

## Market Potential for Organic Cocoa

Study on the global market for cocoa beans  
and semi-finished cocoa products



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The study contains many results and statements based on expert interviews. Their opinions do not necessarily represent the views of the authors or of FiBL.

Please note that the study was completed before the COVID-19 pandemic started in Europe, so possible COVID-19 related changes in the market are not considered in this study.

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The study is available as a free download at <http://orgprints.org/43832/>

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## **About FiBL**

The Research Institute of Organic Agriculture (FiBL) in Switzerland was founded in 1973. It is one of the world's leading research and information centres for organic agriculture and employs 200 experts in Switzerland. The close links between different fields of research and the rapid transfer of knowledge from research to advisory work and agricultural practice are FiBL's strengths. The competence of FiBL Switzerland is sought after beyond the Swiss borders. Thus, FiBL is involved in numerous international projects: not only in research, consultancy, and training but also in development cooperation.

[www.fibl.org/en](http://www.fibl.org/en)

## I. Management summary

The international demand for organic cocoa is growing. However, reliable published data on supply and demand volumes and trend studies about this sector are lacking. With the increasing demand, processors are looking for new, reliable sources of organic cocoa. Furthermore, producers in the main cocoa cultivation areas want to know more about market prospects and trends in the long term before deciding whether to convert to certified organic production.

FiBL, therefore, compiled this study based on a comprehensive analysis of literature and market data from various sources. Key questions on the expected development of supply and demand and their influencing factors were addressed in consultation with relevant European and American traders, mills, and chocolate manufacturers. The study is aimed at market players in the cocoa sourcing and processing industries and the retail sector, as well as scientists, consultants and NGOs active in the cocoa sector.

The worldwide production of cocoa is based on 5 to 6 million small farmers. Apart from this large number of smallholder producers in the primary sector, the cocoa value chain is highly concentrated at the level of traders, processors of semi-finished products, and chocolate manufacturers, with the exception of small artisanal processors.

In 2018, 4.8 million tons of cocoa were produced worldwide, of which approximately 131'860 tonnes were organic. This corresponded to a 3.4 % share of the total cocoa production.

Despite certain risks associated with production and cultivation conditions (see Chapter 4), experts have predicted an annual increase in trade volume for organic cocoa of 5-9% by 2025 (see Chapter 5).

In 2019, the six most important organic cocoa-producing countries were the Dominican Republic, the Democratic Republic of the Congo, Peru, Sierra Leone, Ghana and Ecuador. The five most important organic cocoa markets were the USA, Germany, France, Italy, and the UK.

At the time of our surveys among experts, in January 2020, the supply of organic cocoa slightly exceeded demand. Nevertheless, the amount of residue-free organic goods, or the amount of organic cocoa from certain growing countries, can fluctuate and become scarce at certain times. All interviewed experts expected a sufficient supply of the demanded quantities of organic cocoa in the medium term because further producer groups would react to increasing demand by converting to organic production. In addition, yields are expected to increase through consulting projects and the rejuvenation of tree stands. However, experts evaluate the long-term supply of cocoa at a global level as vulnerable. Labour-intensive and little-mechanised cocoa production on small farms combined with low cocoa prices makes it challenging to persuade younger producers to continue cocoa cultivation. Unless the framework conditions for cocoa cultivation are fundamentally changed by politics and the market develops to favour cocoa producers, many cocoa production sites could be abandoned or converted

to other, more attractive crops. Suitable instruments could be national support programs for cocoa producers, significantly higher producer prices, and more investment in mechanisation, advisory services, and plantation renewal.

From a buyer's perspective, the organic cocoa market, with its small share of 2.5% of total production in 2018, is a niche market with low strategic weight for many large companies in the sector. It is, therefore, usually not a prioritised sector with the major international cocoa processors. Smaller and specialised organic cocoa processors have thus filled the niche with attractive price and service offers to the organic cocoa producers.

Experts predict a general growth of the organic cocoa market and a development out of the niche market. Indicators for this include the uptake of organic chocolate in most supermarkets and discounters.

## 2. Objectives and study design

### 2.1 Objectives and research questions

The study aims to answer fundamental questions about the organic cocoa market and its development:

- What is the status quo of the market for organic cocoa and its processed products? How will the organic cocoa market develop until 2024/25? (Chapter 3 and 5)
- What are the opportunities and risks in the global organic cocoa chain? (Chapter 4)

### 2.2 Study design

In the first step, available data and trends in the development of the general and organic cocoa market were collected. Reliable public information on the organic cocoa market is very limited, so, in the second step, 13 experts working in the cocoa sector (mainly trading and processing) were interviewed in January 2020. These experts were asked about their role in the organic cocoa market and their predictions of future developments. The interviews were conducted by telephone and recorded with the interviewees' permission.

Based on expert estimates, the market development until 2024/25 was extrapolated, and the most important drivers and inhibiting factors of supply development were identified. Combining expert statements and available statistics, the potential future market development of organic cocoa was estimated.

#### Respondent companies

For the study, mainly traders and millers/processors were interviewed because of their roles as actors in the most central and powerful part of the value chain and their broad expertise concerning supply and demand development (i.e. cocoa producers, intermediaries, retailers, and consumers have been excluded).

Respondents included representatives of traders and millers who buy the cocoa beans and resell them directly as either beans or semi-finished products, such as cocoa mass, butter and powder. Further study participants were representatives of processors, such as chocolate companies, who purchase either cocoa beans or semi-finished products to produce chocolate or other products containing cocoa, such as cocoa powder and cosmetics with cocoa butter. Some of the participating companies purchase cocoa beans directly from the producing countries (bean-to-bar companies).

In particular, Dutch, German, and Swiss companies stated that they have strong links with producers and supported their own local sustainability projects or cooperatives in the countries of origin. This allows them to support the local production system,

maintain high-quality products, and foster fair working conditions and environmental awareness.

In total, representatives of twelve companies from Germany, the Netherlands, Switzerland, the USA, Italy and Austria were interviewed.

### 3. The cocoa value chain

From bean to finished chocolate product, the cocoa value chain comprises various steps and several stages, from the local producer to the retailers and their customers (see Figure 1). This chapter presents the findings from the literature and the expert interviews, which have been grouped according to the value chain's main steps: cocoa production, processing and sales.



Figure 1: The cocoa value chain.

Source: adapted from [www.inkota.de](http://www.inkota.de)

Note: The term 'producers' stands for very different systems depending on local histories or traditions. Some producers own land, and some are tenants. Some producers own the trees, while in other regions, the trees belong to the government.

## 3.1 Cocoa production

### 3.1.1 Production areas and volume

#### Low growth rate in global cocoa production

Cocoa is produced in tropical countries in West or East Africa, South and Central America, Oceania, and Asia. Cocoa is mainly grown by smallholders with low mechanisation levels and is harvested by hand. Approximately 5-6 million smallholders earn their income by producing cocoa beans (Hütz-Adams & Schneeweiß, 2018). The global production volume of cocoa in 2018 was almost 4.8 million tons (see Figure 2). While the global production increased between 1980 and 2005 by about 180%, it has levelled off at a plateau of about 4 million tons per year since 2005 with slight weather-related annual variations.

