



5 BANANA MARKET



Bananas are the world's most popular fruit and one of the world's most important staple foods, along with rice, wheat and maize. In 2011, 107 million metric tons of bananas were produced in more than 130 countries on 0.1 per cent of the world's agricultural area,¹ for a total trade value of US\$9 billion (Food and Agriculture Organization of the United Nations (FAO), 2013) and a retail value of approximately US\$25 billion. Bananas have a high rate of domestic consumption, with only about 17 per cent of bananas exported to foreign markets annually. About two-thirds of bananas are exported from Latin America, with about the same amount destined for Europe or the United States (2011 data, FAO, 2013; see Table 5.1).

The banana market is characterized by heavy horizontal and vertical integration within the value chain and a low-cost and highly competitive export market focused in Latin America. Bananas are typically grown on plantations, and certain viruses, pests and fungi have spread in epidemic proportions over the last few decades, allegedly a result of decreased immunity created by monoculture

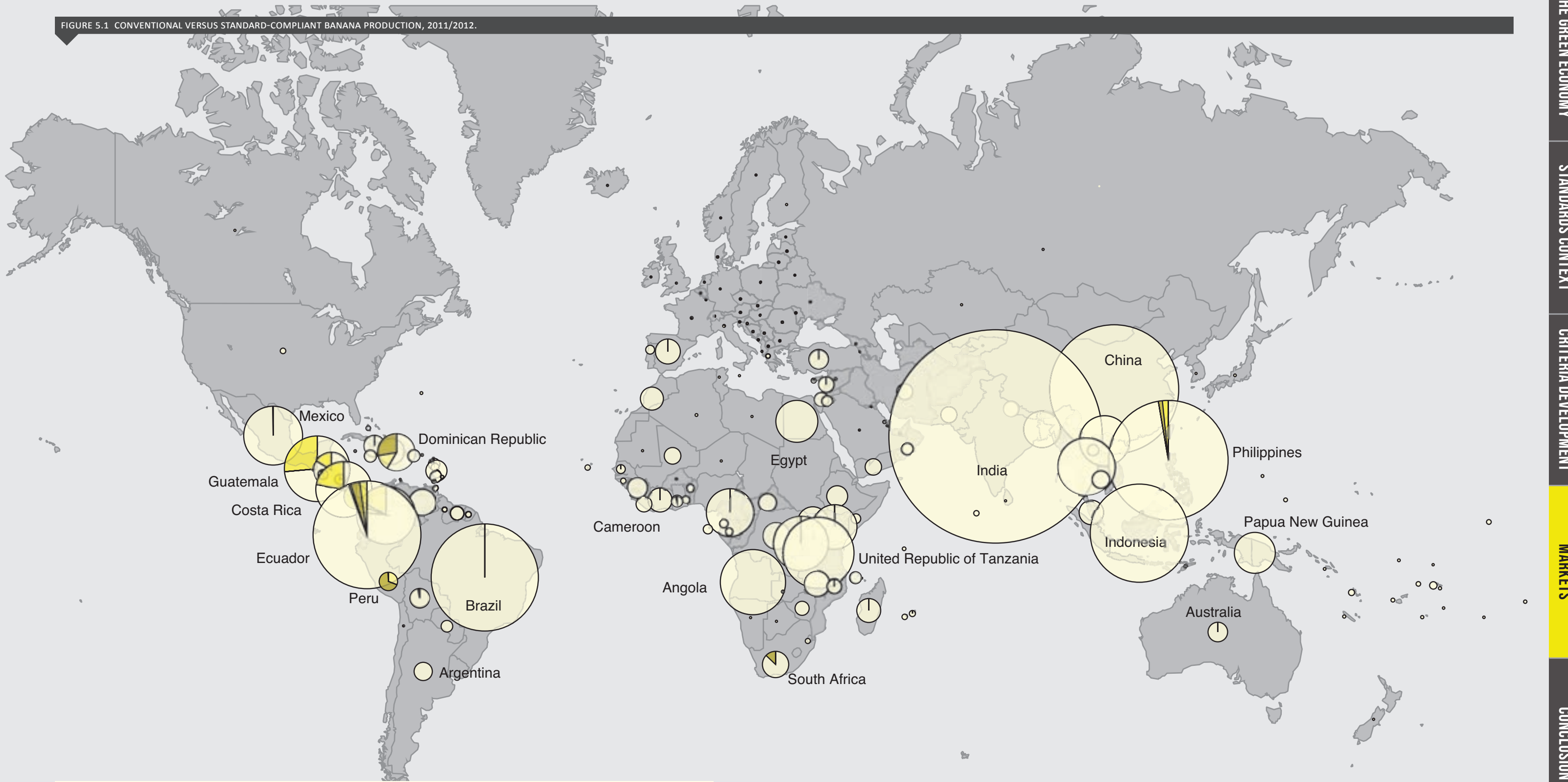
practices (Mlot, 2004). Increased susceptibility has rendered banana plantations increasingly dependent on agrochemicals, which has led to concerns regarding worker health and safety.² It is in the context of these sustainability concerns that voluntary sustainability standards, including Fairtrade, Organic and Rainforest Alliance, have emerged over the past few decades. In total, 3 per cent of global banana production and 14 per cent of exports were standard-compliant in 2012³ (see Figure 5.1, Conventional versus standard-compliant banana production, 2011/2012.). About three-quarters of standard-compliant bananas are cultivated in five countries: Guatemala, Colombia, Costa Rica, Ecuador and the Dominican Republic. See Figure 5.2 for a breakdown of standard-compliant production in these countries.

¹ 2011 agricultural land data: 4,911,622,000 hectares.

² In turn, the extensive use of agrochemicals has given rise to the emergence of pest strains that are resistant to pesticides. The main fungal disease, black sigatoka, has been able to mutate and develop resistance to fungicides, posing a problem to plantation managers seeking to reduce agrochemical use (Liu, 2009).

³ Adjusted for multiple certification, using 2011 data for Organic bananas.

FIGURE 5.1 CONVENTIONAL VERSUS STANDARD-COMPLIANT BANANA PRODUCTION, 2011/2012.

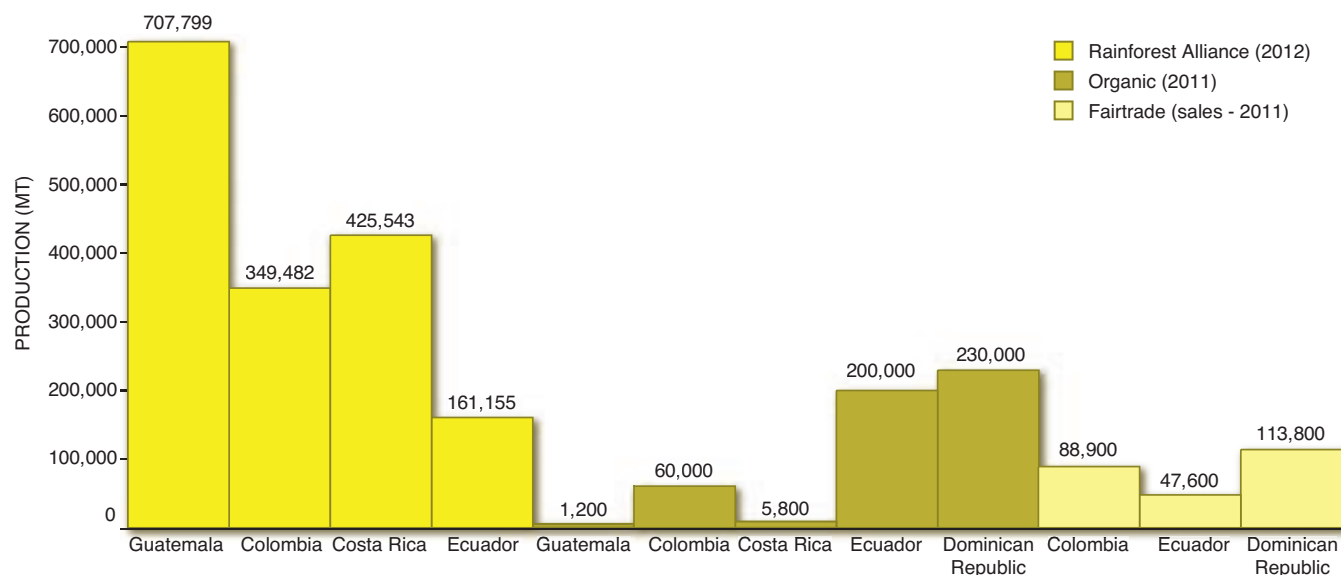


Circle size represents total production volumes, and coloured slices represent volumes of standard-compliant banana production. In several of the Latin American countries, compliant production accounts for about one-fifth of total domestic production. India and China are the largest producers of bananas by volume, while Guatemala and Colombia are the largest producers of standard-compliant bananas. In Guatemala, most compliant production is Rainforest Alliance certified, whereas most compliant production in the Dominican Republic is Fairtrade or Organic certified.

Sources: Fairtrade Labelling Organizations (FLO), 2012; FAO, 2012, 2013; C. Guinea, Rainforest Alliance, personal communication, February 18, 2013; IISD, H. Willer, Research Institute of Organic Agriculture/ Forschungsinstitut für biologischen Landbau (FiBL), personal communication, August 26, 2013.



FIGURE 5.2 LEADING PRODUCERS OF STANDARD-COMPLIANT BANANAS BY INITIATIVE, 2011/2012.



Sources: FLO, 2012; C. Guinea, Rainforest Alliance, personal communication, February 18, 2013; IISD, H. Willer, FiBL, personal communication, August 26, 2013.

