs. dirt floors) may also be needed for this indicator if public communication of the results were to be made.

**Potable Water:** Mills doing both wet and dry processing proved the most likely to provide potable water to workers, with these mills achieving 98 percent compliance. Dry mills were the second most likely at 96 percent, followed by wet mills at 84 percent. The correlation between wet milling and lack of potable water for 16 percent of mills may be due to the remote locations of the wet mills, but Starbucks may wish to undertake further investigation of this issue to ensure that the wet milling process is not responsible for the lack of potable water at these sites. These compliance rates are all lower than the compliance rates achieved for the housing indicator which is somewhat surprising, although the number of farms reporting is higher across all 3 categories of mills. It is interesting to note that for all 3 types of mills there were some for which this indicator was not- applicable. This is also surprising, as one would think that this is one of the few universally applicable indicators within the guidelines.

Most countries demonstrated high performance on this indicator for dry mills and those doing both types of processing were analyzed. An exception, however, occurs in the case of Honduras where the one mill doing both wet and dry processing failed to provide workers with potable water. Honduras also had the lowest level of compliance among all the countries with wet mills by a significant margin (26 percent below Nicaragua, the next closest country). Further investigation into wet milling practices in Honduras may be warranted to try and improve their performance and determine whether there is a correlation between the wet milling process and the lack of potable water available to the workers.

### **6.3.5 Access to education**

- Percentage of mills located in areas with insufficient access to education providing primary or secondary education to children of workers living on site
- Percentage of mills located in areas with convenient access to education supporting schools through in-kind or financial support
- Percentage of mills providing direct incentives for education

**Mills in locations with insufficient access to education:** For 38 percent of mills there was insufficient access to primary schools for children living on site. This figure drops to 32 percent when secondary schools are considered. However, these figures do not necessarily match the number of mills reporting on indicator SR-WC2.4 which asks whether the mill is located in an area that has *convenient* access to education. This is an important data point and efforts should be taken to reconcile the number of mills reporting on these indicators to ensure accuracy.

The actual number of children living on site of school age, however is not collected during the verification process and thus is unknown. This is a data point that might be considered for inclusion in future audits as it could greatly increase the effectiveness of public communications and would also enable the significance of this indicator to be assessed (e.g. How many children were able to attend school in a given year?)

**Access to supplementary education where no local school is available:** Where access to public education was insufficient for the children of workers living on-site, all of the dry mills and those mills doing both wet and dry processing provided supplementary schooling to these children. Of the wet mills where this was the case, 98 percent provided supplementary schooling for children of primary school age, but this figure dropped to 85 percent for secondary schooling. Guatemala and Mexico were the only countries failing to achieve 100 percent compliance for this indicator for children of primary school age. Neither of the 2 Ethiopian wet mills located in areas without secondary schools provided supplementary education for children living on the site. This was clearly the exception among the countries with wet mills, as all of the others achieved compliance rates of over 78 percent.

**In-kind or financial support to local schools:** Over half (e.g. 57 percent) of all the mills participating in the program in FY08 provided some support to local schools. Mills that did both dry and wet processing were the most likely to support these institutions, with an 84 percent compliance rate. Dry mills were the least likely to do so, but 37 percent of them did provide support to local schools. Wet mills were 23 percent more likely than dry mills to support local schools. These trends are also reflected in the country level analysis, although in Kenya, Mexico, Peru and Tanzania dry mills were more likely than wet mills to support local schools through financial contributions. Compliance rates ranged considerably for this indicator from 13 percent in Burundi to 100 percent in Bolivia and Zambia. The high compliance rates for Bolivia and Zambia are most likely due to each country having only a single mill participating in the program in FY08.

**Direct incentives for education:** Across all of the participating mills, 53 percent provided direct incentives for education via scholarships, materials, books, transportation or food. Once again mills doing both wet and dry processing achieved the highest compliance rate (74 percent) followed by wet mills (57 percent) and dry mills (35 percent). These rates track quite closely to those reported for in-kind or financial support and this may be due to a certain degree of overlap in what these indicators are asking. The only difference is that this particular indicator should apply to all mills, although according to the reporting levels this was not the case across any of the mill categories. Thus, there may be some confusion among verifiers as to when these indicators apply to a given mill and further guidance and training may be required. The VRS could be used to rectify this by requiring verifiers to report against this particular indicator for all mills.

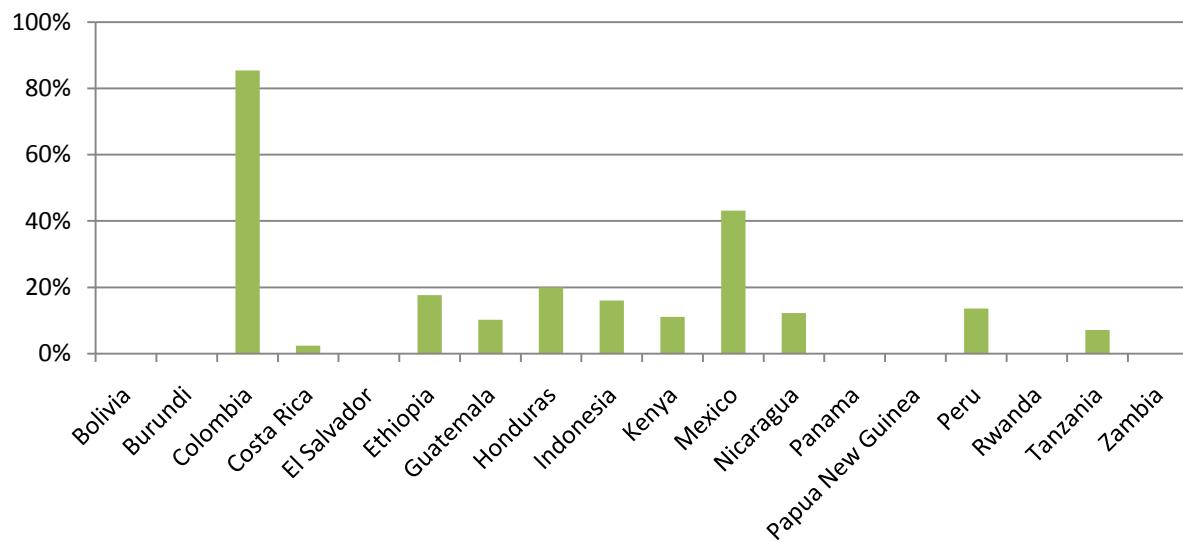
Compliance rates varied greatly across the 18 participating countries. Mills in Zambia and Bolivia achieved 100 percent compliance for this indicator, and Papua New Guinea, Peru and Kenya each had compliance rates above 75 percent. None of the mills in Burundi provided direct incentives to schools, and mills in Indonesia and Rwanda also had low levels of compliance (e.g. less than 20 percent).

### 6.3.6 Access to medical care

- Percentage of mills with convenient access to public medical care
- Percentage of mills supporting local medical facilities through in-kind or financial support
- Percentage of mills offsetting the cost of health services for workers

**Access to medical care:** Most of the mills verified were located in areas with convenient access to medical care. Only 155 mills, or 16 percent, were located in areas that lacked convenient

access to medical care (based on the mills reporting that indicator SR-WC3.3 was not applicable). The vast majority (e.g. 88 percent) of these were wet mills. Across the countries participating in the program, Colombia and Mexico had the highest percentage of mills located in areas lacking convenient access to medical care. (See Figure 33.) Conversely, all of the mills in Bolivia, Burundi, El Salvador, Panama, Papua New Guinea, Rwanda and Zambia were in locations where medical care was available.



**Figure 33: Percentage of mills lacking convenient access to medical care by country**

**In-kind or financial support to local medical facilities:** Of those mills with access to medical care, 36 percent provided in-kind or financial support to these facilities. Mills that did both wet and dry processing had a significantly higher compliance rate (e.g. 62 percent) than those only doing wet or dry processing (36 and 30 percent, respectively).

Bolivia, Burundi, Panama, Rwanda and Zambia all achieved 100 percent compliance with this indicator across all mill types. At the other end of the spectrum, Colombia had the lowest compliance rate of only 13 percent. The only other country performing below 50 percent was Mexico (at 25 percent) and this was due to a very low rate of compliance among wet mills in that country.

**Offsetting costs of health services:** Verifiers indicate whether mills are offsetting the costs of health care for full-time workers as well as for all types of workers. As might be expected, mills were much more likely to do so for full-time workers than for all workers. The vast majority of mills (e.g. 92 percent) provided these benefits to full-time workers, with little variation by mill type. These rates drop significantly for dry and wet mills when all workers are considered. However, wet/dry mills continue to perform well with a compliance rate of 92 percent, a rate only 6 percentage points lower than that achieved for full-time workers. It is interesting to note that 81 mills reported not applicable for SR-WC3.6. It is not clear why verifiers would mark this indicator NA, unless they thought it did not apply in countries where government covers the costs of health care. Starbucks may wish to discuss this issue with verifiers during subsequent training sessions.

Five countries achieved 100 percent compliance for offsetting the costs of health services for full-time workers and all countries had compliance rates above 78 percent. When expanded to include part-time and temporary workers the range increased greatly with Tanzania at 7 percent and Bolivia and Panama at 100 percent. Both Bolivia and Panama only had a single mill participating in the program. Guatemala with 179 wet mills, 9 dry mills and 6 mills doing both had a high average compliance rate of 89 percent when all workers are considered, which is quite significant. Peru also had a high level of participation with an average of 97 percent compliance for all workers.

### **6.3.7 Coffee Processing - Social Responsibility Conclusions and Recommendations**

Mills achieved compliance rates of over 90 percent for 30 of the 71 indicators used to verify social responsibility practices. Only 9 had compliance rates below 50 percent. Within the Hiring Practices section, mills had low performance levels for 6 indicators, most of which were related to the existence of workers associations and collective bargaining agreements. Other indicators with low performance levels were those asking if mills paid overtime and pension benefits that exceeded the legal requirements. Within the Working Conditions section mills had average compliance rates below 50 percent for only 3 indicators. Two of these asked for written policies and records for training and safety procedures. The other assessed if mills supported local medical facilities. Thus, most mills complied with the majority social responsibility indicators. The exceptions to this occurred for indicators requiring additional paperwork or financial outlays.

Wet/dry mills consistently achieved the highest compliance rates across the range of social responsibility indicators used to evaluate mills participating in the program, sometimes significantly outperforming those that only did only wet or dry processing. This may be due to the size of these operations and the financial resources available to them. Another factor might be the smaller number of wet/dry mills included in the population size, which was significantly lower than that included in the wet or dry categories. Wet mills represented the largest proportion of mills in the program and had lower compliance rates across most of the indicators, and most significantly among the zero tolerance indicators. The wet mills also had the lowest performance on the potable water indicator, which may warrant further investigation to determine whether this is due to the quality of water being discharged from the mill. The results of this analysis show a clear need for additional outreach and training on social responsibility among participating wet mills.

The access to medical care and education sections might warrant the consideration of additional indicators in future versions of the standards. For instance, it would be good to include information on the distance to clinics and schools. Another consideration would be to include some information on the level of investments made into these facilities, as currently a mill investing \$1.00 in a clinic would receive the same score as one investing 1 percent of its profits. Related to education, it would also be good to collect information on the number of children living in housing provided by the mill. Furthermore, on the housing indicator it would be nice to know the percentage of employees provided housing.

Reporting consistency continued to be an issue for mills in the social responsibility section of the scorecard. The VRS can play a significant role in policing reporting to ensure for consistency in the number of mills reporting on indicators that are closely related. The indicators might also be

further reviewed to identify those for which all mills should be reporting (e.g. access to potable water) and this guidance should be provided as part of a revised verifier training curriculum.

Only a portion of the social responsibility indicators included in the C.A.F.E. Practices guidelines were analyzed in the above section, although compliance rates for all of them are available in Appendix F.

## **6.4 Coffee Processing – Environmental Responsibility**

The Environmental Responsibility indicators for coffee processing included in the C.A.F.E. Practices scorecard focus on water conservation, waste management, and energy conservation. For each of these focal areas we identified and analyzed key indicators for use in monitoring mill performance over time. The C.A.F.E. Practices program distinguishes between wet processing that takes place on small farms and at a stand-alone mill.<sup>31</sup> Verifiers use only a subset of indicators to evaluate the environmental performance of smallholder wet milling, which present some challenges when reporting on the environmental performance of wet mills as a whole.

Due to the sampling that occurs as part of the group certification process for small farms, the smallholder wet milling results are extrapolated to the population of small farms in a given application based on data provided at the application level regarding the number of smallholders that processed coffee.<sup>32</sup> In some cases the number of small farms with on-site wet milling is not available which resulted in the exclusion of 76 applications – and 2 countries (El Salvador and Honduras) from the analysis. In addition, not all of the applications that included smallholders who conducted some wet processing on their farms have reports for the coffee processing indicators as some were verified off harvest when no coffee was processed. Thus, while there are a reported 53,400 smallholders who conduct wet processing on the farm, verification reports represent only 34,075 small farms, or 64 percent.

In reporting the results, we do not distinguish between mills only doing wet or dry processing and those doing both, as the indicators are unique for each type of mill and counting these mills in both does not distort the results as it would have done in the social responsibility section.

### **6.4.1 Wet Coffee Processing**

Each of the 18 countries represented in the program in FY08 applied wet milling practices to convert the coffee cherry into parchment coffee. In half of these countries (Colombia, Costa Rica, Guatemala, Indonesia, Mexico, Nicaragua, Peru, El Salvador and Honduras) a portion of the wet processing took place on small farms. However, smallholder wet milling performance was not verified in Costa Rica, El Salvador or Honduras as the verifications did not occur during the harvest season. Colombia had the highest number of smallholders conducting some wet processing on their farms, a figure that dwarfed that of any other country. (See Table 33.) Guatemala and Nicaragua had the highest number of stand-alone mills verified in FY08.

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<sup>31</sup> Stand-alone mills are those assigned an identification code beginning with an “M”. Small farms conducting wet processing are identified according to their farm identification number (beginning with an “F”).

<sup>32</sup> The extrapolation methodology is available in Appendix E.

Country	Wet		Total
	Small	Stand-Alone	
Bolivia	-	1	1
Burundi	-	5	5
Colombia	18,760	30	18,790
Costa Rica	NA*	39	39
El Salvador	NA*	23	23
Ethiopia	-	22	22
Guatemala	2050	195	2245
Honduras	NA*	44	44
Indonesia	2501	55	2556
Kenya	-	8	8
Mexico	4711	53	4764
Nicaragua	1942	187	2129
Panama	-	1	1
Papua New Guinea	-	11	11
Peru	4111	46	4157
Rwanda	-	10	10
Tanzania	-	52	52
Zambia	-	2	2
<b>Total</b>	<b>34,075</b>	<b>784</b>	<b>34,859</b>

Table 33: Number of wet mill facilities by country and type

NA = not-available

#### 6.4.1.1 Water Conservation

- Percentage of wet mills that have reduced their water use
- Percentage of mills recycling water
- Percentage of mills achieving a coffee cherry/water ratio of less than 1:1
- Percentage of mills conducting water testing
- Percentage of mills producing no negative impact results from wastewater management
- Percentage of mills that have evidence of no contamination of water bodies from processing

**Recording and reducing water use:** This indicator applied to all facilities conducting wet processing, including small farms. According to the verification report data, a small proportion of wet mills recorded and tracked the volume of water used to process coffee. This is one indicator where there was a significant difference in compliance rate according to the type of facility doing the wet processing: 52 percent of stand-alone mills complied with this practice, whereas only 11 percent of the small farms that processed coffee monitored water use. This indicator is only applicable to mills processing at least 7500 lbs of green coffee. As such, it did not apply to over 36,000 small farms that did wet processing on the site and 16 stand-alone wet mills.

The ability to comply with the indicator asking whether the facility decreased its water use over time is dependent on whether or not it tracked water use. However, a larger number of smallholders received a compliance rating for decreasing their water use than those who tracked and monitored this indicator. This calls into question the 46 percent of small farms reported to have reduced their water use over time. The VRS could correct this particular reporting error by

only allowing mills that reported compliance on CP-WC1.1 to report a comply rating for CP-WC1.4.