Most conventional cocoa is produced in African countries (FAO, 2009), and only 13% is cultivated in Latin America. While earlier data showed that a large part of organic cocoa

production was located in Latin America, the latest data show that now also for organic, a large part of the cocoa area is in Africa (Willer et al. 2021).

The sales value of cocoa produced worldwide amounted to USD 8.6 billion in 2017 (Voora, Bermúdez, & Larrea, 2019). The largest cocoa exporting countries in 2016, irrespective of label standards, were Ivory Coast (USD 3.9 billion), followed by Ghana (USD 2.5 billion) and Nigeria (USD 0.8 billion) (Voora et al., 2019).

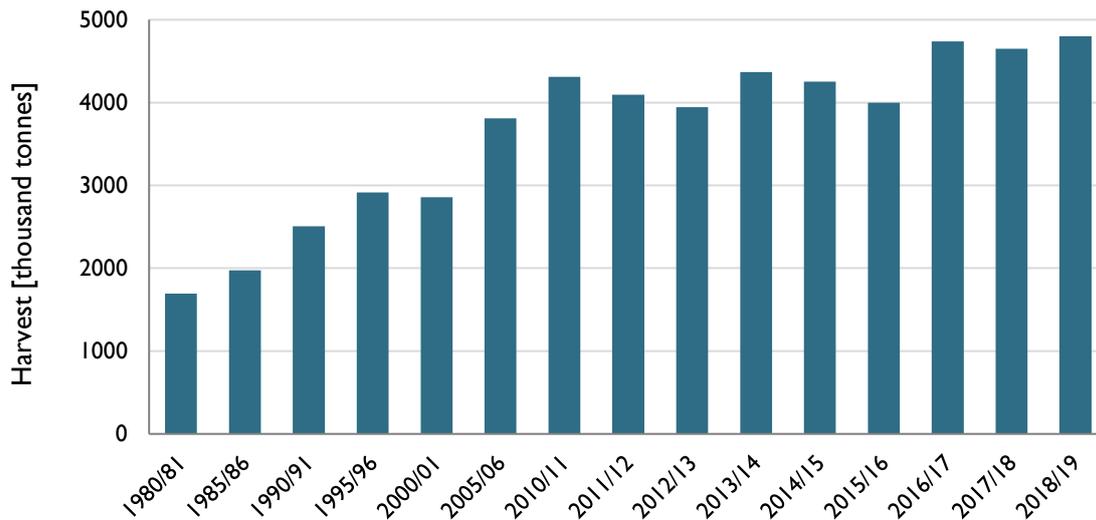


Figure 2: Overview of the global development of cocoa crop production

Sources: <https://www.icco.org/> & <https://de.statista.com>

### **Sustainable and socially responsible cocoa is booming**

Organic labels, as well as other sustainability labels (e.g. UTZ, Rainforest Alliance, Fairtrade), had an important orientation function for consumers and a social or additional income function for farmers.

In 2018, at least 3.2 million hectares of cocoa were cultivated according to one or more Voluntary Sustainability Standards (Organic, UTZ, Rainforest Alliance, Fairtrade). This represents a doubling of the area since 2014 (Meier et al., 2020). The strongest growth was recorded for Fairtrade certified areas (+174%). For the Swiss market, the foundation Max Havelaar reported a retail sales with Fairtrade cocoa and chocolate of CHF 118 million in 2019 (+19%). However, in other European countries sales declined slightly, as retailers are increasingly starting to favour their own sustainability schemes, at the cost of the official Fairtrade standard. Nevertheless, the Fairtrade market will remain large. This is, for instance, driven by the commitment made by the British supermarket chain

Waitrose to only source Fairtrade cocoa for its private label products by the end of 2019 (CBI, 2020)..

Similarly, the organic cocoa areas have expanded considerably in recent years, and, with a harvested area of about 320'000 hectares, organic constituted an estimated 10% of the total cocoa area certified under the four sustainability labels surveyed by FiBL in 2018 (Meier et al., 2020).

**Table 1: Overview of the cultivated areas of the most important product groups in 2018, certified with at least one sustainability standard**

<b>Commodity</b>	<b>Minimum area certified [ha]*</b>	<b>Share of global area</b>	<b>Area growth 2017 – 2018</b>	<b>Area growth 2014 – 2018</b>
<b>Bananas</b>	343'128	6,0%	0.9%	22.8%
<b>Cocoa</b>	3'174'438	26.8%	9.1%	89.7%
<b>Coffee</b>	2'195'681	20.7%	-13.3%	-12.2%
<b>Cotton</b>	5'885'938	18.2%	14.2%	173.2%
<b>Oil palm</b>	2'864'161	15.1%	12.9%	7.1%
<b>Soybeans</b>	1'957'154	1.6%	8.7%	14.6%
<b>Sugarcane</b>	1'947'924	7.4%	-1.6%	75.2%
<b>Tea</b>	673'763	16.1%	0.7%	56.8%

Source: Meier et al. (2020)

*In this table, the minimum area is used as many producers are certified by more than one standard. There are not enough reliable data on multiple certifications. For the purposes of the report “The State of Sustainable Markets” (Meier et al 2020) the editors FiBL, IISD and ITC decided that the best approach was to work with the minimum as a reference, but to provide the maximum and average of the area as well.*

Table 1 illustrates that at least one-fourth of the global cocoa area was certified with at least one sustainability standard. Of the eight commodities selected by FiBL for its survey on Voluntary Sustainability Standards (VSS), cocoa is the most important crop certified in terms of area share. It showed a substantial increase from 2014 until 2018 when the area almost doubled (Meier et al. 2020). Compared to other tropical products, such as coffee or bananas, the share of certified cocoa production has grown faster in the past years. When comparing the individual labels, UTZ had the largest certified cocoa area with more than 3.0 million hectares, and Fairtrade showed the strongest growth in the 2014 to 2018 period (see Figure 3)(Meier et al., 2020)).