TABLE 5.1 STANDARD-COMPLIANT AND CONVENTIONAL KEY STATISTICS FOR BANANA PRODUCTION AND TRADE.

KEY STATISTICS

Top 5 producers (2011) (61% of global)	India (28%), China (10%), Philippines (9%), Ecuador (7%), Brazil (7%)
Top 5 producers of standard-compliant bananas (2012) (71% of global)	Guatemala (21%), Colombia (15%), Costa Rica (13%), Ecuador (12%), Dominican Republic (10%)
Top 5 exporters (2011) (70% of global)	Ecuador (31%), Philippines (11%), Costa Rica (10%), Colombia (10%), Guatemala (8%)
Top 5 importers (2011) (49% of global)	United States (22%), Belgium (7%), Russia (7%), Germany (7%), Japan (6%)
Total production (2011)	107.1 million metric tons
Total exports (2011)	18.7 million metric tons (17% of production)
Total export value (2011)	US\$9 billion
Total area under cultivation (2011)	5.3 million hectares (0.11% of agricultural area – compare to 25 million hectares for sugar cane, 163 million hectares for rice, 217 million hectares for wheat)
Total number of workers employed by the banana sector*	380,000 workers in Ecuador alone, which accounts for 7.3% of global production volume*
Major international voluntary sustainability standards	Fairtrade, Organic, Rainforest Alliance
Standard-compliant production (2011/2012)**	3.3 million metric tons (3% of production)
Standard-compliant sales (2011/2012)**	2.7 million metric tons (82% of standard-compliant production, 2.5% of global production, 14% of exports)
Key sustainability issues	Maintaining biodiversity, pest management, worker health and safety, poverty

* Extrapolated, the total amount of people employed by the banana sector would be approximately 6.9 million. Banana production in Ecuador has increased by roughly one-third from 2002 (year of estimate) to 2011, from 5,611,440 to 7,427,780 (FAO, 2013).

**Using 2012 Fairtrade and Rainforest Alliance data, 2011 Organic data and an adjustment to account for multiple certification.

Sources: Top 5 producers, exporters, importers, global production, global exports, global area harvested: FAO, 2013; Total number of workers (2002

estimate): Arias, Dankers, Liu, & Pilkasus, 2003; Standard-compliant production and standard-compliant sales (2011 Organic data, 2012 Fairtrade and Rainforest Alliance data): FLO, 2012; C. Guinea, Rainforest Alliance, personal communication, February 18, 2013; IISD, H. Willer, FiBL, personal communication, August 26, 2013.



5.1 MARKET REVIEW

Market reach

Approximately 3.3 million metric tons of bananas were standard-compliant in 2012, equivalent to 3 per cent of global production²¹ (see Figure 5.3). Sales of compliant production accounted for 14 per cent of global exports during the same year.

Growth

Standard-compliant banana production grew 12 per cent per annum from 2009 to 2012.

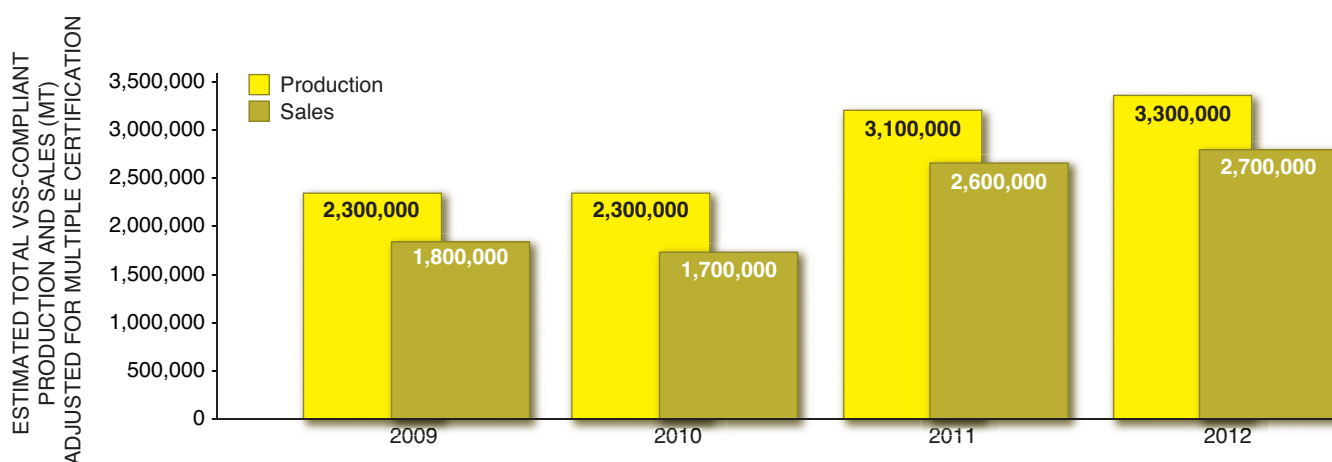
Regional importance

The most important producers of compliant volumes were Guatemala (21 per cent), Colombia (15 per cent) and Costa Rica (13 per cent), comprising just under half of total compliant volumes.

Pricing and premiums

Price premiums in the banana sector have reached up to 75 per cent over the past several years. Highest premiums were reported for Organic bananas, and lowest premiums were reported for Rainforest Alliance bananas.

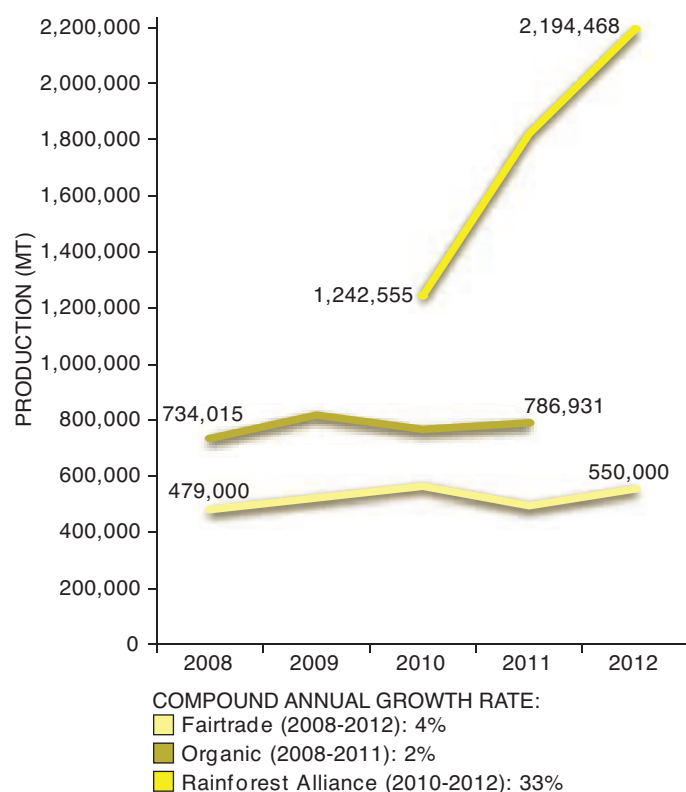
FIGURE 5.3 GROWTH IN STANDARD-COMPLIANT BANANA PRODUCTION AND SALES, 2009–2012.



Sources: FLO, 2011, 2012; C. Guinea, Rainforest Alliance, personal communication, February 18, 2013; IISD, H. Willer, FiBL, personal communication, August 26, 2013.

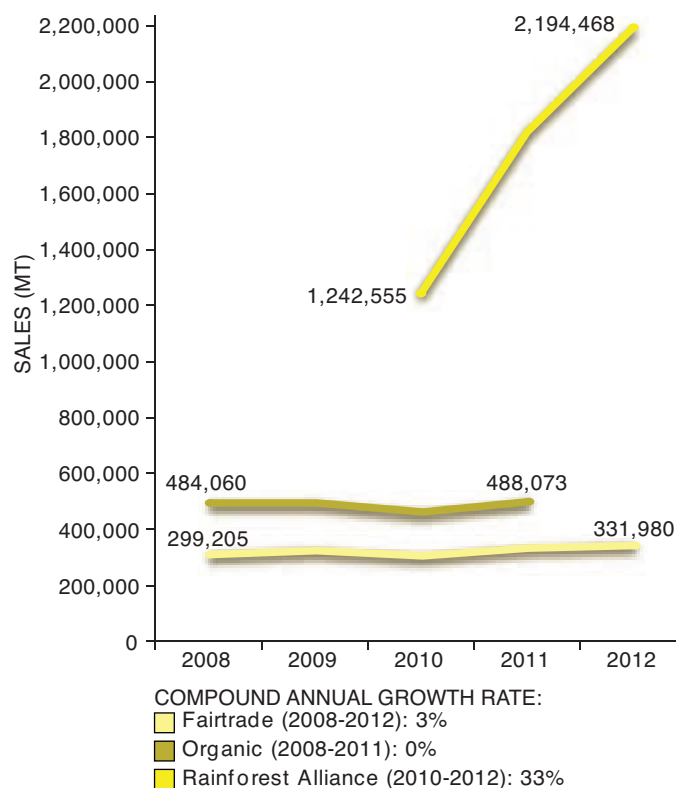


FIGURE 5.4 FAIRTRADE, RAINFOREST ALLIANCE AND ORGANIC BANANA PRODUCTION, 2008–2012.



Sources: FLO, 2011, 2012; C. Guinea, Rainforest Alliance, personal communication, February 18, 2013; IISD, H. Willer, FiBL, personal communication, August 26, 2013.