Small farms in El Salvador achieved 100 percent compliance with the tracking and reporting indicator, but most other countries had rates vastly lower with Ethiopia and Rwanda having no smallholder complying with this indicator. Compliance rates for stand-alone mills also varied greatly with Bolivia (n=1) achieving 100 percent compliance and Burundi (n=5) and Panama (n=1) having no mills achieving compliance. Guatemala (n=192), Costa Rica (n=38), and El Salvador (n=23) had compliance rates exceeding 80 percent.

Compliance rates for reductions in water use vary greatly across the countries for both small farm and stand-alone wet mills. The one stand-alone mill in Bolivia complied with this indicator, giving the country a 100 percent compliance rate, while in Indonesia all 55 mills were not in compliance. Guatemala had 143 mills reporting on this indicator and 71 percent of them were decreasing their water use. Nicaragua, on the other hand, had 162 mills reporting and only 34 (e.g. 21%) reduced their water use. Countries where smallholders did some wet processing also had a range of compliance levels. Indonesia had no farms demonstrating a reduction in water used for wet processing, while in Colombia 58 percent of farms reduced their water use.

**Water recycling:** This indicator applies only to stand-alone wet mills, of which over half (54%) were implementing some water recycling to transport coffee before and during the pulping process. All of the mills in Bolivia, El Salvador, Kenya, Rwanda and Zambia practiced water recycling, but none in Burundi, Indonesia or Panama were doing so. Countries with the highest number of mills reporting on this indicator had mixed results. For instance, Guatemala, with 187 mills had 80 percent of the mills recycling water, whereas in Nicaragua, only 43 percent of the 166 mills were doing so.

**Water testing:** When wastewater is discharged from a wet processing facility, 21 percent of small farms and 37 percent of stand-alone mills conducted tests on a monthly basis to monitor key water quality indicators. Small farm compliance rates were less than 50 percent across most countries for this indicator. Colombia at 29 percent had the highest percentage of smallholders monitoring water quality, while Indonesia had no small farms conducting water quality tests. Compliance rates for stand-alone wet mills showed a much broader range, with all participating mills in Bolivia, Colombia, El Salvador and Ethiopia conducting water testing. However, no mills in Burundi, Rwanda or Tanzania were doing so. Guatemala had the highest number of mills reporting on this indicator (74) and only 26 of these were testing water quality of discharge.

**No evidence of negative impacts:** This indicator (CP-WC2.4) was applicable only to stand-alone wet mills, of which 80 percent were found to be compliant. Wet mills in seven countries (with the number of mills reporting ranging from 1 to 39) achieved 100 percent compliance with this indicator, but in Burundi none of the 5 stand-alone mills were able to meet this standard. Mexican wet mills also struggled with this indicator as only 40 percent were able to demonstrate no evidence of negative impacts on neighboring water bodies and streams. Guatemala and Nicaragua had the most mills reporting and achieved 80 and 78 percent compliance rates, respectively.

#### **6.4.1.2 Waste Management**

- Percentage of mills employing worm composting
- Percentage of mills re-using organic byproducts as soil amendment
- Percentage of mills effectively managing wastes to protect the environment

**Composting and reuse of organic matter:** The majority of small farm and stand-alone wet mills composted or used worms to decompose organic wastes produced during the wet milling process. Among the small farms carrying out wet processing on the site, 68 percent were composting organic matter, and this figure jumped to 88 percent for stand-alone mills. In 7 countries (Bolivia, Burundi, Costa Rica, Indonesia, Kenya, Panama and Rwanda) all of the participating stand-alone wet mills used composting or worms to manage processing wastes. Some of these countries only had a small number of mills reporting, although in Costa Rica all 39 mills were in compliance. All countries had at least half of the stand-alone mills adopting this best practice. Zambia (n=2) and Mexico (n=52) had the lowest percentage of mills applying composting techniques to process wastes, with compliance rates of 50 and 60 percent, respectively. All of the small farms in Indonesia that processed coffee on the site used these practices to effectively manage organic wastes. And all countries where small farms did some wet processing had more than half of the farms applying these techniques. Colombia at 56 percent had the lowest adoption rate.

Both types of wet mills also tended to apply these byproducts as soil amendments on their farm or on local farms located nearby. Once again stand-alone mills were more likely to comply with this practice as demonstrated by the 95 percent compliance rate compared to 91 percent for small farm wet mills. Stand-alone wet mills that used sedimentation pools were also likely to recover the solids and apply them to coffee farms, as demonstrated by a 77 percent compliance rate with this indicator.

Across all countries stand-alone mills were extremely likely to use wet processing byproducts as soil amendments on farms. Scores ranged from a low of 80 percent in Papua New Guinea to 100 percent compliance across 9 of the 18 participating countries. Countries in which small farms did some wet processing were also very likely to apply waste products as soil amendment on their farms. In Indonesia all of the farms adopted this practice, and Guatemala, Peru and Nicaragua were closely behind with compliance rates of over 97 percent. Colombia had the lowest adoption level for this particular indicator, but it was still quite high at over 85 percent.

#### **6.4.1.3 Energy Conservation**

- Percentage of mills that have reduced energy use
- Percentage of mills with commitments to production and/or purchase of renewable energy
- Percentage of mills using wood to dry coffee
- Percentage of mills using responsible wood sources to dry coffee

**Recording and reducing energy use:** These 2 indicators (CP-EC1.1 and CP-EC1.5) were applicable only to stand-alone mills. Over half of participating wet mills (59%) reported their use of energy for processing, and 34 percent demonstrated a decrease in the amount used per pound of green coffee over time. All of the participating wet mills in Bolivia, Burundi, Panama and Zambia recorded energy use, but in each case the population of mills was quite low, ranging from just 1 to 5. Countries with higher populations of wet mills like Guatemala (n=189) and

Nicaragua (n=183) demonstrated a wide range in compliance levels. For instance, Guatemala had 86 percent of mills reporting energy use, but only 36 percent of those in Nicaragua were doing so. Indonesia, with a population of 54 wet mills reporting on this indicator, had the lowest percentage of mills tracking energy use at just 9 percent. Most countries, however, had compliance rates of over 50 percent. The same high degree of variation occurred for decreasing energy use over time. Countries with very low numbers of mills reporting on the indicator made up both extremes of the spectrum, with 3 countries at 100 percent and 3 with no mills complying. The only exception to this was Indonesia where all 49 mills reporting on this indicator had not decreased their energy use over time. Colombia with a population of 24 mills reporting on this indicator had a compliance rate of 92 percent.

**Renewable energy:** This indicator (CP-EC1.6) was only used to assess stand-alone mills, and on average 53 percent of mills demonstrated a commitment to the production or purchase of renewable energy sources. Compliance rates ranged from 100 percent for Bolivia, Panama and Peru to no mills in compliance in Burundi, Indonesia, and Kenya. To enable improved reporting, Starbucks might consider tracking the types of renewable energy sources used by these mills.

**Wood fuel sourcing:** Of those stand-alone wet mills that used wood to dry coffee 99.5 percent ensured that it came from prunings of shade trees, responsibly managed forests or other minimal impact harvesting practices. Mills in 9 countries reported using wood to dry coffee, and 8 of these had all mills in compliance with this practice. Costa Rica was the only country with less than full compliance, but in this case there was only one mill using other sources of wood for fuel. Given the high rates of compliance, Starbucks could consider making this indicator a zero tolerance indicator as the use of wood from unmanaged natural forests can be a driver of deforestation in biologically-rich coffee production landscapes.

#### 6.4.2 Dry Coffee Processing

Dry coffee processing takes place in stand-alone mills that may be associated with a large farm, an export company or a cooperative. In FY08, 260 dry mills underwent verification, 69 of which did wet processing as well. Indonesia had the most dry mills participating in the program. (See Table 34.) In other countries with high rates of participation in C.A.F.E. Practices as demonstrated by the number of applications received the dry processing appeared to be much more consolidated at a small number of mills.

Key environmental concerns related to dry milling include waste management, especially as concerns the parchment hulls that are generated during the process, and the use and source of energy necessary to carry out the process.

Country	Dry
Bolivia	1
Burundi	3
Colombia	11
Costa Rica	38
El Salvador	16
Ethiopia	15
Guatemala	16
Honduras	7
Indonesia	89
Kenya	1
Mexico	7
Nicaragua	24
Panama	1
Papua New Guinea	8
Peru	13
Rwanda	4
Tanzania	4
Zambia	2
<b>Total</b>	<b>260</b>

Table 34: Participating dry mills by country

#### 6.4.2.1 Waste Management

- Percentage of mills reusing parchment hulls

**Reuse of parchment hulls:** In FY08, 95 percent of dry mills used parchment hulls to fuel dryers, generate energy or provide other benefits. All of the dry mills in 14 of the 18 countries with dry mills complied with this indicator. Tanzania and Papua New Guinea had the lowest rate of compliance, but still had three-fourths of the mills reusing parchment hulls for energy or other benefits. Indonesia and Nicaragua also had high levels of compliance at 88 and 96 percent, respectively.

#### 6.4.2.2 Energy Conservation

- Percentage of mills that have reduced energy use
- Percentage of mills with commitments to production and/or purchase of renewable energy
- Percentage of mills using wood to dry coffee
- Percentage of mills using responsible wood sources to dry coffee

**Recording and reducing energy use:** The overwhelming majority of dry mills (92 percent) recorded the amount of energy used on the mill and over half (53%) showed a decline in the amount used over time. In 8 of the 18 countries participating in C.A.F.E. Practices all of the dry mills recorded energy use data, and all countries had at least half of the mills tracking energy use.

These compliance rates drop significantly for most countries, however, when asked if energy use has decreased over time. Only Bolivia and Kenya demonstrated total compliance with this indicator and in each of these countries only one mill participated in the program. Zambia and

Burundi had no mills showing a decline in energy use in dry milling processes over time, but each country only had a single mill reporting on this indicator. Countries with higher reporting rates demonstrated mixed results. For instance, Indonesia had 68 mills reporting on this indicator, and a compliance rate of 47 percent, while Costa Rica had 24 mills reporting and a compliance rate of 75 percent. Guatemala (n=16) also had a high percentage (e.g. 81%) of mills demonstrating a reduction in energy use.

**Renewable energy:** In FY08, 62 percent of dry mills demonstrated a commitment to renewable energy. At the country level compliance rates ranged from 100 percent for Panama to no mills complying in Bolivia, Kenya or Zambia. In each of these cases a very low number of mills reported on this indicator. Costa Rica, with 26 mills reporting, achieved a very high compliance rate of 92 percent. Indonesia, on the other hand had 71 mills reporting and only 30 percent demonstrating a commitment to renewable energy.

**Sustainable wood sourcing:** Of the dry mills participating in C.A.F.E. Practices, 98 percent ensured that wood used for drying coffee was harvested according to sustainable practices. This indicator was only applicable in 7 of the 18 countries participating in the program and all but Ethiopia achieved 100 percent compliance. Ethiopia had no mills comply with this indicator, although only 1 of the 15 dry mills in this country appeared to use wood as a fuel source. Due to the high compliance rates across the board and the significant risk associated with deforestation in most of the coffee producing countries, Starbucks might consider weighting this indicator more heavily and making it a zero tolerance indicator within the program.

#### **6.4.3 Coffee Processing – Environmental Responsibility Conclusions and Recommendations**

Dry mills tended to outperform wet mills on environmental responsibility, although they are assessed against fewer indicators. This was especially the case for the energy efficiency section of the scorecard where dry mills had higher compliance rates than wet mills for all but one indicator. That one indicator was the one asking about the source of wood used. In this case the dry mills were only 1 percentage point less likely to use prunings from shade trees or responsibly managed forests than wet mills. This is significant given the much higher rate of wood usage for dry mills. A few countries in East Africa appeared to face some challenges in complying with the dry milling indicators which may provide some direction for outreach and technical assistance for that region.

All wet mills, regardless of whether they were small farms or stand-alone operations performed the best within the waste management portion of the scorecard. Most mills were using byproducts as soil amendments or for other beneficial reuse. There was a higher degree of variation within the water use and water discharge sections of the scorecard. Only a very low percentage of small farms processing coffee were able to comply with the water indicators as most did not have the required monitoring and tracking systems. Indonesian and Mexican wet mills tended to have the lowest compliance rates across the various indicators and may warrant some further training and outreach on water management. Among the stand-alone mills many recorded water and energy use although few demonstrated a decline in these use rates over time.

Both wet and dry mills appeared to use sustainable sources of wood as a fuel source, which has clear benefits for conservation of nearby forests. Due to the potential issues around the use of wood from primary forests or other important habitats for energy in wet and dry mills and the

already high levels of compliance, Starbucks might consider adding this indicator to the list of zero tolerance indicators. This would provide additional assurance against deforestation and would not result in a high degree of non-compliance as the vast majority of wet and dry mills (e.g. all but one mill in both cases) are in compliance with this practice.

## 7. Conclusions & Recommendations

This report represents the first attempt at undertaking a comprehensive analysis of the C.A.F.E. Practices program to determine farm, mill and PSO level performance. The analysis shows a high level of performance among the various actors within the Starbucks supply chain.

Highlights include:

- Small farms of less than 12 hectares make up the vast majority (e.g. 99 percent) of the nearly 141,000 farms participating in the program.
- The geographic reach of the program is vast for the three years analyzed included coffee producers in 20 countries across four continents. These countries significantly overlap with 8 of the world's most biologically rich but most threatened regions.
- Coffee suppliers achieved high levels of performance across the majority of the social and environmental indicators selected to assess performance among mills and farms.
- Starbucks buys significant volumes from small farms –this amounted to at least half of the company's coffee purchases in FY08.
- Coffee farms are making valuable contributions to the conservation of habitat in these globally important areas for conservation. Participating farms have designated 102,281 hectares as conservation areas and 99 percent have not converted any natural forest areas to coffee production during the since 2004.
- Coffee production is contributing to social and economic development in these regions. Participating farms employed 1.1 million workers and the majority of large and medium sized farms made efforts to extend health care and education benefits to workers and their families.
- Although there were some instances of non-compliance among the zero tolerance indicators, this should be seen as evidence that the program is effective in identifying coffee producers that do not comply with minimum best practices, and thus enables Starbucks to send clear messages to these entities by not approving their participation in the program.

The analysis also identified some areas for potential improvement of the C.A.F.E. Practices program as it moves forward.

- Currently there are no environmental indicators that rise to the zero tolerance level, which weights the program more strongly in the social direction. Analysis of the environmental indicator on no clearing of natural habitat shows that raising this indicator to the zero

tolerance level would not result in significant changes in the number of applications achieving an approved status. Another environmental processing indicator that might be considered for zero tolerance is the practice of ensuring wood used for energy for coffee processing is sourced from pruned shade trees or other sustainably managed forests.

- There are some indicators that recognize legal compliance that are not considered minimum requirements for achieving an approved status. While the C.A.F.E. Practices program was designed as a continuous improvement program that offers incentives to farmers to adopt more practices over time, the program should also provide the necessary assurance that farms and mills are in compliance with local legislation. Given the high level of investment required to manage the program, Starbucks should consider expanding the minimum requirements to secure assurance that suppliers are in legal compliance. Starbucks should consider undertaking a review of the guidelines to identify those practices that refer to legal minimums and making these minimum requirements.
- Throughout the program there was some inconsistency in the number of farms or mills reporting on any given indicator. While this is due in part to the not applicable option for any indicator which must be explained by the verifier, it has resulted in some inconsistencies across related indicators. The VRS can play a key role in addressing this issue by requiring consistency in reporting across related indicators for individual farms or mills. Thus, if the verifier records that the farm employs part-time workers, then all of the part-time worker indicators would require a compliant or non-compliant rating and the verifier would not be permitted to enter not applicable.
- In some cases some key data points were not available to calculate the number of individuals affected by the indicator. For instance, lack of data on the number of workers that live on a farm prohibits the calculation of the number benefitting from the provision of habitable dwellings. The same is true for the number of children benefitting from educational services provided by the farm or mill. Finally, Starbucks may wish to include information on the percentage of workers that are women. On the environmental side the greatest gap was in the total area of watercourse buffer zones on the farm, since the indicators only look at width and percentage of the watercourse with a buffer.
- The assessment of small farms against only a portion of the total indicators in the Generic Evaluation Guidelines creates some challenges, especially for the access to medical care section of the scorecard. This is one instance where there is no indicator to assess small farms on this criteria. The education section also has challenges, although in that case an additional indicator was added to the smallholder scorecard that is not used to assess medium or large farms. Collecting information on the distance to the nearest primary school and medical clinic might serve as an effective way to fill these gaps.

