



**TACKLING (ILLEGAL)  
DEFORESTATION IN COCOA SUPPLY  
CHAINS: WHAT IMPACT CAN  
DEMAND-SIDE REGULATIONS HAVE?**

By **Marigold Norman** and **Jade Saunders**

## INTRODUCTION

Rising demand for commodities such as soy, beef, palm oil, cocoa, coffee and rubber is driving tropical deforestation globally, half of which is estimated to be illegal. While around 500 companies in the food and agriculture sector have made commitments to halt deforestation in their supply chains<sup>1</sup>, overall progress on voluntary commitments made by the business and finance sector has been slow.<sup>2</sup>

Furthermore, 40 percent of the companies that produce, trade, use or sell the largest amounts of key commodities have not made public commitments to prevent deforestation in their operations and supply chains.<sup>3</sup> It is clear that companies cannot halt global (illegal) deforestation on their own.

New government efforts are now underway in key consumer markets, to develop regulatory approaches to tackle deforestation and illegal land conversion in agricultural supply chains. What impact can such import regulations really have?

Forest Trends presents ten things to know about the potential for demand side regulations to tackle (illegal) deforestation in cocoa supply chains.

<sup>1</sup> Supply Change. 2020. "Homepage." Forest Trends. Accessed December 7, 2020. <https://supply-change.org>.

<sup>2</sup> Reis, Tiago, Meyfroidt, Patrick, Ermgassen, Erasmus zu, West, Chris, Gardener, Toby, Bager, Simon, Croft, Simon, Lathuillière, Michael J., and Javier Godar. 2019. "Understanding Trade Stickiness to Improve Sustainability of Global Commodity Supply Chains." *SSRN Electronic Journal*. doi:10.2139/ssrn.3508883.

<sup>3</sup> Global Canopy. 2020. *Forest 500 2019 Annual Report: The Companies Getting it Wrong on Deforestation*. Oxford: Global Canopy. Accessed December 4, 2020. <https://forest500.org/publications/forest-500-annual-report-2019-companies-getting-it-wrong-deforestation>.



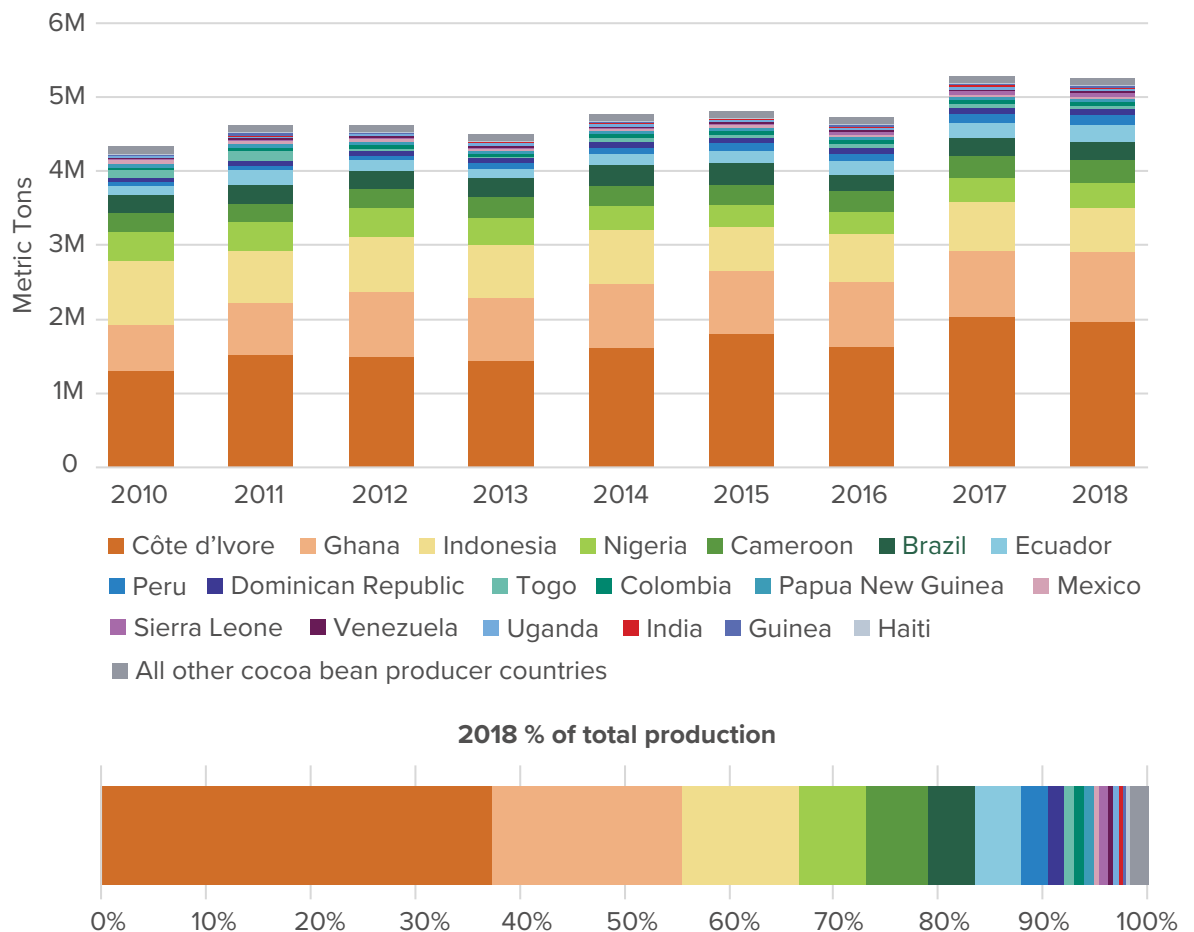
## FINDINGS

### 1 Cocoa bean production is concentrated in just a handful of countries. More than half of the world's cocoa beans are produced in Ghana and Côte d'Ivoire.

