

# Global Market Report: Cocoa

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## Western Europe and developing economies in Asia are driving demand for cocoa but farm risks may affect supply in the long-term

**Cocoa** is primarily produced by hand and its production has never experienced widespread mechanization.<sup>1-3</sup> Despite this limitation, approximately 4 million tonnes of cocoa beans have been produced annually around the world since 2010.<sup>4</sup> The beans are first transformed into cocoa liquor and then into cocoa butter or cocoa powder for producing chocolate, cosmetics and a variety of foodstuffs.

Exported cocoa beans, whether whole or broken, raw or roasted, had a combined value of USD 8.6 billion in 2017.<sup>5,6</sup> The global cocoa beans market is expected to grow at a compound annual growth rate (CAGR) of 7.3 per cent from 2019 to 2025 to reach USD 16.32 billion.<sup>7</sup> The chocolate industry, which consumed 43 per cent of all cocoa in 2017, had a retail market value of USD 106.19 billion in 2017 and is expected to grow to USD 189.89 billion by 2026.<sup>6,8</sup>

The cocoa sector is an important source of livelihoods, providing revenue for 40 to 50 million people in 2012, mostly in developing countries and including 16 Low Human Development Countries (LHDCs).<sup>9,10</sup> An estimated 5 million farming households depend on cocoa as a cash crop, and 70 per cent of cocoa is produced by smallholders living on less than USD 2 per day and relying on cocoa for 60 to 90 per cent of their income.<sup>9</sup> The cocoa and chocolate industry also generate jobs in importing countries, where cocoa beans are often exported for processing and sale to end consumers. In 2011, it supported about 2,000 companies in the European Union and 650 companies in the United States, employing 70,000 people overall.<sup>9</sup>

In 2016, the largest exporter of cocoa beans was Côte d'Ivoire (USD 3.9 billion), followed by Ghana (USD 2.5 billion) and Nigeria (USD 0.8 billion). The largest importers were the Netherlands (USD 2.6 billion), Germany (USD 1.5 billion) and the United States (USD 1.3 billion).<sup>11</sup>

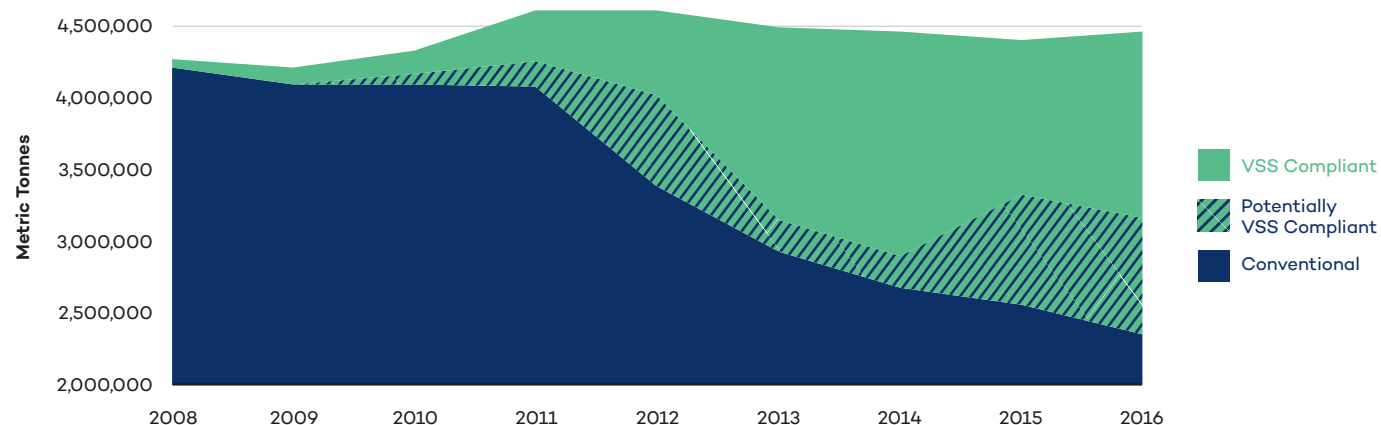
Although supply has kept up with demand in recent years, the market research firm The Economist Intelligence Unit predicts a shortage of supply in the long-term due to poor yield returns and low prices that are discouraging youth to work in the sector.<sup>12</sup> Despite this long-term projection, the global supply-demand of cocoa closed with a small surplus in 2018, which is expected to increase to 39,000 metric tonnes in 2019.<sup>13</sup> This surplus keeps prices for the producers low, further disincentivizing farmers from working in cocoa production.