Finally, we would recommend that Starbucks take the following steps to integrate this type of analysis into management of the program on an annual basis. The following actions would serve to facilitate and improve the data management and analysis procedures.

- This type of analysis should be incorporated into annual reviews of the program and the integration of the extrapolation methodology and compliance rate calculations should be incorporated within the Verifier Reporting System (VRS) to facilitate the process.
- The sheer number of indicators included in the program and the volume of data made it necessary to focus on a subset of key indicators within this first report. A core set of performance indicators should be identified that can be analyzed on an annual basis to take stock of environmental and social performance within the Starbucks coffee supply chain. The number included in this report is probably still too large even though it represents only a fraction of the total number of indicators included in the C.A.F.E. Practices scorecard.
- Due to the amount of time necessary to manually extrapolate compliance rates for small and medium farms, some priorities were set among the indicators to be included in that section of the analysis. In the future, as this process becomes automated and integrated within the VRS, these gaps will be filled.
- As the extrapolation and reporting of compliance rates becomes more automated, Starbucks may wish to explore the potential to report results on a country by country basis and use these results to inform supplier and verifier training sessions held in selected countries.

## 8. References

ISEAL Alliance. 2009. "Common Requirements for the Certification of Producer Groups." Available at <http://www.isealalliance.org/index.cfm?fuseaction=Page.ViewPage&PageID=499> (August 31, 2009).

Mittermeier, Russell A., Patricio Robles Gil, Michael Hoffman, John Pilgrim, Thomas Brooks, Cristina Goettsch Mittermeier, John Lamoreux, and Gustavo A.B. da Fonseca. Preface by Peter A. Seligmann. 2007. *Hotspots Revisited*. CEMEX.

Starbucks Coffee Company. 2009. "Starbucks™ Shared Planet™ Global Responsibility Report 2009." Available at <http://assets.starbucks.com/assets/ssp-g-p-full-report.pdf>.

Starbucks Coffee Company and Scientific Certification Systems. 2008. "Verifier and Inspector Operations Manual 3.1."

The World Bank. 2009. "The World Bank List of Economies (April 2009)." Available at: <http://web.worldbank.org/WBSITE/EXTERNAL/DATASTATISTICS/0,,contentMDK:20420458~menuPK:64133156~pagePK:64133150~piPK:64133175~theSitePK:239419,00.html>.

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## Appendix A: Farm Compliance Rates for C.A.F.E. Practices Indicators

Indicator		Compliance	Farm Size			All
			Small	Medium	Large	
SR-HP1.1	All full-time workers are paid the nationally or regionally established minimum wage	C	4436	613	374	5422
		NC	1137	31	10	1178
		Total (C+NC)	5573	644	384	6601
		% Compliance	79.59%	95.19%	97.40%	82.15%
SR-HP1.2	All part-time workers are paid the nationally or regionally established minimum wage	C	4271	183	118	4572
		NC	18	1	3	22
		Total (C+NC)	4289	184	121	4594
		% Compliance	99.58%	99.46%	97.52%	99.52%
SR-HP1.3	All temporary/seasonal workers are paid the nationally or regionally established minimum wage	C	88117	944	384	89445
		NC	4204	22	4	4230
		Total (C+NC)	92321	966	388	93675
		% Compliance	95.45%	97.72%	98.97%	95.48%
SR-HP1.9	Overtime pay meets national requirements	C	21246	218	174	21637
		NC	1861	46	39	1946
		Total (C+NC)	23107	264	213	23584
		% Compliance	91.95%	82.47%	81.69%	91.75%
SR-HP1.10	Overtime pay exceeds national requirements	C	13437	122	69	13628
		NC	12760	115	141	13017
		Total (C+NC)	26197	238	210	26645
		% Compliance	51.29%	51.46%	32.86%	51.15%
SR-HP1.11	All full-time workers are paid more than the nationally or regionally established minimum wage	C	2664	488	282	3435
		NC	2861	153	100	3114
		Total (C+NC)	5525	641	382	6549
		% Compliance	48.22%	76.15%	73.82%	52.45%
SR-HP1.12	All part-time workers are paid more than the nationally or regionally established minimum wage	C	4033	132	92	4257
		NC	344	52	29	424
		Total (C+NC)	4377	184	121	4681
		% Compliance	92.15%	71.87%	76.03%	90.93%
SR-HP1.13	All temporary/seasonal workers are paid more than the nationally or regionally established minimum wage	C	67430	736	286	68453
		NC	25026	229	101	25356
		Total (C+NC)	92456	965	387	93808
		% Compliance	72.93%	76.31%	73.90%	72.97%
SR-HP1.14	Full-time workers are paid at least a living wage	C	4889	557	326	5772
		NC	3969	84	54	4107
		Total (C+NC)	8859	641	380	9879
		% Compliance	55.19%	86.95%	85.79%	58.43%

Indicator	Compliance	Farm Size			All	
		Small	Medium	Large		
SR-HP1.20	Provident/pension plan that exceeds legal requirements is in place for full-time employees	C	NA	126	99	225
		NC	NA	486	284	770
	Total (C+NC)		NA	612	383	995
	% Compliance	NA	20.53%	25.85%	22.57%	
SR-HP3.5	Employer has a paid sick leave program for full-time employees	C	NA	518	338	856
		NC	NA	123	46	169
	Total (C+NC)		NA	641	384	1025
	% Compliance	NA	80.75%	88.02%	83.47%	
SR-HP3.6	Employer has a paid sick leave program for all workers	C	NA	436	225	661
		NC	NA	487	172	659
	Total (C+NC)		NA	923	397	1320
	% Compliance	NA	47.22%	56.68%	50.06%	
SR-HP3.8	Employer has an annual leave (vacation) program that meets applicable laws	C	NA	443	312	755
		NC	NA	181	69	250
	Total (C+NC)		NA	624	381	1005
	% Compliance	NA	71.04%	81.89%	75.16%	
SR-HP4.1	Employer does not directly contract any persons under the age of 14	C	109659	994	402	111056
		NC	348	5	1	354
	Total (C+NC)		110008	999	403	111410
	% Compliance	99.68%	99.51%	99.75%	99.68%	
SR-HP4.2	Employment of authorized minors older than 14 does not conflict with their access to education	C	44038	232	114	44385
		NC	1061	7	1	1069
	Total (C+NC)		45099	239	115	45453
	% Compliance	97.65%	97.23%	99.13%	97.65%	
SR-HP4.3	Management has an enforced policy prohibiting discrimination on the basis of gender, race, ethnicity, age or religion as per ILO Convention 111	C	NA	996	407	1403
		NC	NA	3	3	6
	Total (C+NC)		NA	999	410	1409
	% Compliance	NA	99.70%	99.27%	99.57%	
SR-HP4.4	Employer prohibits the use of forced, bonded, indentured or involuntary convict labor	C	101324	988	403	102716
		NC	0	1	0	1
	Total (C+NC)		101324	989	403	102717
	% Compliance	100.00%	99.90%	100.00%	100.00%	
SR-HP4.7	All workers receive equal pay for equal work, except in case of recognizing seniority of service through higher pay	C	NA	979	404	1383
		NC	NA	17	4	21
	Total (C+NC)		NA	996	408	1404
	% Compliance	NA	98.25%	99.02%	98.47%	

Indicator		Compliance	Farm Size			All
			Small	Medium	Large	
SR-WC1.1	Part-time/seasonal and full-time workers living onsite have habitable dwellings	C	11922	618	349	12889
		NC	1412	73	27	1512
		Total (C+NC)	13334	691	376	14401
		% Compliance	89.41%	89.37%	92.82%	89.50%
SR-WC1.2	Workers have ready access to potable water	C	84370	756	355	85480
		NC	5324	204	44	5572
		Total (C+NC)	89694	960	399	91053
		% Compliance	94.06%	78.74%	88.97%	93.88%
SR-WC1.3	Worker housing has buffer zones from productive area and agrochemical storage facilities sufficient to prevent agrochemical exposure	C	NA	451	293	744
		NC	NA	248	84	332
		Total (C+NC)	NA	699	377	1076
		% Compliance	NA	64.51%	77.72%	69.14%
SR-WC1.4	Workers have ready access to sanitary facilities that do not impact the local environment	C	NA	729	306	1035
		NC	NA	229	91	320
		Total (C+NC)	NA	958	397	1355
		% Compliance	NA	76.06%	77.08%	76.36%
SR-WC2.1	Where there is insufficient access to public education, schoolchildren (of <b>primary</b> school age) of workers who live on-site have access to primary educational instruction, facilities and materials that meet national requirements	C	NA	346	218	564
		NC	NA	12	5	17
		Total (C+NC)	NA	358	223	581
		% Compliance	NA	96.56%	97.76%	97.02%
SR-WC2.2	Where there is insufficient access to public education, schoolchildren (of <b>secondary</b> school age) of workers who live on-site have access to primary educational instruction, facilities and materials that meet national requirements	C	NA	235	157	392
		NC	NA	42	34	76
		Total (C+NC)	NA	278	191	469
		% Compliance	NA	84.77%	82.20%	83.72%
SR-WC2.3	Employer provides direct incentives for education in the form of scholarships, educational materials, books, transportation, food, etc.	C	NA	373	245	618
		NC	NA	487	150	637
		Total (C+NC)	NA	860	395	1255
		% Compliance	NA	43.39%	62.03%	49.26%
SR-WC2.4	Where there is convenient access to public education programs, employer supports those schools either through in-kind donation or financial support	C	NA	511	266	777
		NC	NA	432	124	556
		Total (C+NC)	NA	942	390	1332
		% Compliance	NA	54.19%	68.21%	58.29%

Indicator	Compliance	Farm Size				
		Small	Medium	Large	All	
SR-WC2.5	Employer supports training or workshops on additional skills or trades	C	NA	358	212	570
		NC	NA	609	198	807
		Total (C+NC)	NA	967	410	1377
		% Compliance	NA	37.02%	51.71%	41.40%
SR-WC2.6	Children of legal school age attend school where available and do not work during school hours	C	131484	NA	NA	131484
		NC	612	NA	NA	612
		Total (C+NC)	132097	NA	NA	132097
		% Compliance	99.54%	NA	NA	99.54%
SR-WC3.3	Where there is convenient access to public medical care, employer supports these facilities either through in-kind donation or financial support	C	NA	257	159	416
		NC	NA	596	208	804
		Total (C+NC)	NA	853	367	1220
		% Compliance	NA	30.09%	43.32%	34.07%
SR-WC3.5	Employer offsets the cost of health services for permanent workers	C	NA	533	339	872
		NC	NA	143	48	191
		Total (C+NC)	NA	675	387	1062
		% Compliance	NA	78.84%	87.60%	82.03%
SR-WC3.6	Employer offsets the cost of health services for all workers	C	NA	667	306	973
		NC	NA	292	96	388
		Total (C+NC)	NA	959	402	1361
		% Compliance	NA	69.54%	76.12%	71.49%
SR-WC4.1	Employer provides personal protective equipment to all applicable employees at no cost	C	16726	549	298	17573
		NC	37073	271	104	37447
		Total (C+NC)	53799	820	402	55020
		% Compliance	31.09%	66.97%	74.13%	31.94%

Indicator	Compliance	Farm Size			All	
		Small	Medium	Large		
CG-WR1.1	Watercourse buffer zones are maintained adjacent to at least 25% of water bodies (>2m in width)	C	NA	668	316	984
		NC	NA	55	5	60
		Total (C+NC)	NA	723	321	1044
		% Compliance	NA	92.43%	98.44%	94.28%
CG-WR1.2	Watercourse buffer zones are maintained adjacent to at least 50% of water bodies (>2m in width)	C	31055	614	286	31955
		NC	8008	110	36	8153
		Total (C+NC)	39062	724	322	40108
		% Compliance	79.50%	84.85%	88.82%	79.67%
CG-WR1.3	Watercourse buffer zones are maintained adjacent to all of water bodies (>2m in width)	C	23471	477	233	24181
		NC	14494	246	90	14830
		Total (C+NC)	37966	723	323	39011
		% Compliance	61.82%	65.99%	72.14%	61.98%
CG-WR1.4	Watercourse buffer zones are maintained adjacent to at least 50% of seasonal/intermittent watercourses (>2m in width)	C	NA	335	185	520
		NC	NA	183	71	254
		Total (C+NC)	NA	518	256	774
		% Compliance	NA	64.65%	72.27%	67.17%
CG-WR1.5	Watercourse buffer zones are maintained adjacent to all seasonal/intermittent watercourses (>2m in width)	C	NA	227	118	345
		NC	NA	290	137	427
		Total (C+NC)	NA	517	255	772
		% Compliance	NA	43.85%	46.27%	44.65%
CG-WR1.6	Watercourse buffer zones of at least 5m per side are maintained adjacent to at least 50% of seasonal/intermittent and water bodies	C	NA	366	196	562
		NC	NA	331	129	460
		Total (C+NC)	NA	696	325	1021
		% Compliance	NA	52.51%	60.31%	54.99%
CG-WR1.7	Watercourse buffer zones of at least 5m per side are maintained adjacent to all seasonal/intermittent and water bodies	C	NA	250	134	384
		NC	NA	466	197	663
		Total (C+NC)	NA	716	331	1047
		% Compliance	NA	34.95%	40.48%	36.70%
CG-WR1.12	There is a plan to restore native vegetation within the buffers	C	NA	350	191	541
		NC	NA	325	129	454
		Total (C+NC)	NA	675	320	995
		% Compliance	NA	51.84%	59.69%	54.37%
CG-WR1.14	At least 50% of watercourse buffer zones are composed of native woody vegetation	C	27411	621	285	28317
		NC	8887	148	54	9090
		Total (C+NC)	36298	770	339	37407
		% Compliance	75.52%	80.72%	84.07%	75.70%

Indicator		Compliance	Farm Size			All
			Small	Medium	Large	
CG-WR1.15	All watercourse buffer zones are composed of native woody vegetation	C	21671	417	169	22257
		NC	14864	352	173	15389
		Total (C+NC)	36535	770	342	37646
		% Compliance	59.32%	54.23%	49.42%	59.12%
CG-WR2.1	There is no application of agrochemicals within 10m of any water body or watercourse	C	44110	422	235	44767
		NC	13273	276	113	13662
		Total (C+NC)	57384	698	348	58429
		% Compliance	76.87%	60.45%	67.53%	76.62%
CG-WR2.2	There is no application of nematicides within 20m of any water body or watercourse	C	NA	488	228	716
		NC	NA	28	19	47
		Total (C+NC)	NA	516	247	763
		% Compliance	NA	94.59%	92.31%	93.85%
CG-WR2.4	Synthetic fertilizers are not used or the farm is certified organic	C	66627	211	31	66869
		NC	64085	620	355	65060
		Total (C+NC)	130712	831	386	131928
		% Compliance	50.97%	25.40%	8.03%	50.69%
CG-WR3.1	Irrigation water use is tracked and recorded per lb. of green coffee, per hectare and for each plot	C	NA	8	11	19
		NC	NA	12	15	27
		Total (C+NC)	NA	20	26	46
		% Compliance	NA	39.79%	42.31%	41.20%
CG-WR3.2	There is a hydrological balance assessment, including climatic, community and competing agricultural issues	C	NA	6	18	24
		NC	NA	36	13	49
		Total (C+NC)	NA	41	31	72
		% Compliance	NA	13.29%	58.06%	32.46%
CG-WR3.3	Irrigation water use doesn't exceed the operation's net neutral hydrological balance	C	NA	5	10	15
		NC	NA	9	12	21
		Total (C+NC)	NA	14	22	36
		% Compliance	NA	33.26%	45.45%	40.73%