Cocoa bean production is dominated by West African countries, with Côte d'Ivoire producing 37 percent of global cocoa beans in 2018, Ghana producing 18 percent and Nigeria 6 percent.

In Asia, Indonesia produces about 11 percent of the global supply of cocoa beans. Latin American countries are actively expanding their positions as cocoa producers: Brazil and Ecuador each produced 5 percent of all cocoa beans in 2018, Peru 3 percent and the Dominican Republic 2 percent.

**FIGURE 1** Global producers of cocoa beans  
(metric tons and % of global production)



Source: FAOSTAT, 2020.



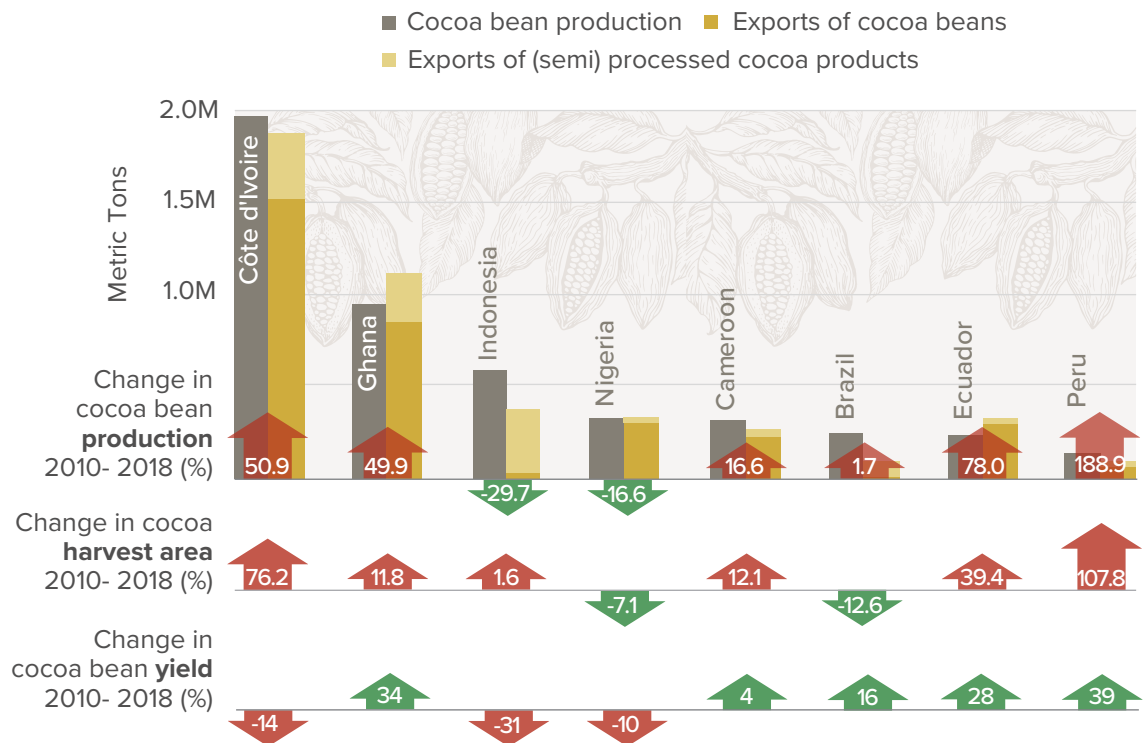
**2 Most cocoa is sold to international markets. As such, consumer-driven import regulations – whether based on legality or on zero deforestation – have the potential to significantly influence cocoa producer actions in many countries.**

Cocoa is a key cash crop sold to international markets and provides an important stream of export revenue for many producer countries and smallholder farmers. In 2018, Côte d'Ivoire produced just shy of 2 million metric tons of cocoa beans, exporting 1.5 million metric tons of cocoa in the form of beans (the primary product prior to processing) and 361,000 metric tons in the form of semi-processed cocoa products (including cocoa paste, cocoa powder and cocoa butter) as well as chocolate. In total, this accounted for almost one third of Côte d'Ivoire's agricultural product exports in 2018. While Ghana produces and exports lower volumes of cocoa beans and products, these represent 42 percent of Ghana's total 2018 agricultural exports in metric tons.

As cocoa bean production increased by roughly 50 percent in Côte d'Ivoire and Ghana between 2010 and 2018, so did the area of land used to grow cocoa. Côte d'Ivoire increased the hectares under cocoa production by 76 percent, while Ghana increased by 12 percent. Peru, a country actively seeking to increase its market share, has expanded its hectares under cocoa production by more than 100 percent over the same period.