The cocoa sector is projected to grow, driven primarily by its extensive appeal, popularity and wide use in the food and beverage industry. According to Euromonitor, increased demand for chocolate with perceived health benefits and more exotic flavours is expected in Western Europe and North America, which are the traditional chocolate consuming markets.<sup>14,15</sup> This includes chocolate made with single-origin cocoa, products with reduced sugar content, premium and dark chocolate, as well as new flavours. Demand for cocoa products is also increasing in emerging economies.<sup>12,16</sup> Chocolate sales are projected to grow in countries experiencing increases in GDP per capita such as China, Mexico, Indonesia, Turkey and India, as end consumers in these countries have greater disposable income to spend on such products.<sup>17</sup>

Outside of chocolate confectionary products, growth in the cocoa sector overall will come from increasing

## VSS-compliant Cocoa Accounted for at Least 29 Per Cent of Total Cocoa Production in 2016

Figure 1. Global cocoa production trend 2008 to 2016<sup>10,20</sup>



Note: VSS-compliant production volumes refer to cocoa produced in compliance with one or more VSSs. Conventional production volumes do not comply with any existing VSS. Production volumes that are defined as potentially VSS-compliant cannot be definitively listed in either category with the data currently available.

demand for cocoa ingredients (i.e. cocoa powder used in sweet biscuits and cookies) primarily in Asia, led by China, India, Japan and the Philippines due to the growth of the middle-upper class and increased youth's income.<sup>18,61</sup> Notably, Asia is expected to become the second largest consumer market of cocoa-based ingredients in the world after Western Europe.<sup>14</sup>

Within the sector, sustainably produced cocoa is also expected to grow faster than conventionally produced cocoa, with the rapid proliferation of voluntary sustainability standards (VSS) in the sector.<sup>10,19</sup> In 2016, 29 per cent of the market was made up of VSS-compliant cocoa while cocoa that was potentially VSS-compliant represented 18 per cent and conventional cocoa production accounted for 53 per cent of the market.<sup>10</sup>

Although the cocoa sector is expected to experience a 7.3 per cent Compound Annual Growth Rate (CAGR) from 2019 to 2025, there are important risks on the cocoa supply side that can limit this potential expansion.<sup>7</sup> **Market price volatility** has historically been a significant challenge for cocoa farmers, which has recently been exacerbated by the uncertainty over the timing and terms of Brexit, given the United Kingdom's importance in cocoa trading.<sup>21,22</sup> Cocoa future prices dropped drastically from USD 3,422 per tonne in late 2015 to USD 1,769 per tonne in mid-2017, which has influenced the price paid for cocoa beans to the farmer (farm-gate price).<sup>23</sup>

Coupled with price volatility, **income disparity** across the value chain remains a persistent challenge in the sector. For instance, despite supplying the key ingredient of chocolate bars, cocoa farmers in Cote d'Ivoire and Ghana earn only 3 to 6 per cent of the chocolate bars' retail market value.<sup>24</sup> To remediate price volatility and income disparities, Cote d'Ivoire and Ghana, which account for over 60 per cent of global cocoa production with 80 per cent of volumes sold before harvest, are working towards setting a minimum Free on Board (FOB) export price of USD 2,600 per tonne as a measure to improve farm-gate prices, and ultimately farmer's incomes (farmers receive approximately 70 per cent of this FoB price)<sup>25,26</sup> Setting a cocoa floor price in the two largest producing countries will provide more certainty for their farmers, and would be a game changer for the sector. Nevertheless, establishing an adequate floor price for cocoa requires an assessment of the cost and price distribution across the chain. It is important that this include consideration of the status of producers from all cocoa growing countries to achieve an equitable outcome.