Indicator	Compliance	Farm Size			All	
		Small	Medium	Large		
CG-SR1.1	Farm managers demonstrate knowledge of farm areas at risk to erosion	C	116236	977	405	117618
		NC	11541	0	3	11544
	Total (C+NC)		127777	977	408	129162
	% Compliance		90.97%	100.00%	99.26%	91.06%
CG-SR1.2	There is an explicit soil management plan that includes measures to minimize surface erosion	C	NA	574	289	863
		NC	NA	431	118	549
	Total (C+NC)		NA	1005	407	1412
	% Compliance		NA	57.12%	71.01%	61.13%
CG-SR1.3	Areas at high risk of erosion are identified on a map	C	27124	395	220	27739
		NC	62513	562	178	63253
	Total (C+NC)		89637	957	398	90991
	% Compliance		30.26%	41.29%	55.28%	30.48%
CG-SR1.4	Productive areas on at least 25% of slopes over 10% slope are covered by shade trees and/or cover crops/vegetation	C	100745	974	386	102105
		NC	1841	14	8	1862
	Total (C+NC)		102585	988	394	103967
	% Compliance		98.21%	98.61%	97.97%	98.21%
CG-SR1.5	Productive areas on at least 50% of slopes over 10% slope are covered by shade trees and/or cover crops/vegetation	C	93428	944	371	94743
		NC	9143	44	22	9209
	Total (C+NC)		102571	988	393	103952
	% Compliance		91.09%	95.54%	94.40%	91.14%
CG-SR1.6	Productive areas on all of slopes over 10% slope are covered by shade trees and/or cover crops/vegetation	C	71862	807	336	73005
		NC	29694	181	58	29934
	Total (C+NC)		101557	988	394	102939
	% Compliance		70.76%	81.66%	85.28%	70.92%
CG-SR1.7	Productive areas on at least 25% of slopes over 20% slope are covered by shade trees and/or cover crops/vegetation	C	84822	900	362	86084
		NC	3424	68	20	3513
	Total (C+NC)		88247	968	382	89597
	% Compliance		96.12%	92.93%	94.76%	96.08%
CG-SR1.8	Productive areas on at least 50% of slopes over 20% slope are covered by shade trees and/or cover crops/vegetation	C	76404	762	302	77469
		NC	11715	202	80	11997
	Total (C+NC)		88119	964	382	89465
	% Compliance		86.71%	79.05%	79.06%	86.59%
CG-SR1.9	Productive areas on all of slopes over 20% slope are covered by shade trees and/or cover crops/vegetation	C	58887	499	236	59622
		NC	29155	457	146	29758
	Total (C+NC)		88042	956	382	89380
	% Compliance		66.89%	52.21%	61.78%	66.71%

Indicator	Compliance	Farm Size			All	
		Small	Medium	Large		
CG-SR1.10	Productive areas on at least 25% of slopes over 30% slope are covered by shade trees and/or cover crops/vegetation	C	63645	659	344	64648
		NC	7977	89	12	8078
		Total (C+NC)	71622	748	356	72726
		% Compliance	88.86%	88.11%	96.63%	88.89%
CG-SR1.11	Productive areas on at least 50% of slopes over 30% slope are covered by shade trees and/or cover crops/vegetation	C	54584	580	321	55485
		NC	16674	156	38	16868
		Total (C+NC)	71258	736	359	72353
		% Compliance	76.60%	78.82%	89.42%	76.69%
CG-SR1.12	Productive areas on all of slopes over 30% slope are covered by shade trees and/or cover crops/vegetation	C	44462	444	277	45183
		NC	26857	288	82	27227
		Total (C+NC)	71319	732	359	72410
		% Compliance	62.34%	60.68%	77.16%	62.40%
CG-SR1.13	Herbicides are not used to control ground vegetation/cover crops and are only used in spot applications for aggressive weeds	C	122796	636	249	123680
		NC	5510	210	157	5877
		Total (C+NC)	128306	845	406	129557
		% Compliance	95.71%	75.19%	61.33%	95.46%
CG-SR1.16	Areas in which the risk of landslides is extreme are not cultivated, are left or taken out of production and restored with native vegetation where practicable	C	NA	335	183	518
		NC	NA	267	145	412
		Total (C+NC)	NA	602	328	930
		% Compliance	NA	55.66%	55.79%	55.70%
CG-SR2.1	At least 25% of the productive area is covered by an organic matter layer and/or nitrogen-fixing cover crops	C	127127	863	407	128397
		NC	3336	1	4	3341
		Total (C+NC)	130463	864	411	131738
		% Compliance	97.44%	99.88%	99.03%	97.46%
CG-SR2.2	At least 50% of the productive area is covered by an organic matter layer and/or nitrogen-fixing cover crops	C	113015	830	382	114226
		NC	17594	34	29	17657
		Total (C+NC)	130609	864	411	131884
		% Compliance	86.53%	96.05%	92.94%	86.61%
CG-SR2.3	All of the productive area is covered by an organic matter layer and/or nitrogen-fixing cover crops	C	82649	641	306	83596
		NC	47769	223	105	48097
		Total (C+NC)	130418	864	411	131693
		% Compliance	63.37%	74.19%	74.45%	63.48%
CG-SR2.5	At least 25% of the productive area is planted with nitrogen-fixing, leguminous trees	C	93834	839	391	95065
		NC	36754	24	18	36796
		Total (C+NC)	130589	863	409	131860
		% Compliance	71.85%	97.28%	95.60%	72.09%

Indicator	Compliance	Farm Size			All	
		Small	Medium	Large		
CG-SR2.6	At least 50% of the productive area is planted with nitrogen-fixing, leguminous trees	C	69831	774	364	70969
		NC	60202	89	43	60334
		Total (C+NC)	130033	863	407	131303
		% Compliance	53.70%	89.74%	89.43%	54.05%
CG-SR2.7	All of the productive area is planted with nitrogen-fixing, leguminous trees	C	45018	596	288	45902
		NC	83535	266	118	83920
		Total (C+NC)	128553	863	406	129822
		% Compliance	35.02%	69.12%	70.94%	35.36%
CG-SR2.12	Farm is certified organic	C	NA	111	17	128
		NC	NA	745	382	1127
		Total (C+NC)	NA	855	399	1254
		% Compliance	NA	12.94%	4.26%	10.18%

Indicator	Compliance	Farm Size			All	
		Small	Medium	Large		
CG-CB1.1	Native trees are removed only when they constitute a human hazard or when they significantly compete with coffee plants	C	101242	926	387	102556
		NC	6026	58	12	6096
		Total (C+NC)	107269	985	399	108652
		% Compliance	94.38%	94.10%	96.99%	94.39%
CG-CB1.2	The farm has a shade management plan	C	NA	446	256	702
		NC	NA	531	149	680
		Total (C+NC)	NA	977	405	1382
		% Compliance	NA	45.63%	63.21%	50.78%
CG-CB1.3	The farm is implementing the shade management plan and meeting the timeline for actions	C	NA	432	247	679
		NC	NA	409	109	518
		Total (C+NC)	NA	840	356	1196
		% Compliance	NA	51.36%	69.38%	56.73%
CG-CB1.4	Farm is covered by at least 10% canopy cover	C	118602	976	394	119972
		NC	17394	24	16	17435
		Total (C+NC)	135996	1000	410	137407
		% Compliance	87.21%	97.56%	96.10%	87.31%
CG-CB1.5	Canopy cover is comprised of a diversity of tree species	C	96485	827	353	97665
		NC	29800	176	55	30031
		Total (C+NC)	126285	1003	408	127696
		% Compliance	76.40%	82.46%	86.52%	76.48%
CG-CB1.6	Canopy cover is retained at biologically significant levels	C	104064	857	351	105272
		NC	24576	144	57	24777
		Total (C+NC)	128639	1001	408	130048
		% Compliance	80.90%	85.59%	86.03%	80.95%
CG-CB1.7	Invasive exotic species are not used for canopy cover	C	124277	976	395	125649
		NC	2114	25	11	2150
		Total (C+NC)	126391	1001	406	127798
		% Compliance	98.33%	97.52%	97.29%	98.32%
CG-CB1.8	An average of 40% canopy cover is maintained across the productive area of the farm	C	NA	792	322	1114
		NC	NA	198	86	284
		Total (C+NC)	NA	991	408	1399
		% Compliance	NA	79.97%	78.92%	79.66%

Indicator	Compliance	Farm Size			All	
		Small	Medium	Large		
CG-CB1.9	At least 75% of the canopy cover is comprised of locally native species and/or the canopy consists of at least 10 species that are locally native or can be shown to contribute to the conservation of native biodiversity	C	78327	722	316	79365
		NC	47508	280	91	47878
	Total (C+NC)		125835	1002	407	127244
	% Compliance		62.25%	72.06%	77.64%	62.37%
CG-CB1.10	Where local ecological conditions allow, shade canopy is comprised of at least 2 distinguishable canopy strata	C	NA	538	240	778
		NC	NA	409	138	547
	Total (C+NC)		NA	947	378	1325
	% Compliance		NA	56.80%	63.49%	58.71%
CG-CB1.11	Locally native epiphytes are retained in the canopy cover	C	57215	828	364	58407
		NC	24817	142	30	24989
	Total (C+NC)		82032	970	394	83396
	% Compliance		69.75%	85.38%	92.39%	70.04%
CG-CB1.12	Biological legacies, such as cavity trees and standing and/or fallen dead trees, are retained or recruited	C	64566	898	387	65850
		NC	22283	78	21	22382
	Total (C+NC)		86848	976	408	88232
	% Compliance		74.34%	91.98%	94.85%	74.63%
CG-CB2.1	There are specific implemented measures to restrict unauthorized hunting and commercial collection of flora and fauna	C	71284	745	372	72401
		NC	26654	280	38	26972
	Total (C+NC)		97938	1025	410	99373
	% Compliance		72.78%	72.69%	90.73%	72.86%
CG-CB2.2	Hunting threatened or rare wildlife species is not allowed on the property	C	88498	803	337	89638
		NC	4236	201	63	4500
	Total (C+NC)		92734	1004	400	94138
	% Compliance		95.43%	80.02%	84.25%	95.22%
CG-CB2.3	Farm management has created a list of wildlife species native to the region and identified which of those species are classified as vulnerable, endangered or critically endangered according to the IUCN red list	C	NA	299	181	480
		NC	NA	721	225	946
	Total (C+NC)		NA	1020	406	1426
	% Compliance		NA	29.30%	44.58%	33.65%

Indicator	Compliance	Farm Size			All	
		Small	Medium	Large		
CG-CB2.4	Farm management has consulted with relevant government agencies or universities to determine which wildlife species are native to the farm's region and classified as vulnerable, endangered, or critically endangered	C	NA	197	126	323
		NC	NA	820	281	1101
	Total (C+NC)	NA		1018	407	1425
	% Compliance	NA		19.41%	30.96%	22.71%
CG-CB2.5	A Wildlife Management Plan is developed on the basis of the results gathered from the consultations with relevant government agencies or universities	C	NA	202	124	326
		NC	NA	761	269	1030
	Total (C+NC)	NA		963	393	1356
	% Compliance	NA		20.94%	31.55%	24.02%

Indicator		Compliance	Farm Size			All
			Small	Medium	Large	
CG-CB2.6	The Wildlife Management Plan is properly implemented on the farm	C	NA	194	151	345
		NC	NA	598	179	777
		Total (C+NC)	NA	792	330	1122
		% Compliance	NA	24.48%	45.76%	30.73%
CG-CB3.1	After March 2004, there is no conversion of natural forest to agricultural production	C	136398	919	383	137700
		NC	546	42	5	592
		Total (C+NC)	136943	960	388	138292
		% Compliance	99.60%	95.67%	98.71%	99.57%
CG-CB3.2	If areas of natural vegetation are converted to agricultural production, these are not areas of high ecological value and there are equivalent set-asides	C	NA	282	98	380
		NC	NA	29	13	42
		Total (C+NC)	NA	312	111	423
		% Compliance	NA	90.62%	88.29%	90.01%
CG-CB3.3	There is an assessment of the farm for areas of high ecological value	C	NA	461	240	701
		NC	NA	466	151	617
		Total (C+NC)	NA	926	391	1317
		% Compliance	NA	49.73%	61.38%	53.19%
CG-CB3.5	Areas of identified high ecological value are clearly defined, protected and managed with a conservation emphasis that maintains the high ecological values	C	NA	468	253	721
		NC	NA	284	93	377
		Total (C+NC)	NA	752	346	1098
		% Compliance	NA	62.24%	73.12%	65.67%
CG-CB3.6	If areas of high ecological value are completely lacking on the farm, there is a plan to restore natural habitat, forest and other natural vegetative areas on a portion of the farm	C	NA	117	46	163
		NC	NA	238	42	280
		Total (C+NC)	NA	355	88	443
		% Compliance	NA	32.96%	52.27%	36.80%
CG-CB3.7	If areas of high ecological value are completely lacking on the farm, managers have implemented the plan to restore natural habitat or condition on a portion of the farm	C	NA	97	41	138
		NC	NA	239	37	276
		Total (C+NC)	NA	336	78	414
		% Compliance	NA	28.85%	52.56%	33.33%
CG-CB3.8	Areas of high ecological value are protected from future development through the declaration of private reserves, conservation emphasis areas or legal conservation easements	C	NA	113	108	221
		NC	NA	559	226	785
		Total (C+NC)	NA	673	334	1007
		% Compliance	NA	16.85%	32.34%	21.99%

Indicator		Compliance	Farm Size			All
			Small	Medium	Large	
CG-CB3.9	At least 3% of the farm is set aside as a conservation emphasis area	C	NA	719	347	1066
		NC	NA	274	61	335
		Total (C+NC)	NA	993	408	1401
		% Compliance	NA	72.38%	85.05%	76.07%
CG-CB3.10	At least 5% of the farm is set aside as a conservation emphasis area	C	NA	630	316	946
		NC	NA	357	91	448
		Total (C+NC)	NA	987	407	1394
		% Compliance	NA	63.79%	77.64%	67.83%
CG-CB3.11	Biological corridors are established to connect multiple conservation emphasis areas	C	NA	423	246	669
		NC	NA	357	111	468
		Total (C+NC)	NA	780	357	1137
		% Compliance	NA	54.22%	68.91%	58.83%
CG-CB3.12	Multiple plant species selected for contribution to biodiversity are established where space allows within the farm	C	NA	684	331	1015
		NC	NA	319	78	397
		Total (C+NC)	NA	1003	409	1412
		% Compliance	NA	68.21%	80.93%	71.89%

Indicator	Compliance	Farm Size			All	
		Small	Medium	Large		
CG-EM1.1	Farms do not use chemicals that are listed by the World Health Organization as Type 1A or 1B, except as specified by the nematode amendment	C	129168	884	350	130402
		NC	2020	79	61	2160
	Total (C+NC)		131188	963	411	132563
	% Compliance		98.46%	91.81%	85.16%	98.37%
CG-EM1.7	Farms calculate total toxic load of productive area on farm	C	NA	73	128	201
		NC	NA	602	247	849
	Total (C+NC)		NA	675	375	1050
	% Compliance		NA	10.84%	34.13%	19.16%
CG-EM1.8	Toxic load is decreased over time through reduction in agrochemical use or selecting less toxic alternatives	C	NA	87	84	171
		NC	NA	491	214	705
	Total (C+NC)		NA	577	298	875
	% Compliance		NA	15.00%	28.19%	19.49%
CG-EM1.18	Agrochemicals are only applied as a last resort (after cultural and physical controls have failed)	C	44593	437	261	45290
		NC	33781	270	105	34156
	Total (C+NC)		78373	707	366	79446
	% Compliance		56.90%	61.75%	71.31%	57.01%
CG-EM1.19	There is a written Integrated Pest Management Plan that is properly implemented in the field	C	NA	482	243	725
		NC	NA	513	164	677
	Total (C+NC)		NA	995	407	1402
	% Compliance		NA	48.41%	59.71%	51.69%
CG-EM2.1	Farm managers implement a monitoring program which tracks farm activities and improvements in C.A.F.E. Practices	C	NA	505	292	797
		NC	NA	439	112	551
	Total (C+NC)		NA	944	404	1348
	% Compliance		NA	53.52%	72.28%	59.15%
CG-EM2.3	Farm managers develop a written management plan and supporting documents	C	NA	530	271	801
		NC	NA	474	136	610
	Total (C+NC)		NA	1004	407	1411
	% Compliance		NA	52.78%	66.58%	56.76%
CG-EM2.4	Farm managers implement the written management plan	C	NA	513	271	784
		NC	NA	335	97	432
	Total (C+NC)		NA	848	368	1216
	% Compliance		NA	60.46%	73.64%	64.45%
CG-EM2.5	The management plan is updated on an annual basis	C	NA	441	248	689
		NC	NA	376	101	477
	Total (C+NC)		NA	818	349	1167
	% Compliance		NA	53.95%	71.06%	59.07%

