



## 8 COFFEE MARKET

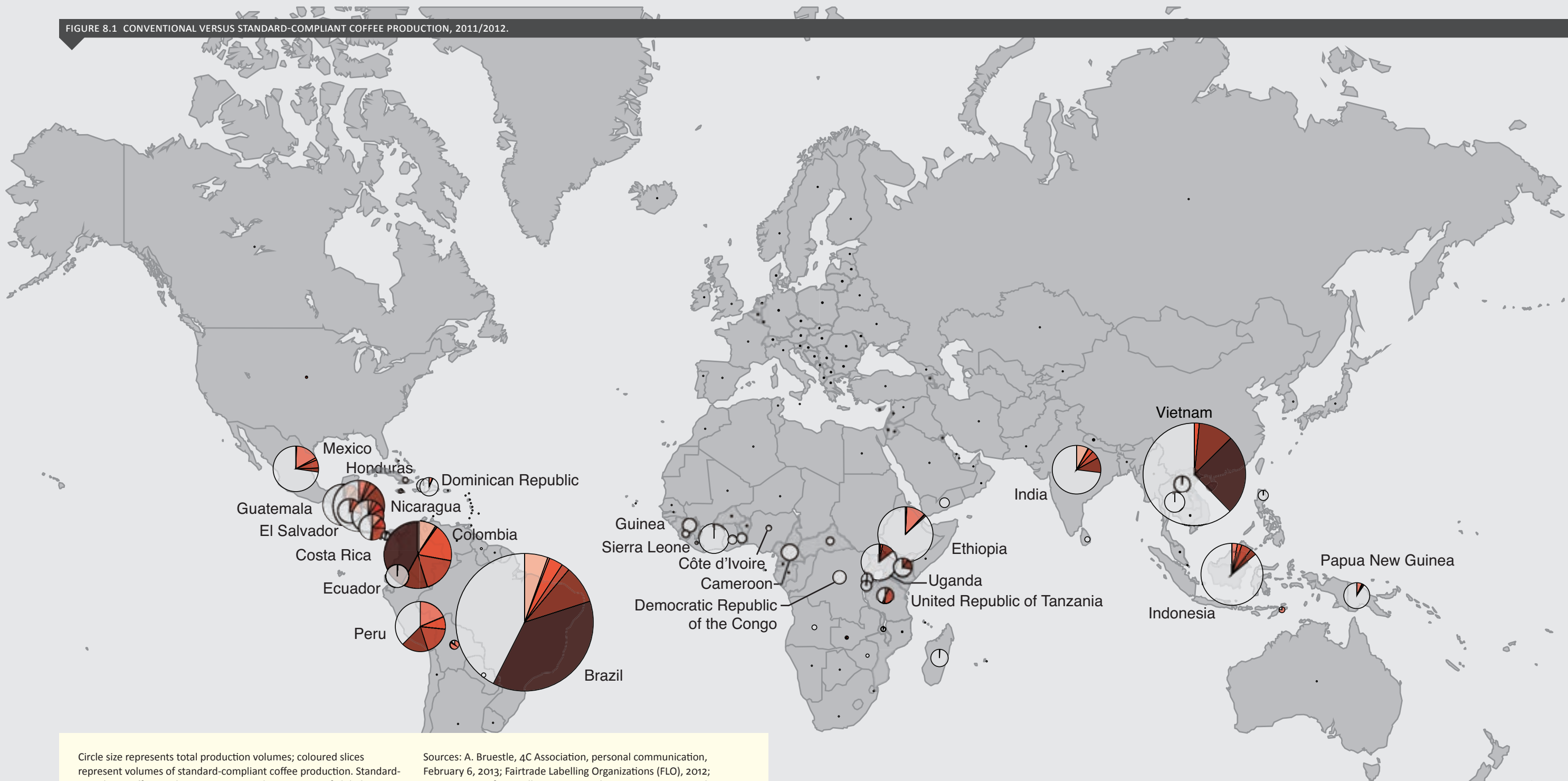


Coffee (e.g. *Coffea Arabica*, *C. Robusta*) is a drink brewed from the seeds of the *Coffea* genus.<sup>1</sup> Originating in East Africa, the coffee shrub was later cultivated in many tropical and subtropical countries across the world. It was introduced to the now major producing countries Brazil and Colombia in the early 1700s and to Vietnam in 1857. In 2012, 8.2 million metric tons of coffee were produced in over 50 countries on 0.2 per cent of the world's agricultural area. Over 80 per cent of the world's coffee production was exported, with a total export value of US\$23.4 billion. Estimates of total coffee farmers worldwide have long hovered at about 20 million to 25 million (Lewin, Giovannucci, & Varangis, 2004)<sup>2</sup> (see Table 8.1, Standard-compliant and conventional key statistics for coffee production and trade.).

Coffee is generally regarded as the pioneering industry for sustainability standards and certification (Reinecke, Manning & von Hagen, 2011). As with many other primary commodities, the global coffee market has been defined by high volatility and long-term declining prices. Notwithstanding international efforts to secure more stability and predictability in the relationship between supply and demand of coffee through the International Coffee Organization (ICO), growing global production, speculation and climatic uncertainty have continued to drive price volatility and long-term price decline within the sector. With coffee production being dominated by smallholder producers in tropical regions, themselves often subject to conditions of poverty and in close interaction with highly biodiverse biomes, the coffee sector has provided fertile ground for the development and adoption of sustainability standards.

- 1 Coffee was first cultivated in the Horn of Africa, specifically in Ethiopia, where, according to records, it was consumed by slaves taken from Sudan to Yemen through the port of Mocha (ICO, n.d.). One coffee "cherry" contains two seeds, or "beans."
- 2 This estimate has been quoted for over a decade; however, it is still relevant given coffee's extremely stable harvested area (0.3 per cent decrease per annum from 2004 to 2011) (Food and Agriculture Organization of the United Nations (FAO), 2013).

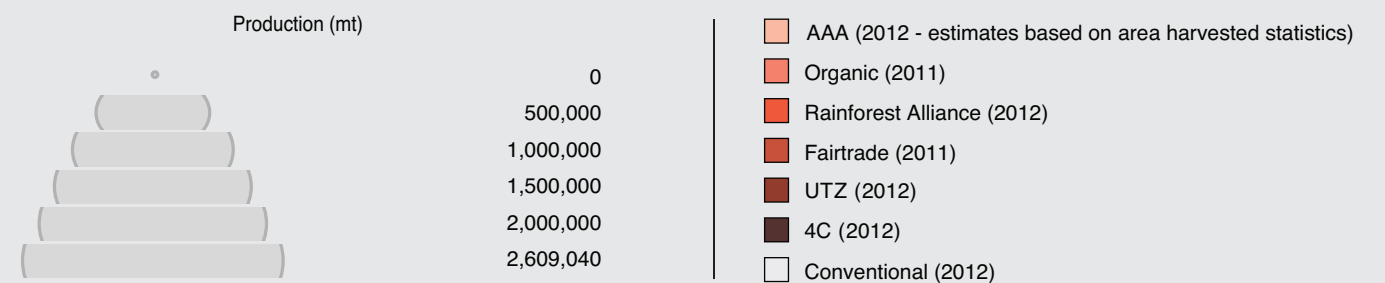
FIGURE 8.1 CONVENTIONAL VERSUS STANDARD-COMPLIANT COFFEE PRODUCTION, 2011/2012.



Circle size represents total production volumes; coloured slices represent volumes of standard-compliant coffee production. Standard-compliant coffee production represented 40 per cent of global production in 2012. Brazil, Colombia and Peru are the largest producers of standard-compliant coffee,<sup>3</sup> while Brazil, Vietnam and Colombia are the largest producers of coffee by volume. In several Latin American countries including Brazil, Colombia, Peru, Honduras and Costa Rica, standard-compliant production is approaching, or has surpassed, 30 to 50 per cent of total production. Geographic distribution of voluntary sustainability standards, for the most part, follows global distribution of production, although a larger proportion of standard-compliant production came from Latin America in 2012 (77 per cent of standard-compliant production, compared with 58 per cent of total production).

<sup>3</sup> The map does not adjust for multiple certifications.

Sources: A. Bruestle, 4C Association, personal communication, February 6, 2013; Fairtrade Labelling Organizations (FLO), 2012; C. Guinea, Rainforest Alliance, personal communication, March 24, 2013; Nestlé Nespresso Corporate Communications, personal communication, September 26, 2013; J. Rijkenberg, UTZ Certified, personal communication, March 19, 2013; ICO, 2013a; IISD, H. Willer, Research Institute of Organic Agriculture/Forschungsinstitut für biologischen Landbau (FiBL), personal communication, August 26, 2013.



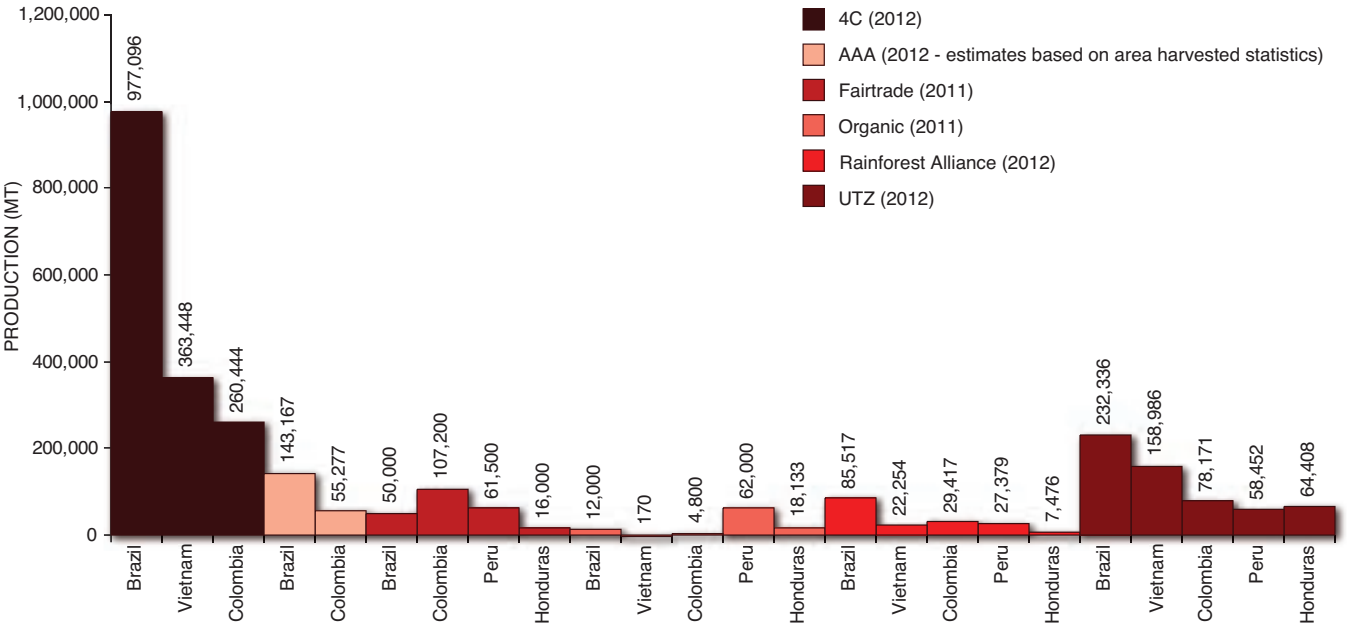
While certification initiatives for sustainable coffee have been around for more than 20 years, the past decade has seen a rapid increase in the development of new schemes and mainstream uptake of sustainable coffees. Many labels and certifications for coffee exist. The most important in terms of volumes certified include Nespresso AAA Sustainable Quality, 4C Association<sup>4</sup>,

4 The coffee sector widely applies two different conformity assessment processes: certification and verification. Certification is defined as a “third party attestation related to products, processes, systems or persons” (International Organization for Standardization, 2005). The definition of verification is “confirmation through the provision of objective evidence, that specified requirements have been fulfilled” (International Organization for Standardization, 2005). Typically, verification is used to define conformity assessment for internal processes and assurances, whereas certification is used to make claims with respect to external stakeholders. Practically speaking, both certification and verification can entail many of the same processes, even through the use of third parties to carry out the conformity assessment process; the main distinction rests with the formality and legal responsibilities associated with the verification process.

Starbucks Coffee And Farmer Equity (C.A.F.E.) Practices, Fairtrade, Organic (IFOAM is the standard-setting body), Rainforest Alliance (Sustainable Agriculture Network is the standard-setting body) and UTZ Certified. In 2012, 3.3 million metric tons of coffee were produced in compliance with a voluntary sustainability standard (40 per cent of global production; see Figure 8.1, Conventional versus standard-compliant coffee production, 2011/2012.), of which 840,000 metric tons were sold as standard compliant (25 per cent of standard-compliant production, 10 per cent of global production and 12 per cent of global exports). Brazil and Vietnam were the largest producers of standard-compliant coffee by volume in 2011/2012;<sup>5</sup> see Figure 8.2, Leading producers of standard-compliant coffee by initiative, 2011/2012.

5 In this section, all voluntary sustainability standard data are from 2012, except for Fairtrade and Organic country-level data and Organic aggregate data.

FIGURE 8.2 LEADING PRODUCERS OF STANDARD-COMPLIANT COFFEE BY INITIATIVE, 2011/2012.



Sources: J. Anderson, Starbucks, personal communication, November 21, 2013; A. Bruestle, 4C Association, personal communication, February 6, 2013; FLO, 2013; C. Guinea, Rainforest Alliance, personal communication, March 24, 2013; Nestlé Nespresso Corporate Communications, personal communication, September 26, 2013; J. Rijkenberg, UTZ Certified, personal communication, March 19, 2013; IISD, H. Willer, FiBL, personal communication, August 26, 2013.

TABLE 8.1 STANDARD-COMPLIANT AND CONVENTIONAL KEY STATISTICS FOR COFFEE PRODUCTION AND TRADE.