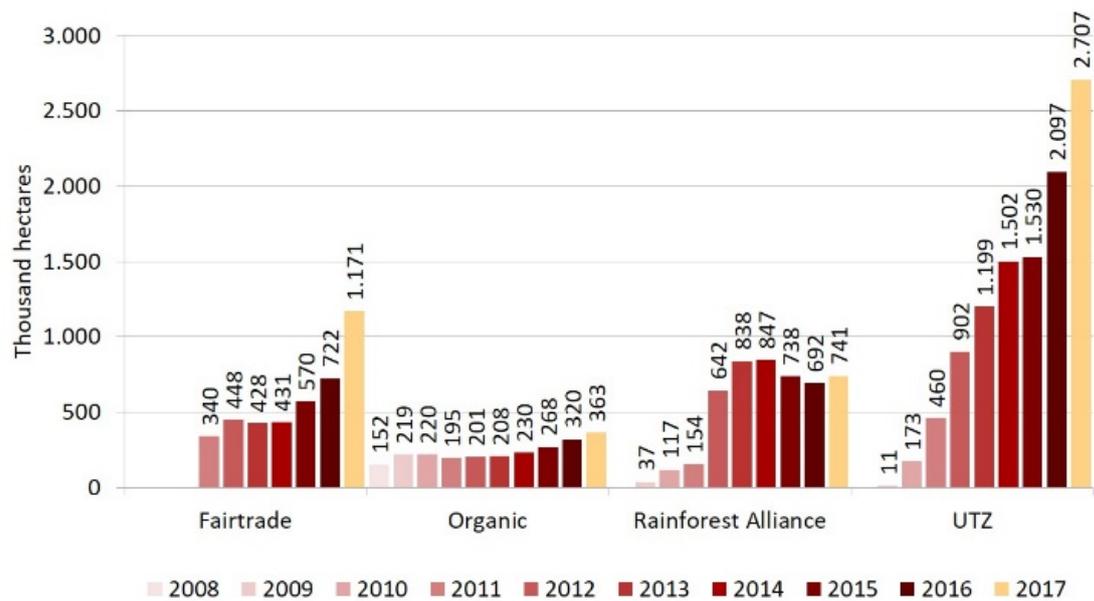


Figure 3: Evolution of the harvested cocoa area of four sustainability standards

Source: Willer et al. (2019)

Since 2013, the cultivation of organic cocoa consistently had the smallest area of all sustainability labels (see Figure 3). In 2018, the certified harvested organic area was 318'202 hectares, a lower number as in previous years (Meier et al. 2020).

The global production volume of organic cocoa beans in 2018 was 131'860 tonnes, which corresponded to an estimated organic share of global cocoa production of about 3.4%. (Meier et al. 2020).

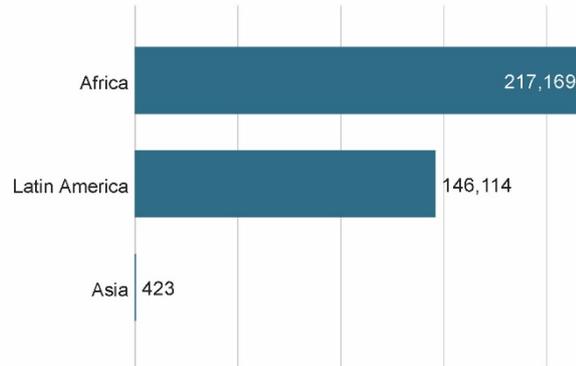
According to expert estimates, the yields in organic farming per hectare may vary widely between 0.1 and 1 tonne per hectare. Organic cocoa is produced in 25 countries worldwide. The amount of organic cocoa grown in a country mainly depends on the projects and stimuli of the world's most important organic cocoa traders and processors, as well as on international development cooperation projects (e.g. Private Public Partnership models).

Looking at the latest available area data by country (from 2019), the most important countries in 2019 for organic cocoa production were the Dominican Republic (89'623 hectares), Sierra Leone (79'797 hectares), the Democratic Republic of the Congo (71'609 hectares), Peru (25'448 hectares), Ghana (18'645 hectares) and Ecuador (18'204 hectares) (Willer et al. 2021).

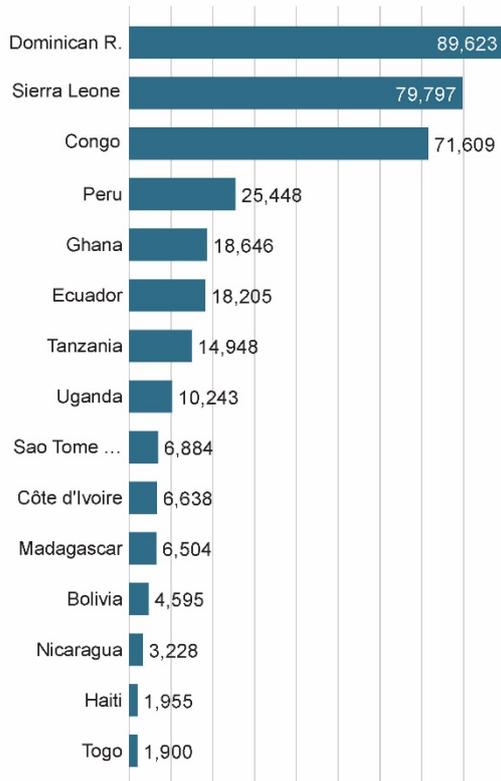
**The development of the organic cocoa area in thousand hectares**



**Organic cocoa area by continent in hectares**



**The countries with the largest organic area in hectares**



**The countries with the highest organic cocoa area share in %**

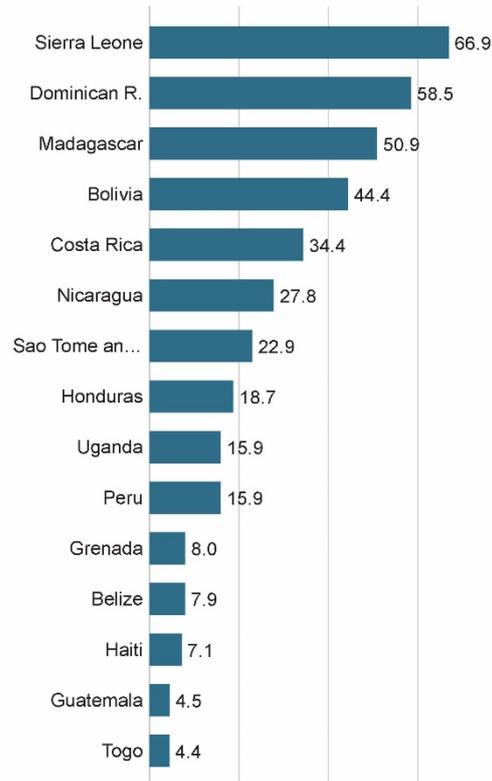


Figure 4: Overview of the most important indicators of the global development of organic cocoa production

Source: Willer et al. (2021)

## Deforestation and cocoa production

In many places, the increasing demand was met by expanding the area under cultivation, accompanied by progressive deforestation. As prices rose, cultivation intensified, and the use of external inputs increased: especially in full-sun monocultures. In a few intensive monocultures, yields per hectare range from 1.5 to 3 tonnes.

In agroforestry systems, fewer or no external inputs are used (Figure 5) leading to lower cocoa yields but higher system yields compared to monoculture cocoa systems (Armengot et al., 2016; Niether et al., 2020). In agroforestry cocoa systems, timber or other food plants are grown; this diversifies the producers' income and provides added value for the environment (diverse habitats, carbon storage, water balance and microclimate). With the focus on the total yield of the system rather than the highest cocoa yield, these systems have the potential to create diversified agricultural landscapes with multiple products and increase the income of cocoa producers.