Other important challenges in meeting increasing demand include ageing cocoa trees, which lead to a considerable reduction in **yields**; the effects of **rising temperatures** in major producing countries in West Africa, which might undermine production levels and encourage shifts in production sites, and could trigger further deforestation<sup>27</sup>; and **systemic poverty**, which

affects the large majority of cocoa producers<sup>28</sup>. These challenges need to be addressed by coordinated efforts between industry actors, including governments, standard setting bodies, development organizations and private companies to ensure the benefits from the continued growth in cocoa demand is equitably shared across the value chain.

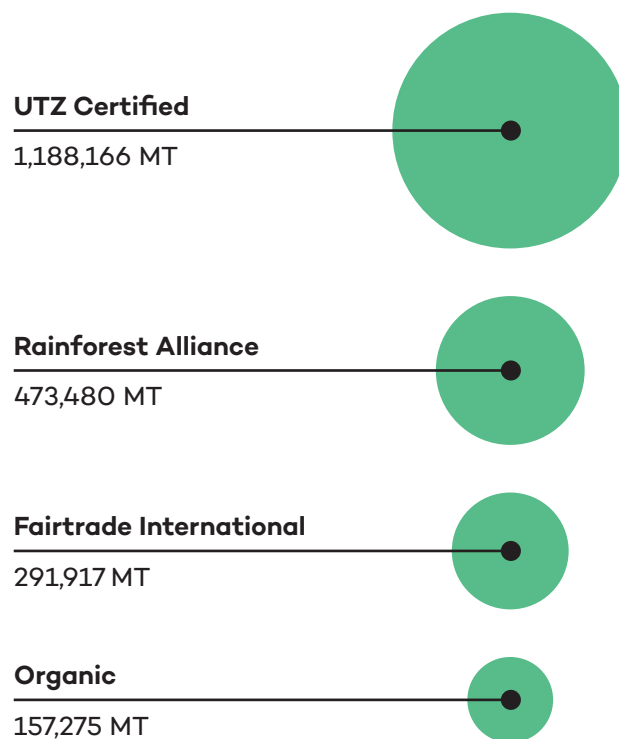
### Increased consumption of sustainable cocoa in traditional markets drives significant growth of VSS-compliant production

**Voluntary sustainability standards (VSS)** emerged in the cocoa sector over 20 years ago. These standards are intended to provide consumers with more sustainable cocoa purchasing options. VSS offer producers a label or means to distinguish their products in the marketplace, so that consumers can then identify them and their attributes more easily. To earn that label or distinguishing feature, the producer must adopt specified practices that are more socio-economically equitable and environmentally sound than conventional production, and have those practices assessed and verified. Several companies that purchase cocoa have relied on VSS compliant cocoa to meet their sustainable sourcing commitments, improve the reliability of their cocoa supplies and mitigate reputational risks. Doing so provides them with a competitive edge on multiple levels. In particular, VSS labels have allowed companies to differentiate their products in the marketplace, where they aim to appeal to consumers who want to address sustainability challenges such as income disparities, child and forced labour and deforestation through their purchase decisions.<sup>A,29,30</sup>

To date, there are some promising signs of success on the supply side. According to our analysis, VSS-compliant cocoa experienced a CAGR of about 46 per cent from 2008 to 2016, accounting for at least 29 per cent of the total cocoa production in 2016. UTZ Certified, Rainforest Alliance, Fairtrade and Organic are the main VSSs in the cocoa sector when ranked by the volume of production they cover.<sup>10</sup> In 2016, at least 1.3 million metric tonnes were VSS-compliant, with a value estimated at USD 2.1 billion.<sup>10,31</sup> This value is derived from the average producer prices per country, as reported by the Food and Agriculture Organization of the United Nations (FAO), which is

### How Much Cocoa is Certified by Each Standard?

**Figure 2. Standard-compliant cocoa production volumes in 2016<sup>10</sup>**



#### LIVELIHOODS

- 40 to 50 million people worldwide earn revenue from cocoa production
- 5 million of these are farming households
- 70 per cent of these are smallholder farms

then applied to the volume of VSS-compliant cocoa produced per country. The majority of VSS-compliant production comes from Africa, at approximately 75 per cent, (led by Côte d' Ivoire, Ghana and Nigeria) with some important volumes coming from the Dominican Republic, Ecuador, Indonesia and Peru.<sup>10</sup> The concentration of VSS-compliant cocoa in West Africa could constitute a risk for the growth of VSS-compliant cocoa, as the region has experienced conflict, political challenges and uncontrolled deforestation that cannot be overlooked.<sup>32,33</sup>