Yield decreases in Côte d'Ivoire, Nigeria and Indonesia indicate increasing pressure to expand the hectares planted so that farmers can maintain or even increase the volume of cocoa beans produced and sustain their livelihoods.

**FIGURE 2** 2018 cocoa production and exports as well as change in production, harvest area and yield between 2010 and 2018 in the top eight producer countries for cocoa (metric tons, %)



Source: FAOSTAT, 2020



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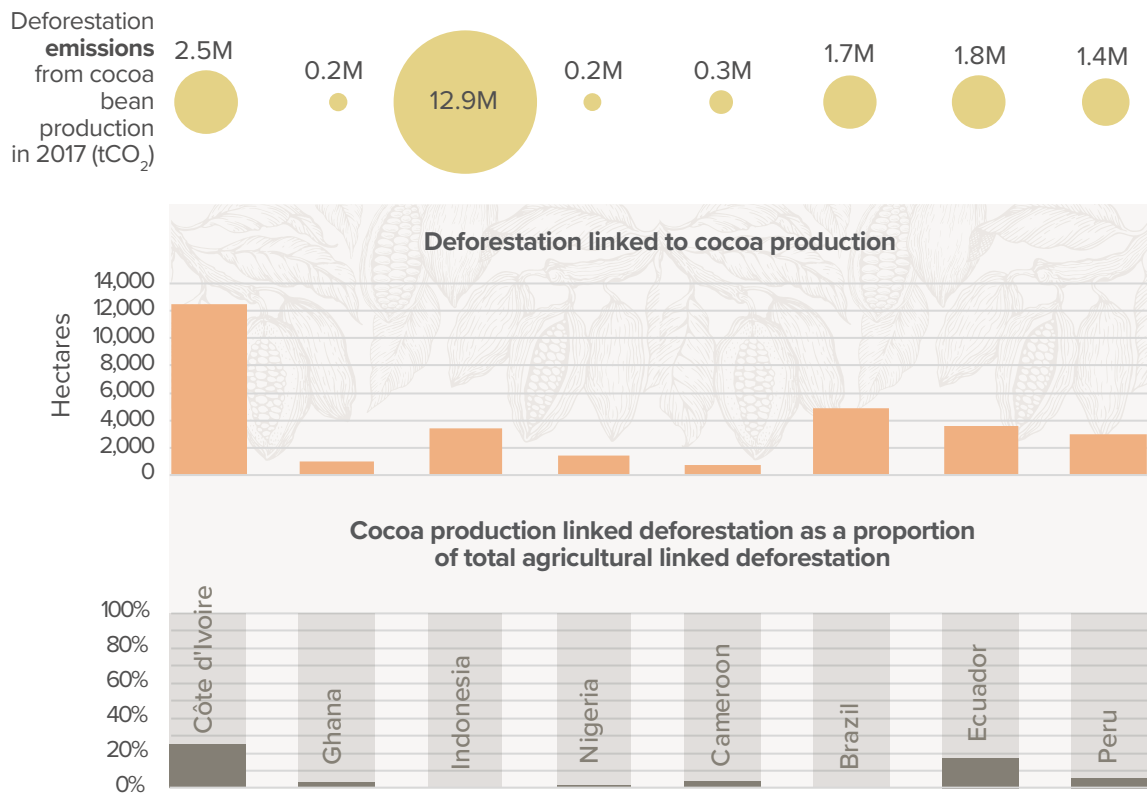
**Demand-side import regulations for cocoa also have the potential to tackle deforestation and reduce carbon emissions supporting many producer countries to meet their national and international climate commitments.**

Legislation developed by consumer countries to eradicate deforestation from forest risk commodity (FRC) supply chains, including cocoa, have the potential to tackle carbon emissions and forest loss as well as support producer countries to meet their national and international climate commitments.

The top eight global producers of cocoa emitted 21 million tCO<sub>2</sub> in 2017 as a result of the deforestation linked to cocoa production - tackling this would be the equivalent of removing 4.5 million cars from the road or the carbon sequestration from growing 350 million new tree seedlings for a decade.<sup>4</sup>

Ghana committed in it's first Nationally Determined Contributions (NDC) to a 45 percent emissions reduction through a results based program in the cocoa landscape with a new

**FIGURE 3** 2017 forest loss and deforestation emissions from cocoa bean production in the top eight producer countries<sup>5</sup>



Source: Pendrill et al, 2020

<sup>4</sup> Based on the EPA greenhouse gas equivalencies calculator available at <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>.  
<sup>5</sup> Underlying data from: Pendrill, Florence, Persson, U Martin, and Thomas Kastner. 2020. "Deforestation risk embodied in production and consumption of agricultural and forestry commodities 2005-2017." Chalmers University of Technology, Senkenberg Society for Nature Research, SEI, and Ceres Inc. Accessed December 12, 2020. <https://zenodo.org/record/4250532#.X8pHjmhKibg>.





commitment in 2020 to revise the NDC and raise ambition as well as integrate emerging policies into climate change actions at the national level. Côte d'Ivoire committed to a reduction of GHG emissions from deforestation and forest degradation with improved governance of forested lands.