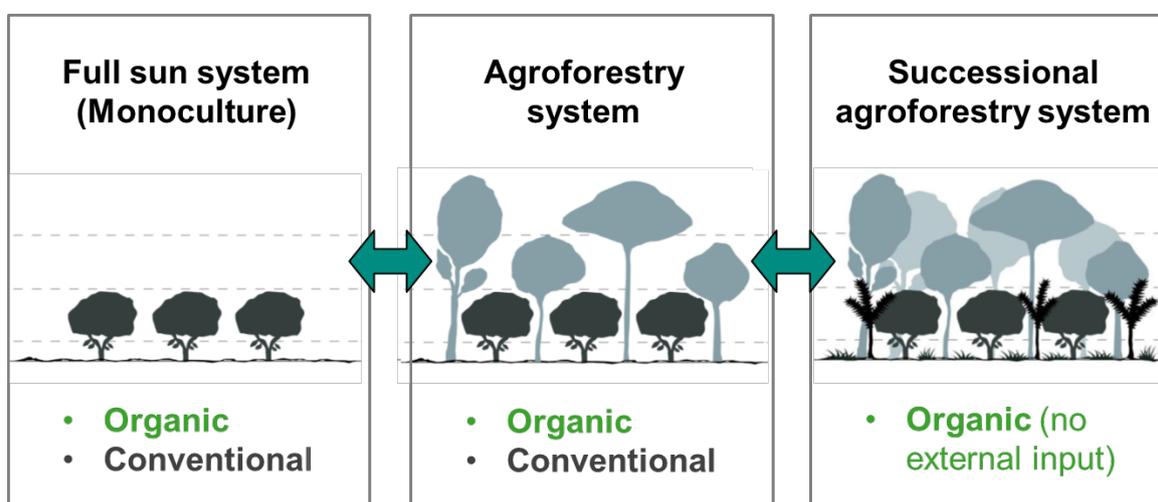


Figure 5: Different systems of cocoa cultivation

Source: FiBL (2020)

Deforestation is increasingly associated with cocoa production at the level of smallholders. However, due to small farmers' limited technical and economic capacities, large corporations, governments, and NGOs can drive the necessary reforms towards sustainable and resilient farming systems, such as agroforestry (Kroeger et al., 2017). The global vision, driven by climate change and biodiversity loss, is shifting towards "zero deforestation" in cocoa farming. Four of the world's six dominant traders/processors, who together control 73% of the world cocoa market, have made concrete commitments with their producers to stop deforestation (Kroeger et al., 2017). According to the INKOTA network, well-known companies have committed themselves to base their procurement on certified or verified sustainability standards, in some cases up to 100% by 2021 (Mars, Hersheys, Ferrero).

### 3.1.2 Development of producer prices for cocoa beans

In recent years, prices for cocoa beans have fallen significantly and fell by a third between 2014 and 2017 (see Figure 6). Figure 6 also shows how strongly prices can fluctuate within a very short period: depending on the annual production volume. While the cocoa exchange price usually determines the price for farmers, there are also countries (e.g. Ghana and Ivory Coast) that have set fixed farmgate prices.

Prices for organic cocoa beans are negotiated directly between buyer and producer or producer group and are usually not published. According to the interviewed experts, purchase prices could vary considerably depending on the organic price premium that importers are willing to pay. The price of organic cocoa has tended to increase due to shortages of pesticide-free goods. In recent years, the purchase price for organic cocoa beans was between 15 and 20% higher than the price of conventional beans. In cases of double certification (organic and Fairtrade), an additional 15-20% is paid. There were greater price differences between the mass market for average qualities and the niche segment for fine flavoured cocoa, which was traded at significantly higher prices.

#### Different negotiation power along the cocoa supply chain

Hütz-Adams and Schneeweiß (2018) pointed out that, similar to other sectors, processes in the cocoa market are concentrated among cocoa traders and processors as well as in food retail.

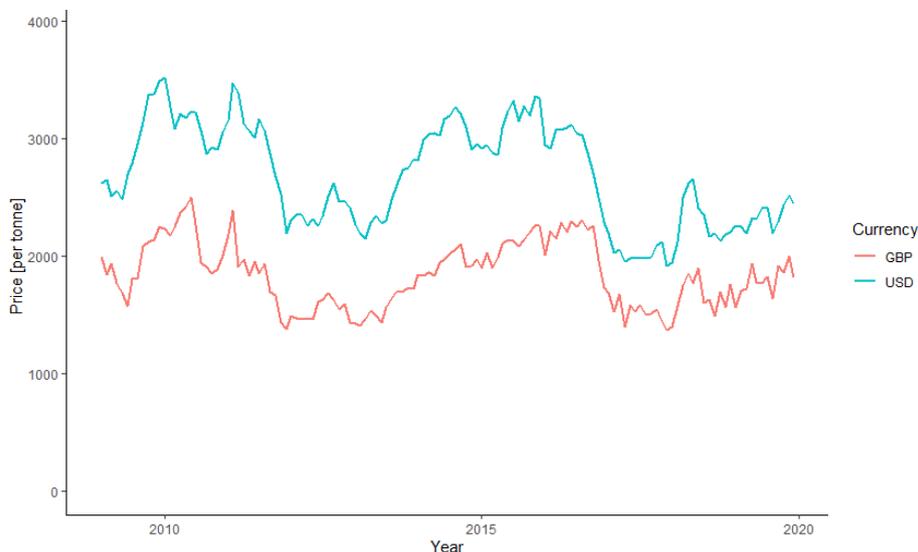


Figure 6: Development of average trading prices on the stock exchange for one tonne of cocoa beans from 2009 to 2020

Sources: [www.icco.org](http://www.icco.org), [www.investing.com/commodities/london-cocoa](http://www.investing.com/commodities/london-cocoa)

According to the study, the three largest traders/mills alone could process two-thirds of the world's harvest. This is in significant contrast to the estimated five to six million farmers on the supply side. As most of them are not organised as grower cooperatives, their negotiating position in the value chain is weak (Hütz-Adams & Schneeweiß, 2018).

### 3.2 Cocoa processing

After harvesting, cocoa beans are first fermented and dried: either on farms or in centralised facilities. Next, the beans are roasted and broken, and the seed coat is removed. The beans are then processed into cocoa mass (liquor) and then separated into cocoa butter and cocoa powder to produce chocolate, cosmetics, and a variety of foods and beverages.

The semi-finished products are mainly resold to the confectionery industry. Figure 7 shows the sales of the world's leading confectionery manufacturers in 2018. The largest confectionery manufacturer in the world was the US company Mars. There is no purely organic processor among the ten largest confectionery manufacturers. Many of the companies listed in figure 7 were supplied by the Swiss company *Barry Callebaut*. The company is one of the largest chocolate producers in the world and produces chocolate, cocoa products, fillings, glazes, and decorations for industrial and commercial customers.