## KEY STATISTICS

|   |  |
|---|--|
| Top 5 producers (67% of global) (2012)                              | Brazil (32%), Vietnam (18%), Indonesia (6%), Colombia (6%), Ethiopia (5%)  |
| Top 5 producers of standard-compliant coffee (81% of global) (2012) | Brazil (40%), Colombia (17%), Vietnam (15%), Peru (6%), Honduras (3%)  |
| Top 5 coffee exporters (66% of global) (2012)                       | Brazil (24%), Vietnam (22%), Indonesia (9%), Colombia (6%), Honduras (5%)  |
| Top 5 importers (64% of global) (2012)                              | United States (24%), Germany (20%), Italy (8%), Japan (6%), France (6%)  |
| Global production (2012)  | 8.2 million metric tons  |
| Global exports (83% of production) (2012)                           | 6.8 million metric tons  |
| Total coffee export value (2012)                                    | US\$33.4 billion   |
| Global area harvested (2011)  | 10.5 million hectares  |
| Total number of farmers involved in coffee production               | 20–25 million  |
| Major international voluntary sustainability standards              | Nespresso AAA Sustainable Quality (AAA), Starbucks Coffee And Farmer Equity Practices (C.A.F.E. Practices), 4C Association, Fairtrade, Rainforest Alliance, Organic, UTZ Certified |
| Standard-compliant production (2012)                                | 3.3 million metric tons (40% of global production)   |
| Standard-compliant sales (2012)                                     | 0.8 million metric tons (25% of compliant production, 10% of global production, 12% of global exports)   |
| Key sustainability issues   | Maintaining biodiversity, climate change, poverty, worker health and safety  |

Sources: Top 5 producers: ICO, 2013a; Top 5 exporters, top 5 importers: ICO, 2012; Global production (green coffee): ICO, 2013a; Global exports (all types): ICO, 2013b; Global export value (all types): International Trade Centre (ITC), 2013c; Global area harvested: Food and Agriculture Organization of the United Nations (FAO), 2013; Total number of farmers involved in coffee production: Lewin et al., 2004; Standard-compliant data are from 2012, unless for Organic, whose data are from 2011: J. Anderson, Starbucks, personal communication, November 21, 2013; A. Bruestle, 4C Association, personal communication, February 6, 2013; FLO, 2012; C. Guinea, Rainforest Alliance, personal communication, March 24, 2013; Nestlé Nespresso Corporate Communications, personal communication, September 26, 2013; J. Rijkenberg, UTZ Certified, personal communication, March 19, 2013; IISD, H. Willer, FiBL, personal communication, August 26, 2013.





### Market reach

Approximately 3.3 million metric tons of standard-compliant coffee were produced in 2012, equivalent to 40 per cent of global production. Sales of standard-compliant coffee reached 12 per cent of exports during the same year (Figure 8.3).

### Growth

Standard-compliant coffee production grew 26 per cent per annum from 2008 to 2012.

### Regional importance

Brazil (40 per cent), Colombia (17 per cent) and Vietnam (15 per cent) produce the lion's share of the world's standard-compliant coffee.

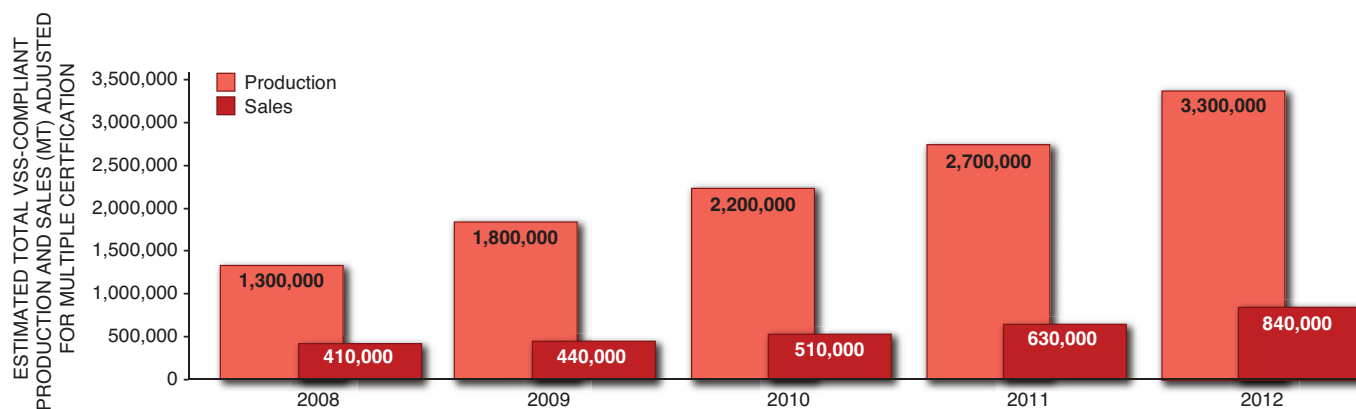
### Pricing and premiums

Premiums for standard-compliant sales have been reported at 1 to 30 per cent over the 2011–2012 period. Highest premiums were observed for Fairtrade/Organic certified coffee, and lowest premiums were observed for 4C-compliant coffee.



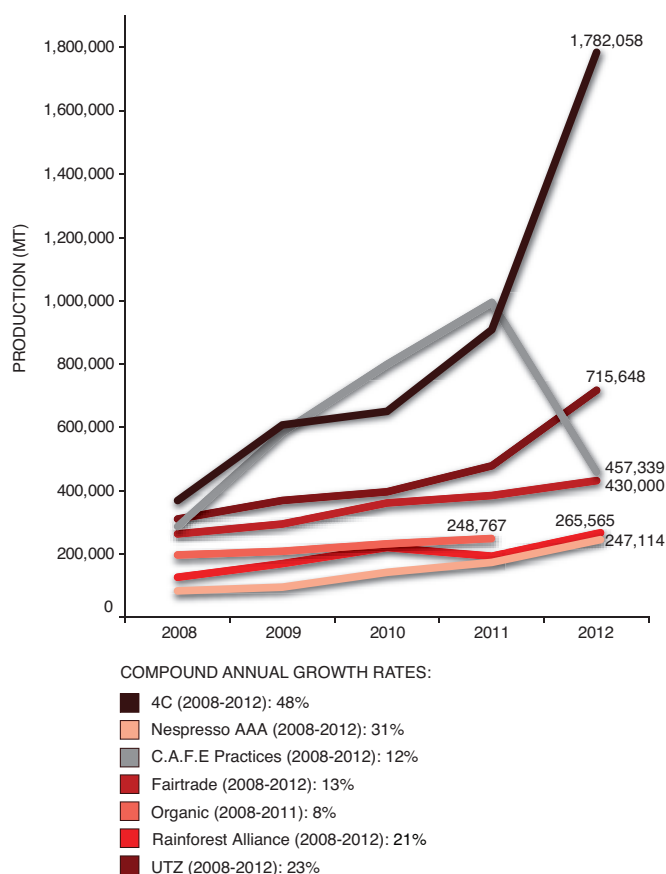
FIGURE 8.3 GROWTH IN STANDARD-COMPLIANT COFFEE PRODUCTION AND SALES, 2008–2012.

Since 2008, standard-compliant coffee (under AAA, 4C Association, C.A.F.E. Practices, Fairtrade, Organic, Rainforest Alliance and UTZ) has grown to 40 per cent of global production, up from 15 per cent of production in 2008. Sales have grown to 12 per cent of exports, up from 7 per cent of exports in 2008.



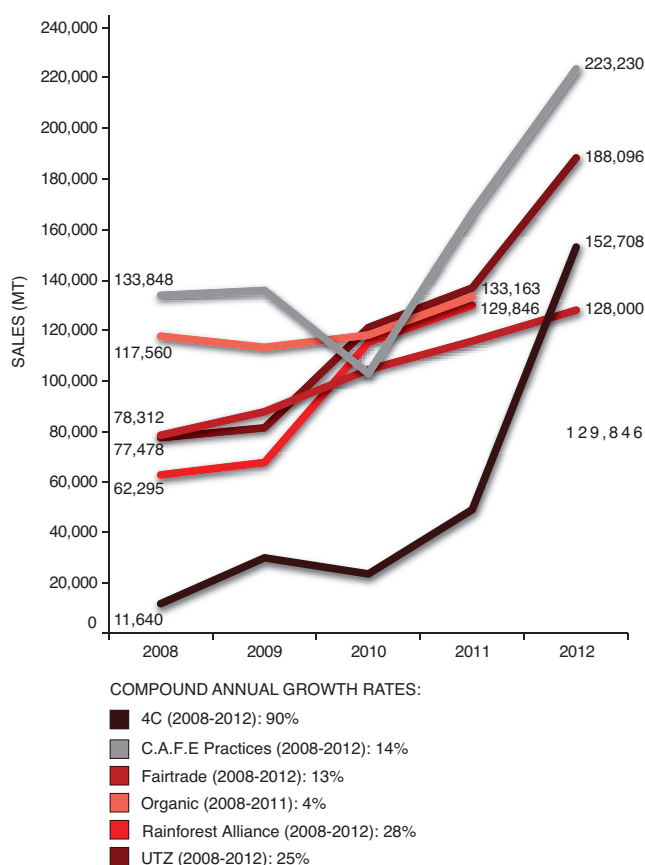
Sources: J. Anderson, Starbucks, personal communication, November 21, 2013; A. Bruestle, 4C Association, personal communication, February 6, 2013; FLO, 2012; C. Guinea, Rainforest Alliance, personal communication, March 24, 2013; Nestlé Nespresso Corporate Communications, personal communication, September 26, 2013; J. Rijkenberg, UTZ Certified, personal communication, March 19, 2013; IISD, H. Willer, FiBL, personal communication, August 26, 2013.

FIGURE 8.4 STANDARD-COMPLIANT COFFEE PRODUCED UNDER AAA, 4C ASSOCIATION, C.A.F.E. PRACTICES, FAIRTRADE, ORGANIC, RAINFOREST ALLIANCE AND UTZ CERTIFIED, 2008–2012.



Sources: J. Anderson, Starbucks, personal communication, November 21, 2013; A. Bruestle, 4C Association, personal communication, February 6, 2013; FLO, 2012; C. Guinea, Rainforest Alliance, personal communication, March 24, 2013; Nestlé Nespresso Corporate Communications, personal communication, September 26, 2013; J. Rijkenberg, UTZ Certified, personal communication, March 19, 2013; IISD, H. Willer, FiBL, personal communication, August 26, 2013.

FIGURE 8.5 STANDARD-COMPLIANT COFFEE SOLD UNDER 4C ASSOCIATION, C.A.F.E. PRACTICES, FAIRTRADE, ORGANIC, RAINFOREST ALLIANCE AND UTZ CERTIFIED, 2008–2012.



Sources: J. Anderson, Starbucks, personal communication, November 21, 2013; A. Bruestle, 4C Association, personal communication, February 6, 2013; FLO, 2012; C. Guinea, Rainforest Alliance, personal communication, March 24, 2013; J. Rijkenberg, UTZ Certified, personal communication, March 19, 2013; IISD, H. Willer, FiBL, personal communication, August 26, 2013.





## 8.2 MARKET DEVELOPMENT

Coffee produced in conformity with a voluntary sustainability standard represented 40 per cent of global coffee production in 2012, with about one-quarter of this actually sold as standard compliant from the certificate holder to the first buyer (representing 10 per cent of global production or 12 per cent of the coffee trade, see Importance of voluntary sustainability standard (VSS) coffee production and sales relative to the global market.). The coffee sector indeed has the highest presence of sustainability standards among major agricultural commodity sectors in regards to both supply and demand;<sup>6</sup> both continue to grow across all voluntary sustainability standards active within the sector<sup>7</sup> (see Figure 8.4, Standard-compliant coffee produced under AAA, 4C Association, C.A.F.E. Practices, Fairtrade, Organic, Rainforest Alliance and UTZ Certified, 2008–2012., and Figure 8.5, Standard-compliant coffee sold under 4C Association, C.A.F.E. Practices, Fairtrade, Organic, Rainforest Alliance and UTZ Certified, 2008–2012.). The pervasiveness of these standards throughout the sector has been driven by many factors, but can in large part be attributed to the maturity of the market, the 2001 coffee crisis and corresponding consumer and private sector awareness, and the high concentration in manufacturing, as well as the limited processing between production and consumption, and retail products with one single or very few ingredients. The last two factors allow for easier consumer recognition of certified ingredients.

Coffee pricing is well known for its volatility and long-term decline in real terms over the past century. The causes of price volatility, which are largely systemic, include the delay in moving from new planting to production<sup>8</sup> as well as climatic variability, although speculative trading is also a factor (Maurice, 2011). The causes of price decline, on the other hand, have been associated with oversupply, which itself can arise within the context of price volatility, but has been exacerbated over time by uncoordinated investments to increase production at the global level.<sup>9</sup> The collapse of the 1989 International Coffee Agreement and the corresponding disappearance of market-based controls for supply management have also contributed to more recent pricing challenges in the

marketplace.<sup>10</sup> The most notable among these is the 2001 coffee crisis, which resulted in an estimated net loss of US\$4 billion for producer countries.<sup>11</sup>

Certification in the coffee sector dates back to 1967, when the first organic coffee was exported from Mexico. Although principally identified as production without chemical inputs, the organic movement was initially fuelled by an interest in building farm sustainability through improved soil health. Since then, organic production has grown to be associated with, and is largely fuelled by, a combination of ensuring both environmental integrity and personal health. The first certification initiative to explicitly target trade itself as a tool for improving farmer livelihoods was the Max Havelaar label, established in Holland in 1988.<sup>12</sup> The Max Havelaar model, which required licensees (manufacturers) to pay a minimum price for coffee while also ensuring other trade benefits, was quickly adopted in other countries; these eventually came together to form Fairtrade Labelling Organizations International (FLO) in 1997. In addition to the specification of a minimum price, Fairtrade is exceptional in that it works only with democratically organized smallholders (i.e., those organized into cooperatives), while also specifying a fixed social premium to be distributed to the producer organizations for reinvestment in the local community.<sup>13</sup>

Rainforest Alliance, which was founded in 1987 with a mission to “conserve biodiversity and ensure sustainable livelihoods by transforming land-use practices, business practices and consumer behavior” (Rainforest Alliance, 2013a), certified its first coffee in 1996. Rainforest Alliance has developed its model through extensive

6 During the same year, sales of standard-compliant cocoa production were at similar levels, at 10 per cent of the world's cocoa trade.