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**Poor governance and corruption in many cocoa producing countries increase the risk that cocoa is produced on illegally converted land or as a result of illegal deforestation.**

Nearly half of the world's forests are in nations suffering from what Transparency International calls "rampant" corruption<sup>6</sup> casting a shadow over the legitimacy of documents pertaining to the conversion of forest to agricultural uses as well as traceability documentation. Half of all tropical deforestation is illegal and for commercial agriculture.<sup>7</sup> Similarly, most of the forest crimes identified by Interpol and the United Nations Environment Programme (UNEP)<sup>8</sup> as critical to vulnerable habitats result from the inability of national authorities to enforce their own laws that regulate timber harvesting and trade.

**FIGURE 4** Relative governance ranking for the top eight cocoa producing countries and comparison of underlying scores<sup>9</sup>

Country	FT governance score (2020) % rank	WGI (2019) % rank	CPI (2019) % rank	WJP (2019) % rank	IEF (2020) % rank	ND GAIN GR (2018) % rank	EDB (2019) % rank	FSI (2020) % rank	EIU OR (2020) % rank	EIU IT (2018) % rank	TRACE (2019) % rank	PRS PRI (2019) % rank
Peru	46.7	50.2	56.1	62.5	28.3	51.1	40.0	46.1	35.0	66.7	44.5	33.0
Ghana	48.8	46.0	44.4	39.8	57.8	43.6	62.1	39.3	49.4		40.0	65.0
Indonesia	49.8	55.0	47.2	46.1	30.0	55.9	38.4	46.6	46.1	81.0	45.0	56.0
Brazil	61.3	56.4	58.9	52.3	80.0	59.6	65.3	58.4	53.9	70.2	50.0	69.0
Cote d'Ivoire	67.7	69.7	58.9	47.2	56.1	67.6	57.9	82.6	57.2		69.0	84.0
Ecuador	68.9	67.8	51.7	67.2	87.8	69.1	67.9	50.6	65.6	71.4	73.0	86.0
Nigeria	83.2	88.2	81.1	84.4	64.4	92.0	68.9	92.7	88.9		81.0	90.0
Cameroon	86.5	90.0	85.0	96.9	80.6	89.4	87.9	93.8	81.7		85.5	74.0

Source: Forest Trends, 2017, 2019, 2021 (forthcoming)

<sup>6</sup> Sundström, Aksel. 2016. "Understanding illegality and corruption in forest governance." *Journal of Environmental Management* 181: 779-790. doi:10.1016/j.jenvman.2016.07.020.

<sup>7</sup> Forest Trends. 2014. *Consumer Goods and Deforestation: an Analysis of the Extent and Nature of Illegality in Forest Conversion for Agriculture and Timber Plantations*. Washington, DC: Forest Trends. Accessed December 4, 2020. [https://www.forest-trends.org/wp-content/uploads/imported/for168-consumer-goods-and-deforestation-letter-14-0916-hr-no-crops\\_web-pdf.pdf](https://www.forest-trends.org/wp-content/uploads/imported/for168-consumer-goods-and-deforestation-letter-14-0916-hr-no-crops_web-pdf.pdf).

<sup>8</sup> Nellemann, Christian, Henriksen, Rune, Kreilhuber, Arnold, Stewart, Davyth, Kotsovou, Maria, Raxter, Patricia, Mrema, Elizabeth, and Sam Barrat. 2016. *The Rise of Environmental Crime – A Growing Threat To Natural Resources Peace, Development And Security. A UNEPINTERPOL Rapid Response Assessment*. Nairobi: United Nations Environment Programme and RHIPTO Rapid Response–Norwegian Center for Global Analyses. Accessed December 4, 2020. <https://www.cbd.int/financial/doc/unep-environmental-crimes.pdf>.

<sup>9</sup> Forest Trends (FT) Governance Ranking Score 2019, Worldwide Governance Indicators (WGI), Corruption Perceptions Index (CPI), World Justice Project Rule of Law Index (WJP), Heritage Foundation Index of Economic Freedom (IEF), ND Gain Country Governance Ranking (ND GAIN GR), World Bank Ease of Doing Business (EDB), Fragile State Index (FSI), Economist Intelligence Unit Operational Risk Country Rankings (EIU OR), Economist Intelligence Unit Illicit Trade Country Rankings (EIU IT), TRACE Matrix (TRACE), PRS Group Political Risk Index (PRS PRI).



In order to understand these systemic risks better, Forest Trends developed a percentile ranking of forest rich countries, combining a range of independent, globally recognized indices measuring governance, corruption, business and political risk.<sup>10</sup> The main cocoa producer countries rank consistently low, suggesting elevated risk associated with rule of law in the sector and illegal deforestation as well as documentary fraud associated with traceability claims.