FIGURE 5.5 FAIRTRADE, RAINFOREST ALLIANCE AND ORGANIC BANANA SALES, TIME SERIES, 2008–2012.



Sources: FLO, 2011, 2012; C. Guinea, Rainforest Alliance, personal communication, February 18, 2013; IISD, H. Willer, FiBL, personal communication, August 26, 2013.





5.2 MARKET DEVELOPMENT

In 2012, 3.2 million metric tons, or 3 per cent of all bananas, were produced in compliance with an international voluntary sustainability standard. Growth in standard-compliant banana production and sales has been especially strong over recent years (see Figure 5.4 and Figure 5.5), but the market's current conduciveness to voluntary sustainability standards is rooted in the beginning of mass banana production for international export markets. Both North America and Europe established deep commercial interests in banana production throughout the early 1900s, sometimes by leveraging political influence as a vehicle for promoting commercial objectives. High levels of concentration within the sector, combined with high levels of dependency on banana production for revenues among producing countries and workers, resulted in the growth of large-scale plantations with reportedly poor working and environmental conditions.⁴ The role of banana companies in banana producing countries had been openly criticized since at least the 1930s,⁵ but it wasn't until the 1980s and 1992 that civil society campaigns and alternative trading organizations declared more fervently that the highly competitive and low-cost production of bananas from many Latin American countries was fuelling a "race to the bottom" (FAO, 2005)—with production being forced to move from family-run farming systems largely in the Caribbean to large-scale plantations with poor working conditions throughout Latin America.⁶ These campaigns, along with broader media attention resulting from the "Banana War,"⁷ began to fuel the use of alternative trade channels to improve the conditions of banana workers.

By 1998, there was "a widespread recognition amongst [...] governments, companies, scientists and civil society organizations involved in the sector that the social and environmental conditions prevailing in the industry at the time were unacceptable" (FAO, 2005), a sentiment that gave rise to the first International Banana Charter.⁸ Although the Charter initially failed to gain the support of industry, it did provide a reference point for changing corporate attitudes that proceeded over the ensuing decade. It also set the

stage for the second International Banana Conference in 2005 and the subsequent establishment of the World Banana Forum as the first permanent platform for dialogue and collaboration among all actors along the international banana supply chain. This increased dialogue and critical thinking about the sustainability challenges in the banana sector, combined with growing pressure and opportunity for international collaboration, set the stage for wider industry adoption of voluntary sustainability standards within the banana trade.

While production and sales of standard-compliant bananas have grown heavily in the wake of the Banana Charter and the establishment of the World Banana Forum, the Rainforest Alliance and Fairtrade had both been active in the banana market prior to this, in the early 1990s. In 1990, the Rainforest Alliance, with its partners in the Sustainable Agriculture Network, followed the model used by the forestry sector and organized a two-year-long series of meetings between banana farmers, NGOs, government agencies, community leaders and industry representatives in order to establish economically viable solutions for sustainable banana production and trade. Around the same time, the first Fairtrade banana standards were developed and certified under the Max Havelaar label, and Fairtrade certified bananas were first imported into the European Union in 1996 (Fairtrade Foundation, 2009).

The banana export market is characterized by deep horizontal and vertical integration, and several voluntary sustainability standards have leveraged this in growing the production and trade of their standard-compliant bananas. The UN Conference on Trade and Development (2011) estimates that the top five banana companies (Chiquita, Dole, Del Monte, Fyffes and Noboa) account for more than 70 per cent of the global export market for bananas. These companies serve functions ranging from production to processing to trading of bananas (Liu, 2009), and their decisions related to production and trading practices effectively determine many sustainability outcomes associated with banana production for export markets.

The major example of this in the banana sector is Rainforest Alliance's work with the major brand Chiquita in the early 1990s, which resulted in the banana sector becoming one of the first to experience mainstream adoption of voluntary sustainability standards. As early as 1992, Chiquita began applying the Sustainable Agriculture Network's social and economic standards on two of its farms in Costa Rica. Within a decade, all of Chiquita's own banana plantations were Rainforest Alliance certified. By 2008, a full 87 per cent of total banana volumes sold by Chiquita were Rainforest Alliance certified (including those sourced from non-Chiquita farms) (Chiquita Brands International Inc., 2008).

4 This trend was more prevalent in Latin America than in Africa and the Caribbean (Banana Link, 2009; Coats, Feral, Fischer, Nielsen & Smith, 2006).

5 Smedley Butler, a former Marine Corp, openly criticized the banana industry for its role in propagating and benefiting from war tactics in Central America (Butler, 1935).

6 By 1996, the challenges facing banana production were sufficiently widespread to give rise to the establishment of Banana Link, an organization dedicated solely to improving the livelihoods of banana producers and communities. Banana Link subsequently became an important voice for civil society and banana workers more generally within the context of international efforts to improve conditions for banana producers.

7 The Banana War consisted of a series of trade disputes between the European Union and Latin American banana producing countries related to the application of tariffs for non-African, Caribbean and Pacific bananas in the European Union (not to be confused with the "banana wars" during the Spanish-American war).

8 The International Banana Charter was negotiated within the context of the First International Banana Conference in 1998 (Institute for Agriculture and Trade Policy, 1999).

Major corporate actor Dole uses a variety of standards, including Rainforest Alliance, Fairtrade and Organic.⁹ Today, Dole and its partners have signed agreements with national Fairtrade initiatives in Austria, Belgium, France, Germany, the Netherlands, Sweden, the United Kingdom and the United States for the distribution of Fairtrade bananas from Colombia, Dominican Republic, Ecuador and Peru.¹⁰ Meanwhile, Dole reports that 100 per cent of its Peruvian operations are certified Organic.¹¹

Del Monte reports having implemented ISO 14001 standards for its banana operations in Costa Rica and Guatemala, while Fyffes has become the largest importer of Fairtrade bananas in the European

Union and a major player in marketing Organic bananas as well (Fyffes, 2012).

Through the combination of the commitments made by these and other banana companies, the transition to standard-compliant production continued at a modest pace of 9 per cent per annum between 2008 and 2012. We estimate that 3 per cent of global production was compliant with a voluntary sustainability standard by 2012 and that sales of standard-compliant product accounted for 14 per cent of global exports (see Table 5.2).¹²

9 Dole's ISO 14001 management system allegedly includes all of the requirements set by Rainforest Alliance standards, and the company encourages many of its banana farms in Costa Rica and banana plantations in Ecuador and Honduras to become Rainforest Alliance certified. In 2003, the company signed a memorandum of understanding with Fairtrade for the distribution of Organic and Fairtrade bananas from Peru and the Dominican Republic in Europe. Dole's first Rainforest Alliance certification was attained in Costa Rica in 2007.

10 Dole was invited to become a member of Fairtrade's Product Advisory Council for bananas in 2010 and achieved its first Fairtrade certification of a Dole-owned farm in 2012. Dole also claims to embrace the principles of integrated pest management at its primary production facilities in order to offer Organic products (Dole, 2011).

11 Note that despite Dole's adoption of a variety of voluntary sustainability standards across its production base, as late as 2005 a number of civil society organizations based in the European Union remained critical of the company's practices at production (see Banana Link, 2009; Coats et al., 2006).

12 Not all sales are exported. Sales refer to certified bananas that were sold as such (not as "conventional" bananas) at the first level of organization at which certification occurs (at the plantation level, for example). In the banana sector, however, most bananas sold as certified are destined for export markets, so sales divided by exports can give an idea of the total export market that is certified.



5.3 MARKET PERFORMANCE

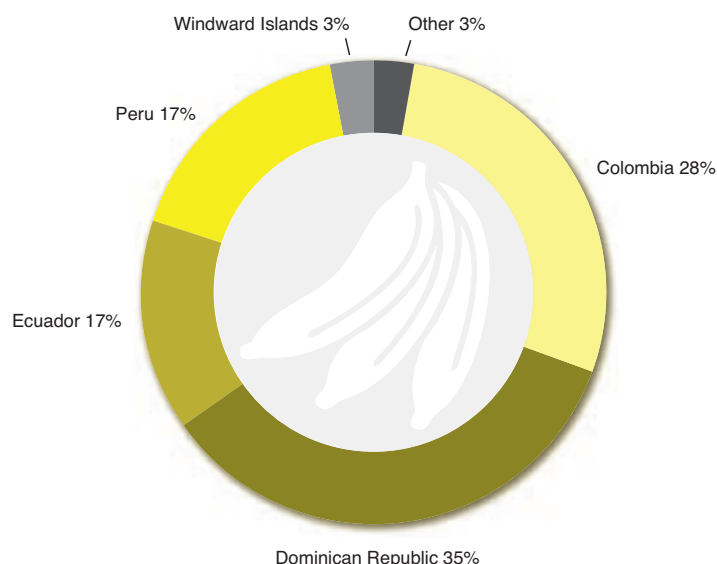


Fairtrade International

Fairtrade certified bananas account for approximately 0.5 per cent of global banana production, with 550,000 metric tons of production certified in 2012 on 28 thousand hectares, up 4 per cent per annum from 2008. In 2011, two-thirds of Fairtrade production was sold as Fairtrade certified, representing 2 per cent of the total world banana trade. Both sales and production have grown relatively consistently from 2008 to 2011 (see Figure 5.7 and Table 5.4), with the exception of a dip in production in 2011 due in part to the effect of Hurricane Thomas in the Windward Islands (St-Vincent, St-Lucia, Dominica, Grenada and Martinique) (FLO, 2012). Fairtrade expects its certified banana sales volumes will grow about 10 per cent in 2013 and reach a level of 400,000 metric tons in 2014 (M. Blaser, Fairtrade, personal communication, September 13, 2013).