7 With the exception of a contraction in C.A.F.E. Practices production from 2011 to 2012.

8 It takes roughly three to four years after planting for coffee plants to bear fruit and several more to reach their most productive years.

9 Vietnam's booming entrance into the market when a U.S. embargo was lifted on the country in 1994 is but one acute example. Vietnam's production quickly grew from virtually nil in the mid-1990s, and it is currently the world's second-largest producer of coffee, behind only Brazil. This has been identified as one of the more important causes of the 2011 coffee crisis (Topik, Talbot & Samper, 2010).

10 The ICO was established in 1962 with a mandate to reduce price volatility and long-term price decline. In its original mandate, the ICO had the authority to implement a set of global quotas to manage overall supply and demand on the market. Following the removal of market management instruments from the ICO's mandate with the dissolution of the 1989 International Coffee Agreement, supplies increased and prices steadily declined until bottoming out at US\$0.42 per pound in 2001; for reference, The International Coffee Agreement target price was between US\$1.20 and US\$1.40 per pound at the time of the agreement's collapse (International Trade Centre, 2011). Since the dissolution of market instrument-based International Coffee Agreements, the ICO has focused on information exchange and policy coordination as its main instruments for securing stability and equity in the global coffee market.

11 The dramatic swing in coffee's total traded value during this time period illustrates the severity of the crisis: coffee export revenues dropped from \$US9 billion in 1982 to US\$5.1 billion in 2002 and shot back up to US\$17.9 in 2010. The ICO lists the economic issues arising from the crisis as abandonment of farms, widespread loss of jobs, reduced fiscal revenue, knock-on effect on other economic sectors and reduced export earnings. Social issues were listed as migration from the countryside to cities, emigration abroad, less money available for health care and education, increase in households living under the poverty line, increased incidence of malnutrition, increased indebtedness and growth in illicit crop production (ICO, 2004).

12 The first explicit private efforts to leverage coffee trade as a means for improving conditions of the poor can be traced back to the alternative trade movement arising out of programs lead by SELFHELP and Oxfam in the 1950s and 1960s.

13 In 2011, almost 50 per cent of the Fairtrade premium was invested in improvements to production and processing (FLO, 2012).



rollout across Latin America, with a focus on ensuring sustainable farming practices that revolve around the use of integrated pest management.

Up until the end of the twentieth century, Organic, Fairtrade and Rainforest Alliance shared the market for certified coffee principally by leveraging market niches within the specialty coffee sector. Total sales of sustainable coffee by 2000 were still under 1 per cent of global production. Media campaigns by NGOs arising out of the 2001 coffee crisis (e.g., Oxfam through its Coffee Rescue Plan [Oxfam, 2002]) called for action by governments, NGOs, consumers and the private sector to commit to sustainable development and procurement of coffee. Although Fairtrade, Rainforest Alliance and Organic certification already had well-established markets by 2001, the depth of the crisis led to an unprecedented convergence among major private sector players through a number of pre-competitive initiatives, including the Common Code for the Coffee Community (otherwise known as “4C Association”) and the Sustainable Agriculture Initiative (SAI) Platform.<sup>14</sup> These initiatives set the stage for a paradigm shift in the manner in which mainstream businesses integrate multistakeholder, standards-based initiatives across their supply chains (Alvarez, Pilbeam, & Wilding, 2010).

The most obvious manifestation of the new multistakeholder-mainstream paradigm came under the auspices of the 4C Association, an initiative initially launched as a public-private partnership between the German Agency for Technical Development and Cooperation and the German Coffee Association to establish a code of conduct for the global coffee trade.<sup>15</sup> Throughout a five-year negotiation process, 4C Association developed into a full verification-based sustainability standard with a very explicit target of reducing barriers to entry in the 4C Association supply chain as a means to facilitating producer access and mainstream uptake. In order to avoid explicit competition with existing certification initiatives, 4C Association also intentionally avoids any significant branding or on-package labelling at the consumer level. As 4C Association gave direction and comfort to the notion of mainstream standards, several of the major companies participating in the 4C

Association process saw additional opportunity through consumer-facing labels and certification processes.

One of the first voluntary sustainability standards to service the mainstream market was the newly formed UTZ Certified. Formally launched in 2002 as Utz Kapeh (meaning “good coffee” in the Mayan language, Quiché), UTZ was founded on the principles of improving market transparency while promoting good agricultural practices at the farm level. UTZ immediately became one of the largest coffee certifications through a number of dedicated partnerships with major European manufacturers. By 2009, UTZ accounted for almost one-quarter of the total standard-compliant coffee available on the market.<sup>16</sup> As of 2012, UTZ had the largest sales volumes of any sustainability standard in the coffee sector, with a reported 188,096 metric tons being sold as UTZ certified. At the same time, UTZ had secured the second-place position in terms of the volume of sustainable coffee produced in compliance with a sustainability standard.

Similarly, in the fallout from the 2001 coffee crisis, Rainforest Alliance was able to develop new partnerships with companies such as Kraft and Nespresso, which quickly earned it the title of the fastest growing voluntary sustainability standard in coffee, reporting an average annual growth rate of 64 per cent between 2004 and 2009 (Potts et al., 2010). By 2011, Rainforest Alliance’s growth had tempered somewhat (averaging 28 per cent per annum between 2008 and 2011), with total sales of 129,846 metric tons, still higher than total Fairtrade sales in the same year. Rainforest Alliance’s continued rapid growth has secured it as a clear option for mainstream certification moving forward.

Although neither Fairtrade nor Organic, the two oldest initiatives, have secured the same level of growth experienced by UTZ and Rainforest Alliance under the new mainstream paradigm, they have continued to benefit from the growing corporate and consumer interest in sustainable sourcing, with constant growth well beyond that of the conventional coffee sector as a whole. The latest reported sales for both Fairtrade (2012) and Organic (2011) are in the range of 130,000 metric tons (each approximately 2.1 per cent of the 2012 coffee trade), making them major players in total sales of sustainable coffee. Beyond the usual demand constraints facing the entire sustainability sector, both Organic and Fairtrade do face potential challenges in expansion, despite their current oversupply. In 2011, 60 per cent of Organic production came from only three countries: Peru, Ethiopia and Mexico. Nearly half of Fairtrade coffee production came from Colombia and Peru during the same year. The role and importance of these two standards will depend on their ability to maintain a broad supply base within the context of major uptake of voluntary sustainability standards within mainstream supply chains.

14 The coffee crisis also generated unprecedented multistakeholder collaboration within the ICO, most notably in the form of the Sustainable Coffee Partnership, which called for, among other things, more detailed reporting on market and performance data on sustainability standards. The Sustainable Coffee Partnership proposals gave rise to the eventual establishment of the State of Sustainability Initiatives.

15 The 4C program was born of a project called the Public Private Partnership program funded by the German Ministry for Economic Cooperation and Development and implemented by the German Agency for Technical Development and Cooperation in 2003 (4C Association, 2009). The program worked with the private sector, including Kraft (now Mondelēz International), which has set the goal of sourcing 100 per cent sustainable coffee beans for its EU brands and considerably increasing purchases of 4C Association coffee by 2015, and Nestlé, which has committed to sourcing about 180,000 metric tons (2.6 per cent of coffee traded globally) by 2015 (4C Association, 2009).

16 Sales of UTZ certified coffee in 2009 were 82,058 metric tons (Potts et al., 2010).

The 4C Association initiative, which offers itself as a stepping stone to certification through the application of a less costly verification process, has, perhaps not surprisingly, shown the greatest growth in terms of both production and sales over the past five years. As a pre-competitive sustainability platform for the coffee sector, the 4C Association is committed to stimulate supply of and demand for verified and certified sustainable coffees in the market. As such, the 4C Association not only promotes its own baseline standard and verification system but also other sustainability standards. In the *Rules of Participation* for its members, the 4C Association states:

*Final Buyers (excluding private label roasters/manufacturers and other companies providing services to final buyers), commit themselves to purchase increasing volumes of verified and/or certified coffees (minimum 4C Compliant) over time. Sustainability certification standards qualifying for being recognized as part of this commitment must have a formal cooperation and/or membership link with the organization and a technical comparison against the baseline standard. (4C Association, 2013d)*

The three most recognized standards in the coffee sector—Fairtrade, UTZ Certified and the Rainforest Alliance—are, in fact, 4C Association members and are engaging with the association to increase alignment and cooperation (A. Bruestle, 4C Association, personal communication, December 13, 2013).

Through the 4C Association's unique "en masse" conformity assessment processes,<sup>17</sup> it has been able to bring significant amounts of verified production on line in a remarkably short period of time. Within two years of its initial establishment (i.e., by 2009), the 4C Association had more verified coffee being produced than any of the other available sustainability initiatives. By 2012, the total 4C-compliant coffee produced had grown to a massive 1,782,058 metric tons, making its compliant production volumes larger than all of the other certification-based sustainability standards combined. Notwithstanding this impressive growth, it is worth noting that it has been almost entirely based on the expansion of production

across three countries: Brazil, Vietnam and Colombia, which alone accounted for 90 per cent of 4C-verified production in 2012. This, again, is likely a reflection of the 4C strategy to bring mainstream supply online as quickly as possible.

Securing sales for 4C-compliant coffee has, however, been more of a challenge. Notwithstanding the impressive production levels, actual sales of 4C-compliant coffee were lower than all of the other initiatives up until 2011. 2012 represented a significant year for the 4C Association in this sense, with massive sales growth securing it a second-place position in total sales, at 152,708 metric tons. It is unclear whether the challenge of getting 4C verified coffee to market "as 4C-compliant coffee" is related to the absence of a consumer-facing label and correspondingly low consumer recognition of the initiative or not. Certainly, in light of the recent growth in sales, it seems that the 4C Association is well situated to take a leadership position in sales of sustainable coffee in the coming years.

The "mainstreaming" of standards within the coffee sector has also stimulated the development of company-led programs, ranging from in-house standards systems such as Starbucks' C.A.F.E. Practices (2004) to hybrid "co-created" systems such as Nespresso's AAA Sustainable Quality Program (2003).<sup>18</sup> Although virtually all of the voluntary sustainability standards provide some mention of quality improvement, particularly those catering to the mainstream supply chains, these two programs build the most systemic link between quality management and sustainable sourcing. In many respects, the Nespresso and Starbucks plans are part of a more holistic corporate approach to supply and supply chain management more generally.<sup>19</sup> These standards have arisen on behalf of several large coffee purchasers, not typically the stakeholder whose interests that sustainability standards, at least in concept, would aim to

<sup>17</sup> The 4C Association uses the concept of "4C units" to determine the level at which conformity with the 4C code is determined. The 4C unit is the entity where the 4C compliant coffee is produced. The 4C unit is flexible in its setup. A 4C unit can be a group of small-scale farmers who agree to register jointly, an already organized group as a cooperative or farmers' association, a collecting station, a mill, a local trader, an export organization, or even a roaster (as long as it is based in a country where coffee is produced) (A. Bruestle, 4C Association, personal communication, December 13, 2013). More than two-thirds of the 4C Association's total production comes from a total of 23 4C units in Brazil.

<sup>18</sup> The Nespresso AAA program directly integrates SAN standards within its system of training but applies a verification process rather than full Rainforest Alliance certification (C. Wille, Rainforest Alliance, personal communication, December 20, 2013). Although historically recognized as niche market products, the growth of the specialty sector has rendered these two companies important players in the mainstream trade as well. Total volumes purchased by Starbucks in 2012 were equivalent to about 6 per cent of the world's coffee production. During the same year, the area harvested under the AAA program accounted for about 2.4 per cent of the global area harvested.

<sup>19</sup> The stated objective of C.A.F.E. Practices is to "ensure quality while promoting social, economic and environmental standards" (J. Anderson, Starbucks, personal communication, November 21, 2013). The stated objective of Nespresso AAA program is to "safeguard the future supply of the highest quality coffee, while paying farmers a higher income and protecting the natural environment" (Nespresso, 2010). See also Alvarez et al. (2010) and Renard (2010).

benefit most. However, because of this integration with the private sector, the standards gain depth of integration within corporate supply chains and business planning. Starbucks, for example, has managed to bring 90 per cent of its entire supply in compliance with its standards over the last decade. Similarly, Nespresso reports that 80 per cent of its supply is verified compliant with its standards (2013).<sup>20</sup> Both companies have also continued to source from existing independent certification standards.<sup>21</sup>

Overall, the landscape of sustainable coffee has been one of rapid transformation from a niche market to a fully recognized strategic business management tool for mainstream and specialty coffee companies alike over the past five years. Between 2008 and 2012, the production of certified or verified coffee has grown from an estimated 15 to 40 per cent of global production today. The average annual growth rate of global certified or verified coffee production over these five years, at 26 per cent, continues to outpace growth of global coffee production itself (4 per cent).



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<sup>20</sup> Nearly 90 per cent of the area harvested under the AAA program is in Brazil, Colombia and India (Nestlé Nespresso Corporate Communications, personal communication, September 26, 2013).

<sup>21</sup> Starbucks has a partnership with Fairtrade, while Nespresso has a partnership with Rainforest Alliance. Moreover, Nespresso recently made a public commitment to source 10 per cent of its coffee from Fairtrade (Yeomans, 2013).