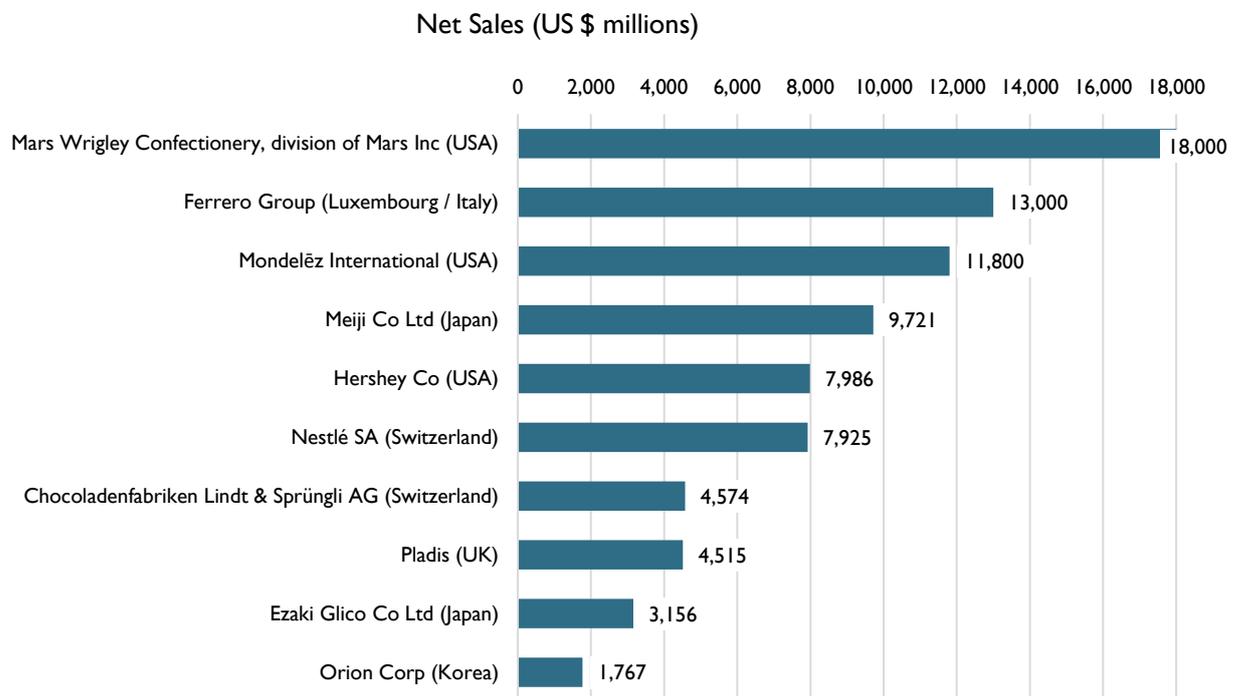


Figure 7: Net sales of the leading confectionery manufacturers worldwide in 2019

Source: [www.icco.org](http://www.icco.org)

### The main international traders and mills

The largest cocoa and organic cocoa traders and mills are located in North America and Europe.

**North America:** Kraft Foods, Cargill, Ciranda, Blommer Chocolate, Artisan Confections, InterNatural Foods.

**Europe:** Barry Callebaut, Tradin, Pronatec, Theobroma/ECOM, Fuchs and Hoffmann, Minka SCS AG, Albrecht & Dill Trading GmbH, DAARNHOUWER & CO. BV.

**Asia:** Olam (with the processing site in the Netherlands).

### 3.3 Global sales of organic cocoa beans by region

Between 2014 and 2018, the annual growth in organic cocoa's trade value was around 7%. According to Maia Research (2020), Europe was the largest organic cocoa market in 2018, followed by North America (see Figure 8). Together, both continents accounted for more than three-quarters of global organic cocoa sales. The largest individual markets for organic cocoa beans in 2018 were the USA (USD 75 million), Germany (USD 23 million), France, Italy, and the UK, with USD 19 million each (Maia Research, 2020).

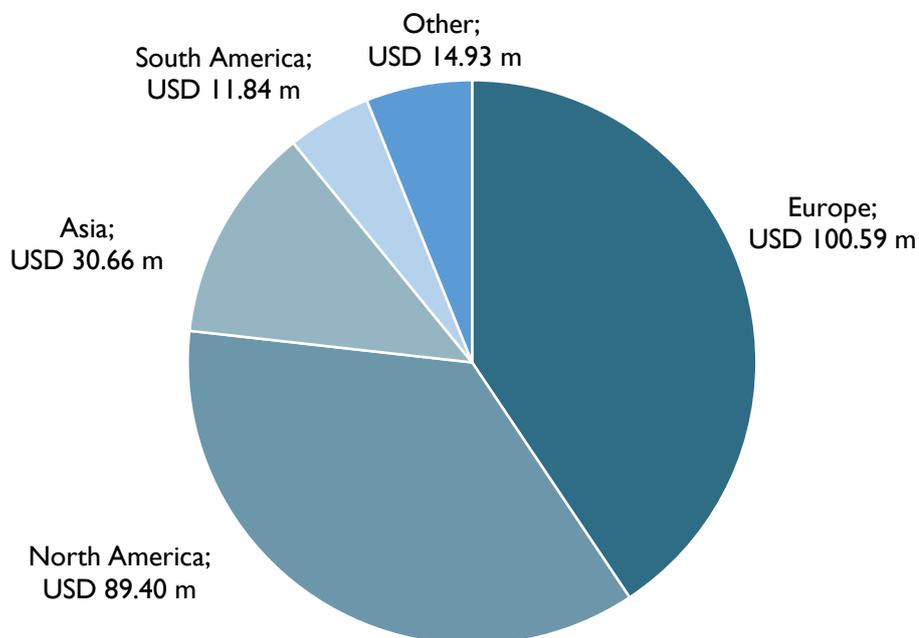


Figure 8: Organic cocoa sales 2018 by continent (in millions USD)

Source Maia Research (2020)

## **The growing demand for organic products pushes the global supply**

The global market for organic products has been growing continuously for several decades, and in recent years has been growing even stronger. In 2019, the market value of trade in organic products was EUR 106 billion.

The growing consumer demand was attributed to greater consumer awareness of sustainability and a significant increase in the range of organic products offered in supermarkets. Products made from organic cocoa also benefited from this trend.

In terms of volume, the demand for organic products was highest in North America (and above all in the USA) and in Europe (in particular in Germany, France, and Italy) (see Figures 9 & 10). Smaller European countries such as Denmark, Sweden, Switzerland, or Austria did not achieve the highest absolute sales of organic products but reached the highest organic share of total sales. This means that organic consumption is exceptionally high in these countries. Organic has become a part of society and is anchored at the centre of the supermarket shelf.

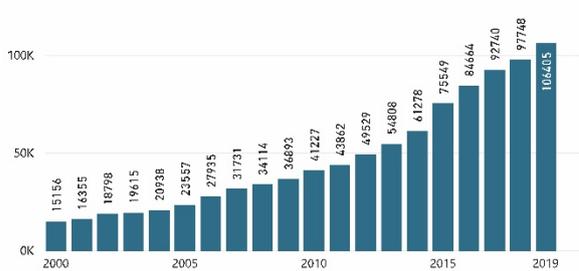
In some large organic markets, such as France, Switzerland or the USA, organic products' sales grew at double-digit rates. According to the interviewed experts, demand was driven by buying motives of healthy and high-quality nutrition. Furthermore, purchasing decisions were increasingly guided by the consumers' sense of responsibility to fight against climate change, preserve biodiversity and support animal-friendly husbandry.