Almost all (94 per cent) of Fairtrade banana sales occurred in four countries: Colombia, the Dominican Republic, Ecuador and Peru (see Table 5.3). The Windward Islands accounted for only 3 per cent of Fairtrade banana sales but exported 90 per cent Fairtrade bananas, and bananas account for 20 per cent or more of the domestic economy (Fairtrade Foundation, 2012). Also notable is that Fairtrade has increased production capacity in Africa to 600,000 metric tons in 2013 (in itself more than doubling total 2011 production capacity from all regions), from virtually nothing in 2011 (M. Blaser, Fairtrade, personal communication, September 13, 2013).

FIGURE 5.6 FAIRTRADE BANANA SALES BY COUNTRY, 2011.



Source: FLO, 2012.

TABLE 5.2 IMPORTANCE OF VOLUNTARY SUSTAINABILITY STANDARD (VSS) BANANA 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 (%)
Fairtrade (2012)	550,000	1%	3%	331,980	0%	2%
Organic (2011)	786,931	1%	4%	488,073	0%	3%
Rainforest Alliance (2012)	2,194,468	2%	12%	2,194,468	2%	12%
Global VSS production / sales (mt) (%) (adjusted for multiple certification)	3,300,000	3%	18%	2,700,000	3%	14%

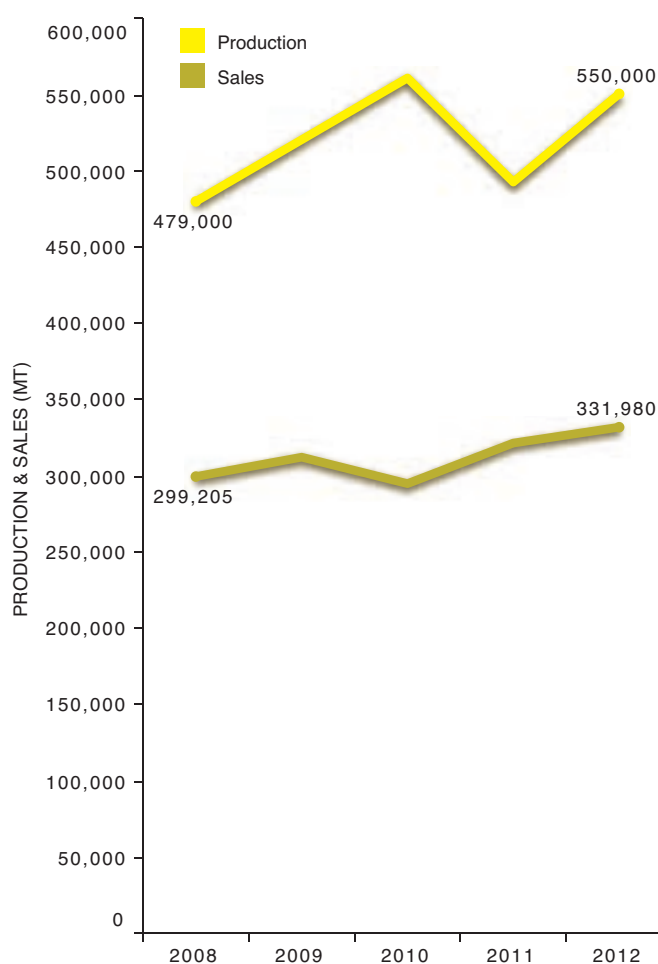
Sources: FLO, 2012; FAO, 2013; C. Guinea, Rainforest Alliance, personal communication, February 18, 2013; IISD, H. Willer, FiBL, personal communication, August 26, 2013.

TABLE 5.3 FAIRTRADE BANANA SALES AND AREA HARVESTED, 2011.

	Sales (mt)	Area Harvested (ha)
Colombia	88,900	3,330
Dominican Republic	113,800	7,660
Peru	54,200	4,080
Ecuador	47,600	6,100
Windward Islands	8,400	5,500
Total	321,300	27,950

Source: FLO, 2012.

FIGURE 5.7 FAIRTRADE BANANA PRODUCTION AND SALES GROWTH, 2008–2012.



Source: FLO, 2012.

TABLE 5.4 FAIRTRADE BANANA SALES AND PRODUCTION, 2008–2012.

	Sales (mt)	Production (mt)
2008	299,205	479,000
2009	311,465	-
2010	294,447	561,100
2011	321,300	491,800
2012	331,980	550,000

Source: FLO, 2012.

Rainforest Alliance

Rainforest Alliance is by far the dominant provider of certified bananas to the global market, due principally to its unique partnership with Chiquita. Although Rainforest Alliance has been certifying bananas since the 1990s, the organization is still experiencing rapid growth, with an annual growth rate of 33 per cent over the last three years, reaching 2.2 million metric tons of certified banana production by 2012 (see Figure 5.9 and Table 5.6), on 77,205 hectares.¹³ As of 2012, we estimate that sales of Rainforest Alliance bananas accounted for approximately 12 per cent of global banana exports (and 2 per cent of global banana production).¹⁴

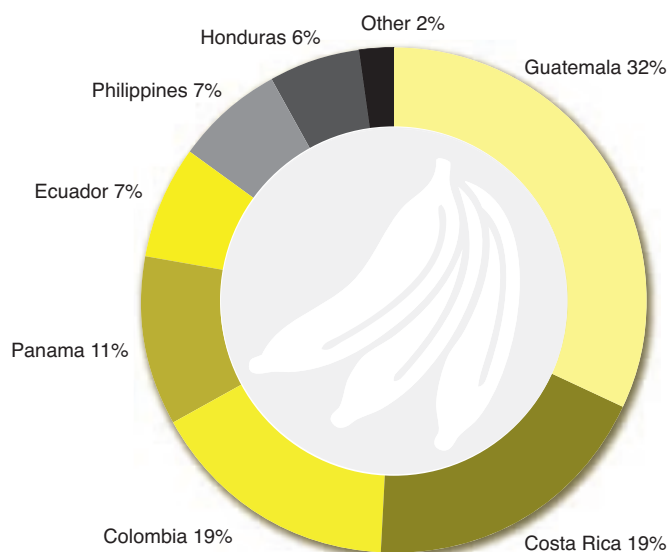
¹³ This is roughly three times larger than the total area under Fairtrade banana certification.

¹⁴ Note that this is significantly less than the claims on the Rainforest Alliance website, which advertises that the organization certifies 15 per cent of global exports. It is also short of its proclaimed target of certifying 20 per cent of global exports by 2012 (Rainforest Alliance, n.d.).

The long-standing collaboration with Chiquita has also made bananas one of the most important commodities (in terms of volume certified) for Rainforest Alliance's programs. All of Chiquita's plantations in Latin America are Rainforest Alliance certified. Moreover, the plantations of the Favorita Fruit Company, the third-largest banana exporter in Ecuador and a key Chiquita supplier, are 100 per cent Rainforest Alliance certified. According to Chiquita, the company traded almost 2 million metric tons of Rainforest Alliance bananas worldwide in 2006, accounting for 88 per cent of Chiquita's imports from Latin America and more than 90 per cent of Rainforest Alliance certified bananas during the same year (Byers, Giovannucci, & Liu, 2008).

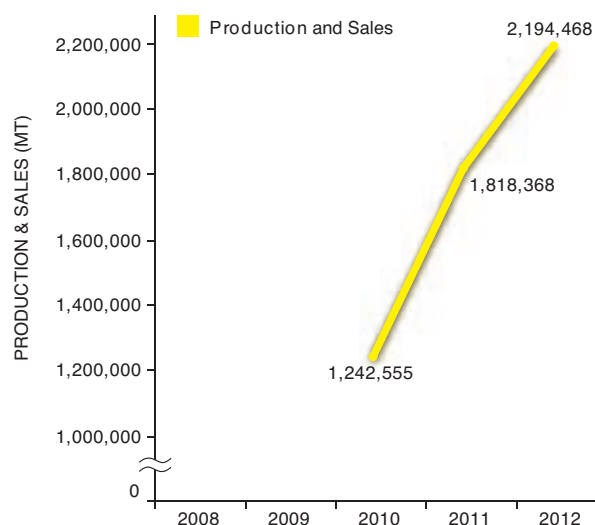
Geographically, the largest suppliers of Rainforest Alliance bananas are in Central America, with Guatemala (32 per cent), Costa Rica (19 per cent) and Colombia (19 per cent) accounting for 70 per cent of global Rainforest Alliance banana supply (see Table 5.5). The same three countries account for a mere 28 per cent of global exports, and there remains plenty of opportunity for growth in other major exporting countries such as Ecuador and the Philippines, each of which accounted for 7 per cent of Rainforest Alliance exports in 2012.

FIGURE 5.8 RAINFOREST ALLIANCE BANANA PRODUCTION BY COUNTRY, 2012.



Source: C. Guinea, Rainforest Alliance, personal communication, February 18, 2013.

FIGURE 5.9 RAINFOREST ALLIANCE BANANA PRODUCTION (AND SALES¹⁵) GROWTH, 2010–2012.



Source: C. Guinea, Rainforest Alliance, personal communication, February 18, 2013.

- 15 Virtually all Rainforest Alliance certified bananas are sold as certified due to direct integration within the Chiquita supply chain.

TABLE 5.5 RAINFOREST ALLIANCE BANANA PRODUCTION AND AREA HARVESTED BY COUNTRY, 2012.