## 8.3 MARKET PERFORMANCE



TABLE 8.2 IMPORTANCE OF VOLUNTARY SUSTAINABILITY STANDARD (VSS) COFFEE PRODUCTION AND SALES RELATIVE TO THE GLOBAL MARKET.

|  | VSS production (mt) | VSS production market share of global production | VSS production market share of global exports | VSS sales (mt) | VSS sales market share of global production | VSS sales market share of global exports |
|--|---------------------|--|---|----------------|---|--|
| AAA  | 247,114             | 3%   | 4%  | no data        | NA  | NA                                       |
| 4C Association   | 1,782,058           | 22%  | 26%   | 152,708        | 2%  | 2%                                       |
| C.A.F.E. Practices   | 457,339             | 6%   | 7%  | 222,550        | 3%  | 3%                                       |
| Fairtrade  | 430,000             | 5%   | 6%  | 128,000        | 2%  | 2%                                       |
| Organic  | 248,767             | 3%   | 4%  | 133,163        | 2%  | 2%                                       |
| Rainforest Alliance  | 265,565             | 3%   | 4%  | 129,846        | 2%  | 2%                                       |
| UTZ Certified  | 715,648             | 9%   | 11%   | 188,096        | 2%  | 3%                                       |
| Global VSS production / sales (mt, %), adjusted for multiple certification | 3,300,000           | 40%  | 49%   | 840,000        | 10%   | 12%                                      |

### 4C Association

In 2012, the implementation of the baseline standard generated the largest volume of coffee in conformity with a sustainability standard. In 2012 approximately 1.8 million metric tons were compliant with 4C Association standards, cultivated on 1 million hectares. 4C Association production accounted for an estimated 42 per cent of total certified or verified production, and 22 per cent of global production overall. About 90 per cent of 4C-verified production was concentrated in Brazil, Vietnam and Colombia in 2012<sup>22</sup> (see Figure 8.6, 4C coffee production volume by country, 2012., and Table 8.3, 4C-compliant coffee area harvested, production and sales, by country, 2012.). In these countries, 4C verification accounts for significant portions of domestic production: 57 per cent in Colombia, 37 per cent in Brazil and 25 per cent in Vietnam.<sup>23</sup> Brazil's verified production grew the most from 2011 to 2012, nearly doubling from 505,000 metric tons to 977,000 metric tons.

Since 2008, production of 4C-compliant coffee has increased from 367,000 metric tons to 1.8 million metric tons, for an average annual increase of 49 per cent. Sales of 4C-compliant coffee have grown at an average annual rate of 90 per cent over the last five years, indicating a growth in relative uptake of the product; purchases of 4C-compliant coffee as a percentage of global production grew from 3 per cent in 2008 to 12.5 per cent in 2012<sup>24</sup> (see Figure 8.7 and Table 8.4). Notwithstanding the recent growth in sales, 4C continues to exhibit massive oversupply, with a mere 12.5 per cent of total production actually being sold as 4C compliant in 2012. This is significantly below the industry average of 25 per cent of production being sold as sustainable. Nevertheless, the recent growth of purchases of 4C sales suggests substantial closing of this gap moving forward is possible (in 2008 only 3.2 per cent of 4C production was sold as 4C compliant).

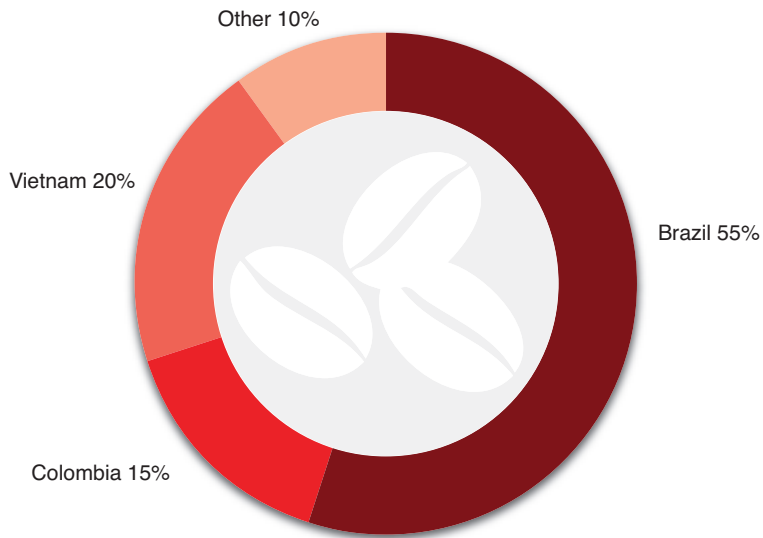
<sup>22</sup> Notwithstanding, increasing amounts of 4C compliant coffee will be available from other regions (A. Bruestle, 4C Association, personal communication, December 13, 2013).

<sup>23</sup> 4C producer members also exist in Cameroon, China, Costa Rica, Côte D'Ivoire, El Salvador, Ethiopia, Guatemala, Honduras, Kenya, Laos, Malawi, Mexico, Papua New Guinea, Peru, Tanzania and Uganda.

<sup>24</sup> Taking into account a normalization of the crop year (production) with the calendar year (sales), the baseline was about 12.5 per cent (A. Bruestle, 4C Association, personal communication, 2013). Using the raw data, the sales-to-production ratio is about 8.5 per cent.

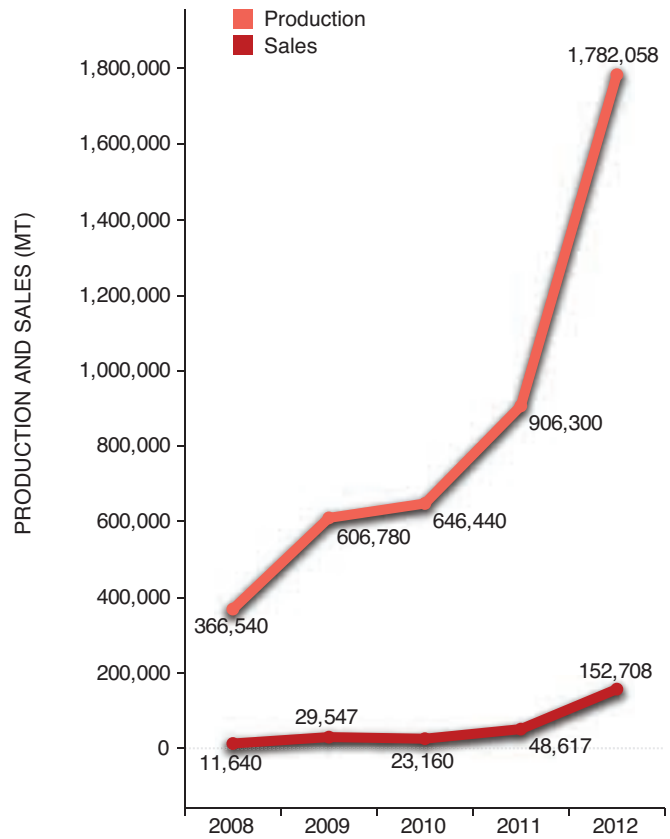


FIGURE 8.6 4C COFFEE PRODUCTION VOLUME BY COUNTRY, 2012.



Source: A. Bruestle, 4C Association, personal communication, February 6, 2013.

FIGURE 8.7 4C COFFEE PRODUCTION AND SALES, 2008–2012.



Source: A. Bruestle, 4C Association, personal communication, February 6, 2013.





TABLE 8.3 4C-COMPLIANT COFFEE AREA HARVESTED, PRODUCTION AND SALES, BY COUNTRY, 2012.

|              | Area harvested (ha) | Production (mt)  |
|--------------|---------------------|------------------|
| Brazil       | 568,746             | 977,096          |
| Colombia     | 204,983             | 260,444          |
| Vietnam      | 98,832              | 363,448          |
| Other        | 160,480             | 181,070          |
| <b>Total</b> | <b>1,033,041</b>    | <b>1,782,058</b> |

Source: A. Bruestle, 4C Association, personal communication, February 6, 2013.

TABLE 8.4 4C COFFEE AREA HARVESTED, PRODUCTION AND SALES, 2008–2012.

|      | Area harvested (ha) | Production (mt) | Sales (mt) |
|------|---------------------|-----------------|------------|
| 2008 | 209,500             | 366,540         | 11,640     |
| 2009 | 380,400             | 606,780         | 29,547     |
| 2010 | 440,700             | 646,440         | 23,160     |
| 2011 | 566,000             | 906,300         | 48,617     |
| 2012 | 1,033,041           | 1,782,058       | 152,708    |

Source: A. Bruestle, 4C Association, personal communication, February 6, 2013.



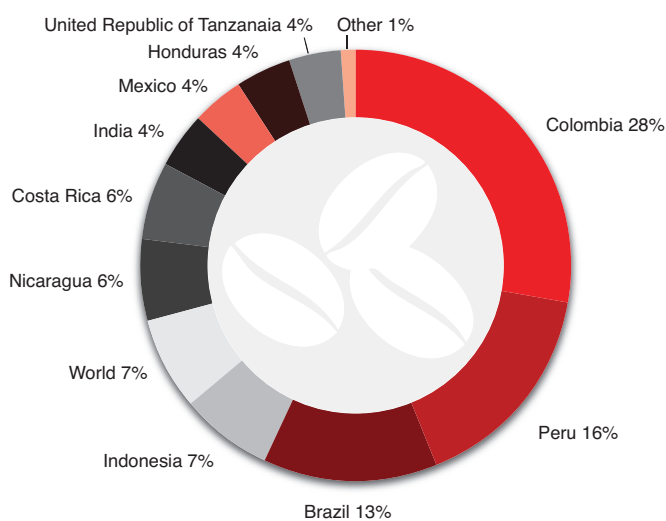
## Fairtrade International

In 2012, 430,000 metric tons of Fairtrade certified coffee were produced, making it the third-largest supplier of sustainable coffee on the global market. As with many of the other coffee initiatives, Fairtrade's production has relied heavily on Latin American sources, with an estimated 77 per cent of Fairtrade coffee production coming from Latin America and 57 per cent coming from just three countries: Colombia (28 per cent), Peru (16 per cent) and Brazil (13 per cent) (see Figure 8.8, Fairtrade coffee production volume by country, 2010–2011. and Table 8.5, Fairtrade coffee production by country, 2011.). Although Fairtrade is one of the pioneers in sustainability certification, sales of Fairtrade coffee, although still experiencing growth, have not kept up with the pace of growth within the sector more generally.<sup>25</sup> With sales of 128,000 metric tons in 2012, Fairtrade sales were the lowest among the other four competing global initiatives. Per-annum growth of Fairtrade production and sales were identical, at 13 per cent over the last five years, giving rise to a constant ratio of sales to production (30 per cent) over the same period (see Figure 8.9 and Table 8.6).

Although the ratio between sales and demand for Fairtrade (34 per cent) is slightly above the industry average (25 per cent), the potential importance of sales versus production is arguably greater within the context of Fairtrade, where many of the criteria relate to the trading relationship itself and therefore *depend* upon actual sales for their fulfillment. For example, farmers seeking to secure

<sup>25</sup> In reality, Fairtrade sales were only marginally lower than Organic and Rainforest Alliance in 2012, with each of the initiatives selling approximately 130,000 metric tons.

FIGURE 8.8 FAIRTRADE COFFEE PRODUCTION VOLUME BY COUNTRY, 2010–2011.



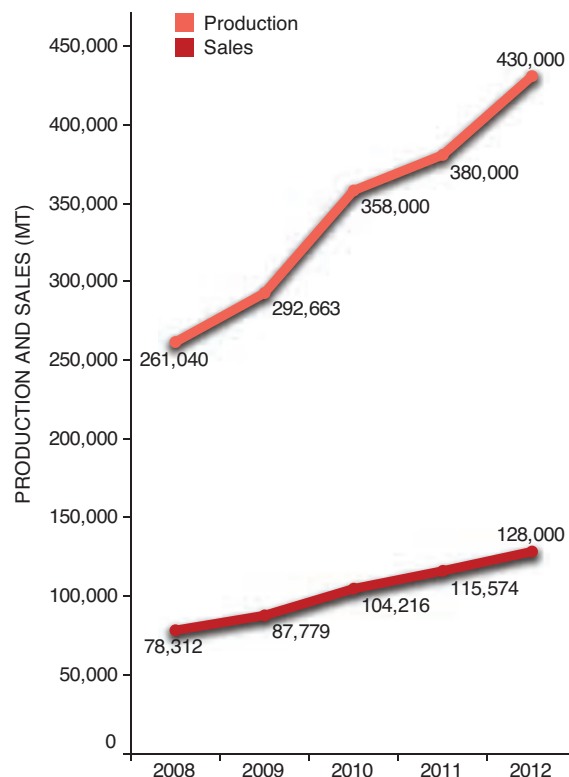
Source: FLO, 2012.

the minimum Fairtrade price may produce all of the Fairtrade-compliant coffee they like, but without actual sales will not be able to benefit from this element of the system.

Notwithstanding its relatively lower growth rates, Fairtrade remains a major player in both the production and sales of sustainable coffee. In 2012 Fairtrade accounted for 10 per cent of total certified or verified production and 5 per cent of global coffee production. In Colombia, Peru, Nicaragua and Tanzania, Fairtrade represents 20 per cent or more of domestic production.<sup>26</sup> Notably, in 2012, while no Fairtrade coffee was produced in Vietnam, Indonesian Fairtrade production (27,100 metric tons) was higher than that of any of the other sustainability initiatives. Similarly, Fairtrade's presence in Tanzania shows its potential to develop strong markets in non-Latin American countries.

<sup>26</sup> Other countries producing Fairtrade coffee: Indonesia (27,100 metric tons, or 5 per cent of domestic production), Nicaragua (23,700 metric tons, or 18 per cent of domestic production), Costa Rica (21,400 metric tons, or 24 per cent of domestic production), India (16,400 metric tons, or 5 per cent of domestic production), Mexico (16,100 metric tons, or 6 per cent of domestic production), Honduras (16,000 metric tons, or 5 per cent of domestic production) and Tanzania (13,800 metric tons, or 43 per cent of domestic production). Approximately 10 per cent of remaining Fairtrade certified production came from other countries. Countries with Fairtrade certified producer organizations for coffee at the time of writing include (other than those listed above) Bolivia, Burundi, Cameroon, Côte D'Ivoire, the Democratic Republic of the Congo, the Dominican Republic, East Timor, Ecuador, El Salvador, Ethiopia, Guatemala, Haiti, Kenya, Laos, Papua New Guinea, Rwanda, Sierra Leone and Uganda.