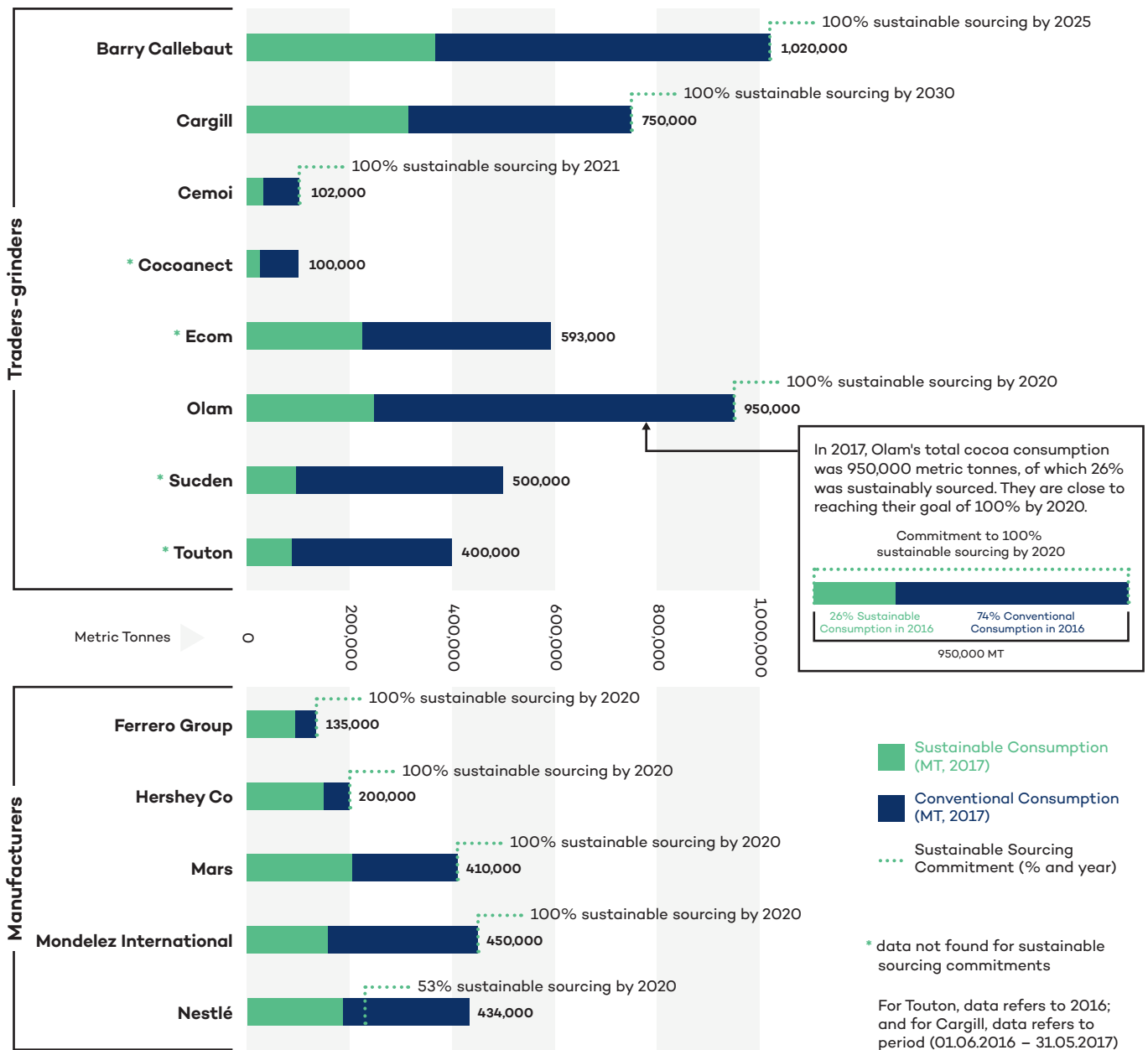
<sup>A</sup> To review the purpose of each VSS and the set of requirements producers need to comply with regarding different sustainability issues, please access the SSI Reviews in the following link: <https://iisd.org/ssi/>