	Production (mt)	Area harvested (ha)
Colombia	349,482	17,982
Costa Rica	425,543	21,951
Ecuador	161,155	4,160
Guadeloupe	2,771	220
Guatemala	707,799	14,059
Honduras	122,672	8,553
Nicaragua	29,740	634
Panama	247,633	5,999
Peru	1,718	38
Philippines	145,955	3,644
Total	2,194,468	77,240

Source: C. Guinea, Rainforest Alliance, personal communication, February 18, 2013.

TABLE 5.6 RAINFOREST ALLIANCE BANANA PRODUCTION AND AREA HARVESTED, 2008–2012.

	Production (mt)	Area harvested (ha)
2008	-	70,742
2009	-	96,343
2010	1,242,555	52,973
2011	1,818,368	55,145
2012	2,194,468	77,240

Source: C. Guinea, Rainforest Alliance, personal communication, February 18, 2013.



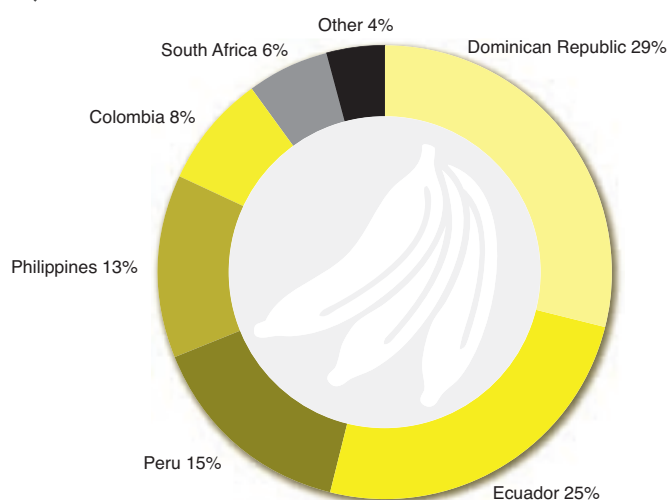
International Federation of Organic Agriculture Movements (IFOAM, or “Organic”)

Organic bananas have been on the market for more than two decades, but growth has been especially strong since the early 2000s, albeit tapering more recently. The growth in Organic banana production and sales slowed to under 2 per cent per annum from 2008 to 2012 (see Figure 5.11 and Table 5.8). As of 2011, more than 780,000 metric tons of Organic bananas were produced, accounting for 1 per cent of global production. During the same year, 488,000 metric tons of bananas were sold as Organic, accounting for 3 per cent of global exports.

Organic certified bananas are grown throughout the world, with a particular concentration in Asia and Latin America. The Dominican Republic (29 per cent), Ecuador (25 per cent) and Peru (15 per cent) account for almost three-quarters of global Organic banana

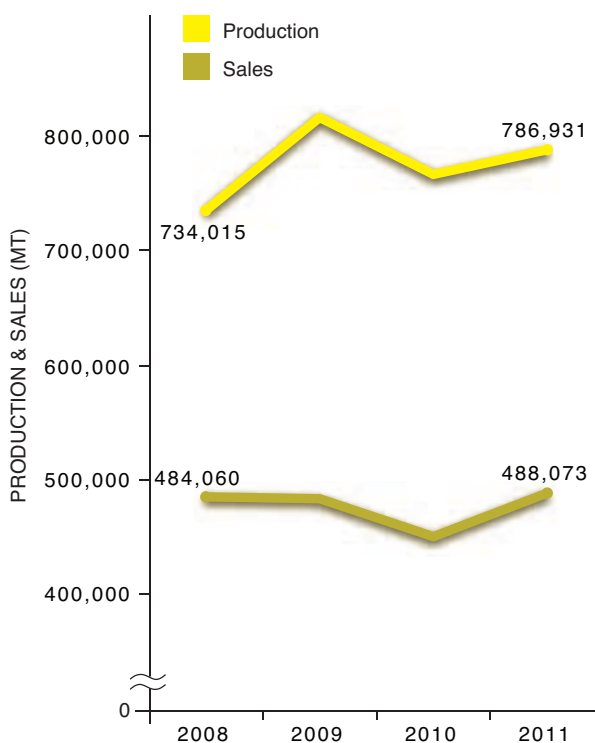
production (see Figure 5.10 and Table 5.7). While four of the top five producers of Organic bananas (Ecuador, Peru, the Philippines and Colombia) control similar levels of market share relative to their banana exports, the Dominican Republic stands out as the most important source of Organic bananas, despite its being a relatively small player on the international export market. Guatemala, on the other hand, which serves as a major exporter of bananas, has a relatively low presence of Organic banana production. Organic banana production has remained relatively stable over the period under analysis, averaging around an estimated 0.8 million metric tons, even though a major increase was noted from 2008 to 2009.

FIGURE 5.10 ORGANIC BANANA PRODUCTION BY COUNTRY, 2011.



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

FIGURE 5.11 ORGANIC BANANA PRODUCTION AND SALES GROWTH, 2008–2011.



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

TABLE 5.7 ORGANIC BANANA PRODUCTION AND AREA HARVESTED BY COUNTRY, 2011.

	Production (mt)	Area Harvested (ha)
Australia	50	3
Bolivia (Plurinational State of)	6,000	250
Burundi	250	50
Cameroon	10	1
Colombia	60,000	1,750
Costa Rica	5,800	--
Cuba	30	3
Cyprus	5	0
Dominican Republic	230,000	18,000
Ecuador	200,000	10,500
El Salvador	3,400	200
France	400	10
Ghana	2,500	100
Grenada	10	5
Guatemala	1,200	30
Kenya	50	5
Lebanon	30	1
Madagascar	40	5
Mauritius	30	2
Mexico	6,200	200
Mozambique	156	40
Peru	120,000	5,000
Philippines	100,000	5,000
Senegal	300	10
South Africa	50,000	1,700
Spain	0	65
Turkey	470	10
Total	786,931	42,939

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

TABLE 5.8 ORGANIC BANANA PRODUCTION, SALES AND AREA HARVESTED, 2008–2011.

	Production (mt)	Sales (mt)	Area Harvested (ha)
2008	734,015	484,060	40,628
2009	815,350	482,559	43,280
2010	766,453	449,868	39,852
2011	786,931	488,073	42,939

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

5.4 SUPPLY



We estimate that as of 2012, more than 3.3 million metric tons of banana production were standard-compliant. Standard-compliant banana supply is concentrated almost entirely in countries with significant production for export markets. India, China, Brazil, Indonesia, Tanzania and Angola, for example, represent 56 per cent of global production for banana cultivation around the world and 48 per cent of total land area, but none of the voluntary sustainability standards are present in these countries. Conversely, the countries where sustainability standards do have a presence represent less than one-third of global production (see Figure 5.12, Figure 5.13, and Figure 5.15). While standard-compliant supply comes from more than 30 countries, more than 90 per cent of this comes from just eight countries in Latin America and the Caribbean. This overall context points toward the limited role of voluntary sustainability standards across the majority of banana production around the globe.

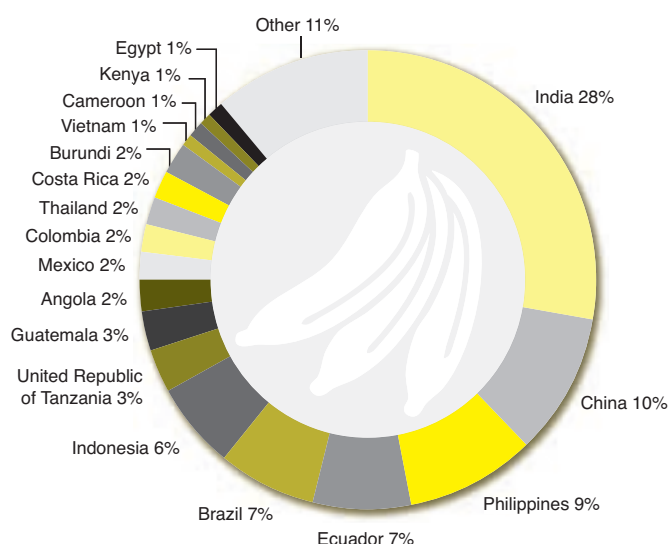
Standard-compliant markets are only slightly more concentrated than conventional markets in regards to countries of production, with 71 per cent of total standard-compliant supply coming from the top five producing countries (as opposed to the 70 per cent of global exports coming from top five exporters). While the top five banana exporters globally are also some of the top producers of standard-compliant bananas, Guatemala stands out as having excelled disproportionately in making the transition to compliant production, accounting for 24 per cent of global standard-compliant

supply in 2012 (Guatemala accounted for 10 per cent of global exports during the same year). Other countries that have created dominant positions in production of standard-compliant bananas, such as Panama and the Dominican Republic, have done so notwithstanding their relatively minor importance in terms of global banana production and/or exports. More than 20 per cent of all exports from Guatemala, the Dominican Republic, Colombia and Costa Rica could be supplied with standard-compliant bananas,¹⁶ giving these countries the highest rates of standard-compliant sales as a percentage of total banana exports (see Table 5.9).

Figure 5.14 and Figure 5.16 illustrate the distribution of standard-compliant production over different countries and continents. Standard-compliant banana production is heavily concentrated in a handful of Latin American countries. Seventy per cent of Rainforest Alliance's total supply comes from Guatemala, Costa Rica and Colombia, while virtually all Fairtrade bananas are sourced from Colombia, Ecuador, the Dominican Republic and Peru.