## Appendix B: Producer Support Organization Compliance Rates by Indicator

Indicators			
PS-MT1: Management and Tracking Systems		Compliance	
PS-MT1.1	All supply chain entities have a system for tracking product from initial purchase through point of export	C	336
		NC	9
		NA	10
		Total (C+NC)	345
		% Compliance	97%
PS-MT1.2	Organization has an annually updated list of producers participating in the C.A.F.E. Practices program	C	338
		NC	6
		NA	11
		Total (C+NC)	344
		% Compliance	98%
PS-MT1.3	Each farm in the supply chain receives a receipt for coffee	C	322
		NC	28
		NA	5
		Total (C+NC)	350
		% Compliance	92%
PS-MT1.4	Participating farmers are given a written agreement or identification card upon their commitment to comply with the C.A.F.E. Practices	C	202
		NC	149
		NA	4
		Total (C+NC)	351
		% Compliance	58%
PS-MT1.5	Organization maintains farm inspection reports documenting status of compliance of each farm accompanied by a farm map and description	C	184
		NC	167
		NA	4
		Total (C+NC)	351
		% Compliance	52%
PS-SR1: Controlling Surface Erosion			
PS-SR1.1	Producer Support Organization has an explicit soil management plan that includes erosion reduction strategies	C	263
		NC	91
		NA	1
		Total (C+NC)	354
		% Compliance	74%
PS-SR1.2	Producer Support Organization has identified resources for erosion controls	C	278
		NC	73
		NA	4
		Total (C+NC)	351
		% Compliance	79%
PS-SR1.3	Producer Support Organization facilitates the distribution of erosion controls for more than 5% of producers in network	C	201
		NC	142
		NA	12
		Total (C+NC)	343
		% Compliance	59%
PS-SR1.4	Producer Support Organization facilitates the distribution of erosion controls for more than 15% of producers in network	C	176
		NC	167
		NA	12
		Total (C+NC)	343
		% Compliance	51%

<b>Indicators</b>		
PS-SR1.5	Producer Support Organization facilitates the distribution of erosion controls for more than 25% of producers in network	
	C	160
	NC	178
	NA	17
	Total (C+NC)	338
<b>PS-SR2: Maintaining Soil Productivity</b>		
PS-SR2.1	Where synthetic fertilizers are used, Producer Support Organization has included in its soil management plan a strategy for soil analysis (for nutrient deficiencies and organic matter content) from representative plots in producer network	
	C	201
	NC	71
	NA	83
	Total (C+NC)	272
<b>PS-SR2.2</b>		
PS-SR2.2	Where synthetic fertilizers are used, Producer Support Organization has included in its soil management plan a strategy for foliar analysis (for nutrient deficiencies) from representative plots in producer network	
	C	122
	NC	126
	NA	107
	Total (C+NC)	248
<b>PS-SR2.3</b>		
PS-SR2.3	Where synthetic fertilizers are used, Producer Support Organization has developed a timeline for implementing soil and foliar testing strategy	
	C	128
	NC	127
	NA	100
	Total (C+NC)	255
<b>PS-SR2.4</b>		
PS-SR2.4	Where synthetic fertilizers are used, Producer Support Organization is implementing its soil and foliar testing strategy according to the timeline	
	C	101
	NC	141
	NA	113
	Total (C+NC)	242
<b>PS-CB1: Maintaining Shade Canopy</b>		
PS-CB1.1	Producer Support Organization has a shade management plan including: identifying areas with gaps in shade and plans for replanting invasive exotic/non-native trees with native species	
	C	249
	NC	103
	NA	3
	Total (C+NC)	352
<b>PS-CB1.2</b>		
PS-CB1.2	Producer Support Organization has identified resources for the distribution of shade trees or seedlings	
	C	232
	NC	109
	NA	14
	Total (C+NC)	341
<b>PS-CB2: Protecting Wildlife</b>		
PS-CB2.1	Producer Support Organization has created a list of wildlife species native to the region and identified which of those species are classified as vulnerable, endangered or critically endangered according to the IUCN red list ( <a href="http://www.redlist.org">http://www.redlist.org</a> )	
	C	170
	NC	158
	NA	27
	Total (C+NC)	328
<b>% Compliance</b>		
47%		
74%		
49%		
50%		
42%		
71%		
68%		
52%		

<b>Indicators</b>			
<b>PS-EM1: Ecological Pest and Disease Control</b>			
PS-EM1.1	Producer Support Organization does not use chemicals that are listed by the World Health Organization as Type 1A or 1B, except as specified by the nematode amendment*	C	174
		NC	13
		NA	168
		Total (C+NC)	187
		% Compliance	93%
PS-EM1.2	Producer Support Organization maintains purchase records of pesticides (specifying date, product, formulation, active ingredient, quantity, supplier and price of purchase for each pesticide)	C	66
		NC	19
		NA	270
		Total (C+NC)	85
		% Compliance	78%
PS-EM1.3	Agrochemicals are stored in a locked place with controlled access	C	94
		NC	3
		NA	258
		Total (C+NC)	97
		% Compliance	97%
PS-EM1.4	Pesticides are applied using spot spraying based on incidence and infestation pattern (evidence from monitoring)	C	77
		NC	24
		NA	254
		Total (C+NC)	101
		% Compliance	76%
PS-EM1.5	Agrochemicals are only applied as a last resort (after cultural and physical controls have failed)	C	95
		NC	22
		NA	238
		Total (C+NC)	117
		% Compliance	81%
PS-EM1.6	Where coffee berry borer infestation exists, Producer Support Organization facilitates the distribution of biological control agents or methanol/ethanol traps for more than 5% of affected producers in network	C	176
		NC	95
		NA	84
		Total (C+NC)	271
		% Compliance	65%
PS-EM1.7	Where coffee berry borer infestation exists, Producer Support Organization facilitates the distribution of biological control agents or methanol/ethanol traps for more than 15% of affected producers in network	C	166
		NC	101
		NA	88
		Total (C+NC)	267
		% Compliance	62%
PS-EM1.8	Where coffee berry borer infestation exists, Producer Support Organization facilitates the distribution of biological control agents or methanol/ethanol traps for more than 25% of affected producers in network	C	138
		NC	128
		NA	89
		Total (C+NC)	266
		% Compliance	52%
<b>PS-EM2: Management and Monitoring</b>			
PS-EM2.1	Producer Support Organization implements a monitoring program to track farm activities and improvements in C.A.F.E. Practices for more than 5% of the producers in its network	C	276
		NC	68
		NA	11
		Total (C+NC)	344
		% Compliance	80%

Indicators			
PS-EM2.2	Producer Support Organization implements a monitoring program to track farm activities and improvements in C.A.F.E. Practices for more than 10% of the producers in its network	C	262
		NC	80
		NA	13
		Total (C+NC)	342
		% Compliance	77%
PS-EM2.3	Producer Support Organization implements a monitoring program to track farm activities and improvements in C.A.F.E. Practices for more than 15% of the producers in its network	C	256
		NC	85
		NA	14
		Total (C+NC)	341
		% Compliance	75%
PS-EM2.4	Producer Support Organization holds annual planning meeting(s) to develop a written annual work plan which details which C.A.F.E. Practices activities are to be taken in the coming year	C	259
		NC	80
		NA	16
		Total (C+NC)	339
		% Compliance	76%
PS-EM2.5	Producer Support Organization develops a written management plan and supporting documents, including but not limited to: - A description of the farm production systems and coffee productivity(coffee production per hectare, total annual coffee production) for the association - Producer Support Organization farmer training plan - Ecological pest and disease management measures - Soil quality improvement strategies - Producer Support Organization farmer resource sharing	C	201
		NC	148
		NA	6
		Total (C+NC)	349
		% Compliance	58%
PS-EM2.6	Producer Support Organization implements the written management plan with more than 5% of producers in network	C	239
		NC	74
		NA	42
		Total (C+NC)	313
		% Compliance	76%
PS-EM2.7	Producer Support Organization implements the written management plan with more than 15% of producers in network	C	225
		NC	88
		NA	42
		Total (C+NC)	313
		% Compliance	72%
PS-EM2.8	Producer Support Organization implements the written management plan with more than 25% of producers in network	C	183
		NC	127
		NA	45
		Total (C+NC)	310
		% Compliance	59%
PS-EM2.9	The management plan is updated on an annual basis	C	202
		NC	58
		NA	95
		Total (C+NC)	260
		% Compliance	78%

Indicators			
PS-EM2.10	Producer organization has documented materials for training members in its network on: shade management; integrated pest control and disease management; pruning, weeding and cultural management; and processing and drying coffee	C	272
		NC	79
		NA	4
		Total (C+NC)	351
		% Compliance	77%
PS-EM2.11	Producer Support Organization has trained more than 5% of its network on topics covered in PS-EM2.5	C	277
		NC	68
		NA	10
		Total (C+NC)	345
		% Compliance	80%
PS-EM2.12	Producer Support Organization has trained more than 15% of its network on topics covered in PS-EM2.5	C	262
		NC	77
		NA	16
		Total (C+NC)	339
		% Compliance	77%
PS-EM2.13	Producer Support Organization has trained more than 25% of its network on topics covered in PS-EM2.5	C	219
		NC	120
		NA	16
		Total (C+NC)	339
		% Compliance	65%

## Appendix C: Mill Compliance Rates for C.A.F.E. Practices Indicators

Indicator	Compliance	Mill Type			All	
		Wet	Dry	Both		
<b>Hiring Practices</b>						
SR-HP1.1	All full-time workers are paid the nationally or regionally established minimum wage	C	334	153	68	555
		NC	6	1	0	7
		NA	375	37	1	413
		Total (C+NC)	340	154	68	562
		% Compliance	98.24%	99.35%	100.00%	98.75%
SR-HP1.2	All part-time workers are paid the nationally or regionally established minimum wage	C	76	58	17	151
		NC	2	0	0	2
		NA	637	133	52	822
		Total (C+NC)	78	58	17	153
		% Compliance	97.44%	100.00%	100.00%	98.69%
SR-HP1.3	All temporary/seasonal workers are paid the nationally or regionally established minimum wage	C	583	157	56	796
		NC	12	3	0	15
		NA	120	31	13	164
		Total (C+NC)	595	160	56	811
		% Compliance	97.98%	98.13%	100.00%	98.15%
SR-HP1.4	Management maintains complete written earning records	C	595	174	67	836
		NC	42	16	2	60
		NA	78	1	0	79
		Total (C+NC)	637	190	69	896
		% Compliance	93.41%	91.58%	97.10%	93.30%
SR-HP1.5	Workers are paid regularly in cash/cash equivalent	C	655	189	69	913
		NC	0	0	0	0
		NA	60	2	0	62
		Total (C+NC)	655	189	69	913
		% Compliance	100.00%	100.00%	100.00%	100.00%
SR-HP1.6	If nationally legally mandated benefits are required for full-time workers, then these are paid by employer	C	313	141	62	516
		NC	21	3	0	24
		NA	381	0	7	388
		Total (C+NC)	334	144	62	540
		% Compliance	93.71%	97.92%	100.00%	95.56%
SR-HP1.7	If nationally legally mandated benefits are required for part-time workers, then these are paid by employer	C	70	17	13	100
		NC	4	0	1	5
		NA	641	174	55	870
		Total (C+NC)	74	17	14	105
		% Compliance	94.59%	100.00%	92.86%	95.24%
SR-HP1.8	If nationally legally mandated benefits are required for seasonal/temporary workers, then these are paid by employer	C	339	100	42	481
		NC	95	4	2	101
		NA	281	87	25	393
		Total (C+NC)	434	104	44	582
		% Compliance	78.11%	96.15%	95.45%	82.65%
SR-HP1.9	Overtime pay meets national requirements	C	294	117	61	472
		NC	68	38	6	112
		NA	353	36	2	391
		Total (C+NC)	362	155	67	584
		% Compliance	81.22%	75.48%	91.04%	80.82%

Indicator		Compliance	Mill Type			All
			Wet	Dry	Both	
SR-HP1.10	Overtime pay exceeds national requirements	C	153	54	28	235
		NC	197	96	39	332
		NA	365	41	2	408
		Total (C+NC)	350	150	67	567
		% Compliance	43.71%	36.00%	41.79%	41.45%
SR-HP1.11	All full-time workers are paid more than the nationally or regionally established minimum wage	C	269	131	57	457
		NC	68	23	11	102
		NA	378	37	1	416
		Total (C+NC)	337	154	68	559
		% Compliance	79.82%	85.06%	83.82%	81.75%
SR-HP1.12	All part-time workers are paid more than the nationally or regionally established minimum wage	C	60	57	13	130
		NC	19	1	4	24
		NA	636	133	52	821
		Total (C+NC)	79	58	17	154
		% Compliance	75.95%	98.28%	76.47%	84.42%
SR-HP1.13	All temporary/seasonal workers are paid more than the nationally or regionally established minimum wage	C	486	117	42	645
		NC	108	43	14	165
		NA	121	31	13	165
		Total (C+NC)	594	160	56	810
		% Compliance	81.82%	73.13%	75.00%	79.63%
SR-HP1.14	Full-time workers are paid at least a living wage	C	312	135	56	503
		NC	65	21	5	91
		NA	338	35	8	381
		Total (C+NC)	377	156	61	594
		% Compliance	82.76%	86.54%	91.80%	84.68%
SR-HP1.15	In-kind payments are itemized in writing	C	56	10	6	72
		NC	12	5	1	18
		NA	647	176	62	885
		Total (C+NC)	68	15	7	90
		% Compliance	82.35%	66.67%	85.71%	80.00%
SR-HP1.16	Workers have access to their earnings records	C	582	169	68	819
		NC	56	20	1	77
		NA	77	2	0	79
		Total (C+NC)	638	189	69	896
		% Compliance	91.22%	89.42%	98.55%	91.41%
SR-HP1.17	Wages are paid directly to all workers	C	636	186	68	890
		NC	5	4	1	10
		NA	74	1	0	75
		Total (C+NC)	641	190	69	900
		% Compliance	99.22%	97.89%	98.55%	98.89%
SR-HP1.17	Wages are paid directly to all workers	C	636	186	68	890
		NC	5	4	1	10
		NA	74	1	0	75
		Total (C+NC)	641	190	69	900
		% Compliance	99.22%	97.89%	98.55%	98.89%

Indicator		Compliance	Mill Type			All
			Wet	Dry	Both	
SR-HP1.18	Time spent by workers in any required trainings and meetings is considered working time and workers are compensated at their normal rate	C	435	169	66	670
		NC	33	5	2	40
		NA	247	17	1	265
		Total (C+NC)	468	174	68	710
		% Compliance	92.95%	97.13%	97.06%	94.37%
SR-HP1.19	Financial disciplinary penalties are not assessed against workers	C	637	187	68	892
		NC	3	2	1	6
		NA	75	2	0	77
		Total (C+NC)	640	189	69	898
		% Compliance	99.53%	98.94%	98.55%	99.33%
SR-HP1.20	Provident/pension plan that exceeds legal requirements is in place for full-time employees	C	81	53	35	169
		NC	293	99	32	424
		NA	341	39	2	382
		Total (C+NC)	374	152	67	593
		% Compliance	21.66%	34.87%	52.24%	28.50%
SR-HP2.1	Workers have either direct communication or designated representative with management or employer	C	643	189	69	901
		NC	1	0	0	1
		NA	71	2	0	73
		Total (C+NC)	644	189	69	902
		% Compliance	99.84%	100.00%	100.00%	99.89%
SR-HP2.2	Workers can air workplace grievances to management or employer with no fear of reprisal	C	631	187	69	887
		NC	6	2	0	8
		NA	78	2	0	80
		Total (C+NC)	637	189	69	895
		% Compliance	99.06%	98.94%	100.00%	99.11%
SR-HP2.3	Workers' right to organize and/or collectively bargain in accordance with national laws and international obligations is acknowledged by management	C	509	145	62	716
		NC	21	7	2	30
		NA	185	39	5	229
		Total (C+NC)	530	152	64	746
		% Compliance	96.04%	95.39%	96.88%	95.98%
SR-HP2.4	There is a workers' association formed and governed by the employees independent of management influence	C	70	27	25	122
		NC	295	79	20	394
		NA	350	85	24	459
		Total (C+NC)	365	106	45	516
		% Compliance	19.18%	25.47%	55.56%	23.64%
SR-HP2.5	There are regular meetings between management and employees or employees' association	C	470	141	64	675
		NC	103	42	4	149
		NA	142	8	1	151
		Total (C+NC)	573	183	68	824
		% Compliance	82.02%	77.05%	94.12%	81.92%
SR-HP2.6	Regular meetings between management and employees (or employees' association) continually improve working conditions	C	363	98	61	522
		NC	191	81	6	278
		NA	161	12	2	175
		Total (C+NC)	554	179	67	800
		% Compliance	65.52%	54.75%	91.04%	65.25%