FIGURE 8.9 FAIRTRADE COFFEE PRODUCTION AND SALES, 2008–2012.



Sources: L. Beyers, Fairtrade, personal communication, 2013; FLO, 2012.



TABLE 8.5 FAIRTRADE COFFEE PRODUCTION BY COUNTRY, 2011.

|                             | Production (mt) |
|-----------------------------|-----------------|
| Colombia                    | 107,200         |
| Peru                        | 61,500          |
| Brazil                      | 50,000          |
| Indonesia                   | 27,100          |
| Other                       | 26,800          |
| Nicaragua                   | 23,700          |
| Costa Rica                  | 21,400          |
| India                       | 16,400          |
| Mexico                      | 16,100          |
| Honduras                    | 16,000          |
| United Republic of Tanzania | 13,800          |
| <b>Total</b>                | <b>380,000</b>  |

Source: FLO, 2012.

TABLE 8.6 FAIRTRADE COFFEE AREA HARVESTED, PRODUCTION AND SALES, 2008–2012.

|      | Area harvested (ha) | Production (mt) | Sales (mt) |
|------|---------------------|-----------------|------------|
| 2008 | 683,000             | 261,040         | 78,312     |
| 2009 | No data             | 292,663         | 87,779     |
| 2010 | 717,500             | 358,000         | 104,216    |
| 2011 | 748,000             | 380,000         | 115,574    |
| 2012 | No data             | 430,000         | 128,000    |

Sources: L. Beyers, Fairtrade, personal communication, 2013; FLO, 2012.



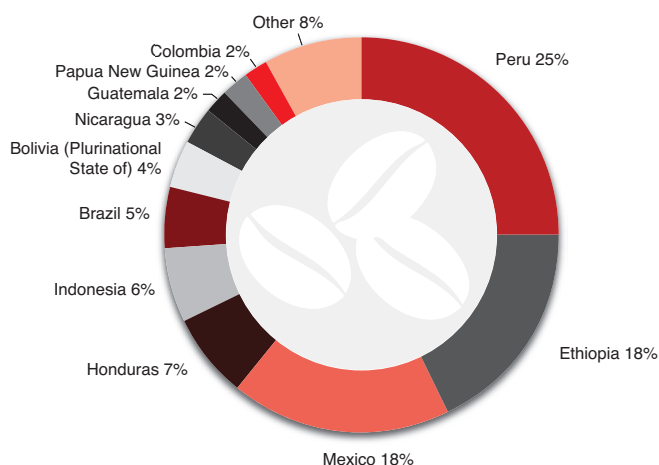


## International Federation of Organic Agriculture Movements (IFOAM, or “Organic”)

In 2011 Organic coffee production was estimated at 248,767 metric tons, making it the fourth-largest producer of sustainable coffee in that year. Organic production is remarkable for the diversity of its production base and the degree to which its supply diverges from the distribution of conventional coffee at the global level. Although 67 per cent of Organic coffee was sourced from Latin America in 2011, 51 per cent of Organic production came from Peru (25 per cent), Mexico (18 per cent) and Honduras (7 per cent) (see Figure 8.10, Organic coffee production volume by country, 2011., and Table 8.7), showing Organic certification’s reliance on smaller producing countries for the majority of its supply base. This trend is repeated in Africa, with a remarkable 18 per cent of Organic supply coming from Ethiopia alone. The unique distribution of Organic supply is arguably a function of the relative comparative advantage that certain regions have in the adoption of Organic agricultural production practices. In Ethiopia, Mexico and Peru, Organic production accounted for 10 per cent or more of total domestic production in 2011, suggesting its importance to these economies.<sup>27</sup>

<sup>27</sup> Organic is also active in Honduras (18,133 metric tons, or 5 per cent of domestic production), Indonesia (14,700 metric tons, or 3 per cent of domestic production), Bolivia (9,700 metric tons, or virtually all of domestic production) and Tanzania (10,705 metric tons, or 7 per cent of domestic production). Lesser amounts (fewer than 10,000 metric tons) were produced in Nicaragua, Guatemala, Papua New Guinea, Colombia, Dominican Republic, Timor-Leste, Laos, El Salvador, Ecuador, Costa Rica, Madagascar, Nepal, Côte d’Ivoire, Panama, Kenya, Rwanda, Haiti, Jamaica and Cuba.

FIGURE 8.10 ORGANIC COFFEE PRODUCTION VOLUME BY COUNTRY, 2011.

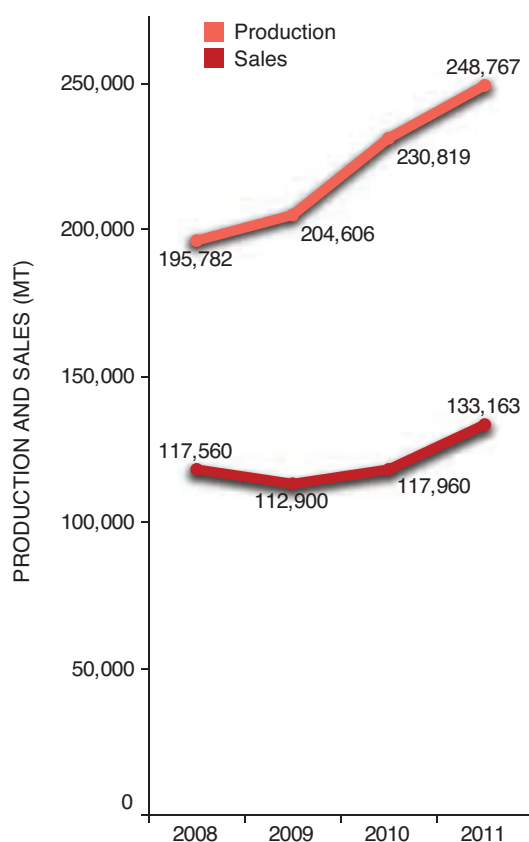


Source: IISD, H. Willer, FiBL, personal communication, August 26, 2013.

Based on current trends, we estimate that Organic fell to fifth place in terms of overall production volume of sustainable coffee in 2012. Although Organic is the oldest sustainability standard in the coffee sector, its per-annum growth in production has been well below average for the sector, at 8 per cent. Sales of Organic coffee have grown at the even slower pace of approximately 4 per cent over the last five years (see Figure 8.11 and Table 8.8).

Nevertheless, Organic stands out among the third-party sustainability initiatives for the high percentage of production that it sells as sustainable. In 2011 an estimated 54 per cent (133,000 metric tons) of Organic production was actually sold as Organic, making it the second most important sustainability standard in terms of volume sold in 2011—although, based on reported trends, we estimate that Organic sales fell to third place in 2012, behind UTZ and Rainforest Alliance. Based on our 2012 estimates, Organic accounted for 6 per cent of total certified or verified production and 3 per cent of total global coffee production in that year.

FIGURE 8.11 ORGANIC COFFEE PRODUCTION AND SALES, 2008–2011.



Source: IISD, H. Willer, FiBL, personal communication, August 26, 2013.

TABLE 8.7 ORGANIC COFFEE AREA HARVESTED, PRODUCTION AND SALES BY COUNTRY, 2011.

|   | Area harvested (ha) | Production (mt) |
|---|---------------------|-----------------|
| <b>Bolivia (Plurinational State of)</b> | 10,600              | 9,700           |
| <b>Brazil</b>                           | 12,000              | 12,000          |
| <b>Colombia</b>                         | 8,200               | 4,800           |
| <b>Costa Rica</b>                       | 800                 | 600             |
| <b>Côte d'Ivoire</b>                    | 700                 | 300             |
| <b>Dominican Republic</b>               | 8,452               | 2,400           |
| <b>Ecuador</b>                          | 3,100               | 600             |
| <b>El Salvador</b>                      | 3,200               | 3,300           |
| <b>Ethiopia</b>                         | 112,000             | 45,845          |
| <b>Guatemala</b>                        | 7,600               | 5,900           |
| <b>Haiti</b>                            | 100                 | 20              |
| <b>Honduras</b>                         | 22,500              | 18,133          |
| <b>India</b>                            | 2,000               | 1,400           |
| <b>Indonesia</b>                        | 38,000              | 14,700          |
| <b>Jamaica</b>                          | 10                  | 10              |
| <b>Kenya</b>                            | 200                 | 40              |
| <b>Lao People's Democratic Republic</b> | 600                 | 400             |
| <b>Madagascar</b>                       | 1,000               | 300             |
| <b>Mexico</b>                           | 160,000             | 45,000          |
| <b>Nepal</b>                            | 350                 | 60              |
| <b>Nicaragua</b>                        | 9,400               | 6,400           |
| <b>Panama</b>                           | 200                 | 269             |
| <b>Papua New Guinea</b>                 | 9,800               | 5,500           |
| <b>Peru</b>                             | 90,000              | 62,000          |
| <b>Philippines</b>                      | 50                  | 30              |
| <b>Rwanda</b>                           | 70                  | 30              |
| <b>Thailand</b>                         | 160                 | 60              |
| <b>Timor-Leste</b>                      | 23,000              | 4,200           |
| <b>Uganda</b>                           | 4,500               | 2,300           |
| <b>United Republic of Tanzania</b>      | 5,700               | 2,300           |
| <b>Vietnam</b>                          | 100                 | 170             |
| <b>Total</b>                            | <b>534,392</b>      | <b>248,767</b>  |

Source: IISD, H. Willer, FiBL, personal communication, August 26, 2013.

TABLE 8.8 ORGANIC COFFEE AREA HARVESTED, PRODUCTION AND SALES, 2008–2012.

|             | Area harvested (ha) | Production (mt) | Sales (mt) |
|-------------|---------------------|-----------------|------------|
| <b>2008</b> | 420,720             | 195,782         | 117,560    |
| <b>2009</b> | 460,390             | 204,606         | 112,900    |
| <b>2010</b> | 507,366             | 230,819         | 117,960    |
| <b>2011</b> | 534,392             | 248,767         | 133,163    |

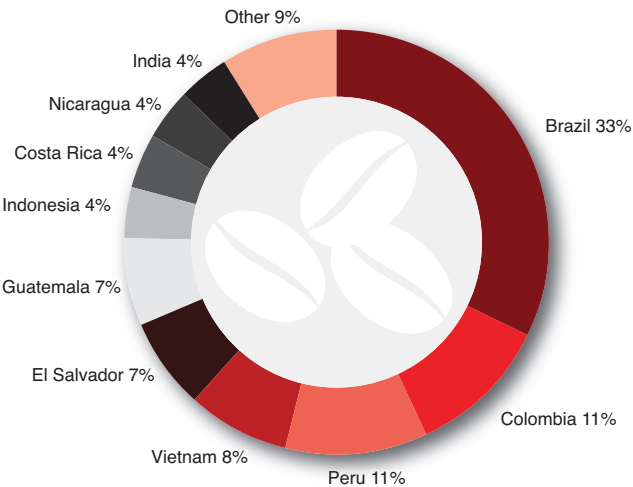
Source: IISD, H. Willer, FiBL, personal communication, August 26, 2013.

**Rainforest Alliance**

In 2012, Rainforest Alliance certified coffee accounted for 266,000 metric tons, cultivated on 212,000 hectares, making it the fourth largest producer of sustainable coffee in that year. Nevertheless, it has been a leader in production and sales growth over the last five years (21 per cent and 28 per cent per-annum growth, respectively), second only to 4C. In 2012, Rainforest Alliance coffee accounted for 6 per cent of certified or verified production and 3 per cent of global production. More than half of Rainforest Alliance certified coffee was produced in Brazil (33 per cent of total production), Colombia (11 per cent of total production) and Peru (11 per cent of total production) (Figure 8.12, Rainforest Alliance coffee production volumes by country, 2012., and Table 8.9, Rainforest Alliance coffee area harvested and production, by country, 2012.).<sup>28</sup>

28 Production volumes of other producing countries involved in the program include Peru (27,379 metric tons, or 8 per cent of domestic production), Vietnam (22,254 metric tons, or 2 per cent of domestic production), El Salvador (16,534 metric tons, or 23 per cent of domestic production), Guatemala (15,765 metric tons, or 7 per cent of domestic production), Indonesia (11,888 metric tons, or 2 per cent of domestic production), Costa Rica (11,547 metric tons, or 13 per cent of domestic production), Nicaragua (10,905 metric tons, or 8 per cent of domestic production) and India (10,563 metric tons, or 3 per cent of domestic production). Fewer than 10,000 metric tons of certified product were also produced in Honduras, Mexico, Kenya, Uganda, Ethiopia, Papua New Guinea, Zambia, Dominican Republic, Panama, Tanzania, the United States, Malawi, Côte d’Ivoire and Jamaica.