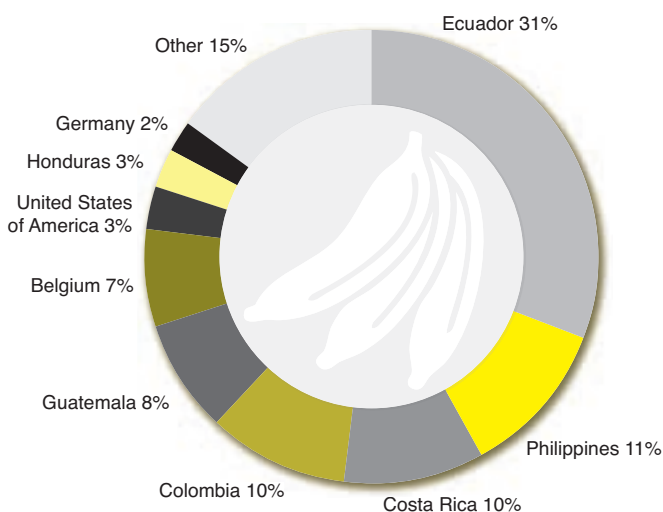
16 Not all sales are exported. Sales refer to certified bananas that were sold as such (not as "conventional" bananas) at the first level of organization at which certification occurs (at the plantation level, for example). In the banana sector, however, most bananas sold as certified are destined for export markets, so sales divided by exports can give an idea of the total export market that is certified.

FIGURE 5.12 TOTAL (STANDARD-COMPLIANT AND CONVENTIONAL) BANANA PRODUCTION BREAKDOWN BY COUNTRY, 2011.



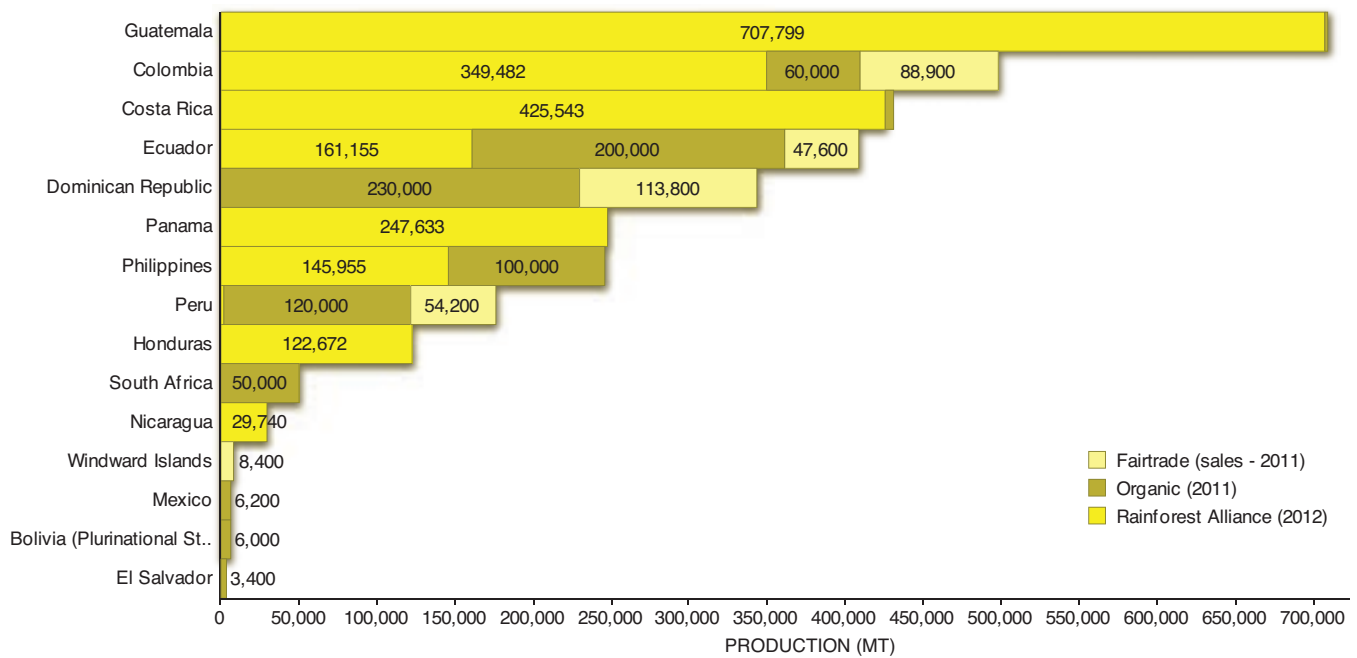
Source: FAO, 2013.

FIGURE 5.13 TOTAL (STANDARD-COMPLIANT AND CONVENTIONAL) BANANA EXPORT BREAKDOWN BY COUNTRY, 2011.



Source: FAO, 2013.

FIGURE 5.15 FIFTEEN LARGEST PRODUCERS OF STANDARD-COMPLIANT BANANAS, 2011/2012.

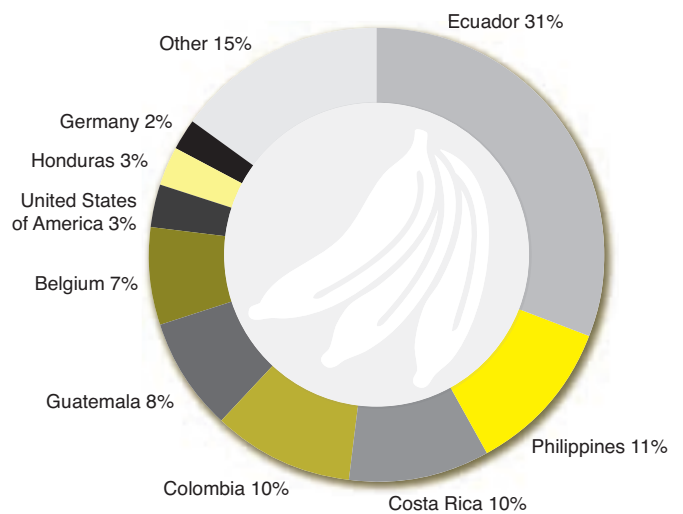


Where space permits, data points are visible.

Sources: FLO, 2012; C. Guinea, Rainforest Alliance, personal communication, February 18, 2013; IISD, H. Willer, FiBL, personal communication, August 26, 2013.

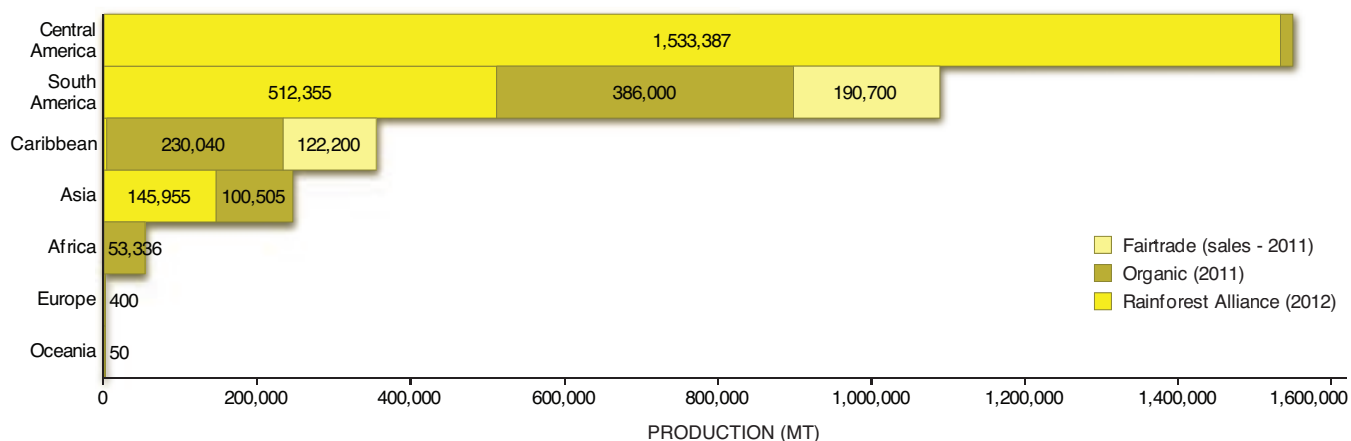


FIGURE 5.14 STANDARD-COMPLIANT BANANA PRODUCTION BY COUNTRY, 2011/2012.



Sources: FLO, 2012; C. Guinea, Rainforest Alliance, personal communication, February 18, 2013; IISD, H. Willer, FiBL, personal communication, August 26, 2013.

FIGURE 5.16 STANDARD-COMPLIANT BANANA PRODUCTION BY CONTINENT, 2011/2012.



Where space permits, data points are visible.

Sources: FLO, 2012; C. Guinea, Rainforest Alliance, personal communication, February 18, 2013; IISD, H. Willer, FiBL, personal communication, August 26, 2013.

TABLE 5.9 STANDARD-COMPLIANT PRODUCTION AS A PERCENTAGE OF TOTAL NATIONAL PRODUCTION FOR THE 20 LARGEST BANANA PRODUCERS, 2011/2012.