Indicator		Compliance	Mill Type			All
			Wet	Dry	Both	
SR-HP2.7	There is a workers' association fund to which management and workers contribute matching funds	C	32	10	21	63
		NC	109	64	9	182
		NA	574	117	39	730
		Total (C+NC)	141	74	30	245
		% Compliance	22.70%	13.51%	70.00%	25.71%
SR-HP2.8	Workers have equal access to association fund to finance projects that improve conditions for workers	C	31	14	23	68
		NC	67	39	1	107
		NA	617	138	45	800
		Total (C+NC)	98	53	24	175
		% Compliance	31.63%	26.42%	95.83%	38.86%
SR-HP2.9	A collective bargaining agreement exists between employees and employer in regions or countries where agricultural workers' organizations are established in the coffee sector	C	46	18	9	73
		NC	84	25	7	116
		NA	585	148	53	786
		Total (C+NC)	130	43	16	189
		% Compliance	35.38%	41.86%	56.25%	38.62%
SR-HP3.1	Workers do not work more regular hours per day or week than allowable under local laws	C	582	171	65	818
		NC	56	19	4	79
		NA	77	1	0	78
		Total (C+NC)	638	190	69	897
		% Compliance	91.22%	90.00%	94.20%	91.19%
SR-HP3.2	Permanent workers must have the equivalent of one continuous 24 period off in each 7 day period or whatever is required by law	C	375	159	64	598
		NC	17	7	5	29
		NA	323	25	0	348
		Total (C+NC)	392	166	69	627
		% Compliance	95.66%	95.78%	92.75%	95.37%
SR-HP3.3	Workers must not work more total hours in one day or week than allowable under applicable laws	C	581	168	62	811
		NC	53	21	7	81
		NA	81	2	0	83
		Total (C+NC)	634	189	69	892
		% Compliance	91.64%	88.89%	89.86%	90.92%
SR-HP3.4	Hours worked on potentially hazardous activities are restricted in accordance with the law	C	312	97	31	440
		NC	44	16	9	69
		NA	359	78	29	466
		Total (C+NC)	356	113	40	509
		% Compliance	87.64%	85.84%	77.50%	86.44%
SR-HP3.5	Employer has a paid sick leave program for full-time employees	C	312	148	65	525
		NC	55	4	3	62
		NA	348	39	1	388
		Total (C+NC)	367	152	68	587
		% Compliance	85.01%	97.37%	95.59%	89.44%
SR-HP3.6	Employer has a paid sick leave program for all workers	C	288	93	57	438
		NC	321	92	12	425
		NA	421	6	0	427
		Total (C+NC)	609	185	69	863
		% Compliance	47.29%	50.27%	82.61%	50.75%

Indicator		Compliance	Mill Type			All
			Wet	Dry	Both	
SR-HP3.7	If overtime work is required as part of the job, such requirements are clear at the time of hiring	C	350	151	68	569
		NC	50	26	0	76
		NA	315	14	1	330
		Total (C+NC)	400	177	68	645
		% Compliance	87.50%	85.31%	100.00%	88.22%
SR-HP3.8	Employer has an annual leave (vacation) program that meets applicable laws	C	345	150	64	559
		NC	56	6	3	65
		NA	314	35	2	351
		Total (C+NC)	401	156	67	624
		% Compliance	86.03%	96.15%	95.52%	89.58%
SR-HP3.9	If employees do not take annual leave, employer can either allow vacation time to accrue or can pay wages for the equivalent amount of time accrued under the regular pay scale	C	258	100	24	382
		NC	53	12	4	69
		NA	404	79	41	524
		Total (C+NC)	311	112	28	451
		% Compliance	82.96%	89.29%	85.71%	84.70%
SR-HP4.1	Employer does not directly contract any persons under the age of 14	C	654	186	69	909
		NC	2	0	0	2
		NA	59	5	0	64
		Total (C+NC)	656	186	69	911
		% Compliance	99.70%	100.00%	100.00%	99.78%
SR-HP4.2	Employment of authorized minors older than 14 does not conflict with their access to education	C	127	79	18	224
		NC	0	0	0	0
		NA	588	112	51	751
		Total (C+NC)	127	79	18	224
		% Compliance	100.00%	100.00%	100.00%	100.00%
SR-HP4.3	Management has an enforced policy prohibiting discrimination on the basis of gender, race, ethnicity, age or religion as per ILO Convention 111	C	657	188	69	914
		NC	5	0	0	5
		NA	53	53	0	106
		Total (C+NC)	662	188	69	919
		% Compliance	99.24%	100.00%	100.00%	99.46%
SR-HP4.4	Employer prohibits the use of forced, bonded, indentured or involuntary convict labor	C	661	187	64	912
		NC	0	0	0	0
		NA	54	4	5	63
		Total (C+NC)	661	187	64	912
		% Compliance	100.00%	100.00%	100.00%	100.00%
SR-HP4.5	Employer observes all legal requirements for the work of authorized minors	C	109	72	13	194
		NC	3	0	0	3
		NA	603	603	56	1262
		Total (C+NC)	112	72	13	197
		% Compliance	97.32%	100.00%	100.00%	98.48%
SR-HP4.6	Workers do not surrender their identity papers or other original personal documents or pay deposits as a condition of employment	C	633	189	69	891
		NC	8	0	0	8
		NA	74	2	0	76
		Total (C+NC)	641	189	69	899
		% Compliance	98.75%	100.00%	100.00%	99.11%

Indicator		Compliance	Mill Type			All
			Wet	Dry	Both	
SR-HP4.7	All workers receive equal pay for equal work, except in case of recognizing seniority of service through higher pay	C	608	170	69	847
		NC	15	1	0	16
		NA	92	20	0	112
		Total (C+NC)	623	171	69	863
		% Compliance	97.59%	99.42%	100.00%	98.15%

Indicator	Compliance	Mill Type			All	
		Wet	Dry	Both		
<b>Working Conditions</b>						
SR-WC1.1	Part-time/seasonal and full-time workers living onsite have habitable dwellings	C	399	64	47	510
		NC	31	1	0	32
		NA	285	126	22	433
		Total (C+NC)	430	65	47	542
		% Compliance	92.79%	98.46%	100.00%	94.10%
SR-WC1.2	Workers have ready access to potable water	C	532	136	65	733
		NC	103	6	1	110
		NA	80	49	3	132
		Total (C+NC)	635	142	66	843
		% Compliance	83.78%	95.77%	98.48%	86.95%
SR-WC1.3	Worker housing has buffer zones from productive area and agrochemical storage facilities sufficient to prevent agrochemical exposure	C	351	27	31	409
		NC	69	0	3	72
		NA	295	164	35	494
		Total (C+NC)	420	27	34	481
		% Compliance	83.57%	100.00%	91.18%	85.03%
SR-WC1.4	Workers have ready access to sanitary facilities that do not impact the local environment	C	525	139	63	727
		NC	100	4	3	107
		NA	385	48	3	436
		Total (C+NC)	625	143	66	834
		% Compliance	84.00%	97.20%	95.45%	87.17%
SR-WC1.5	Garbage from employer-provided housing and facilities is removed to either a municipal waste dump or to a waste site located at least 200 meters from any water body	C	458	78	57	593
		NC	84	4	5	93
		NA	173	109	7	289
		Total (C+NC)	542	82	62	686
		% Compliance	84.50%	95.12%	91.94%	86.44%
SR-WC2.1	Where there is insufficient access to public education, schoolchildren (of <b>primary</b> school age) of workers who live on-site have access to primary educational instruction, facilities and materials that meet national requirements	C	282	59	26	367
		NC	5	0	0	5
		NA	428	132	43	603
		Total (C+NC)	287	59	26	372
		% Compliance	98.26%	100.00%	100.00%	98.66%
SR-WC2.2	Where there is insufficient access to public education, schoolchildren (of <b>secondary</b> school age) of workers who live on-site have access to primary educational instruction, facilities and materials that meet national requirements	C	200	58	23	281
		NC	35	0	0	35
		NA	480	133	46	659
		Total (C+NC)	235	58	23	316
		% Compliance	85.11%	100.00%	100.00%	88.92%

Indicator		Compliance	Mill Type			All
			Wet	Dry	Both	
SR-WC2.3	Employer provides direct incentives for education in the form of scholarships, educational materials, books, transportation, food, etc.	C	312	60	48	420
		NC	239	111	17	367
		NA	164	20	4	188
		Total (C+NC)	551	171	65	787
		% Compliance	56.62%	35.09%	73.85%	53.37%
SR-WC2.4	Where there is convenient access to public education programs, employer supports those schools either through in-kind donation or financial support	C	374	64	56	494
		NC	245	111	11	367
		NA	96	16	2	114
		Total (C+NC)	619	175	67	861
		% Compliance	60.42%	36.57%	83.58%	57.38%
SR-WC2.5	Employer supports training or workshops on additional skills or trades	C	321	115	56	492
		NC	296	72	12	380
		NA	98	4	1	103
		Total (C+NC)	617	187	68	872
		% Compliance	52.03%	61.50%	82.35%	56.42%
SR-WC3.1	Employer has transportation/care plan in place in case of medical emergency	C	568	182	69	819
		NC	116	5	0	121
		NA	31	4	0	35
		Total (C+NC)	684	187	69	940
		% Compliance	83.04%	97.33%	100.00%	87.13%
SR-WC3.2	Employer provides sufficient onsite first aid kits	C	514	173	65	752
		NC	177	16	4	197
		NA	24	2	0	26
		Total (C+NC)	691	189	69	949
		% Compliance	74.38%	91.53%	94.20%	79.24%
SR-WC3.3	Where there is convenient access to public medical care, employer supports these facilities either through in-kind donation or financial support	C	207	52	40	299
		NC	372	124	25	521
		NA	136	15	4	155
		Total (C+NC)	579	176	65	820
		% Compliance	35.75%	29.55%	61.54%	36.46%
SR-WC3.4	Employer or manager maintains communication with workers in case of medical emergencies	C	639	184	69	892
		NC	36	4	0	40
		NA	40	3	0	43
		Total (C+NC)	675	188	69	932
		% Compliance	94.67%	97.87%	100.00%	95.71%
SR-WC3.5	Employer offsets the cost of health services for permanent workers	C	324	144	64	532
		NC	36	9	1	46
		NA	355	38	4	397
		Total (C+NC)	360	153	65	578
		% Compliance	90.00%	94.12%	98.46%	92.04%
SR-WC3.6	Employer offsets the cost of health services for all workers	C	423	93	61	577
		NC	217	95	5	317
		NA	75	3	3	81
		Total (C+NC)	640	188	66	894
		% Compliance	66.09%	49.47%	92.42%	64.54%

Indicator		Compliance	Mill Type			All
			Wet	Dry	Both	
SR-WC4.1	Employer provides personal protective equipment to all applicable employees at no cost	C	391	138	60	589
		NC	177	177	8	362
		NA	147	6	1	154
		Total (C+NC)	568	315	68	951
		% Compliance	68.84%	43.81%	88.24%	61.93%
SR-WC4.2	There is a written record documenting instructor, materials, and attendance for all health and safety training	C	229	66	51	346
		NC	380	123	16	519
		NA	106	2	2	110
		Total (C+NC)	609	189	67	865
		% Compliance	37.60%	34.92%	76.12%	40.00%
SR-WC4.3	Training occurs at regular intervals, at a minimum yearly, free of charge, and during regular working hours	C	308	100	53	461
		NC	252	88	15	355
		NA	155	3	1	159
		Total (C+NC)	560	188	68	816
		% Compliance	55.00%	53.19%	77.94%	56.50%
SR-WC4.4	Training covers, at a minimum: use of protective equipment, safe handling of hazardous materials, operation of equipment and personal safety/hygiene	C	270	90	53	413
		NC	251	84	13	348
		NA	194	17	3	214
		Total (C+NC)	521	174	66	761
		% Compliance	51.82%	51.72%	80.30%	54.27%
SR-WC4.5	There are regular safety meetings for all relevant workers	C	419	132	56	607
		NC	143	49	7	199
		NA	153	10	6	169
		Total (C+NC)	562	181	63	806
		% Compliance	74.56%	72.93%	88.89%	75.31%
SR-WC4.6	There is a written protocol for workers and management to review safety procedures and training materials in the event of accidents, exposures to hazardous materials or spills	C	208	55	55	318
		NC	371	119	12	502
		NA	136	17	2	155
		Total (C+NC)	579	174	67	820
		% Compliance	35.92%	31.61%	82.09%	38.78%
SR-WC4.7	Workers utilize appropriate protective equipment when applying agrochemicals and operating machinery	C	312	127	57	496
		NC	183	34	7	224
		NA	220	30	5	255
		Total (C+NC)	495	161	64	720
		% Compliance	63.03%	78.88%	89.06%	68.89%
SR-WC4.8	All workers who handle/mix/apply agrochemicals have access to eye baths, hand washing and showers post-handling of agrochemicals	C	110	5	17	132
		NC	28	2	0	30
		NA	577	184	52	813
		Total (C+NC)	138	7	17	162
		% Compliance	79.71%	71.43%	100.00%	81.48%

Indicator		Compliance	Mill Type			All
			Wet	Dry	Both	
SR-WC4.9	Authorized minors and pregnant women are prohibited from handling or applying agrochemicals OR operating heavy machinery	C	361	113	41	515
		NC	10	0	0	10
		NA	344	78	28	450
		Total (C+NC)	371	113	41	525
		% Compliance	97.30%	100.00%	100.00%	98.10%
SR-WC4.10	Workers do not enter areas where pesticides were applied in the prior 48 hours without protective gear	C	64	7	7	78
		NC	21	0	2	23
		NA	630	184	60	874
		Total (C+NC)	85	7	9	101
		% Compliance	75.29%	100.00%	77.78%	77.23%

Indicator	Compliance	Size & Mill Type			
		Small - Wet	Wet	Dry	
<b>CP-WC1</b>	<b>Minimizing Water Consumption</b>				
CP-WC1.1	The total volume of water used for pulping, washing, and sorting for coffee processing operations is tracked and recorded	C	1142	396	NA
		NC	8532	372	NA
		Total (C+NC)	9674	768	NA
		NA	24530	16	NA
		% Compliance	11.81%	51.56%	NA
CP-WC1.2	If water is used for separating coffee cherry before pulping, then a siphon of less than 3 cubic meters is used	C	NA	275	NA
		NC	NA	210	NA
		Total (C+NC)	NA	485	NA
		NA	NA	299	NA
		% Compliance	NA	56.70%	NA
CP-WC1.3	Processing facility recycles water for transporting coffee prior to pulping and for pulping	C	NA	372	NA
		NC	NA	318	NA
		Total (C+NC)	NA	690	NA
		NA	NA	94	NA
		% Compliance	NA	53.91%	NA
CP-WC1.4	The amount of water used on a per unit basis shows a decrease over time	C	4079	244	NA
		NC	5771	353	NA
		Total (C+NC)	9850	597	NA
		NA	24354	187	NA
		% Compliance	41.41%	40.87%	NA
CP-WC1.5	The ratio between coffee cherry and water is no more than 1:1	C	1343	277	NA
		NC	8826	406	NA
		Total (C+NC)	10169	683	NA
		NA	24035	101	NA
		% Compliance	13.21%	40.56%	NA
<b>CP-WC2</b>	<b>Reducing Wastewater Impacts</b>				
CP-WC2.1	Wastewater from pulping and washing is managed in a way that does not impact the local or surrounding environment	C	21909	633	NA
		NC	8482	145	NA
		Total (C+NC)	30391	778	NA
		NA	3813	6	NA
		% Compliance	72.09%	81.36%	NA
CP-WC2.2	If wastewater from pulping and washing is released into a leach field or lagoon or sprayed onto fields, the boundary of the fields or lagoon is a minimum of 40m from all watercourses	C	NA	452	NA
		NC	NA	153	NA
		Total (C+NC)	NA	605	NA
		NA	NA	179	NA
		% Compliance	NA	74.71%	NA
CP-WC2.3	If wastewater is discharged to a watercourse or a sewer, the following wastewater tests are conducted at all exit points (and meet established environmental regulatory norms) on a monthly basis during operations: biological oxygen demand, chemical oxygen demand, pH	C	1280	86	NA
		NC	4570	149	NA
		Total (C+NC)	5850	235	NA
		NA	28354	549	NA
		% Compliance	21.88%	36.60%	NA