In recent years, the importance of social standards and fair trade has also increased significantly, which is why organic products were often offered in combination with other sustainability standards (Willer et al., 2019).

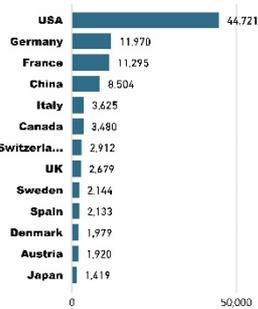
### Organic retail sales in million Euros by country



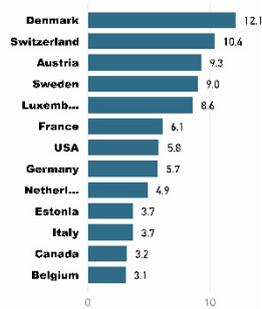
### The development of the organic retail sales in million Euros



### Organic retail sales in million Euros



### Organic retail sales: share of all retail sales in %



### Organic retail sales by continent

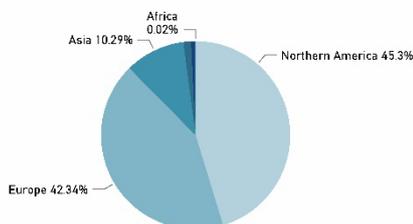


Figure 9: Key figures on global demand for organic products 2019 (1)

Source: Willer et al. 2021

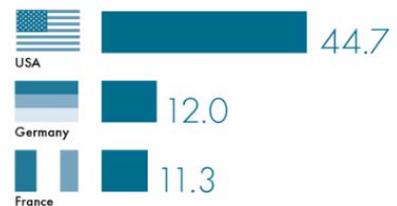
### Organic Market 2019

The global market is growing and consumer demand is increasing

Over  
**106**

Global organic food market in billion euros

### Top 3 countries (market in billion euros)



13.4% Organic market growth

12.1% Market share

344 € Highest per capita spending is in Denmark

Figure 10: Key figures on global demand for organic products 2019 (2)

Source: Willer et al. 2021

## Organic cocoa – steady market growth in all countries

Parallel to the positive development of the organic market, the demand for organic cocoa has grown steadily. According to Maia Research (2020), global organic cocoa sales in 2018 were around USD 275-300 million. The corresponding production volume in the same year was approximately 131'860 tonnes (Meier, 2020). About 65'000 tonnes were exported to EU countries (European Commission, 2020).

## Europe as an important market for organic cocoa

According to the EU TRACES database, an additional 1'821 and 2'016 tonnes of cocoa mass and powder were imported into the EU in 2018 and 2019, respectively.

In 2019, the Dominican Republic was the largest supplier of organic cocoa beans to Europe as a whole (37%), followed by Peru (19%) and Sierra Leone (17%). The rest of the imported organic cocoa beans came mainly from African countries, such as the Democratic Republic of the Congo, Sierra Leone, Uganda, Tanzania, Sao Tome and Principe, and Madagascar. (European Commission, 2020).

**Table 2: Quantities of organic cocoa beans imported into the EU by export country (in tonnes)**

Export country	2018	2019
Belize	27	28
Bolivia	126	146
Brazil	33	21
Colombia	54	53
Congo, Democratic Republic Of	9'864	5'679
Costa Rica	25	25
Cote D'Ivoire	176	285
Dominican Republic	27'062	24'239
Ecuador	1'982	3'016
Ghana	110	543
Grenada	1	0
Guatemala	5	37
Haiti	221	214
Honduras	12	48
India	16	31

<b>Export country</b>	<b>2018</b>	<b>2019</b>
Kenya	23	0
Madagascar	657	681
Mexico	30	24
Nicaragua	151	232
Panama	442	386
Papua New Guinea	0	26
Peru	15'549	12'902
Saint Lucia	0	1
Sao Tome And Principe	1'423	1'409
Sierra Leone	7'681	11'166
Sri Lanka	3	3
Tanzania, United Republic Of	3'166	1'162
Togo	162	101
Uganda	5'062	3'225
United States	37	69
<b>Total</b>	<b>74'220</b>	<b>65'751</b>

Source: European Commission (2020)

## 4. Opportunities and risk analysis of the organic cocoa value chain

Over the past 10 years, the supply and demand for organic cocoa have grown strongly. However, according to experts, there has never been an observed shortage of beans on the market. In January 2020, there was a surplus of certified organic cocoa on the market because new countries began producing organic cocoa, and more land in existing producing countries was being farmed organically.

Consequently, prices for freely traded organic cocoa were relatively low, and the product that was offered varied considerably in quality. According to experts, an increased cadmium content was found in some batches of South American origins, and many batches contained pesticide residues. This speaks in favour of purchasing goods from known projects and offering support and advice to the producer groups during the production period instead of purely relying on external certification.

How can the globally available quantities of organic cocoa for procurement in the future be assessed?

In FiBL's view, the future of the organic cocoa market depends on the development of the following factors:

- Demand;
- Supply;
- Organic guidelines (especially EU and NOP), especially the development of group certification;
- Producer prices.

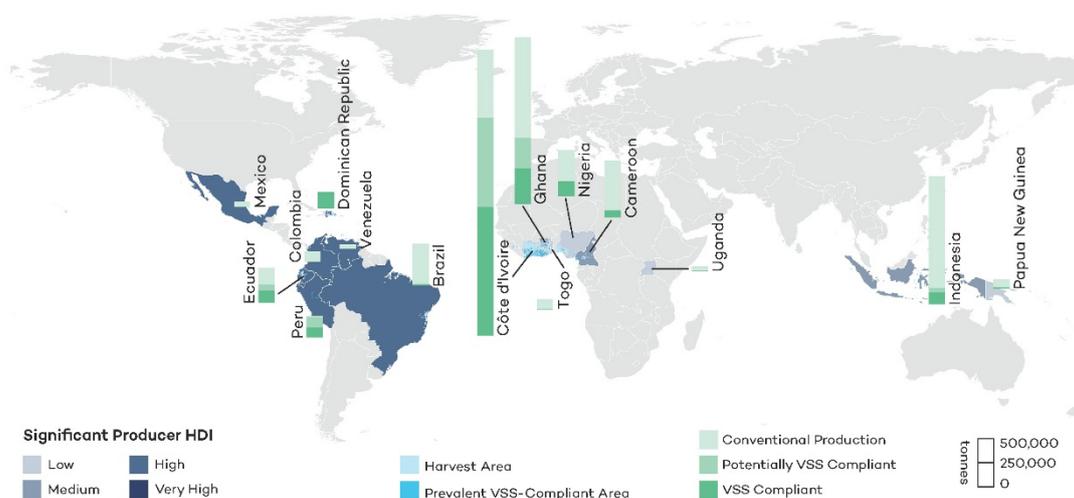
### 4.1 Development of demand

According to the IISD study, the average annual growth rate of the traded commodity value of cocoa beans was expected to increase by around 7% between 2019 and 2025 to a total of USD 16 billion. In 2017, the chocolate industry consumed 43% of all cocoa and had a retail turnover of USD 106 billion, and is expected to grow to USD 189 billion by 2026 (IISD, 2019).