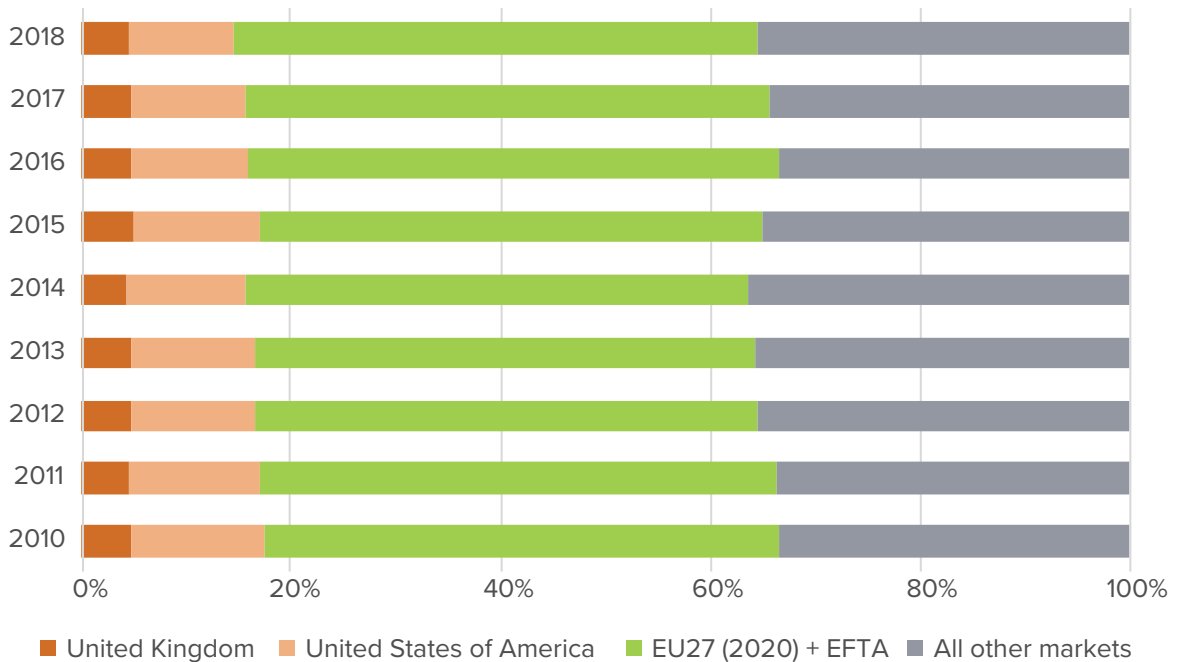
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**Two-thirds of all global cocoa beans, cocoa products and chocolate are imported into the UK, the USA and the EU<sup>11</sup>. Each is developing policies to regulate such imports to combat the trade in illegally sourced FRCs.**

In 2020, the UK became the first country to take legislative action, announcing a law that will place new responsibilities on larger businesses using FRCs likely to include soy, palm oil, timber, beef, cocoa and rubber, and aiming to prevent UK imports and consumption of such commodities grown on land that was illegally cleared.

The UK market is relatively small, with imports accounting for close to 5 percent of all cocoa bean, cocoa products and chocolate in 2018. However, the USA (representing 10 percent of global imports) and the EU (representing 50 percent) are more significant consumers. They too

**FIGURE 5** UK, USA and EU share of global cocoa bean, cocoa products and chocolate imports (%)



Source: FAOSTAT, 2020

<sup>10</sup> Forest Trends. 2017. *National Governance Indicators. Relevance for the Regulation of the Trade in Illegal Timber*. Washington, DC: Forest Trends. Accessed December 4, 2020. [https://www.forest-trends.org/wp-content/uploads/2017/03/FINAL-governance-paper1132017\\_v3.pdf](https://www.forest-trends.org/wp-content/uploads/2017/03/FINAL-governance-paper1132017_v3.pdf).

<sup>11</sup> All references to the "EU" refer to the 27 Member States of the European Union (as of 2020) as well as European Free Trade Agreement (EFTA) countries which include Iceland, Liechtenstein, Norway and Switzerland.



are in the early stages of developing legislative options with similar objectives. In the USA, President Elect Joseph Biden has demonstrated a strong commitment to support legislation making it illegal to import commodities sourced from illegal forest conversion or land clearing. The European Commission is also considering regulatory options as part of actions to reduce EU consumption and encourage the use of products from deforestation-free supply chains. Together, the UK, USA and EU represent 65 percent of the market in 2018.

Both UK and USA legislative drafts have pointed towards a prohibition on the import of crops from illegally cleared forests. This reflects a commitment to honor the sovereignty of producer country governments and avoid compromising on the principles of the World Trade Organization (WTO). However, stakeholder discussion in the EU suggests that policy aspirations are broader; making it more likely that there will be a requirement on companies to remove commodities sourced from all forest conversion lands after specific cut off dates.