	Fairtrade (sales / production - 2011)	Organic (2011)	Rainforest Alliance (2012)	Adjusted aggregate*
India	-	-	-	-
China	-	-	-	-
Philippines	-	1.1%	1.6%	2.1%
Ecuador	0.6%	2.7%	2.2%	4.1%
Brazil	-	-	-	-
Indonesia	-	-	-	-
United Republic of Tanzania	-	-	-	-
Guatemala	-	-	26.4%	26.4%
Angola	-	-	-	-
Mexico	-	0.3%	-	0.3%
Colombia	4.2%	2.8%	16.4%	19.8%
Thailand	-	-	-	-
Costa Rica	-	0.3%	22.0%	22.1%
Burundi	-	-	-	-
Vietnam	-	-	-	-
Cameroon	-	-	-	-
Kenya	-	-	-	-
Egypt	-	-	-	-
Papua New Guinea	-	-	-	-
Dominican Republic	13.7%	27.7%	-	34.6%

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

*All figures in the aggregate column are downward adjusted to account for estimated multiple certification.

Sources: FLO, 2012; FAO, 2013; C. Guinea, Rainforest Alliance, personal communication, 2013; IISD, H. Willer, FiBL, personal communication, August 26, 2013.



Because bananas are a seasonal fresh fruit, their prices are highly volatile, increasing and decreasing depending on the period of the growing season, and premiums for standard-compliant bananas have been reported at 75 per cent or more depending on the standard and country of origin. The relatively tight supply/demand ratio for compliant bananas and commitments by major purchasers should provide support for all market-driven premiums.

Fairtrade is the only standard that fixes price premiums. By October 2013, the Fairtrade social premium was US\$1 per box, and minimum prices were between US\$6.05 per box (Panama) and US\$12.20 per box (Caribbean, excluding the Dominican Republic and Windward Islands) (Fairtrade International, 2013b). The Fairtrade social premium represents 17 per cent and 8 per cent of the above-mentioned minimum prices, respectively. In October 2013, Fairtrade raised its minimum prices for bananas, but conventional banana prices have been rising in recent years and remained higher than Fairtrade minimum prices in some regions; for example, Central American export prices were around US\$11 (producer's port) per box in October 2013 (IndexMundi, 2013a), which is about US\$3 higher than Fairtrade minimums set during the same month. Fairtrade estimates that US\$18 million of its premiums have been transferred on the specific premium accounts of producer organizations in 2012 alone, which corresponds with 327,000 metric tons sold at US\$1 per box (about the same as the 332,000 metric tons reported sold).

Like Fairtrade minimum prices, premiums for Organic bananas vary not only by country of production, but also by country of consumption. European markets are reportedly willing to pay more for Organic bananas than their American counterparts are (Fresh Plaza, 2012), which may be explained in part by the more developed market for double-certified Fairtrade/Organic bananas in the European market. Fairtrade minimum prices for double-certified Fairtrade/Organic bananas ranged from US\$8 per box (Peru) to US\$13 per box (Caribbean, excluding the Dominican Republic and Windward Islands) in 2013 (Fairtrade International, 2013b). As a

reference, Organic bananas imported into the United States from Colombia in November 2013 hovered around US\$20 per box (U.S. Department of Agriculture, 2013b). Like Fairtrade conventional bananas, double-certified Fairtrade/Organic bananas received a fixed social premium of US\$1 per box, equivalent to 13 per cent and 8 per cent of the above-mentioned minimum prices, respectively. Double-certified Fairtrade/Organic minimum prices range from about 30 to 40 per cent above Fairtrade minimum prices, which is in line with a separate study's observed prices for Organic bananas relative to conventional bananas from 2007 to 2010 (see Box 5.1, The relationship between voluntary sustainability initiative compliance, price distribution and price volatility). The study estimated that farm gate prices for non-Fairtrade/Organic bananas averaged 38 per cent over conventional banana prices between 2007 and 2010, with Organic prices displaying modestly improved stability over conventional bananas (see Figure 5.16) (Evans & Gordon, 2011). However, Organic premiums can be even higher where niche buyers and markets are considered, such as in one report of 75 per cent premiums for Organic bananas in the Philippines (Business World Online, 2013).

Lastly, Rainforest Alliance certified bananas can sell at prices varying from market price to 30 per cent over market price (Banana Link, 2009). In 2011, Dole, the largest trader of bananas, announced that it would start selling Rainforest Alliance certified bananas from Costa Rica, Honduras and Guatemala, which may be supportive of premiums in those areas. As observed in Figure 5.17 Average monthly wholesale prices for Organic and conventional bananas (New York market, 2007–2010 [US\$/box]), between 2007 and 2010 conventional bananas on the New York market were observed to fluctuate over a range of approximately US\$12 per box, whereas Organic bananas fluctuated over a range of approximately US\$7 per box.

BOX 5.1 THE RELATIONSHIP BETWEEN VOLUNTARY SUSTAINABILITY INITIATIVE COMPLIANCE, PRICE DISTRIBUTION AND PRICE VOLATILITY

One of the drivers behind concerns for sustainability in many tropical commodities relates to the historic associations between commodity production and poverty. Building increased price stability and equity along the supply chain has been one of the flagship principles of the Fairtrade sector and remains a core pillar of sustainable development in agriculture more generally. While standard-compliant bananas are associated with price premiums, those premiums do not necessarily indicate better revenues¹⁷ or even a more equitable sharing of retail prices. There is, however,

some evidence that voluntary standards may have a positive impact on price volatility.

Estimated price distribution along value chain to New York market. shows the distribution of revenue over the banana supply chain for Fairtrade, Organic and conventional bananas (using bananas produced in the Dominican Republic for the New York market for a case study), suggesting that Organic producers may earn a lower percentage (17 per cent) of the retail price than their conventional counterparts (21 per cent). Estimates for Fairtrade/Organic bananas, although better than Organic alone, at 22 per cent, provide only a marginal improvement over conventional bananas.

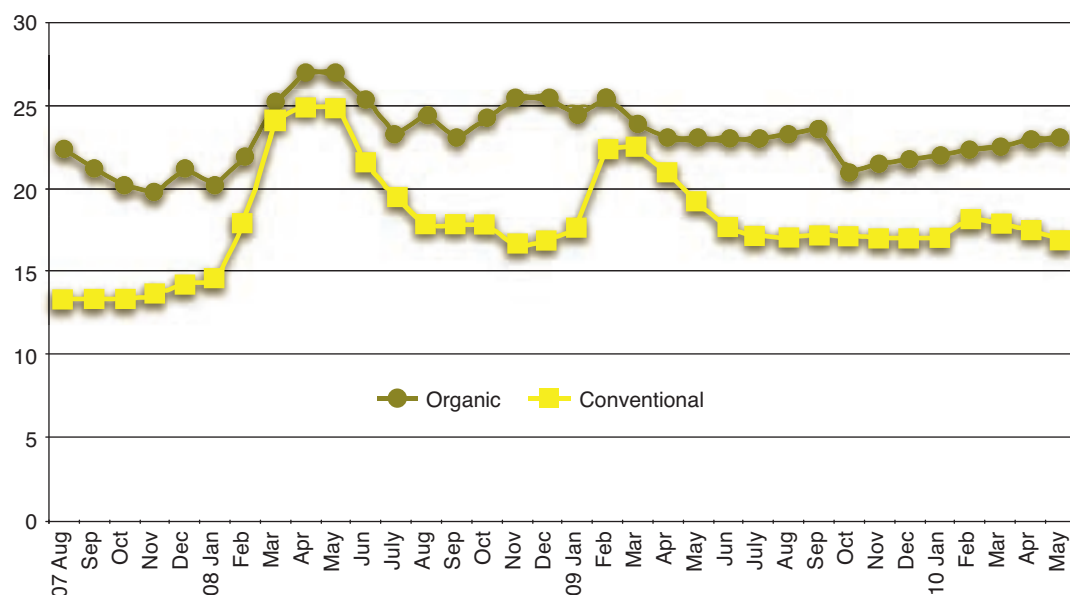
17 Of course, prices only represent one variable in a general analysis of revenue (along with yield, quality and market access) and therefore cannot be considered indicative of overall sustainability at production. For a more detailed analysis and coverage of the role of pricing within the context of household level revenues in standard-compliant commodity production, see Giovannucci et al. (2008).

TABLE 5.10 ESTIMATED PRICE DISTRIBUTION ALONG VALUE CHAIN TO NEW YORK MARKET.

	Fairtrade/Organic				Organic				Conventional			
	Cost (\$/box)	Price (\$/box)	Price (\$/kg)	% Final price	Cost (\$/box)	Price (\$/box)	Price (\$/kg)	% Final price	Cost (\$/box)	Price (\$/box)	Price (\$/kg)	% Final price
Producer's price (farm gate)		8.75	0.48	22%		5.50	0.30	17%		4.00	0.22	21%
Plus exporter's cost and margin	3.55			9%	2.50			8%	1.00			5%
Exporter's price (FOB Port Dominican Republic)		12.30	0.68	31%		8.00	0.44	25%		5.00	0.28	26%
Plus ocean freight, ancillary & insurance charges to NY	6.00			15%	6.00			19%	5.00			26%
Importer's price		18.30	1.01	46%		14.00	0.77	44%		10.00	0.55	51%
Plus ripening and distribution costs & margin	6.00			15%	6.00			19%	5.50			28%
Wholesale price		24.30	1.34	61%		20.00	1.10	63%		15.50	0.86	79%
Plus retailers cost and margin	15.50			39%	11.50			37%	4.00			21%
Retail price		39.80	2.20			31.50	1.74			19.50	1.08	

Source: Evans & Gordon, 2011.

FIGURE 5.17 AVERAGE MONTHLY WHOLESALE PRICES FOR ORGANIC AND CONVENTIONAL BANANAS (NEW YORK MARKET, 2007–2010 [US\$/BOX]).



Source: Evans & Gordon, 2011.