On the demand side, VSS-compliant cocoa production has been driven mainly by large cocoa traders and manufacturers that source cocoa from VSSs. This may change as cocoa processors and manufacturers increasingly show interest in developing their own corporate sustainable cocoa sourcing programs, such as the Cocoa Life Scheme from Mondelez International

and Cocoa Horizons from Barry Callebaut, which are displacing independent third party standards.<sup>34,35</sup> The 13 largest cocoa consuming companies (traders, grinders and manufacturers) purchased 6 million metric tonnes of cocoa in 2016. From this total, 2.2 million metric tonnes came from sustainable sources that were either compliant with VSS or corporate schemes<sup>36</sup>.

### Progress Toward Sourcing More Sustainable Cocoa<sup>36,44-52</sup>

**Figure 3. Major cocoa consuming companies and their sustainable sourcing commitments**



Note: these numbers might reflect double counting of sustainable consumption volumes as traders listed might sell to listed manufacturers. Manufacturers and traders tend not to disclose to whom/from whom they sell/source sustainable volumes of cocoa due to confidentiality reasons.



Extrapolating from the sourcing commitments of the largest cocoa consuming companies, and assessing these against existing sourcing information, an additional 2.5 million metric tonnes of sustainable cocoa could be consumed by 2030. The leading buyers' sourcing commitments are driven mainly by final end consumer preferences to purchase more sustainable and healthier products.<sup>37</sup> Notably, the cocoa sector shows clear signs of continued growth in the demand for sustainable cocoa-based products. According to Euromonitor, chocolate confectionery from sustainable cocoa sources accounted for 8 per cent of the total global [retail] market value in 2017, fuelled by increased demand from Western Europe and North America. This trend is expected to continue.<sup>6</sup> Recent evidence suggests that organic cocoa is expected to have a 9.5 per cent CAGR in the period 2019 to 2025 and to reach USD 620 million in retail value by 2025.<sup>38-41</sup>

There may be projected shortfalls in cocoa supply due to the above-mentioned risks, which may stifle expected growth. However, there is potential for yield improvements in the largest growing countries by investing in replacing ageing trees, expanding cocoa-agroforestry systems, and improving producer capacities to address climate change. These potential improvements provide grounds to remain confident in the growth of VSS-compliant cocoa. Interestingly, rejuvenating and expanding cocoa tree plantations is being touted as a potential response to climate change for coffee farmers.<sup>42,43</sup>

### Potential for continued expansion of VSS-compliant cocoa in LHDCs

Cocoa is produced mainly in developing countries, which could see some significant benefits from implementing more sustainable production practices. Among these are increased yields, improved household income, enhanced working and living conditions, and better environmental protection.<sup>53,54</sup> Despite the existing VSS presence in many of these countries, poverty persists among cocoa farmers, which threatens the viability of downstream industries.<sup>55,56</sup> Coordinated strategies between industry actors, including governments, standard setting bodies, development organizations and private companies are needed to address the systemic causes of poverty that affect cocoa farmers, and to consider what role VSS can play and what other policies and mechanisms are needed.

### MARKET VALUE

Over USD 2.1 billion for VSS-compliant cocoa, based on 2016 cocoa producer prices