Indicator		Compliance	Size & Mill Type		
			Small - Wet	Wet	Dry
CP-WC2.4	There is no evidence of contamination from processing operations of neighboring or local water bodies	C	NA	613	NA
		NC	NA	149	NA
		Total (C+NC)	NA	762	NA
		NA	NA	22	NA
		% Compliance	NA	80.45%	NA
CP-WM1	<b>Waste Management Operations/Beneficial Reuse</b>				
CP-WM1.1	Processing wastes are managed in such a way as to not contaminate the local environment	C	25835	699	NA
		NC	4921	79	NA
		Total (C+NC)	30756	778	NA
		NA	3448	6	NA
		% Compliance	84.00%	89.85%	NA
CP-WM1.2	Skin, pulp, mucilage and unacceptable cherries are composted or processed by worms	C	22049	682	NA
		NC	10502	94	NA
		Total (C+NC)	32551	776	NA
		NA	1653	8	NA
		% Compliance	67.74%	87.89%	NA
CP-WM1.3	Organic processing byproducts are used as soil amendments by the farm or, in the case of a standalone processor, distributed to local farmers	C	26913	732	NA
		NC	2775	38	NA
		Total (C+NC)	29688	770	NA
		NA	4516	14	NA
		% Compliance	90.65%	95.06%	NA
CP-WM1.4	Solids are recovered from sedimentation pools, composted and used by coffee farms	C	NA	538	NA
		NC	NA	157	NA
		Total (C+NC)	NA	695	NA
		NA	NA	89	NA
		% Compliance	NA	77.41%	NA
CP-WM2	<b>Waste Management</b>				
CP-WM2.1	Parchment hulls from <b>dry milling</b> are recovered for use in mechanical coffee dryers, generating energy or other beneficial uses	C	NA	NA	218
		NC	NA	NA	12
		Total (C+NC)	NA	NA	230
		NA	NA	NA	30
		% Compliance	NA	NA	94.78%
CP-EC1	<b>Energy Conservation/Impacts</b>				
CP-EC1.1, 2.1	The quantity of energy used on-site for coffee processing operations shall be reported	C	NA	431	219
		NC	NA	299	19
		Total (C+NC)	NA	730	238
		NA	NA	54	22
		% Compliance	NA	59.04%	92.02%

Indicator		Compliance	Size & Mill Type		
			Small - Wet	Wet	Dry
CP-EC1.2, 2.2	Parchment coffee is patio dried or dried in other energy efficient ways	C	68245	617	165
		NC	708	27	6
		Total (C+NC)	68953	644	171
		NA	2738	140	89
		% Compliance	98.97%	95.81%	96.49%
CP-EC1.3, 2.3	The quantity of wood/other fuel used for drying coffee is recorded	C	NA	202	52
		NC	NA	41	4
		Total (C+NC)	NA	243	56
		NA	NA	541	204
		% Compliance	NA	83.13%	92.86%
CP-EC1.4, 2.4	Wood used for drying coffee comes from pruning of shade trees, responsibly managed forests, or other minimal impact harvests	C	NA	192	41
		NC	NA	1	1
		Total (C+NC)	NA	193	42
		NA	NA	591	218
		% Compliance	NA	99.48%	97.62%
CP-EC1.5, 2.5	The total amount of energy used per pound of green coffee show a decrease over time	C	NA	183	109
		NC	NA	349	97
		Total (C+NC)	NA	532	206
		NA	NA	252	54
		% Compliance	NA	34.40%	52.91%
CP-EC1.6, 2.6	Operation shows commitment to the production of renewable energy through the production or purchase of energy produced using renewable and high-efficiency technologies	C	NA	368	139
		NC	NA	331	86
		Total (C+NC)	NA	699	225
		NA	NA	85	35
		% Compliance	NA	52.65%	61.78%
CP-EC1.7, 2.7	All on-site energy production operations are demonstrably operated in accordance with local permitting requirements or they meet the maximum practicable emissions standards	C	NA	423	197
		NC	NA	54	6
		Total (C+NC)	NA	477	203
		NA	NA	307	57
		% Compliance	NA	88.68%	97.04%

## Appendix D: Farm Reporting Rates for C.A.F.E. Practices Indicators

Indicator		Small	Medium	Large	
<b>Social Responsibility</b>					
<b>Hiring Practices and Employment Policies</b>					
Minimum/ Living Wage/Overtime Regulation	SR-HP1.1	All full-time workers are paid the nationally or regionally established minimum wage	4%	61%	98%
	SR-HP1.2	All part-time workers are paid the nationally or regionally established minimum wage	3%	18%	29%
	SR-HP1.3	All temporary/seasonal workers are paid the nationally or regionally established minimum wage	66%	92%	94%
	SR-HP1.9	Overtime pay meets national requirements	17%	25%	52%
	SR-HP1.10	Overtime pay exceeds national requirements	19%	23%	51%
	SR-HP1.11	All full-time workers are paid more than the nationally or regionally established minimum wage	4%	61%	93%
	SR-HP1.12	All part-time workers are paid more than the nationally or regionally established minimum wage	3%	18%	29%
	SR-HP1.13	All temporary/seasonal workers are paid more than the nationally or regionally established minimum wage	66%	92%	94%
	SR-HP1.14	Full-time workers are paid at least a living wage	6%	61%	92%
	SR-HP1.20	Provident/pension plan that exceeds legal requirements is in place for full-time employees	NA	58%	93%
Vacation/ Sick Leave Regulation	SR-HP3.5	Employer has a paid sick leave program for full-time employees	NA	61%	93%
	SR-HP3.6	Employer has a paid sick leave program for all workers	NA	88%	97%
	SR-HP3.8	Employer has an annual leave (vacation) program that meets applicable laws	NA	60%	93%
Child Labor/ Discrimination/ Forced Labor	SR-HP4.1	Employer does not directly contract any persons under the age of 14	79%	95%	98%
	SR-HP4.2	Employment of authorized minors older than 14 does not conflict with their access to education	32%	23%	28%
	SR-HP4.3	Management has an enforced policy prohibiting discrimination on the basis of gender, race, ethnicity, age or religion as per ILO Convention 111	NA	95%	100%

Indicator			Small	Medium	Large
<b>Social Responsibility</b>					
Child Labor/ Discrimination/ Forced Labor	SR-HP4.4	Employer prohibits the use of forced, bonded, indentured or involuntary convict labor	73%	94%	98%
	SR-HP4.7	All workers receive equal pay for equal work, except in case of recognizing seniority of service through higher pay	NA	95%	99%
<b>Worker Conditions</b>					
Access to Housing, Water and Sanitary Facilities	SR-WC1.1	Part-time/seasonal and full-time workers living onsite have habitable dwellings	10%	66%	91%
	SR-WC1.2	Workers have ready access to potable water	64%	92%	97%
	SR-WC1.3	Worker housing has buffer zones from productive area and agrochemical storage facilities sufficient to prevent agrochemical exposure	NA	67%	165%
	SR-WC1.4	Workers have ready access to sanitary facilities that do not impact the local environment	NA	91%	97%
Access to Education	SR-WC2.1	Where there is insufficient access to public education, schoolchildren (of <b>primary</b> school age) of workers who live on-site have access to primary educational instruction, facilities and materials that meet national requirements	NA	34%	54%
	SR-WC2.2	Where there is insufficient access to public education, schoolchildren (of <b>secondary</b> school age) of workers who live on-site have access to primary educational instruction, facilities and materials that meet national requirements	NA	27%	46%
	SR-WC2.3	Employer provides direct incentives for education in the form of scholarships, educational materials, books, transportation, food, etc.	NA	82%	96%
	SR-WC2.4	Where there is convenient access to public education programs, employer supports those schools either through in-kind donation or financial support	NA	90%	95%
	SR-WC2.5	Employer supports training or workshops on additional skills or trades	NA	92%	100%
Access to Medical Care	SR-WC3.3	Where there is convenient access to public medical care, employer supports these facilities either through in-kind donation or financial support	NA	81%	89%
	SR-WC3.5	Employer offsets the cost of health services for permanent workers	NA	64%	94%

Indicator			Small	Medium	Large
<b>Social Responsibility</b>					
Access to Medical Care	SR-WC3.6	Employer offsets the cost of health services for all workers	NA	92%	98%
Access to Training, Health & Safety	SR-WC4.1	Employer provides personal protective equipment to all applicable employees at no cost	39%	78%	98%
<b>Coffee Growing -- Environmental Leadership</b>					
<b>Protecting Water Resources</b>					
Watercourse Protection	CG-WR1.1	Watercourse buffer zones are maintained adjacent to at least 25% of water bodies (>2m in width)	NA	69%	78%
	CG-WR1.2	Watercourse buffer zones are maintained adjacent to at least 50% of water bodies (>2m in width)	28%	69%	78%
	CG-WR1.3	Watercourse buffer zones are maintained adjacent to all of water bodies (>2m in width)	27%	69%	79%
	CG-WR1.4	Watercourse buffer zones are maintained adjacent to at least 50% of seasonal/intermittent watercourses (>2m in width)	NA	49%	62%
	CG-WR1.5	Watercourse buffer zones are maintained adjacent to all seasonal/intermittent watercourses (>2m in width)	NA	49%	62%
	CG-WR1.6	Watercourse buffer zones of at least 5m per side are maintained adjacent to at least 50% of seasonal/intermittent and water bodies	NA	66%	79%
	CG-WR1.7	Watercourse buffer zones of at least 5m per side are maintained adjacent to all seasonal/intermittent and water bodies	NA	68%	81%
	CG-WR1.12	There is a plan to restore native vegetation within the buffers	NA	64%	78%
	CG-WR1.14	At least 50% of watercourse buffer zones are composed of native woody vegetation	26%	73%	82%
	CG-WR1.15	All watercourse buffer zones are composed of native woody vegetation	26%	73%	83%
Water Quality Protection	CG-WR2.1	There is no application of agrochemicals within 10m of any water body or watercourse	45%	73%	85%
	CG-WR2.2	There is no application of nematicides within 20m of any water body or watercourse	NA	55%	60%
	CG-WR2.4	Synthetic fertilizers are not used or the farm is certified organic	99%	90%	94%
Water and Resources Irrigation	CG-WR3.1	Irrigation water use is tracked and recorded per lb. of green coffee, per hectare and for each plot	NA	2%	6%
	CG-WR3.2	There is a hydrological balance assessment, including climatic, community and competing agricultural issues	NA	4%	8%
	CG-WR3.3	Irrigation water use doesn't exceed the operation's net neutral hydrological balance	NA	1%	5%

Indicator			Small	Medium	Large
<b>Coffee Growing -- Environmental Leadership</b>					
<b>Protecting Soil Resources</b>					
Controlling Surface Erosion	CG-SR1.1	Farm managers demonstrate knowledge of farm areas at risk to erosion	92%	93%	99%
	CG-SR1.2	There is an explicit soil management plan that includes measures to minimize surface erosion	NA	96%	99%
	CG-SR1.3	Areas at high risk of erosion are identified on a map	64%	91%	97%
	CG-SR1.4	Productive areas on at least 25% of slopes over 10% slope are covered by shade trees and/or cover crops/vegetation	74%	94%	96%
	CG-SR1.5	Productive areas on at least 50% of slopes over 10% slope are covered by shade trees and/or cover crops/vegetation	74%	94%	96%
	CG-SR1.6	Productive areas on all of slopes over 10% slope are covered by shade trees and/or cover crops/vegetation	73%	94%	96%
	CG-SR1.7	Productive areas on at least 25% of slopes over 20% slope are covered by shade trees and/or cover crops/vegetation	63%	92%	93%
	CG-SR1.8	Productive areas on at least 50% of slopes over 20% slope are covered by shade trees and/or cover crops/vegetation	63%	92%	93%
	CG-SR1.9	Productive areas on all of slopes over 20% slope are covered by shade trees and/or cover crops/vegetation	63%	91%	93%
	CG-SR1.10	Productive areas on at least 25% of slopes over 30% slope are covered by shade trees and/or cover crops/vegetation	55%	87%	87%
	CG-SR1.11	Productive areas on at least 50% of slopes over 30% slope are covered by shade trees and/or cover crops/vegetation	54%	85%	87%
	CG-SR1.12	Productive areas on all of slopes over 30% slope are covered by shade trees and/or cover crops/vegetation	54%	85%	87%
	CG-SR1.13	Herbicides are not used to control ground vegetation/cover crops and are only used in spot applications for aggressive weeds	98%	94%	99%
	CG-SR1.16	Areas in which the risk of landslides is extreme are not cultivated, are left or taken out of production and restored with native vegetation where practicable	NA	71%	80%

Indicator			Small	Medium	Large
<b>Coffee Growing -- Environmental Leadership</b>					
Maintaining Soil Productivity	CG-SR2.1	At least 25% of the productive area is covered by an organic matter layer and/or nitrogen-fixing cover crops	100%	98%	100%
	CG-SR2.2	At least 50% of the productive area is covered by an organic matter layer and/or nitrogen-fixing cover crops	100%	98%	100%
	CG-SR2.3	All of the productive area is covered by an organic matter layer and/or nitrogen-fixing cover crops	100%	98%	100%
	CG-SR2.5	At least 25% of the productive area is planted with nitrogen-fixing, leguminous trees	100%	98%	100%
	CG-SR2.6	At least 50% of the productive area is planted with nitrogen-fixing, leguminous trees	99%	98%	99%
	CG-SR2.7	All of the productive area is planted with nitrogen-fixing, leguminous trees	98%	98%	99%
	CG-SR2.12	Farm is certified organic	NA	97%	97%
<b>Conserving Biodiversity</b>					
Maintaining a Coffee Shade Canopy	CG-CB1.1	Native trees are removed only when they constitute a human hazard or when they significantly compete with coffee plants	79%	96%	97%
	CG-CB1.2	The farm has a shade management plan	NA	95%	99%
	CG-CB1.3	The farm is implementing the shade management plan and meeting the timeline for actions	NA	82%	87%
	CG-CB1.4	Farm is covered by at least 10% canopy cover	99%	97%	100%
	CG-CB1.5	Canopy cover is comprised of a diversity of tree species	92%	98%	99%
	CG-CB1.6	Canopy cover is retained at biologically significant levels	94%	97%	99%
	CG-CB1.7	Invasive exotic species are not used for canopy cover	92%	97%	99%
	CG-CB1.8	An average of 40% canopy cover is maintained across the productive area of the farm	NA	96%	99%
	CG-CB1.9	At least 75% of the canopy cover is comprised of locally native species and/or the canopy consists of at least 10 species that are locally native or can be shown to contribute to the conservation of native biodiversity	92%	98%	99%
	CG-CB1.10	Where local ecological conditions allow, shade canopy is comprised of at least 2 distinguishable canopy strata	NA	92%	92%
	CG-CB1.11	Locally native epiphytes are retained in the canopy cover	60%	94%	96%