Figure 11 provides an overview of cocoa cultivation worldwide in the top 15 producing countries. According to IISD, mainly African countries such as the Ivory Coast, Ghana, or Cameroon could potentially convert large areas of land to produce according to sustainability standards, such as organic. However, the potential for more sustainable management was also seen in countries such as Indonesia, Brazil, Ecuador, and Peru. The sourcing experiences of the participating experts indicate that countries with smaller organic shares have a greater risk of contamination with pesticide residues or of mixing with conventional goods.

## Cocoa-Growing Regions of the World

Distribution of cocoa production in the top 15 producing countries in 2016



Source:

Lyons, J., Post, J., Sampson, G., Schlatter, B., Hupp, G., Verra, U., et al. (2018). *The State of Sustainable Markets 2018 - Statistics and Emerging Trends*. International Trade Centre. Retrieved from <https://www.itsc.com/wp-content/uploads/2018/09/itsc-sm-2018-publications/Sustainability%202018%20layour-FIN-ssb2.pdf>

Monfreda, C., Ramankutty, N., & Foley, J. A. (2008, March). *Farming the planet: 2. Geographic distribution of crop areas, yields, physiological types, and net primary production in the year 2000*. *Global Biogeochemical Cycles*, 22, 1. doi: 10.1029/2007G11002947. Retrieved from <https://www.earthstat.org/harvested-area-yield-175-crops-26>

Taylor, C., Vickery, J., Butcher, S., Carter, W. C., Buchanan, G., Ducharme, H. (2017). *GIS data for Where are commodity crops certified, and what does it mean for conservation and poverty alleviation?*. *Mendeley Data*, v2. Retrieved from <https://data.mendeley.com/datasets/npff/versions/2>

**Figure 11: Overview of indicators on cocoa cultivation in the cocoa-growing countries, including the proportion of land that (possibly) conforms to voluntary sustainability standards (VSS)**

Source: IISD 2019

According to the interviewed experts, very positive developments in **short-term demand** for organic cocoa products can be expected by 2024. However, the experts also stated that demand for organic cocoa products will not grow to the same extent as fresh organic foods (such as vegetables or eggs).

Based on expert surveys, Maia Research (2020) predicted global growth in demand for organic cocoa of 53% between 2019 and 2024. The strongest percentage growth is expected in Asian, African, South American and Arabic markets, while the largest volume growth is expected in Europe.

The potential for **long-term development of demand** for organic cocoa beans was also rated very positively by experts. A growing proportion of consumers worldwide have become interested in healthy diets, avoiding pesticide residues in foods and environmental and climate-friendly production methods when choosing foods – "Enjoying chocolate without regrets". It is also expected that the double-certification (organic and Fairtrade or UTZ) could become more frequent.

Although the organic cocoa market is still very small (about 2-3% organic market share for cocoa), in the forthcoming years, both the volumes processed and the organic market share for cocoa are expected to grow significantly (4-5% volume growth per year). According to the interviewed experts, an above-average growth is expected for cocoa mass and powder.

Even though the prediction on the demand side is optimistic, there are significant inhibiting factors, mainly related to the supply side and its influencing factors.

## **4.2 Development of supply**

The supply depends on various factors, such as the future development of the prices and price premiums for organic goods, as well as the guidelines for organic farming in the target markets: EU and USA. General factors, such as climate change, socio-demographic phenomena (e.g. rural exodus), breeding progress and access to finance also have to be considered.

In the current debate - from "deforestation-free cocoa" to reforestation with cocoa - agroforestry systems are an interesting option. It remains to be seen whether organic guidelines will develop in this direction. Price developments will also influence the supply. Will prices reflect the expected increase in demand, or will they provide an insufficient stimulus for farmers due to the power imbalance between supply and demand? Since subsidies or direct payments are not usually paid to farmers (groups) in the production countries, the primary stimulus to convert to and maintain organic cocoa production has to come from the market side.

For cocoa from agroforestry systems, voluntary payments for carbon storage are being tested in initial pilot projects. According to the interviewed experts, climate change scenarios showed that some regions in the main growing areas in West Africa would no longer be suitable for cocoa production. Due to extreme weather events, plantations in some regions already need to be irrigated. On the other hand, new regions could become more suitable for cocoa production.

### **Labour availability in rural areas**

From a demographic perspective, the main question is: Who will produce cocoa or other commodities in low-income countries in 20 years? There is a certain risk that, due to the low profitability of cocoa production, the younger generation will migrate to urban areas. In many cocoa-growing regions, a relatively high age of cocoa producers is already a reality. This could already lead to a shortage of cocoa supplies at the end of the 2020s (EvB, 2013).

### **Increasing pressure from pests and diseases**

The three continents with cocoa cultivation each have specific pests and diseases. If they were to spread to the other continents, this would be a significant challenge for organic crop protection. Climate change will also have an impact on the populations of the main cocoa pests. The loss of genetic diversity in cocoa further increases its vulnerability to climatic changes, pests and diseases. Thus the decrease of cocoa genetic diversity must be stopped, with measures like protecting rain forests and conserving traditional varieties (CacaoNet., 2012).

Pests and diseases are already the biggest inhibiting factor for the expansion of organic cocoa cultivation in Cameroon and Togo. Subsequently, the expansion of the areas under organic cultivation could only be achieved through improved knowledge about biological pest and disease control and improved access to alternative and inexpensive organic inputs (KIT Royal Tropical Institute, AgroEco/Louis Bolk Institute, & Tradin, 2010). In some African countries, the availability of planting material is also a problem. Here, importers are required to provide appropriate support through their projects. Since many cocoa farming families live below the poverty line, funds from governments and international development cooperation are being made available for the ecological intensification of cocoa cultivation.

## **4.3 Development of Guidelines for Organic Group Certification**

A significant constraint to convert to organic cocoa production in the forthcoming years is expected by the new EU and US regulations for organic agriculture.

Most organic cocoa producers are organised and certified as groups through an Internal Control System (ICS). Currently, group certification is regulated in both the USA and the EU in favour of producer groups, enabling larger groups, therefore, minimising certification costs passed onto the individual farms.

The new EU Organic Regulation (EU) 2018/848 contains new basic rules for the certification of producer groups, which will apply to all organic producer groups from January 1, 2022.

There are some fundamental changes to the rules and conditions for group certification:

- Limits on group size – Max. 2'000 farmers per group: For example, under the new rules, a group size of 4'000 farmers must be split in two, creating two groups with 2'000 members each. Each group must form a separate ICS legal entity and recruit and train appropriate staff for these tasks, with corresponding cost implications.
- Only smallholders (very detailed rules) are allowed to be group members. Groups may only consist of small farmers who meet the size limit. Larger farmers or separate processing units are to be certified individually and may not remain as a part of the group.