### CAGR 2008–2016

Conventional production is down by 7% while VSS production is up by 46%

VSS production in LHDCs is up by 25%

### COCOA PRODUCTION IN LHDCS

43% of total cocoa produced

61% of VSS-compliant cocoa produced

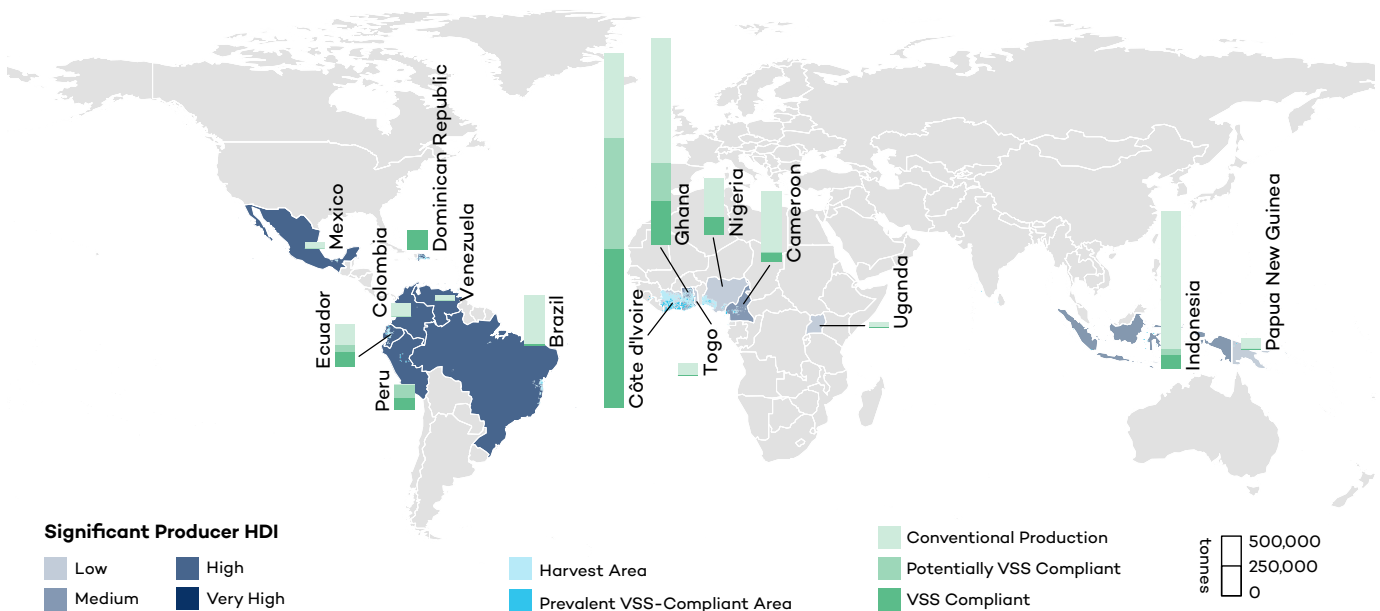
based on 2016 data

The risks that systemic poverty could have on the reliable supplies of cocoa beans have motivated large chocolate confectionary companies to develop their own sustainability programmes and invest directly in their cocoa producers.<sup>34,55,57,58</sup>

Strategies that could help address poverty among cocoa farmers include offering higher prices for cocoa harvests,<sup>56</sup> defining mechanisms for price stabilization, adopting more efficient interventions to sustainable cocoa production, such as landscape or jurisdictional approaches to lower certification costs, and adding value to the cocoa bean through further processing in producing countries. For instance, an International Labour Organization (ILO) study estimated that processing 40 per cent of Ghana's cocoa beans before export could create an additional 4,000 permanent processing jobs.<sup>59</sup> However, tariff escalation applied to cocoa beans and their processed products when exporting to certain markets might disincentivize domestic processing. A recent study<sup>60</sup> on tariff escalation involving the Ghanaian cocoa sector revealed mixed results and suggests that the potential for further domestic cocoa processing for export should be considered by looking at specific cases. It also indicates that other barriers to value addition should be examined closely. In an attempt to address poverty in the cocoa sector, VSS have initiated coordinated discussions and research efforts, in collaboration with other supply chain stakeholders, to develop measures to enable living wages, landscape certification and the eradication of forced and child labour.

## Cocoa-Growing Regions of the World

**Figure 4. Distribution of cocoa production in the top fifteen producing countries in 2016**



Sources: see endnotes 10, 62, 63

Download high resolution version of the map at <https://www.iisd.org/sites/default/files/publications/ssi-global-market-map-cocoa.pdf>

The most promising opportunities for VSS-compliant cocoa production to address sustainable development challenges can be assessed by examining the human development level of cocoa-producing countries based on their Human Development Index (HDI). Our analysis found that out of 59 cocoa growing countries, 16 were LHDCs and 10 of these produced VSS-compliant cocoa in 2016. LHDCs produced 43 per cent of total cocoa production and 61 per cent of total VSS-compliant cocoa production in the same year. VSS have a strong presence in cocoa-producing LHDCs, primarily due to their presence in Côte d'Ivoire. Excluding Côte d'Ivoire from this assessment results in a LHDC share of total and VSS-compliant cocoa production of 10 per cent and 9 per cent respectively.