**FIGURE 8.12 RAINFOREST ALLIANCE COFFEE PRODUCTION VOLUMES BY COUNTRY, 2012.**

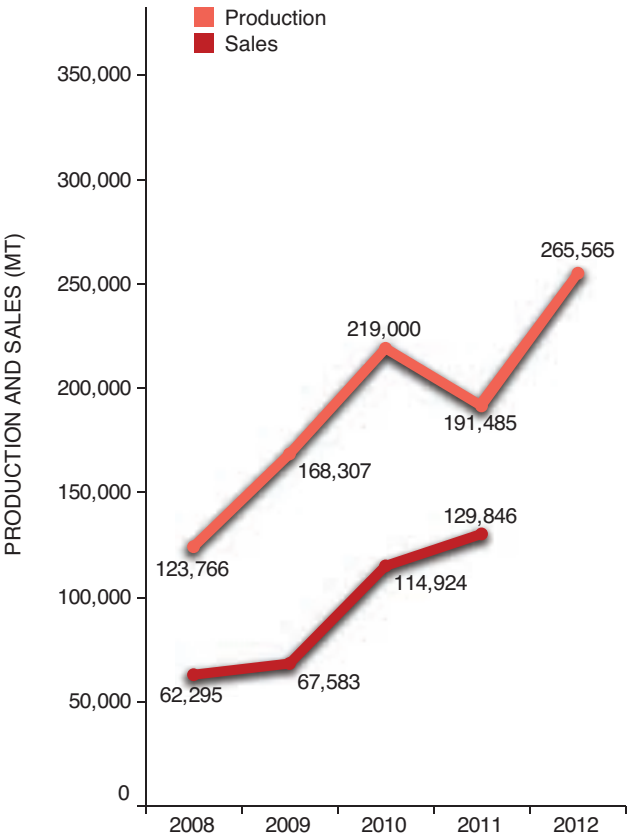


Source: C. Guinea, Rainforest Alliance, personal communication, March 24, 2013.

Rainforest Alliance also has a strong presence in a number of other Latin American countries, with 4 per cent or more of the initiative’s total production coming from Nicaragua, Costa Rica, Guatemala and El Salvador. Overall, Latin America accounts for 81 per cent of Rainforest Alliance supply.

In 2011 Rainforest Alliance displayed significantly less oversupply than other initiatives in the sector, with 68 per cent of total compliant production being sold as sustainable in that year. This was up from 50 per cent in 2008 and represents a higher ratio of sales to production than the industry average (25 per cent) (see Figure 8.13 and Table 8.10 for production and sales growth). However, it is unlikely that the recent growth of Rainforest Alliance production in 2012 has been met by comparable sales growth and, as a result, it is likely that the sales ratio may have returned to something comparable to previous years.

**FIGURE 8.13 RAINFOREST ALLIANCE PRODUCTION AND SALES, 2008–2012.**



Source: C. Guinea, Rainforest Alliance, personal communication, March 24, 2013.

TABLE 8.9 RAINFOREST ALLIANCE COFFEE AREA HARVESTED AND PRODUCTION, BY COUNTRY, 2012.

|                             | Area harvested (ha) | Production (mt) |
|-----------------------------|---------------------|-----------------|
| Brazil                      | 40,669              | 85,517          |
| Colombia                    | 24,312              | 29,417          |
| Vietnam                     | 6,145               | 22,254          |
| Costa Rica                  | 7,727               | 11,547          |
| Côte d'Ivoire               | 256                 | 115             |
| Dominican Republic          | 400                 | 362             |
| El Salvador                 | 16,081              | 16,534          |
| Ethiopia                    | 5,996               | 1,586           |
| Guatemala                   | 13,587              | 15,765          |
| Honduras                    | 3,836               | 7,476           |
| India                       | 10,743              | 10,563          |
| Indonesia                   | 14,258              | 11,888          |
| Jamaica                     | 47                  | 100             |
| Kenya                       | 3,767               | 3,798           |
| Malawi                      | 829                 | 120             |
| Mexico                      | 11,612              | 4,442           |
| Nicaragua                   | 7,666               | 10,905          |
| Panama                      | 210                 | 294             |
| Papua New Guinea            | 1,518               | 1,224           |
| Peru                        | 40,184              | 27,379          |
| Uganda                      | 1,938               | 3,340           |
| United Republic of Tanzania | 229                 | 230             |
| United States               | 142                 | 142             |
| Zambia                      | 270                 | 567             |
| <b>Total</b>                | <b>212,422</b>      | <b>265,565</b>  |

Source: C. Guinea, Rainforest Alliance, personal communication, March 24, 2013.

TABLE 8.10 RAINFOREST ALLIANCE AREA HARVESTED, PRODUCTION AND SALES, 2008–2012.

|      | Area harvested (ha) | Production (mt) | Sales (mt) |
|------|---------------------|-----------------|------------|
| 2008 | 95,995              | 123,766         | 62,295     |
| 2009 | 115,883             | 168,307         | 67,583     |
| 2010 | 140,690             | 219,000         | 114,924    |
| 2011 | 161,615             | 191,485         | 129,846    |
| 2012 | 212,422             | 265,565         | --         |

Source: C. Guinea, Rainforest Alliance, personal communication, March 24, 2013.



## UTZ Certified

As of 2012, UTZ Certified registered the second-largest production volume of sustainable coffee, with 716,000 metric tons certified on 509,000 hectares. Although UTZ sources a significant portion of its coffee from Latin America (61 per cent coming from Brazil, Colombia, Peru and Honduras), it is remarkable for its high level of supply from African and Asian regions (Figure 8.14, UTZ Certified coffee production volume by country, 2012., and Table 8.11, UTZ Certified coffee area harvested, production and sales, by country, 2012.). With a full 28 per cent coming from Asian sources, most notably Vietnam, which accounted for 22 per cent of total UTZ production in 2012, UTZ Certified has distinguished itself by its capacity to bring non-Latin American sources into its supply chain. The largest percentage increase in production in 2012 came from Asia, where Vietnamese Robusta production led growth.

Regarding sales, UTZ registered the largest volume relative to all other voluntary sustainability standards active within the sector, with 187,634 metric tons sold as standard compliant. In 2012 UTZ accounted for 17 per cent of compliant production (certified or verified) and 9 per cent of total global coffee production.

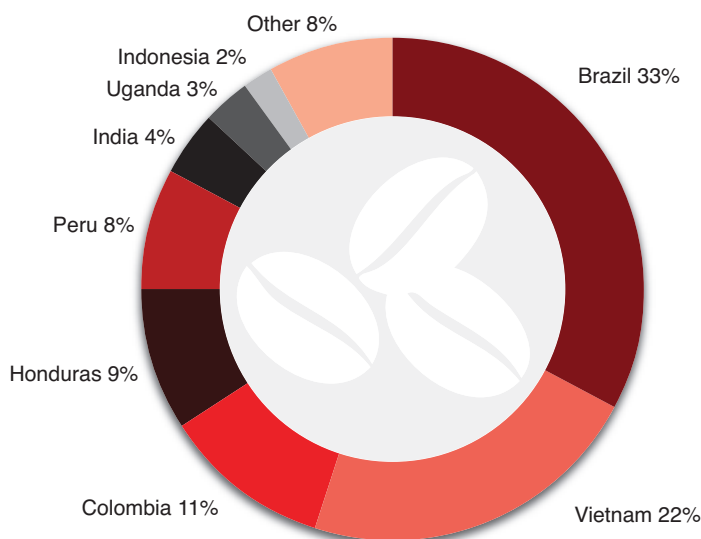
Although UTZ is third in terms of annual production and sales growth (23 per cent and 25 per cent per annum, respectively) over the last five years, it has nevertheless doubled in total volume produced since 2008 (Figure 8.15 and Table 8.12). Not surprisingly, the relatively similar rates of growth for production and sales

have led to little change in the ratio of production being sold as sustainable (25 per cent in 2008 versus 27 per cent in 2012). This is the same as the industry average of 25 per cent. Nevertheless, there is a trend toward growing sales, with the organization reporting that all countries involved in the program increased sales versus production in the 2011 season. The only exception was Guatemala, whose sales decreased by 40 per cent.

Notably, Colombia sold only 12 per cent of its UTZ-compliant coffee as UTZ coffee in 2012, signalling more serious oversupply from the country.<sup>29</sup> This may be attributable to the significant penetration of sustainability initiatives within Colombia, with many producers exhibiting compliance with more than a single initiative. Within this context, UTZ's relatively lower capacity to sell as UTZ may be a reflection of the high level of competition for sales within this market. This interpretation would appear to be supported by the relatively higher proportion of sales to production (43 per cent) experienced in Vietnam, where the competition from other initiatives is limited.

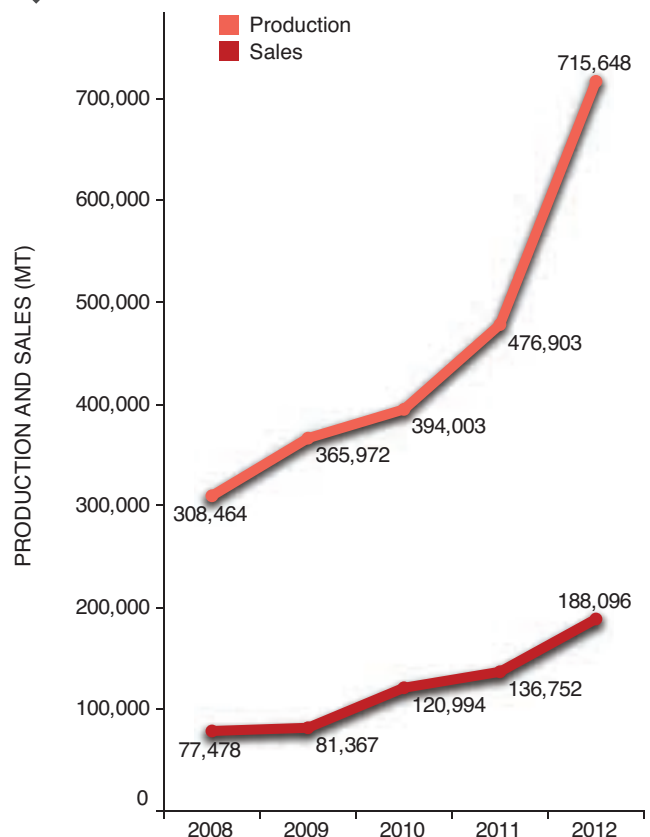
29 It's also important to consider that a high level of multiple certification in Colombia might contribute to a perceived oversupply from UTZ, although the coffee may be bought as standard compliant under other voluntary sustainability standards. The country with the highest levels of UTZ multi-certification with Fairtrade and Rainforest Alliance is Peru, followed by Colombia.

FIGURE 8.14 UTZ CERTIFIED COFFEE PRODUCTION VOLUME BY COUNTRY, 2012.



Source: J. Rijkenberg, UTZ Certified, personal communication, March 19, 2013.

FIGURE 8.15 UTZ CERTIFIED COFFEE PRODUCTION AND SALES, 2008–2012.



Source: J. Rijkenberg, UTZ Certified, personal communication, March 19, 2013.

TABLE 8.11 UTZ CERTIFIED COFFEE AREA HARVESTED, PRODUCTION AND SALES, BY COUNTRY, 2012.

|                                  | Area harvested (ha) | Production (mt) | Sales (mt)     |
|----------------------------------|---------------------|-----------------|----------------|
| Brazil                           | 99,148              | 232,336         | 79,666         |
| Vietnam                          | 44,647              | 158,986         | 38,669         |
| Colombia                         | 48,518              | 78,171          | 9,218          |
| Honduras                         | 46,863              | 64,408          | 27,920         |
| Peru                             | 87,291              | 58,452          | 6,278          |
| India                            | 25,549              | 31,549          | 8,815          |
| Uganda                           | 48,751              | 18,609          | 1,906          |
| Indonesia                        | 17,951              | 17,527          | 2,108          |
| Guatemala                        | 13,285              | 15,997          | 2,715          |
| Nicaragua                        | 15,813              | 13,704          | 3,282          |
| Mexico                           | 12,240              | 7,891           | 2,107          |
| Kenya                            | 9,411               | 7,801           | 2,548          |
| Ethiopia                         | 13,969              | 3,693           | 568            |
| Costa Rica                       | 1,966               | 1,857           | 1,052          |
| Papua New Guinea                 | 2,008               | 1,461           | 573            |
| United Republic of Tanzania      | 13,105              | 1,381           | 235            |
| Zambia                           | 270                 | 424             | 36             |
| Bolivia (Plurinational State of) | 360                 | 377             | 228            |
| Congo                            | 5,962               | 313             | no data        |
| Burundi                          | 890                 | 286             | 58             |
| Dominican Republic               | 195                 | 204             | 115            |
| El Salvador                      | 298                 | 184             | 0              |
| Rwanda                           | 175                 | 39              | 0              |
| <b>Total</b>                     | <b>508,661</b>      | <b>715,648</b>  | <b>188,096</b> |

Source: J. Rijkenberg, UTZ Certified, personal communication, March 19, 2013.

TABLE 8.12 UTZ CERTIFIED COFFEE AREA HARVESTED, PRODUCTION AND SALES, 2008–2012.

|      | Area harvested (ha) | Production (mt) | Sales (mt) |
|------|---------------------|-----------------|------------|
| 2008 | no data             | 308,464         | 77,478     |
| 2009 | no data             | 365,010         | 81,367     |
| 2010 | 261,453             | 394,003         | 120,994    |
| 2011 | 320,308             | 476,903         | 136,752    |
| 2012 | 508,661             | 715,648         | 188,096    |

Source: J. Rijkenberg, UTZ Certified, personal communication, March 19, 2013.



Global coffee production has been dominated by Latin America for much of the last century. More recently, production has been shifting somewhat towards Asian sources—most notably, Vietnam. The supply of sustainable coffee is concentrated in similar areas, but with a higher degree of concentration. In 2012 Latin America accounted for approximately 58 per cent of global coffee production but 77 per cent of sustainable coffee production (see Figure 8.16 and Figure 8.17). Table 8.13 shows the sustainability intensity for the 20 largest coffee producers (or proportion of domestic production under sustainable production).