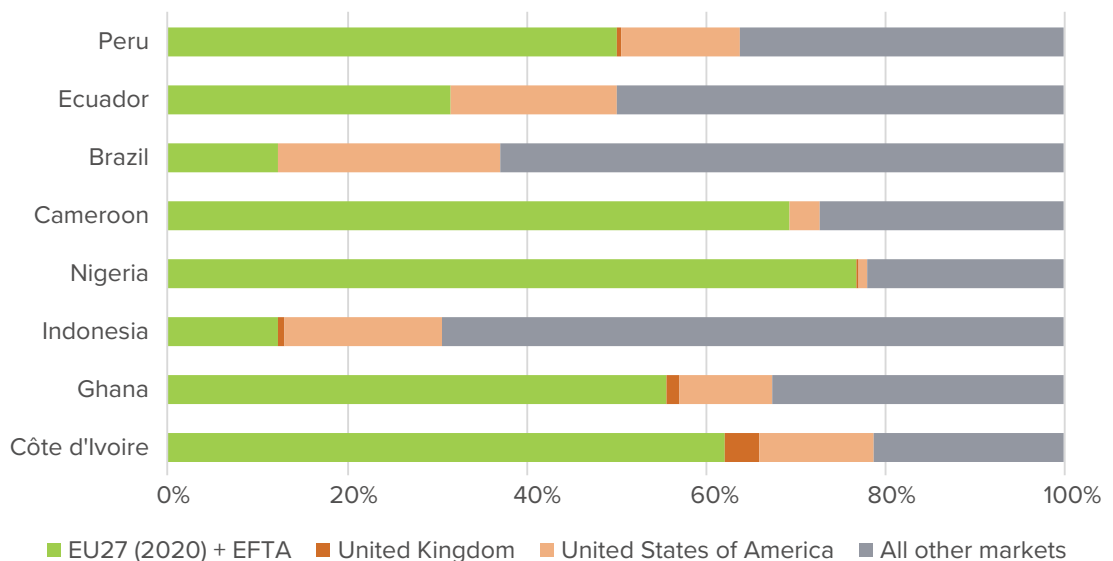
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**Only together can the UK, USA and EU have significant leverage over production methods of cocoa beans, cocoa products and chocolate.**

It will be critical for the UK, USA and the European Commission to work together to promote consistent approaches in cocoa producing countries, if the best social and environmental outcomes are desired.

The EU was the majority consumer of cocoa beans, cocoa products and chocolate from five of the top eight producer countries in 2019 (Cameroon, Côte d'Ivoire, Nigeria, Ghana and Peru), but market influence increases by 5 to 70 percent when combined with USA demand.

**FIGURE 6** Market share of EU the USA and UK imports of cocoa beans, cocoa products + chocolate in 2019 (% of global imports in kg)



Source: UN Comtrade, 2020



Together, the EU and the USA accounts for roughly 50 percent of imports from Ecuador in 2019. The USA has proportionally more influence over the producer markets of Brazil and Indonesia but does not reach critical mass on its own.

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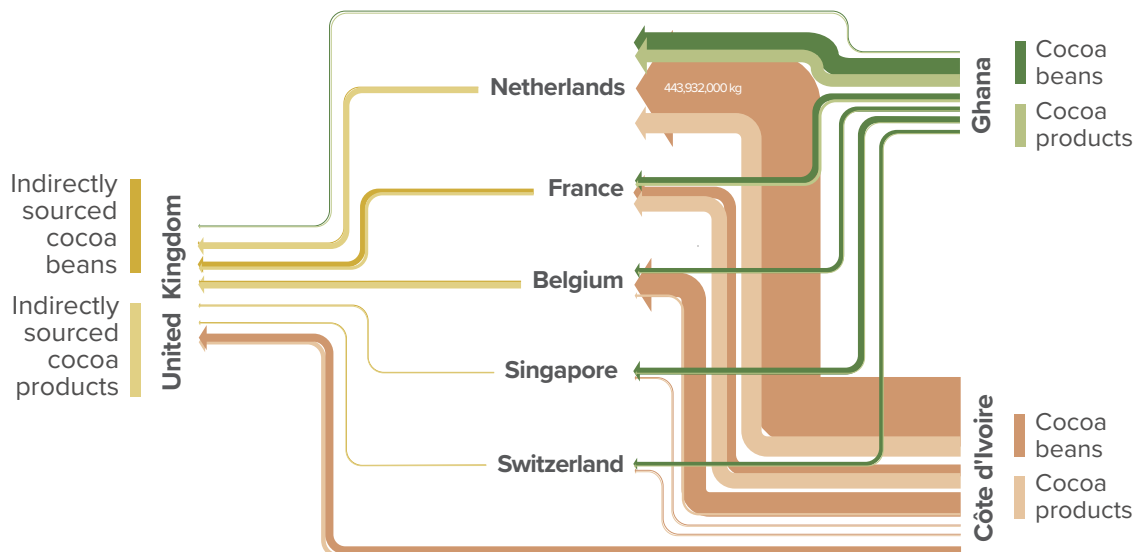
**Import regulations will need to address direct as well as indirect imports of cocoa beans, cocoa products, and chocolate.**

The UK, the first country to take regulatory action on FRCs, is likely to ensure that requirements apply not only to FRCs imported directly from producer countries such as Côte d'Ivoire and Ghana, but also to products sourced from indirect markets, which are almost double the volume the UK sources directly.

In 2019, the UK imported 91.1 million kg of cocoa beans and other forms of processed cocoa products and chocolate direct from Côte d'Ivoire and Ghana, significantly less than the 172.1 million kg of these products imported from indirect markets, mostly through traders in France in the case of cocoa beans, but also from the Netherlands, Belgium, Singapore and Switzerland in the case of all cocoa products, and chocolate. The UK's top five indirect sources of cocoa beans, cocoa products and chocolate purchased 35 times more from Ghana and 12 times more from Côte d'Ivoire in 2019.