There are signs of growth in VSS-compliant production among LHDCs: looking at the 2008 to 2016 period, VSS-compliant cocoa production in LHDCs, even without Côte d'Ivoire, increased at a CAGR of approximately 25 per cent. In 2016, the largest volume of certified cocoa production in LHDCs was UTZ Certified, followed by Rainforest Alliance, Fairtrade

and Organic.<sup>10</sup> As part of a coordinated multi-stakeholder approach to address poverty in LHDCs, the continued expansion of VSS-compliant cocoa production in these countries could result in important sustainable development benefits via the adoption of more sustainable agriculture practices. This includes addressing some of the challenges described above, such as by ensuring fairer farmer incomes, prevention of forced and child labour and avoided deforestation.

As such, there are promising signs of VSS expansion potential among countries that are already producing significant shares of the world's cocoa and that have begun to adopt VSSs, including some countries that are LHDCs. Aside from Côte d'Ivoire and Ghana, Indonesia, Cameroon and Brazil all offer good prospects for more sustainable cocoa production considering their total cocoa output and the existing presence of VSS.

Among the LHDCs, those with the most potential for maximizing sustainable development outcomes are Côte d'Ivoire, Nigeria and Togo, according to our analysis based on 2016 figures. This is based on their share of

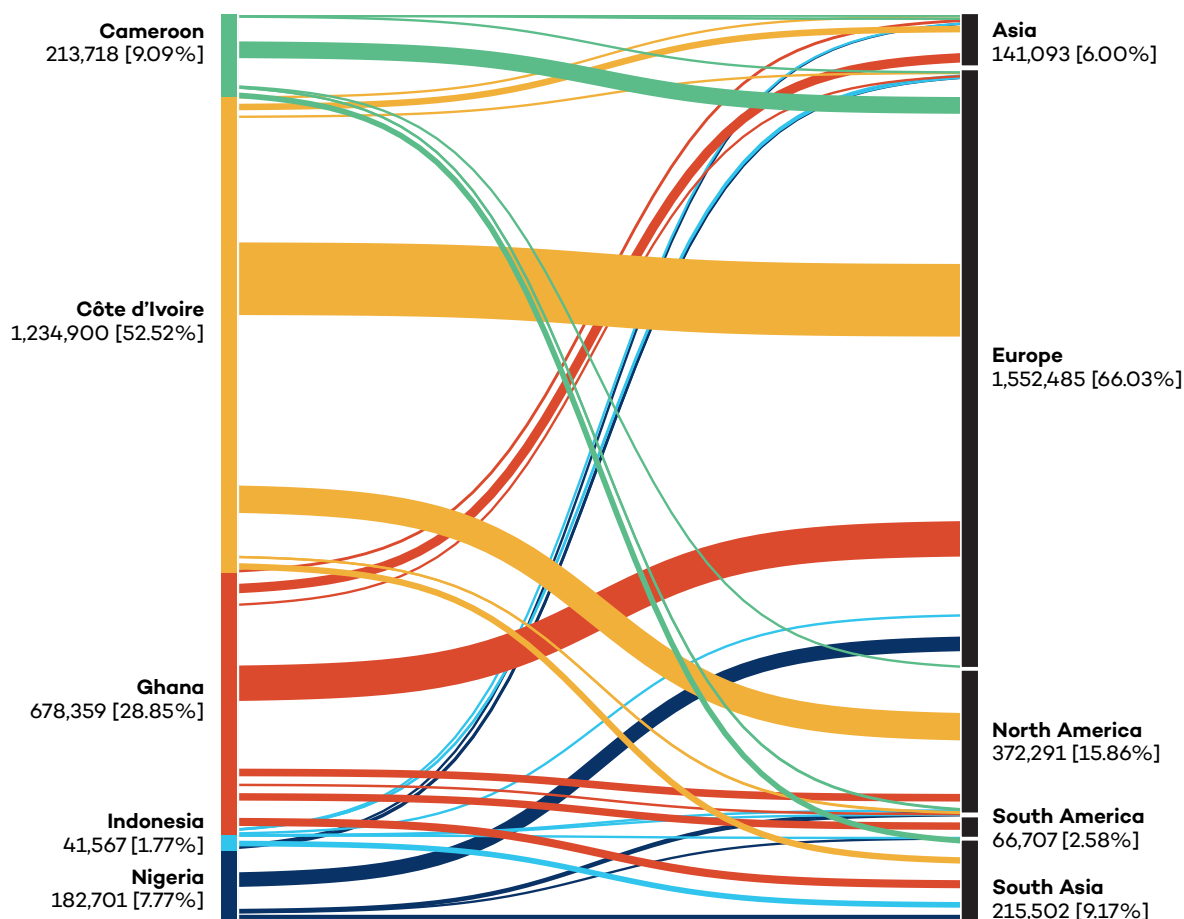
total cocoa production, existing VSS presence and their HDI value. Papua New Guinea, Uganda and Guinea are other notable prospects for expanding VSS-compliant cocoa production within LHDCs. These are countries that have yet to support VSS-compliant cocoa production. If properly implemented as part of broader sustainable development strategies, VSS can be an important catalyst to improve the livelihoods of cocoa farmers and contribute to poverty alleviation in cocoa-producing countries regardless of their development status.