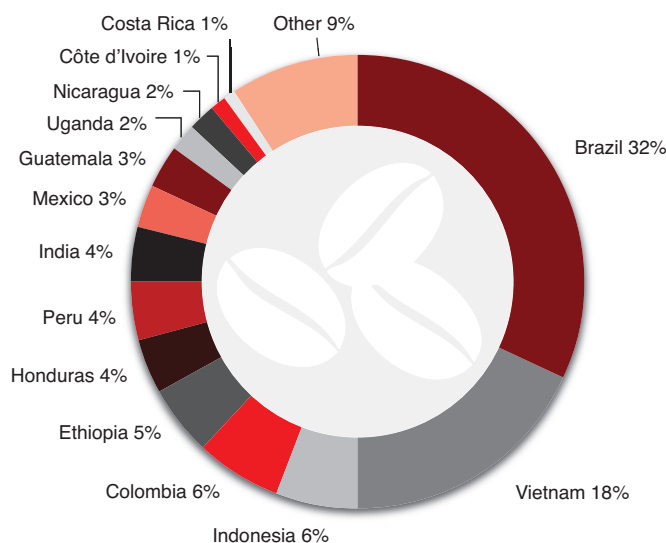
Five of the seven countries with a sustainability intensity of 30 per cent or more are Latin American. Colombia is notable as the country with the highest sustainability intensity, having more than 60 per cent of its total production either certified or verified as sustainable. Colombia is also remarkable for the significant presence of sustainable production across all of the initiatives except Organic, giving it a highly diverse production base for sustainable markets. Peru has also excelled at reaching a high level of sustainable production—registering an intensity of greater than 30 per cent—through a high diversity across all of the initiatives. By contrast, other

leaders such as Brazil and Vietnam, with 40 per cent and 30 per cent of production qualifying as standard compliant, respectively, rely heavily on 4C and UTZ for their sustainable supply and, as such, have entered sustainable markets more recently. Tanzania, on the other hand, stands out with 43 per cent of its production being certified as sustainable, through an almost exclusive relationship with Fairtrade (Figure 8.18).

Over the past several years, division in production for verified versus certified sustainable coffee markets has emerged, with verified coffee production coming primarily from the largest producers (Brazil, Vietnam and Colombia) and certified production coming from a wider range of “semi-major” producers (including Peru, Mexico, Nicaragua, Costa Rica and Honduras).

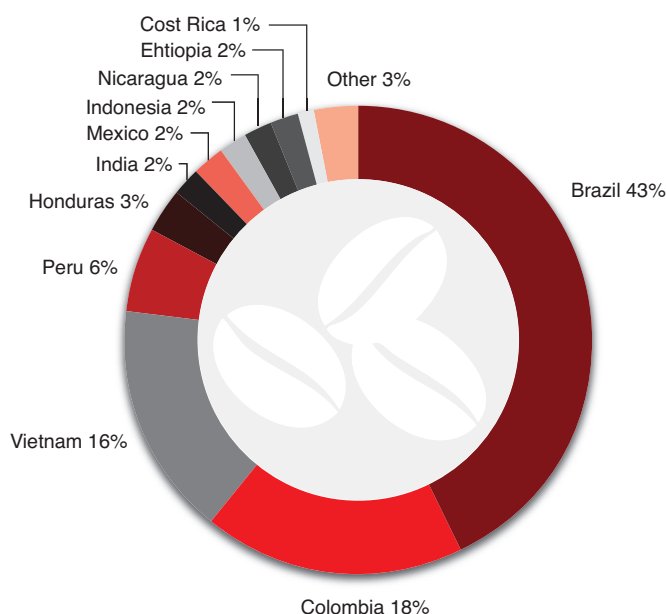
Overall, the distribution of sustainable production appears to be closely connected to a combination of historical linkages and capacity for commercialization associated with larger producing countries and Latin America more generally. With the exception of Kenya and Tanzania, Africa has been disproportionately under-represented as a supplier to sustainable markets (Figure 8.19).

FIGURE 8.16 GLOBAL COFFEE PRODUCTION BREAKDOWN BY COUNTRY (INCLUDES CONVENTIONAL AND STANDARD-COMPLIANT), 2012.



Source: ICO, 2013a.

FIGURE 8.17 STANDARD-COMPLIANT COFFEE PRODUCTION BY COUNTRY, 2012.



Sources: FLO, 2012; C. Guinea, Rainforest Alliance, personal communication, March 24, 2013; J. Rijkenberg, UTZ Certified, personal communication, March 19, 2013; IISD, H. Willer, FiBL, personal communication, August 26, 2013.

TABLE 8.13 STANDARD-COMPLIANT PRODUCTION AS A PERCENTAGE OF TOTAL NATIONAL PRODUCTION FOR 20 LARGEST COFFEE PRODUCERS, 2012.

Dashes represent negligible or no standard-compliant production relative to national production; they may also reflect an absence of data.

double or multiple certification also occur in Peru (79 per cent overlap in UTZ/Rainforest Alliance, 99 per cent UTZ/Organic, 33 per cent UTZ/4C, and

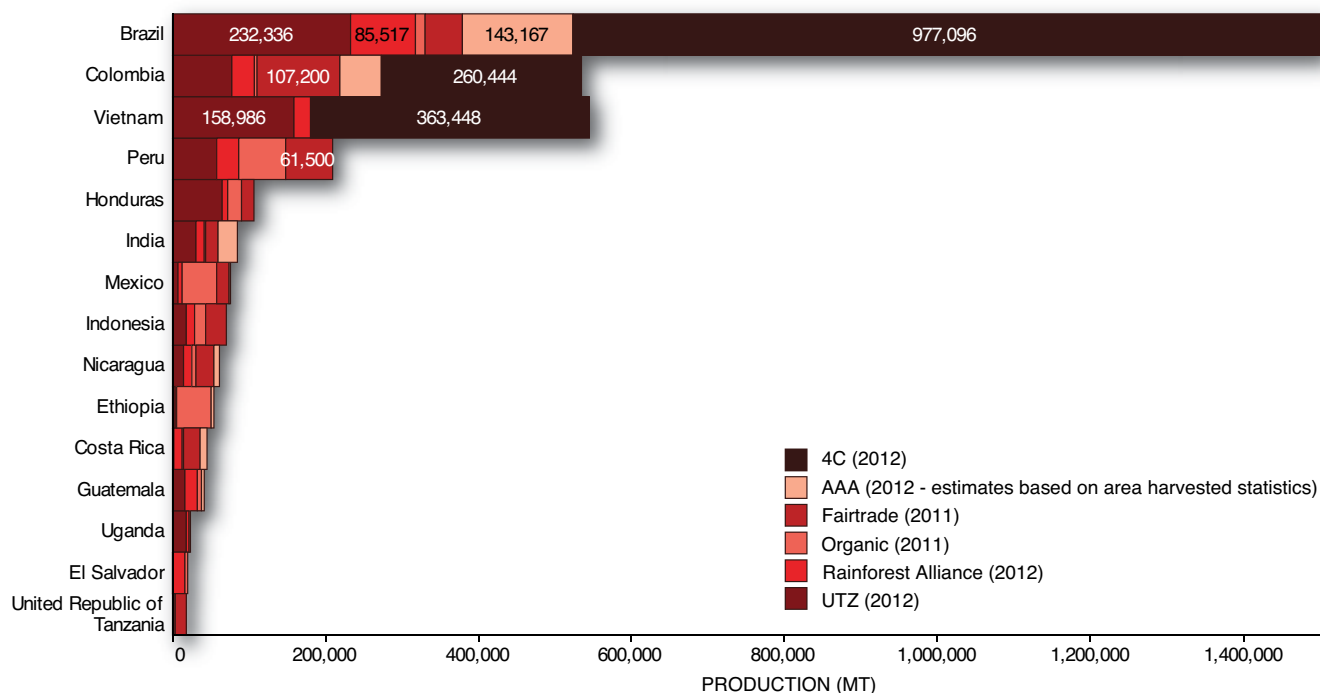
|                                    | 4C    | Fairtrade | Organic | Rainforest Alliance | UTZ Certified | Adjusted aggregate* |
|------------------------------------|-------|-----------|---------|---------------------|---------------|---------------------|
| <b>Brazil</b>                      | 37.5% | 1.9%      | 0.5%    | 3.3%                | 8.9%          | 41%                 |
| <b>Vietnam</b>                     | 25.2% | -         | -       | 1.5%                | 11.0%         | 30%                 |
| <b>Colombia</b>                    | 56.9% | 23.4%     | 1.0%    | 6.4%                | 17.1%         | >60%                |
| <b>Indonesia</b>                   | -     | 5.2%      | 2.8%    | 2.3%                | 3.4%          | 11%                 |
| <b>Peru</b>                        | -     | 18.4%     | 18.5%   | 8.2%                | 17.5%         | >30%                |
| <b>Honduras</b>                    | -     | 4.5%      | 5.1%    | 2.1%                | 18.2%         | 24%                 |
| <b>Ethiopia</b>                    | -     | -         | 11.2%   | 0.4%                | 0.9%          | 10%                 |
| <b>India</b>                       | -     | 5.2%      | 0.4%    | 3.4%                | 10.0%         | 15%                 |
| <b>Mexico</b>                      | -     | 5.9%      | 16.4%   | 1.6%                | 2.9%          | 21%                 |
| <b>Guatemala</b>                   | -     | -         | 2.6%    | 6.8%                | 6.9%          | 13%                 |
| <b>Uganda</b>                      | -     | -         | 1.4%    | 2.0%                | 11.0%         | 11%                 |
| <b>Nicaragua</b>                   | -     | 17.9%     | 4.8%    | 8.2%                | 10.3%         | 33%                 |
| <b>Costa Rica</b>                  | -     | 24.4%     | 0.7%    | 13.2%               | 2.1%          | 32%                 |
| <b>Côte d'Ivoire</b>               | -     | -         | 0.3%    | 0.1%                | -             | 0%                  |
| <b>Papua New Guinea</b>            | -     | -         | 6.5%    | 1.4%                | 1.7%          | 8%                  |
| <b>El Salvador</b>                 | -     | -         | 4.7%    | 23.5%               | 0.3%          | 22%                 |
| <b>Ecuador</b>                     | -     | -         | 0.9%    | -                   | -             | 1%                  |
| <b>Kenya</b>                       | -     | -         | 0.1%    | 9.3%                | 19.1%         | 23%                 |
| <b>Thailand</b>                    | -     | -         | 0.1%    | -                   | -             | 0%                  |
| <b>United Republic of Tanzania</b> | -     | 43.1%     | 7.2%    | 0.7%                | -             | 40%                 |

\*All figures in the aggregate column are downward adjusted for multiple certifications, using the median between the minimum and maximum values (100 per cent and 0 per cent multiple certification levels, respectively). Red text signals intensities that have been adjusted using other means, based on the presence of suspected higher levels of double certification or suspected lower levels of double certification. For example, Colombia also houses significant volumes of double- and multiple-certified production (e.g., 72 per cent overlap in UTZ/Rainforest Alliance, 63 per cent UTZ/Fairtrade, and 9 per cent Organic/Fairtrade). Significant amounts of

approximately 100 per cent Organic/Fairtrade).

Sources: A. Bruestle, 4C Association, personal communication, February 6, 2013; FLO, 2012; C. Guinea, Rainforest Alliance, personal communication, March 24, 2013; ICO, 2013a; Nestlé Nespresso Corporate Communications, personal communication, September 26, 2013; J. Rijkenberg, UTZ Certified, personal communication, March 19, 2013; IISD, H. Willer, FiBL, personal communication, August 26, 2013.

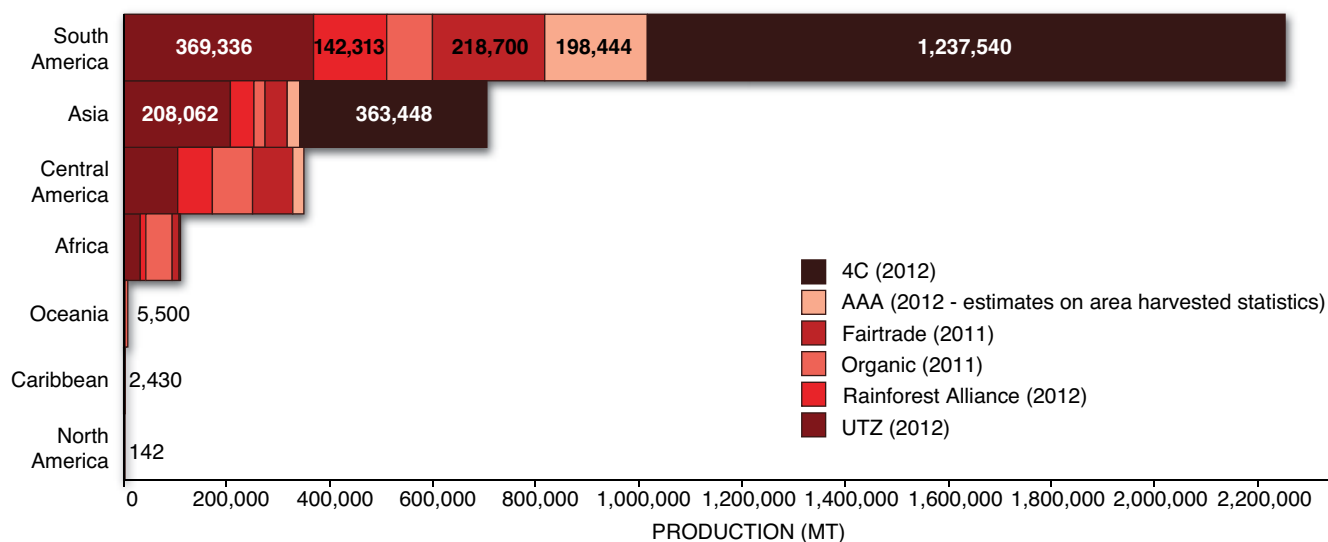
FIGURE 8.18 STANDARD-COMPLIANT COFFEE PRODUCTION BY COUNTRY, 2011/2012.



Where space permits, data points are visible.

Sources: A. Bruestle, 4C Association, personal communication, February 6, 2013; FLO, 2012; C. Guinea, Rainforest Alliance, personal communication, March 24, 2013; J. Rijkenberg, UTZ Certified, personal communication, March 19, 2013; IISD, H. Willer, FiBL, personal communication, August 26, 2013.

FIGURE 8.19 STANDARD-COMPLIANT COFFEE PRODUCTION BY CONTINENT, 2011/2012.