Through its leverage over indirect trade routes and supply chains, the UK requirements have the potential to create a multiplier effect, shifting the sourcing practices of traders based in other countries that are either yet to take regulatory action or have developed slightly different requirements.

**FIGURE 7** UK direct and indirect sourcing of cocoa beans, cocoa products, and chocolate in 2019 from top two direct and top five indirect markets (netweight in kg)



Source: UN Comtrade, 2020



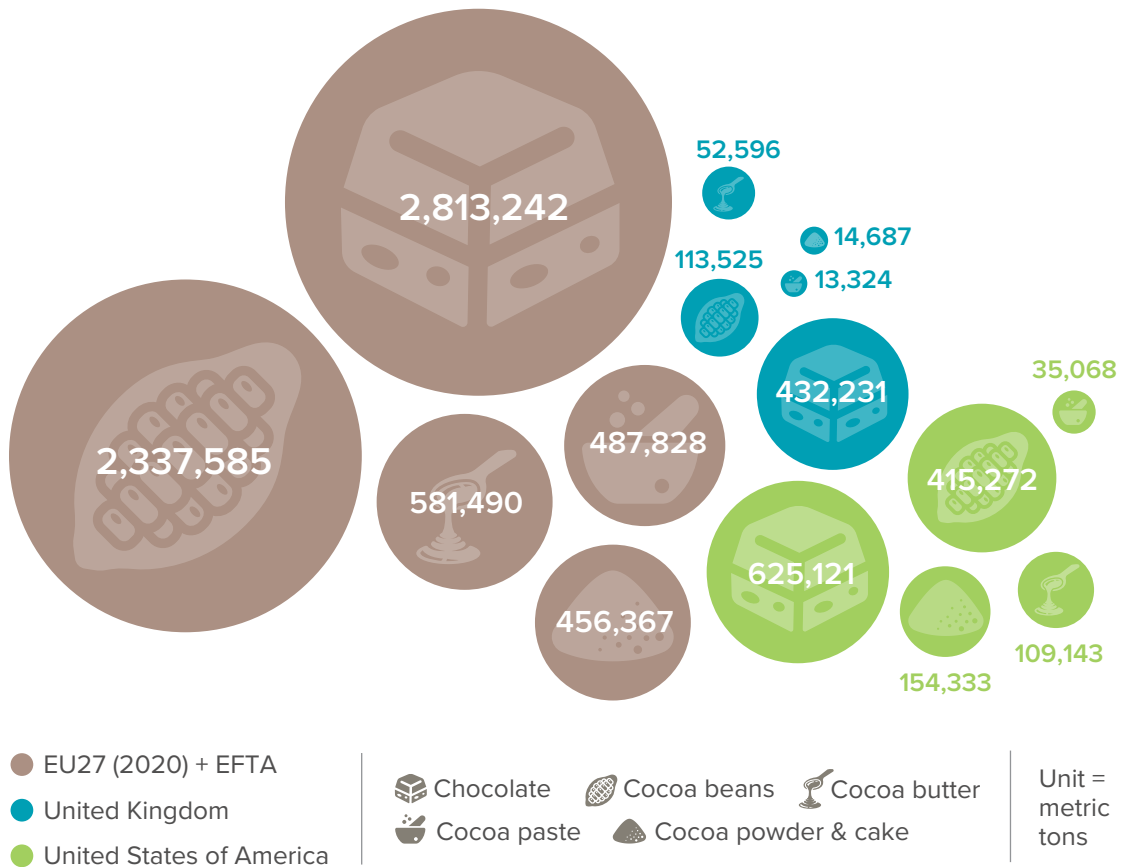


**8 Import regulations seeking to effectively eradicate (illegal) deforestation in cocoa supply chains must cover the full suite of cocoa products from beans to chocolate to have the most significant impact.**

There needs to be consistent requirements across all commodities made from cocoa beans and linked to specific Harmonized System (HS) codes, a standardized numerical method of classifying traded products which is used by customs authorities around the world to identify products.

If a regulation only covers cocoa beans, a significant proportion of the trade in processed products that may come directly from cocoa producing countries or indirectly from non-cocoa producing countries will be exempted. While the majority of processing often happens in the EU, the USA and the UK right now, this may change as producer countries begin to add value through in-country processing. UK imports of more processed cocoa products and chocolate from Côte d'Ivoire, for example, have increased over 2,000% between 2010 and 2018.

**FIGURE 8** Imports of cocoa beans, cocoa paste, cocoa butter, cocoa powder, and chocolate in 2019 (kg)



Source: FAOSTAT, 2020



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**Import regulations designed to exclude illegal deforestation will need to ensure that companies demonstrate the legality of land conversion for agriculture and ensure the reliability of traceability documentation.**

Given the size and economic characteristics of the supply chains facing regulation, economically efficient compliance at scale will be necessary. Once traceability has been established, demonstrating whether a production area has been converted after a given date is relatively easy using historical satellite imagery; however, demonstrating the legality or otherwise of that conversion will be significantly more challenging, vulnerable to fraudulent documentation, and potentially remain contested. Overlapping and changing laws, opaque political processes and the threat of corruption will cause significant barriers to farmers wishing to demonstrate the legality of their land, as well as companies wishing to demonstrate the legality of their supply base at scale. One of the key lessons learned from enforcing the EU Timber Regulation has been the inherent weakness of a compliance system based on the collection of public documentation in countries grappling with endemic levels of corruption and poor capacity. One way to address this would be through legality audits in production areas, which could collate evidence that relevant laws have been complied with, and, where legality is not accepted by all parties, consider local stakeholder views.