Due to the concentration of cocoa production in LHDCs, it is important to ensure that its production results in poverty alleviation and sustainable development. Emerging corporate sustainability cocoa

programmes may provide the additional resources needed to address poverty in the sector. In addition, government efforts to stabilize cocoa markets by establishing a floor price could reshape the sector by enabling a more equal income distribution across cocoa value chains and providing farmers with more reliable and equitable returns for their efforts. Coordinated efforts led by prominent cocoa organizations such as the International Cocoa Organization and the World Cocoa Foundation could result in positive developments for the entire sector. Alongside these developments, VSS are expected to continue having an important role in enabling the emergence of a more sustainable cocoa sector.

Potential to develop south-south trade, local processing and consumption of cocoa in leading African producing countries. In 2016, cocoa grinding remains concentrated in Europe.

Figure 5. Trade flows of the largest producer countries in 2016, in metric tonnes



Sources: see end notes 64,65.

These five countries represents the 80 per cent of total cocoa production in 2016. The % in brackets for each country represents the proportion of the total volume of cocoa exported in 2016 by the five countries. The % in brackets for each region represents the proportion of the total volume of cocoa imported in 2016 from the 5 countries.

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The Sustainable Commodities Marketplace Series provides a market performance overview and outlook for key agricultural commodities that comply with a number of voluntary sustainability standards (VSSs), focusing on global sustainable consumption and production. Each year, the series focuses on a different overarching theme, with individual reports for that year devoted to providing a market update for a chosen commodity. These reports are designed to be accessible and relevant for a range of audiences, including supply chain decision makers, procurement officers, policy-makers and producers. The series builds on *The State of Sustainable Markets 2018: Statistics and Emerging Trends*, a joint publication from IISD, the International Trade Center (ITC), and the Research Institute of Organic Agriculture (FiBL), which examines over a dozen sustainability standards for various commodities.

This *Global Market Report* analyzes recent trends in cocoa production, consumption, trade flows and other relevant areas. The report also emphasizes the potential for expanding VSS-compliant production in Low Human Development Countries (LHDC), given factors such as share of global cocoa production, VSS presence and Human Development Index (HDI) value. It uses 2016 data across all three factors, given that this is the latest year with data available for VSS-compliant cocoa when conducting the analysis. By comparing the growth rates and patterns of standard-compliant versus conventional consumption and production of cocoa, this report provides insights on how sustainable and conventional markets are performing at a global level, and highlights which countries have the potential to produce more VSS-compliant cocoa.

The *State of Sustainability Initiatives* (SSI) is an international transparency and capacity-building project that aims to improve strategic planning and sustainable development outcomes related to VSSs. It does so by providing in-depth, credible and needs-based information on VSS characteristics, market performance and potential contributions to addressing development challenges.

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