Indicator			Small	Medium	Large
<b>Coffee Growing -- Environmental Leadership</b>					
Maintaining a Coffee Shade Canopy	CG-CB1.12	Biological legacies, such as cavity trees and standing and/or fallen dead trees, are retained or recruited	63%	95%	99%
Protecting Wildlife	CG-CB2.1	There are specific implemented measures to restrict unauthorized hunting and commercial collection of flora and fauna	70%	98%	100%
	CG-CB2.2	Hunting threatened or rare wildlife species is not allowed on the property	66%	96%	97%
	CG-CB2.3	Farm management has created a list of wildlife species native to the region and identified which of those species are classified as vulnerable, endangered or critically endangered according to the IUCN red list	NA	97%	99%
	CG-CB2.4	Farm management has consulted with relevant government agencies or universities to determine which wildlife species are native to the farm's region and classified as vulnerable, endangered, or critically endangered	NA	97%	99%
	CG-CB2.5	A Wildlife Management Plan is developed on the basis of the results gathered from the consultations with relevant government agencies or universities	NA	92%	96%
	CG-CB2.6	The Wildlife Management Plan is properly implemented on the farm	NA	76%	80%
Conservation Areas and Ecological Reserves	CG-CB3.1	After March 2004, there is no conversion of natural forest to agricultural production	98%	92%	94%
	CG-CB3.2	If areas of natural vegetation are converted to agricultural production, these are not areas of high ecological value and there are equivalent set-asides	NA	30%	27%
	CG-CB3.3	There is an assessment of the farm for areas of high ecological value	NA	88%	95%
	CG-CB3.5	Areas of identified high ecological value are clearly defined, protected and managed with a conservation emphasis that maintains the high ecological values	NA	72%	84%
	CG-CB3.6	If areas of high ecological value are completely lacking on the farm, there is a plan to restore natural habitat, forest and other natural vegetative areas on a portion of the farm	NA	34%	21%
	CG-CB3.7	If areas of high ecological value are completely lacking on the farm, managers have implemented the plan to restore natural habitat or condition on a portion of the farm	NA	32%	19%

Indicator			Small	Medium	Large
<b>Coffee Growing -- Environmental Leadership</b>					
Conservation Areas and Ecological Reserves	CG-CB3.8	Areas of high ecological value are protected from future development through the declaration of private reserves, conservation emphasis areas or legal conservation easements	NA	64%	81%
	CG-CB3.9	At least 3% of the farm is set aside as a conservation emphasis area	NA	95%	99%
	CG-CB3.10	At least 5% of the farm is set aside as a conservation emphasis area	NA	94%	99%
	CG-CB3.11	Biological corridors are established to connect multiple conservation emphasis areas	NA	74%	87%
	CG-CB3.12	Multiple plant species selected for contribution to biodiversity are established where space allows within the farm	NA	96%	99%
<b>Environmental Management and Monitoring</b>					
Ecological Pest and Disease Management and Reducing Agrochemical Use	CG-EM1.1	Farms do not use chemicals that are listed by the World Health Organization as Type 1A or 1B, except as specified by the nematode amendment	94%	92%	100%
	CG-EM1.7	Farms calculate total toxic load of productive area on farm	NA	64%	91%
	CG-EM1.8	Toxic load is decreased over time through reduction in agrochemical use or selecting less toxic alternatives	NA	55%	73%
	CG-EM1.19	There is a written Integrated Pest Management Plan that is properly implemented in the field	NA	95%	99%
Farm Management and Monitoring Practices	CG-EM2.3	Farm managers develop a written management plan and supporting documents	NA	96%	99%
	CG-EM2.4	Farm managers implement the written management plan	NA	81%	90%
	CG-EM2.5	The management plan is updated on an annual basis	NA	78%	85%

## Appendix E: Mill Reporting Rates for C.A.F.E. Practices Indicators

Indicator		Small Wet	Wet	Dry	Both	
<b>Social Responsibility</b>						
<b>Hiring Practices and Employment Policies</b>						
Wages and Benefits	SR-HP1.1	All full-time workers are paid the nationally or regionally established minimum wage	NA	48%	81%	99%
	SR-HP1.2	All part-time workers are paid the nationally or regionally established minimum wage	NA	11%	30%	25%
	SR-HP1.3	All temporary/seasonal workers are paid the nationally or regionally established minimum wage	NA	83%	84%	81%
	SR-HP1.4	Management maintains complete written earning records	NA	89%	99%	100%
	SR-HP1.5	Workers are paid regularly in cash/cash equivalent	NA	92%	99%	100%
	SR-HP1.6	If nationally legally mandated benefits are required for full-time workers, then these are paid by employer	NA	47%	75%	90%
	SR-HP1.7	If nationally legally mandated benefits are required for part-time workers, then these are paid by employer	NA	10%	9%	20%
	SR-HP1.8	If nationally legally mandated benefits are required for seasonal/temporary workers, then these are paid by employer	NA	61%	54%	64%
	SR-HP1.9	Overtime pay meets national requirements	NA	51%	81%	97%
	SR-HP1.10	Overtime pay exceeds national requirements	NA	49%	79%	97%
	SR-HP1.11	All full-time workers are paid more than the nationally or regionally established minimum wage	NA	47%	81%	99%
	SR-HP1.12	All part-time workers are paid more than the nationally or regionally established minimum wage	NA	11%	30%	25%
	SR-HP1.13	All temporary/seasonal workers are paid more than the nationally or regionally established minimum wage	NA	83%	84%	81%
	SR-HP1.14	Full-time workers are paid at least a living wage	NA	53%	82%	88%
	SR-HP1.15	In-kind payments are itemized in writing	NA	10%	8%	10%
	SR-HP1.16	Workers have access to their earnings records	NA	89%	99%	100%
	SR-HP1.17	Wages are paid directly to all workers	NA	90%	99%	100%
	SR-HP1.18	Time spent by workers in any required trainings and meetings is considered working time and workers are compensated at their normal rate	NA	65%	91%	99%
	SR-HP1.19	Financial disciplinary penalties are not assessed against workers	NA	90%	99%	100%
	SR-HP1.20	Provident/pension plan that exceeds legal requirements is in place for full-time employees	NA	52%	80%	97%

<b>Indicator</b>			<b>Small Wet</b>	<b>Wet</b>	<b>Dry</b>	<b>Both</b>
Freedom of Association/ Collective Bargaining	SR-HP2.1	Workers have either direct communication or designated representative with management or employer	NA	90%	99%	100%
	SR-HP2.2	Workers can air workplace grievances to management or employer with no fear of reprisal	NA	89%	99%	100%
	SR-HP2.3	Workers' right to organize and/or collectively bargain in accordance with national laws and international obligations is acknowledged by management	NA	74%	80%	93%
	SR-HP2.4	There is a workers' association formed and governed by the employees independent of management influence	NA	51%	55%	65%
	SR-HP2.5	There are regular meetings between management and employees or employees' association	NA	80%	96%	99%
	SR-HP2.6	Regular meetings between management and employees (or employees' association) continually improve working conditions	NA	77%	94%	97%
	SR-HP2.7	There is a workers' association fund to which management and workers contribute matching funds	NA	20%	39%	43%
	SR-HP2.8	Workers have equal access to association fund to finance projects that improve conditions for workers	NA	14%	28%	35%
	SR-HP2.9	A collective bargaining agreement exists between employees and employer in regions or countries where agricultural workers' organizations are established in the coffee sector	NA	18%	23%	23%
Vacation /Sick Leave Regulation	SR-HP3.1	Workers do not work more regular hours per day or week than allowable under local laws	NA	89%	99%	100%
	SR-HP3.2	Permanent workers must have the equivalent of one continuous 24 period off in each 7 day period or whatever is required by law	NA	55%	87%	100%
	SR-HP3.3	Workers must not work more total hours in one day or week than allowable under applicable laws	NA	89%	99%	100%
	SR-HP3.4	Hours worked on potentially hazardous activities are restricted in accordance with the law	NA	50%	59%	58%
	SR-HP3.5	Employer has a paid sick leave program for full-time employees	NA	51%	80%	99%
	SR-HP3.6	Employer has a paid sick leave program for all workers	NA	85%	97%	100%

Indicator			Small Wet	Wet	Dry	Both
Vacation /Sick Leave Regulation	SR-HP3.7	If overtime work is required as part of the job, such requirements are clear at the time of hiring	NA	56%	93%	99%
	SR-HP3.8	Employer has an annual leave (vacation) program that meets applicable laws	NA	56%	82%	97%
	SR-HP3.9	If employees do not take annual leave, employer can either allow vacation time to accrue or can pay wages for the equivalent amount of time accrued under the regular pay scale	NA	43%	59%	41%
Child Labor/ Discrimination/ Forced Labor	SR-HP4.1	Employer does not directly contract any persons under the age of 14	NA	92%	97%	100%
	SR-HP4.2	Employment of authorized minors older than 14 does not conflict with their access to education	NA	18%	41%	26%
	SR-HP4.3	Management has an enforced policy prohibiting discrimination on the basis of gender, race, ethnicity, age or religion as per ILO Convention 111	NA	93%	98%	100%
	SR-HP4.4	Employer prohibits the use of forced, bonded, indentured or involuntary convict labor	NA	92%	98%	93%
	SR-HP4.5	Employer observes all legal requirement for the work of authorized minors	NA	16%	38%	19%
	SR-HP4.6	Workers do not surrender their identity papers or other original personal documents or pay deposits as a condition of employment	NA	90%	99%	100%
	SR-HP4.7	All workers receive equal pay for equal work, except in case of recognizing seniority of service through higher pay	NA	87%	90%	100%
<b>Worker Conditions</b>						
Access to Housing, Water and Sanitary Facilities	SR-WC1.1	Part-time/seasonal and full-time workers living onsite have habitable dwellings	NA	60%	34%	68%
	SR-WC1.2	Workers have ready access to potable water	NA	89%	74%	96%
	SR-WC1.3	Worker housing has buffer zones from productive area and agrochemical storage facilities sufficient to prevent agrochemical exposure	NA	59%	14%	49%
	SR-WC1.4	Workers have ready access to sanitary facilities that do not impact the local environment	NA	87%	75%	96%
	SR-WC1.5	Garbage from employer-provided housing and facilities is removed to either a municipal waste dump or to a waste site located at least 200 meters from any water body	NA	76%	43%	90%

Indicator			Small Wet	Wet	Dry	Both
Access to Education	SR-WC2.1	Where there is insufficient access to public education, schoolchildren (of <b>primary</b> school age) of workers who live on-site have access to primary educational instruction, facilities and materials that meet national requirements	NA	40%	31%	38%
	SR-WC2.2	Where there is insufficient access to public education, schoolchildren (of <b>secondary</b> school age) of workers who live on-site have access to primary educational instruction, facilities and materials that meet national requirements	NA	33%	30%	33%
	SR-WC2.3	Employer provides direct incentives for education in the form of scholarships, educational materials, books, transportation, food, etc.	NA	77%	90%	94%
	SR-WC2.4	Where there is convenient access to public education programs, employer supports those schools either through in-kind donation or financial support	NA	87%	92%	97%
	SR-WC2.5	Employer supports training or workshops on additional skills or trades	NA	86%	98%	99%
Access to Medical Care	SR-WC3.1	Employer has transportation/care plan in place in case of medical emergency	NA	96%	98%	100%
	SR-WC3.2	Employer provides sufficient onsite first aid kits	NA	97%	99%	100%
	SR-WC3.3	Where there is convenient access to public medical care, employer supports these facilities either through in-kind donation or financial support	NA	81%	92%	94%
	SR-WC3.4	Employer or manager maintains communication with workers in case of medical emergencies	NA	94%	98%	100%
	SR-WC3.5	Employer offsets the cost of health services for permanent workers	NA	50%	80%	94%
	SR-WC3.6	Employer offsets the cost of health services for all workers	NA	90%	98%	96%
Access to Training, Health & Safety	SR-WC4.1	Employer provides personal protective equipment to all applicable employees at no cost	NA	79%	165%	99%
	SR-WC4.2	There is a written record documenting instructor, materials, and attendance for all health and safety training	NA	85%	99%	97%
	SR-WC4.3	Training occurs at regular intervals, at a minimum yearly, free of charge, and during regular working hours	NA	78%	98%	99%
	SR-WC4.4	Training covers, at a minimum: use of protective equipment, safe handling of hazardous materials, operation of equipment and personal safety/hygiene	NA	73%	91%	96%
	SR-WC4.5	There are regular safety meetings for all relevant workers	NA	79%	95%	91%

<b>Indicator</b>			<b>Small Wet</b>	<b>Wet</b>	<b>Dry</b>	<b>Both</b>
Access to Training, Health & Safety	SR-WC4.6	There is a written protocol for workers and management to review safety procedures and training materials in the event of accidents, exposures to hazardous materials or spills	NA	81%	91%	97%
	SR-WC4.7	Workers utilize appropriate protective equipment when applying agrochemicals and operating machinery	NA	69%	84%	93%
	SR-WC4.8	All workers who handle/mix/apply agrochemicals have access to eye baths, hand washing and showers post-handling of agrochemicals	NA	19%	4%	25%
	SR-WC4.9	Authorized minors and pregnant women are prohibited from handling or applying agrochemicals OR operating heavy machinery	NA	52%	59%	59%
	SR-WC4.10	Workers do not enter areas where pesticides were applied in the prior 48 hours without protective gear	NA	12%	4%	13%

Indicator			Small Wet	Wet	Dry	Both
<b>Coffee Processing -- Environmental Leadership</b>						
<b>Water Conservation</b>						
Minimizing Water Consumption	CP-WC1.1	The total volume of water used for pulping, washing, and sorting for coffee processing operations is tracked and recorded	20%	98%	NA	NA
	CP-WC1.2	If water is used for separating coffee cherry before pulping, then a siphon of less than 3 cubic meters is used	NA	62%	NA	NA
	CP-WC1.3	Processing facility recycles water for transporting coffee prior to pulping and for pulping	NA	88%	NA	NA
	CP-WC1.4	The amount of water used on a per unit basis shows a decrease over time	23%	76%	NA	NA
	CP-WC1.5	The ratio between coffee cherry and water is no more than 1:1	23%	87%	NA	NA
Reducing Wastewater Impacts	CP-WC2.1	Wastewater from pulping and washing is managed in a way that does not impact the local or surrounding environment	75%	99%	NA	NA
	CP-WC2.2	If wastewater from pulping and washing is released into a leach field or lagoon or sprayed onto fields, the boundary of the fields or lagoon is a minimum of 40m from all watercourses	NA	77%	NA	NA
	CP-WC2.3	If wastewater is discharged to a watercourse or a sewer, the following wastewater tests are conducted at all exit points (and meet established environmental regulatory norms) on a monthly basis during operations: biological oxygen demand, chemical oxygen demand, pH	14%	30%	NA	NA
	CP-WC2.4	There is no evidence of contamination from processing operations of neighboring or local water bodies	NA	97%	NA	NA
<b>Waste Management</b>						
Waste Management Operations/ Beneficial Reuse	CP-WM1.1	Processing wastes are managed in such a way as to not contaminate the local environment	77%	99%	NA	NA
	CP-WM1.2	Skin, pulp, mucilage and unacceptable cherries are composted or processed by worms	NA	99%	NA	NA
	CP-WM1.3	Organic processing byproducts are used as soil amendments by the farm or, in the case of a standalone processor, distributed to local farmers	76%	98%	NA	NA
	CP-WM1.4	Solids are recovered from sedimentation pools, composted and used by coffee farms	NA	89%	NA	NA
Waste Management	CP-WM2.1	Parchment hulls from dry milling are recovered for use in mechanical coffee dryers, generating energy or other beneficial uses	NA	NA	88%	NA

Indicator			Small Wet	Wet	Dry	Both
Energy Use						
Energy Conservation /Impacts	CP-EC1.1	The quantity of energy used on-site for coffee processing operations shall be reported	NA	93%	92%	NA
	CP-EC1.2	Parchment coffee is patio dried or dried in other energy efficient ways	83%	82%	66%	NA
	CP-EC1.3	The quantity of wood/other fuel used for drying coffee is recorded	NA	31%	22%	NA
	CP-EC1.4	Wood used for drying coffee comes from pruning of shade trees, responsibly managed forests, or other minimal impact harvests	NA	25%	16%	NA
	CP-EC1.5	The total amount of energy used per pound of green coffee show a decrease over time	NA	68%	79%	NA
	CP-EC1.6	Operation shows commitment to the production of renewable energy through the production or purchase of energy produced using renewable and high-efficiency technologies	NA	89%	87%	NA
	CP-EC1.7	All on-site energy production operations are demonstrably operated in accordance with local permitting requirements or they meet the maximum practicable emissions standards	NA	61%	78%	NA