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**Child and forced labor remain in cocoa supply chains. Current drafts of regulations under development in the UK and USA do not incorporate requirements on companies to exclude products made from child or slave labor but could be drafted to be coherent with regulations addressing these hazards.**

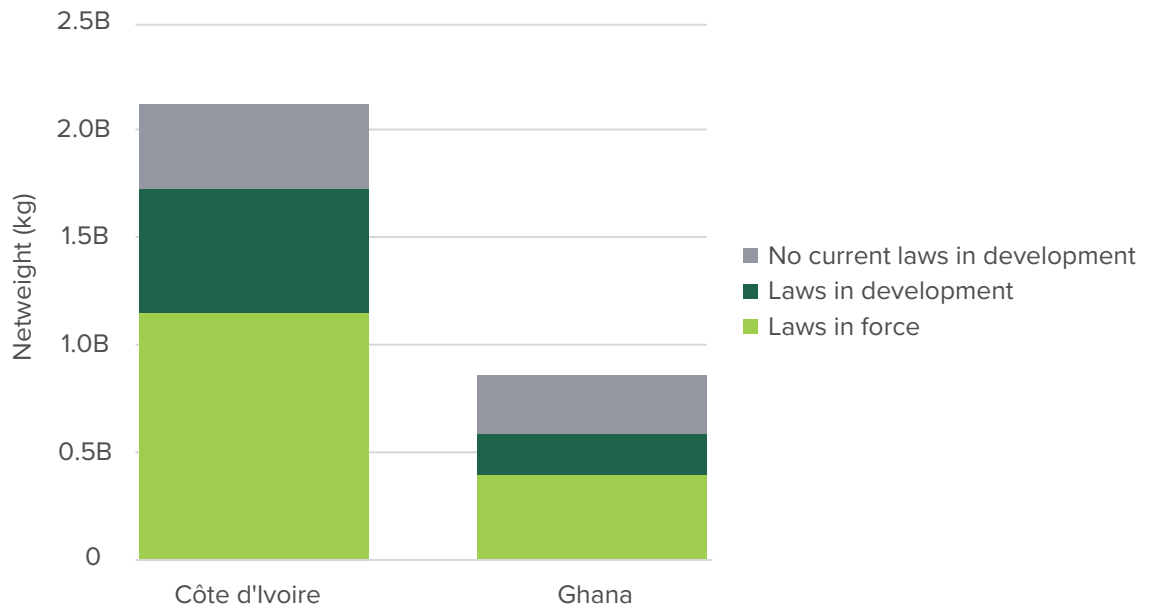
Child labor has been the subject of concern in the West African cocoa industry for over a decade, despite clear legal frameworks in both Ghana and Côte d'Ivoire to outlaw it. Corporate voluntary commitments and government plans have resulted in documented reductions but have not eradicated the problem.

While the proposed new deforestation legislation does not currently incorporate requirements on companies to exclude products made from child or slave labor, the USA, UK and EU Member States either have in force, or are developing, national frameworks for due diligence or accountability that require companies to have effective oversight of forced and child labor risks in their global supply chains. As a result of this, 44 percent of Ghana's direct exports of cocoa, cocoa products and chocolate, and 54 percent of Côte d'Ivoire's should already be subject to scrutiny/accountability in their destination country. If laws are enacted throughout the EU and EFTA as well as Canada, as currently planned, more than 82 percent of Côte d'Ivoire's direct exports and 68 percent of Ghana's exports should be subject to scrutiny/accountability.



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**FIGURE 9** 2019 global imports of cocoa and cocoa products into markets that either have operational, or are developing, national frameworks for due diligence that require companies to have effective oversight of forced and child labor risks in their global supply chains (*netweight in kg*)



Source: UN Comtrade, 2020

While the ultimate harm that companies should avoid differs, requirements to remove both deforested land and forced labor from global supply chains require robust traceability to be established, as well as proactive transparency and communication with suppliers and farmers. As such, regulations should be complementary; and ideally create equivalent levels of scrutiny and sanction for environmental and human rights harms, even where they are rooted in different laws.



## ACKNOWLEDGEMENTS

*The authors would like to thank Naomi Basik Treanor and Kerstin Canby of Forest Trends for review comments. In addition, the authors thank Eszter Bodnar of Forest Trends for formatting and graphic design. Support for this publication came from the U.K. Foreign, Commonwealth & Development Office (FCDO). The views expressed in this report reflect those of the authors, and do not necessarily reflect the views of Forest Trends' donors or our reviewers.*



Forest Trends works to conserve forests and other ecosystems through the creation and wide adoption of a broad range of environmental finance, markets and other payment and incentive mechanisms. This brief was released by Forest Trends' Forest Policy, Trade, and Finance program, which seeks to create markets for legal forest products while supporting parallel transformations away from timber and other commodities sourced illegally and unsustainably from forest areas.

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