Standard-compliant banana production grew over 12 per cent per annum between 2009 and 2012, reaching 3.3 million metric tons in 2012. Although all of the voluntary standards operative in the banana sector have distinct and relatively well developed markets, Rainforest Alliance, the current market leader, remains the most likely to lead the expansion of standard-compliant production and sales in the coming years. As such, voluntary sustainability standard market growth in the banana sector will largely depend upon Rainforest Alliance's ability to expand its adoption beyond Chiquita to other major players. The recent commitments by Dole, among others, to begin the transition to Rainforest Alliance certification suggest that Rainforest Alliance is poised to continue its current growth trends. As such, we expect the annual growth rate of standard-compliant production to continue at above 10 per cent annum, reaching 7 per cent of global production by 2020.

The most important opportunities for expansion of global banana markets at present reside within major exporting countries such as the Philippines, Ecuador, Brazil and Mexico. Although standard-compliant bananas account for less than 25 per cent of domestic production across all of the major exporting countries, significant opportunities exist throughout these countries more generally.

A broader challenge within the sector is the development of domestic markets. With more than 80 per cent of the banana market going to domestic consumption, voluntary sustainability standards will need to find ways into domestic markets if they

are to exert transformational change at production. India, China, Thailand, Tanzania and Indonesia account for nearly half of the world's production and consumption, with virtually no presence of voluntary sustainability standards. With the banana trade market growing at about 2.5 per cent per annum since the turn of the century, however (from 2000 to 2011 [FAO, 2013]), there have been increasing opportunities for these countries to participate in export markets.

A long-standing challenge facing banana certification has been the cost of transitioning to compliance for producers, particularly among the thousands of smallholder banana farmers across the Caribbean and Africa. In recognition of this, national standards are emerging in key producing countries like Uganda (The State House of Uganda, n.d.) as a means for internalizing and localizing the costs associated with certification (UN Conference on Trade and Development, 2012a). In other countries like Australia and Costa Rica, regulations and programs have been put in place to improve the sustainability of the banana sector by modifying production systems and protecting the plant system and the environment in the process (Banana Industry Advisory Committee, 2012). Meanwhile, other countries such as India have started to promote the development of export markets and may thus be expected to become more active in supplying the voluntary sustainability standard market in the coming years (Agritrade, 2013).





5.7 REFERENCES

- AgriTrade. (2013). *India preparing a major banana export program*. Retrieved from <http://agritrade.cta.int/Agriculture/Commodities/Bananas/India-preparing-a-major-banana-export-programme>
- Anania, G. (2009). *How would a WTO agreement on bananas affect exporting and importing countries?* (Issue paper No. 21). Retrieved from International Centre for Trade and Sustainable Development website: <http://ictsd.org/downloads/2012/02/how-would-a-wto-agreement-on-bananas-affect-exporting-and-importing-countries.pdf>
- Arias, P., Dankers, C., Liu, P., & Pilkauskas, P. (2003). *The world banana economy 1985-2002*. Rome: UN Food and Culture Organization.
- Association of Labour Promotion Services (ASEPROLA). (2004). *The real wage situation of male and female workers in 11 banana plantations in Costa Rica, in comparison to a living wage*.
- Banana Industry Advisory Committee. (2012). *Banana strategic investment plan 2012-2014*. Retrieved from Horticulture Australia website: http://cms2live.horticulture.com.au/admin/assets/library/strategic_plans/pdfs/PDF_File_62.pdf
- Banana Link. (2009). Certification in the value chain of fresh fruits; the example of the banana industry, (May 2008), 1-4.
- Bendell, J. (2001). *Growing pain: A case study of a business-NGO alliance to improve the social and environmental impacts of banana production*. Bristol: Aspen Institute
- Business World Online. (2013, October 30). *Davao co-ops grow organic bananas for export*. Retrieved from <http://www.bworldonline.com/content.php?section=Economy&title=Davao-co-ops-grow-organic-bananas-for-export&id=78724>
- Butler, S. (1935). *War is a racket*. Round Table Press.
- Byers, A. Giovannucci, D., & Liu, P. (2008). *Value-adding standards in the North American food market*. Retrieved from the Food and Agriculture Organization (FAO) website: <http://www.fao.org/docrep/010/a1585e/a1585e00.htm>
- Coats, S., Feral, M., Fischer, H., Nielsen, J., & Smith, A. (2006). *Dole, behind the smoke screen... An investigation into Dole's banana plantations in Latin America*.
- Giovannucci, D., Potts, J., Killian, B., Wunderlich, C., Schuller, S., Soto, G., ... Pinard, F. (2008). *Seeking Sustainability COSA Preliminary Analysis of Sustainability Initiatives in the Coffee Sector*. Winnipeg: IISD.
- Chiquita Brands International Inc. (2008). *2008 corporate social responsibility report*. Retrieved from <http://www.chiquita.com/getattachment/1374dd80-2541-43fc-9639-7ce50524c62c/2007-2008-Annual-Report-Corporate-Responsibility.aspx>
- Dole. (2011). *Certifications*. Retrieved from: <http://dolecrs.com/performance/certifications/organics/>
- Evans, E.A., & Gordon R.M. (2011). *Strengthening the banana value chain through the growth of inclusive markets: Analysis of the U.S. market for Organic and Fair-trade bananas from the Dominican Republic* (Project No. UNJP/DOM/O13/SPA). Retrieved from MDG Achievement Fund website: http://www.mdgfund.org/sites/default/files/PS_STUDY_RDominican_Analysis%20of%20US%20Market%20for%20Organic%20and%20Fair-trade%20Bananas.pdf
- Fairtrade Foundation. (2009). *Unpeeling the banana trade*. Retrieved from http://www.fairtrade.org.uk/includes/documents/cm_docs/2009/f/1_ft_banana_reportweb.pdf
- Fairtrade Foundation. (2012). *Fairtrade bananas case study*. Retrieved from: http://www.fairtrade.org.uk/includes/documents/cm_docs/2012/W/WINFA_FairtradeBananas_CaseStudy_Update_Jan2012.pdf
- Fairtrade International. (2013b). *Banana price announcement from Fairtrade International Standards Unit*.
- Fairtrade Labelling Organizations (FLO). (2012). *Monitoring the scope and benefits of Fairtrade, fourth edition*.
- Food and Agriculture Organization of the United Nations (FAO). (2005). *FAO, Second International Banana Conference: "Reversing the race to the bottom"*. Retrieved from: http://www.fao.org/fileadmin/templates/banana/documents/IBC2_finalReport_en05.pdf
- Food and Agriculture Organization of the United Nations (FAO). (2013). *FAOStat*. Retrieved from <http://faostat.fao.org/default.aspx?lang=en>
- Fresh Plaza. (2012). *Dominican Republic: 53% of exported bananas organic*. Retrieved from <http://www.freshplaza.com/article/98413/Dominican-Republic-53-procent-of-exported-bananas-organic>
- Fyffes. (2012). *Focus on growth annual report 2012*.
- IndexMundi. (2013a). *Bananas monthly price - US Dollars per metric ton*. Retrieved from <http://www.indexmundi.com/commodities/?commodity=bananas>
- Institute for Agriculture and Trade Policy. (1999). *International banana charter*. Retrieved from <http://www.iatp.org/documents/international-banana-charter-o>
- International Trade Union Confederation. (2008). *Annual survey of violations of trade union rights*.
- Liu, P. (2009). *Certification in the value chain for fresh fruits: The example of banana industry*. Food and Agriculture Organization of the United Nations: Rome.
- Mlot, C. (2004). Greening the world's most popular fruit. *National Wildlife*, 42(2), 18-19.
- Morton, J.F. (1987). Banana. In J. F. Morton, *Fruits of warm climates*. Retrieved from <http://www.hort.purdue.edu/newcrop/morton/banana.html>
- Rainforest Alliance. (n.d.). *Vision for sustainability*. Retrieved from http://www.rainforest-alliance.org/sites/default/files/publication/pdf/vision_brochure.pdf

- Ramírez, V., & Cuenca, P. (2002). *Daño del ADN en trabajadoras bananeras expuestas a plaguicidas en Limón, Costa Rica*. Instituto de Investigaciones en Salud (INISA). Universidad de Costa Rica.
- Smith, S. (2010). *Fairtrade bananas: A global assessment of impact*. Institute of Development Studies, University of Sussex, UK. Retrieved from http://www.fairtrade.at/fileadmin/user_upload/PDFs/Produzenten/Fairtrade_in_the_Banana_Sector_IDS_Final_Report_December_2011.pdf
- The State House of Uganda. (n.d.). *Banana industrial development (PIBID)*. Retrieved from <http://www.statehouse.go.ug/presidential-initiatives/banana-industrial-development-pibid>
- UN Conference on Trade and Development. (2011). *Companies*. Retrieved from http://www.unctad.info/en/Infocomm/Agricultural_Products/Banana/Companies/
- UN Conference on Trade and Development. (2012a). *Infocomm commodity profile: Banana*. Retrieved from <http://www.unctad.info/en/Infocomm/AACP-Products/COMMODITY-PROFILE---Banana/>
- U.S. Department of Agriculture (USDA). (2013b). *Commodity report*. Retrieved from http://marketnews.usda.gov/portal/fv?&paf_gear_id=1200002&rowDisplayMax=25&repType=termPriceDaily&previousVal=&lastCommodity=&paf_dm=full&lastLocation=&locName=&commName=BANANAS&startIndex=1&commAbr=BAN&dr=1
- Wille, C. (2004). Certification: A catalyst for partnerships. *Human Ecology Review* 11(3), 288-291.