- The current regulation presumably means that groups of small farmers currently organised by processors or traders as certified suppliers (and not as a cooperative of growers) must be formally separated from the legal entity of the certified processor and legally registered, organised and certified as separate groups.
- Higher inspection rates by external certification bodies (re-inspection) to 5% of all farms in a group annually.
- Higher sampling frequency: Samples are to be taken from 2% of all farms and analysed in an accredited laboratory. Accredited laboratories are not available in most organic cocoa-producing countries. This means that the samples have to be analysed abroad.
- Farms in low-income countries have also to be compliant with the very detailed production rules in the EU Regulation and no longer only "in an equivalent sense".
- Precautionary measures: Each group must identify in advance risks of contamination with unauthorised substances (e.g. drift of pesticide applications from the neighbour) and define preventive measures (e.g. establishment of buffer zones).

According to an analysis by the global umbrella organisation of organic agriculture (IFOAM, 2020), some of the proposed changes will improve the transparency and quality of group certification. However, there is also widespread concern that the new legal requirements will have a significant negative impact on millions of small farmers around the world; groups will have to spend their scarce resources on expensive legal registration, administrative procedures and higher external control costs rather than on much-needed training and support for farmers. The new requirements would differ significantly from those of other organic regulations and major voluntary certification schemes, thereby making implementation confusing and inconsistent (Meinshausen et al., 2019).

#### **4.4 Development of producer prices**

In recent years, cocoa prices have fallen sharply and settled at a low level. Even though the development of organic prices is not directly linked to stock market prices, conventional prices do have a signal effect on the attractiveness of cocoa production as a whole.

According to experts, organic premiums are agreed individually between producers and traders and can vary considerably. In 2020, organic cocoa bean prices again began to rise slightly, as residue-free goods are currently more difficult to obtain.

It can be assumed that the premiums for organic cocoa will increase in the future due to the higher certification costs and a possible further divergence in harvest volumes between conventional and organic cultivation.

## 5. Outlook market forecast until 2025

The provided forecasts for the global cocoa market are based on statements in the IISD's *Global Market Report Cocoa* from 2019.

The global cocoa market is expected to grow at an annual rate of 7% to a value of around USD 16 billion by 2025. A shortage of goods is expected in the long term, as yields are low and younger generations are usually not interested in working in this labour-intensive and low-income sector.

The global organic cocoa production is expected to achieve an annual growth rate of 5-9% from 2018-2025 and a trade value of approximately USD 450-500 million by 2025 (Maia Research, 2020) IISI, 2019 and interviewed experts).

The cocoa processing sector is expected to grow due to high demand in the food and beverage industry, such as cocoa powder for biscuits in Turkey, India, Mexico and China.

In North America and Europe (main markets), further market differentiation is expected in addition to volume growth. Chocolate sales are expected to increase strongly in emerging markets. In particular, Asia is considered a growing market and, according to the IISD, could become the second-largest consumer market for cocoa products after Western Europe.

On the production side, yields are expected to decline in many stands due to ageing cocoa trees. In most cases, trees are not replaced due to the lack of financing as most farmers have no savings available.

Most of the general trends and market forecasts also apply to organic cocoa farming. Maia Research (2020) has attempted to quantify the development paths in international expert surveys, especially with leaders of large companies in the industry (published in *Global Organic Cocoa Market Research Report, Segment by Major Player, Types, Applications and Regions, 2014-2026*). As described above, large industrial companies, in particular, do not have sufficient insight into the organic cocoa market, limiting their ability to make informed estimates. Due to their own market size, they tend to overestimate the overall organic market. The data quoted here can therefore only indicate trends.

According to Maia Research (2020), global growth of organic cocoa semi-processed products between 2018 and 2024 is estimated at 53%. The strongest growth market for organic cocoa products in percentage terms is seen in Asia (72%). Although Europe (51%) and North America (47%) are growing slower, the largest volume growth is expected due to their market size.

## **Trends - more vegan, free from pesticides, sugar or milk, Fairtrade and transparent chocolate**

Experts believe that increasing food intolerances and the trend towards healthy and vegan diets will influence the supply of cocoa products. In addition, all experts assume that the proportion of cocoa products with sustainability labels will increase.

In the future, traders and processors will focus even more on the issue of traceability, both for certified and non-certified goods. Increasing transparency on the producer level and in production chains will remain an issue, as it simplifies storytelling about cocoa projects, which makes them more visually appealing and credible.

In this context, manufacturers are critically questioning the entire certification process. If certification costs are higher than premiums for sustainability standards, the system becomes vulnerable. There are already producer groups who do not convert to organic or even return to conventional from organic production due to high certification costs.

According to the participating experts, the issue of living income and high certification costs for producers, combined with increasing processing opportunities, will probably lead to a larger proportion of local processing. Direct investments by consumer groups (often crowd-funded) or importers in local chocolate manufacturing in the cocoa-producing countries are expected.

Other important future trends on the cultivation side will be associated with integrated production systems and practices, such as agroforestry systems and cover crop cultivation.

### **Will there be enough organic beans available in the future?**

All of the participating experts agree that, despite various difficulties, the supply of organic cocoa will be sufficient in the future, as the production share of cocoa is marginal. While overall cocoa shortages are expected over the next ten years, the continuous conversion of conventional farms and producer groups to organic will provide sufficient organic supply.

Although the availability of organic cocoa is and will remain sufficient, there may be partial shortages, as specific characteristics are linked to certain varieties and countries of origin.

Higher production to meet increased demand requires more land, which potentially leads to more deforestation. Without deforestation, it is currently challenging to increase the total cocoa production. Experts believe that higher investments should go into increasing yields of existing plantations in the future. Today, yields in some growing regions are only 0.1 tonne per hectare, although the potential is often around one tonne per hectare. In monocultures, organic cocoa cultivation rarely reaches the yield level of conventional production, while in agroforestry systems, yields can be equal. However, examples from the surveyed companies show that more training and education for

producers can lead to double or triple the yield. Thus, the yield level depends on the region, the age of trees, the cultivation practices and the producers' knowledge.

### **Quality and freedom from residues remain top issues**

In addition to harvest volumes, low bean quality and residues from cross-contamination represent important issues in the cocoa trade today and will likely increase in importance in the future. Meanwhile, even groundwater reservoirs in some growing regions are contaminated with pesticides. This is alarming, as this water is also used for irrigation. Due to contamination, organic production is no longer possible in some areas. The situation is further aggravated by the decision of individual countries, such as Italy, and supermarket chains, to operate under a zero-tolerance strategy. This means that if the smallest traces of residues are detected due to cross-contamination, the goods are no longer considered organic. This presents an unpredictable risk for producers and processors alike.

Pure product quality is expected to improve in the future, as some governments in cocoa-producing countries are pushing to introduce fine flavour varieties. In addition, specialists are helping farmers with the fermentation of cocoa beans.

## 6. Annexe

### 6.1 References

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## 6.2 Databases

Database of key figures on organic farming worldwide: FiBL - <https://statistics.fibl.org/>

Database on organic import volumes to the EU: TRACES

Database Key figures cocoa production worldwide: ICCO - [www.icco.org/](http://www.icco.org/)

Database of key figures Production of products with sustainability labels:  
[www.sustainabilitymap.org](http://www.sustainabilitymap.org)

General statistics: Statista - <https://de.statista.com>