Where space permits, data points are visible.

Sources: A. Bruestle, 4C Association, personal communication, February 6, 2013; FLO, 2012; C. Guinea, Rainforest Alliance, personal communication, March 24, 2013; J. Rijkenberg, UTZ Certified, personal communication, March 19, 2013; IISD, H. Willer, FiBL, personal communication, August 26, 2013.





## 8.5 PRICING AND PREMIUMS

While pricing, and economic conditions more generally, are widely recognized as major sustainability challenges in the coffee sector, there is little consensus among coffee standards as to how to best address issues of economic sustainability within the sector. What is clear, however, is that pricing and premium rules offer but one mechanism for addressing economic uncertainty; better farm management practices, increased organization and improved relations with buyers all play important roles as well.

As such, the range of approaches for dealing with premiums is highly diverse, including setting a fixed baseline price combined with a fixed “above market” premium (Fairtrade), stipulating a fixed premium when specific conditions are met (C.A.F.E. Practices), facilitating a more transparent market for sustainable coffee transactions as a basis for improving the bargaining position of producers (UTZ), and case-by-case and/or market-based premiums (Rainforest Alliance and 4C Association).

Fairtrade has traditionally placed pricing and premiums as one of the flagship components of its certification scheme, with the standard requiring both the payment of a minimum price and the additional payment of a social premium above and beyond the minimum price (FLO, 2011a). As of 2013, the minimum price for Fairtrade coffee was US\$1.40 per pound (washed Arabica), while the required social premium was US\$0.20 per pound. Between 2010 and 2013, the average composite price for coffee was above the Fairtrade minimum, suggesting that only the social premium resulted in “additional revenue” to coffee producers over these years. Based on the 2012 average composite price of US\$1.56, the straight Fairtrade social premium amounted to a 13 per cent premium.<sup>30</sup> Fairtrade social premiums are meant to be distributed by producer organizations to projects such as reinvestment in production or processing systems, school facilities and baseball pitches.<sup>31</sup> Fairtrade reports that the total value of Fairtrade premium revenues increased 9 per cent from the 2009–2010 season to the 2010–2011 season, reaching €19 million (FLO, 2012).

The Organic coffee market is the most mature among the voluntary sustainability initiatives. As a general rule, the premiums associated with Organic are closely linked with overall quality (Giovannucci & Villalobos, 2007). As Organic gains in popularity and other competing initiatives enter into the market, there has been a trend toward premium decline in the market.<sup>32</sup> Reports of premiums of 25 per cent to 35 per cent in the early to mid-2000s

were common.<sup>33</sup> More recent premiums associated with Organic production, however, have been reported as averaging between 10 per cent and 15 per cent (ITC, n.d.). Double Fairtrade–Organic certified coffee represents an exception to this general rule, receiving the Fairtrade minimum price and the Fairtrade social premium as well as an additional Organic premium of US\$0.30 per pound. Based on the 2012 average composite price, the estimated premium for Fairtrade–Organic (Arabica, washed) coffee was approximately 30 per cent.

UTZ Certified is unique among the coffee standards for the detail with which it records the pricing and premiums related to certified sales. In 2012, UTZ reported an average premium of US\$0.04 (or 2.5 per cent based on the 2012 ICO composite price), representing a slight increase over the year prior but down from its high of US\$0.05 in 2009. As with other standard-compliant coffees, premiums for Arabica varieties tend to be higher in light of the higher quality markets they tend to serve. Trends in the delivery of premiums for UTZ Certified coffees, however, may point towards a more general closing of this gap across the voluntary sustainability standard sector. Records of UTZ Certified prices reveal that the difference in premiums across varieties has decreased considerably over the past few years, with Arabica earning a modest 25 per cent higher premium than UTZ Certified Robusta in 2012 (as compared with 100 per cent higher in 2011). This finding is also in line with general market trends, which have seen a general closing in the price differential between Arabica and Robusta varieties over the same period (ICO, 2013c).

Price premiums paid for coffee in India and Vietnam accounted for much of the Robusta variety premium increase year over year, as did recent positive price swings for Robusta varieties. The UTZ Certified (2012b) *Supply and Demand Update* provides useful insights into the variability of premiums under the program, which may serve as indicators of determinants of premiums with other sustainable coffees as well:

- Colombia, Brazil, Mexico, India and Ethiopia, on average, receive higher premiums for UTZ Certified coffee than UTZ Certified coffees from other sources (see Figure 8.20)—the high Colombian premium is due to purchases of high-quality Arabica Excelso beans.
- Tanzania, Honduras and Vietnam, on average, receive the lower premiums, but Honduras and Vietnam have the highest max premiums paid.

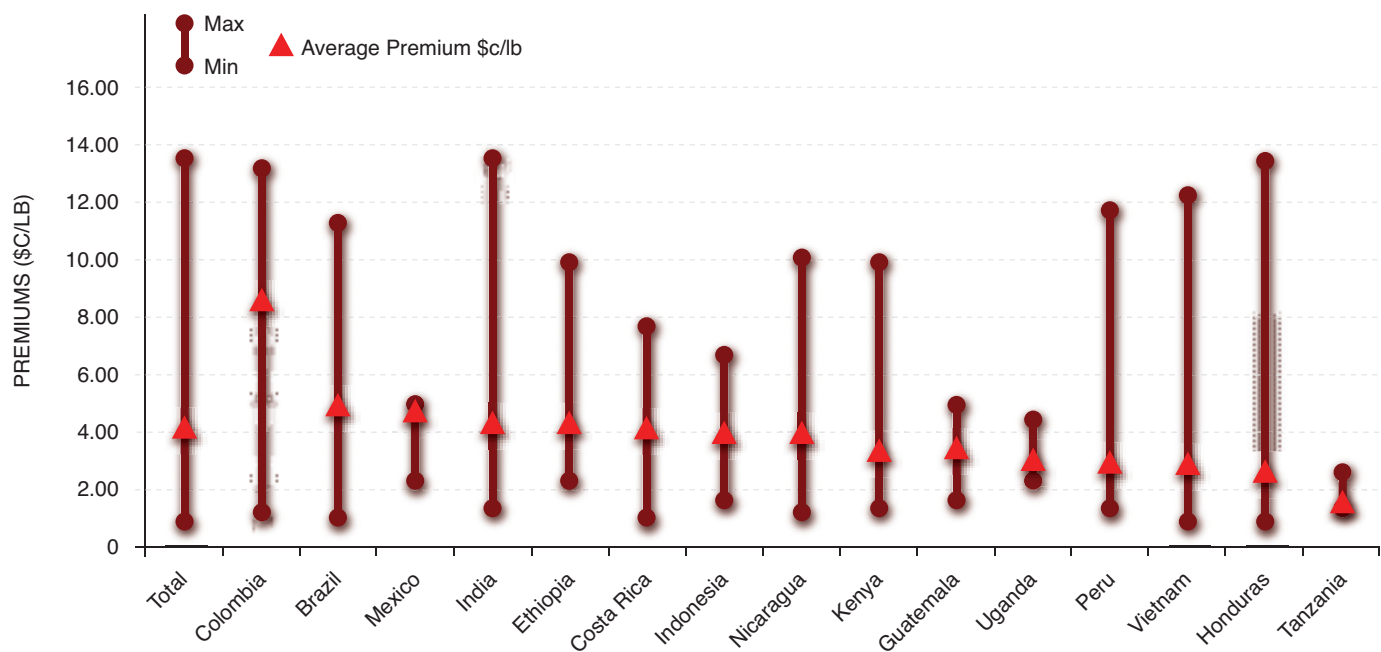
30 Note that the Fairtrade premium amounts to an 11 per cent gain over the average ex-dock New York price for 2012.

31 US\$0.05 per pound of these premiums are earmarked for productivity and quality control efforts.

32 Note the decline in Organic premiums over the past decade may also be linked to the trend toward rising coffee prices. Higher prices on the international market have a tendency to reduce premiums commanded on niche market products (see Potts, 2007).

33 Reported premiums of US\$0.22 per pound were observed for “Other Mild Arabicas” in 2001 where the global price averaged around US\$0.62 per pound (IndexMundi, 2013c), giving a premium of 35 per cent (Bacon, 2005). A 2007 study of the North American coffee market found Organic coffee premiums to range from US\$0.10 to US\$0.60 per pound, averaging at US\$0.24 or 22 per cent based on the 2007 international composite price (US\$1.07) (A. Villalobos, CIMS, personal communication, 2007); see also CIMS (2002, 2005) and Giovannucci & Villalobos (2007).

FIGURE 8.20 UTZ CERTIFIED COFFEE, WEIGHTED AVERAGE PREMIUMS BY COUNTRY, 2012 (US\$/LB).



Source: UTZ Certified, 2012b.

Pricing data on Rainforest Alliance and 4C coffees<sup>34</sup> are scarce due to the absence of requirements or systematic monitoring of initiative-related pricing. Rainforest Alliance reported premiums of around 8 per cent in 2009,<sup>35</sup> which agrees with another study's reported premiums for one Rainforest Alliance certified cooperative—from 3 to 10 per cent over the three years 2006–2008, with an average premium of about 8 per cent.<sup>36</sup> 4C reports that producers and traders have cited premiums of between US\$0.02 and US\$0.04 per pound (equivalent to 1–2 per cent of 2012 ICO composite price), although this is observed to vary on a country-by-country basis.

34 In this review “4C coffees” and “4C coffee” refer to “4C-compliant coffee.”

35 The organization reported an US\$0.11 per pound premium for Rainforest Alliance coffee, while prices for “Other Mild Arabicas” averaged around US\$1.40 per pound in 2009.

36 This corresponds to the price that was paid to farmers by a cooperative in Peru (Barham & Weber, 2012).



## 8.6 CHALLENGES AND OPPORTUNITIES

In many ways, the coffee sector has operated as the testing ground for many of the sustainability initiatives operative across commodities today. As such, the sustainable coffee market is one of the most mature markets currently in operation. One of the key attributes of mature markets, namely reduced growth, is observed within Fairtrade and Organic, the most mature initiatives within the sector. The more recent awareness and uptake of sustainability issues by the mainstream sector over the course of the last decade, however, has created major opportunities for market growth, as signalled by the development of new initiatives such as UTZ Certified and 4C. As a result, the growth of both production and sales of sustainable coffee—across all initiatives—has continued at a rapid pace, well above the global production and sales growth of conventional coffee. Current trends suggest not only that sustainable coffee is here to stay, but that conformity with one standard or another will soon become a requirement for market entry.

It is important to note, however, that supply of sustainable coffee has historically been far above actual demand, with certified producers typically selling only a portion of their standard-compliant production as certified or verified. All voluntary standards, with the exception of in-house standards such as C.A.F.E. Practices and Nespresso, and perhaps Organic, exhibit significant oversupply, with sales volumes being far lower than actual production volumes. This is not necessarily undesirable, as companies—including Mondelēz International (Kraft Foods Inc., 2011; Mondelēz International, n.d.-b), Nestlé (Nestlé, 2013a), Sara Lee, now DE Masterblenders 1753 (Sara Lee Corporation, 2011), Tchibo (Kuhrt, 2013) and Starbucks (J. Anderson, Starbucks, personal communication, November 21, 2013)—have all made specific commitments to sustainable coffee sourcing moving forward. Several of these companies have significant room to grow in the coming years and will need supply beyond that which is currently being purchased to meet coming demand (see, for example, Kuhrt, 2013).

Nevertheless, systemic oversupply could lead to reduced benefits for sustainable producers, while limiting opportunities for entry of producers not yet certified or verified. Historically, the supply of sustainable coffee has been more concentrated than the supply of conventional coffee. This makes sense given the expected time delays in transitioning production to sustainable practices, but a more disconcerting feature of the concentration is its geographic localization in more developed regions such as Latin America. Importantly, the concentration of sustainable production in the Latin American region has remained constant over the past five years, signalling the potential role of voluntary standards as *systemic* barriers to entry for more marginalized producers and

regions. This is particularly a concern for African producers in general, who have seen very little growth in production or sales of sustainable coffee over the last five years. In addition, this remains a serious concern for proponents of a “needs-based” approach to sustainable development, which proactively seeks to secure the “needs of those most in need” as part of a broader approach to sustainable development.

For the time being, however, ample opportunity exists for growth and increased inclusiveness. Taking nothing more than existing private sector commitments for sustainable sourcing, the global market for sustainable coffee is set to continue on a path of significant growth and can be expected to reach a critical mass, accounting for more than 50 per cent of global production within the next five years.

Given this, it will be critical for the industry that the impacts of these organizations be objectively evaluated and their strategies adjusted to optimize their performances given modern developments in markets. To date, there remains little in the way of science-based, comparative analysis of the field-level impacts of such initiatives. Although this is slowly changing as voluntary sustainability standards and other stakeholders begin to implement their own systemic impact evaluation programs, the leveraging of voluntary standards effectively within the sector will depend upon a better understanding of which initiatives are having the desired impacts, and where.

The liberalization of coffee markets has been a key driver in the proliferation of voluntary sustainability standards within the industry, but this has also resulted in a privatization of extension services and technical assistance, which now, in a large way, falls upon voluntary sustainability standards and partner organizations to provide. Given the reach that voluntary standards have attained within the sector, they can provide an invaluable opportunity for collaboration and help ensure a healthy and sustainable coffee crop on a global level moving forward, but doing so will almost certainly entail more than merely ensuring “compliance” with a particular set of standards. Technical assistance and continual improvement will be critical and costly pillars of the transformation to fully sustainable supply chains, and will demand ongoing vigilance and investment by private and public sectors alike.<sup>37</sup>

37 The Sustainable Commodity Assistance Network, originally launched by the Sustainable Commodity Initiative, represents a unique partnership between different standards bodies seeking a more unified and concerted technical assistance strategy for ensuring both compliance with standards and overall quality improvement through good agricultural practices (Sustainable Commodity Initiative, n.d.).



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