



**FOREST POLICY TRADE AND FINANCE INITIATIVE**

REPORT | APRIL 2021

# **ILLICIT HARVEST, COMPLICIT GOODS: THE STATE OF ILLEGAL DEFORESTATION FOR AGRICULTURE**

---

## **EXECUTIVE SUMMARY**

---

**CASSIE DUMMETT  
ARTHUR BLUNDELL**

**WITH CONTRIBUTIONS FROM KERSTIN CANBY,  
MICHAEL WOLOSIN AND ESZTER BODNAR**



---

**Disclaimer:** This study was funded by the UK Foreign, Commonwealth and Development Office (FCDO) and the Norwegian Agency for Development Cooperation (Norad). The opinions, findings and conclusions expressed in this publication reflect those of the authors and do not necessarily reflect the views of FCDO, Norad, or the external reviewers.

---



## Executive Summary

Tropical deforestation is at the root of multiple global challenges facing humanity. Achieving the Paris Agreement's commitment to hold climate warming to well below 2°C above pre-industrial levels requires both rapid decarbonization of the world's economy and rapid reduction in emissions from deforestation and other land uses. Deforestation is one of the greatest drivers of biodiversity loss. Areas of tropical forest loss are global hotspots for zoonotic disease exposure and emergence. Access to forest land for clearance is also driving global increases in violence against indigenous peoples, local communities, and environmental defenders, as well as migration when communities are displaced.

While subsistence agriculture and logging still contribute to deforestation, commercial-scale agricultural expansion is now recognized as by far the single largest driver of deforestation worldwide and thus also of greenhouse gas emissions from land-use change. In 2010, the Consumer Goods Forum<sup>1</sup> resolved to achieve zero net deforestation by 2020 in four priority sectors: soy, palm oil, paper & pulp/timber, and beef. By 2014, when the New York Declaration on Forests was signed, a wave of corporations were making their own highly publicized zero deforestation commitments. The same year, Forest Trends released an analysis of the extent to which agricultural commodities are being grown on lands that have been illegally cleared of forests.<sup>2</sup> The results were stark: almost half of all tropical deforestation between 2000 and 2012 was driven by the illegal conversion of forest lands for commercial agriculture, and half of the production from this agro-conversion was destined for export markets.

Today, the 2020 target year for achieving net zero commodity-driven deforestation has come and gone. A decade-long surge of voluntary corporate commitments has been unable to stem the tide of global forest loss. Clearing for commercial agriculture has continued and is, in fact, getting worse.

After more than a year of intense global focus on the COVID-19 pandemic, policy makers are beginning to emerge from the fog to face problems too long ignored. An urgent need to focus on near-term economic recovery threatens to sideline longer-term objectives in many countries. But global greenhouse gas emissions, after falling more than 6 percent in 2020 from a massive drop in travel and economic activity, already appear to be roaring back. Meanwhile scientific evidence attesting to the need for aggressive global climate action and biodiversity protection continues to roll in.

To combat further forest loss, the European Commission (EC), United Kingdom (UK) and United States (US) are all considering legislation or other trade measures that would prohibit the import of commodities grown on deforested land. There is a strong interest to know to what extent legislation based on the *legality* of the imported agricultural commodity would address broader deforestation. It is also important to clarify how donor and consumer nations can best support producer countries, industry, and other stakeholders to uphold national laws and regulations when it comes to the conversion of forested lands for agriculture.

---

<sup>1</sup> CEO-level organization of 400 global consumer goods manufacturers and retailers with combined revenue in excess of US\$2.8 trillion (2,1 trillion Euros).

<sup>2</sup> Forest Trends. 2014. *Consumer Goods and Deforestation*. Washington DC, USA: Forest Trends. [www.forest-trends.org/publications/consumer-goods-and-deforestation/](http://www.forest-trends.org/publications/consumer-goods-and-deforestation/).



Several initiatives have quantified how much and where deforestation is driven by commercial agriculture, and even how much of this deforestation was driven by international trade. However, fewer analyses have been able to determine the extent to which agricultural commodities are being grown on lands that have been *illegally cleared* of forests. This study therefore focuses on *illegal deforestation* driven by agricultural expansion, and places it within the scope and scale of all tropical deforestation. Forest Trends progressively walks readers through assessments of:

### Defining “illegal deforestation”

This report defines illegal deforestation as forest clearing in violation of a producer country’s legislative framework (e.g., their laws and regulations) at the time the deforestation took place. Forest Trends focused only on material violations, specifically on illegalities in licensing (e.g., failures to obtain permits or permission from landowners, conduct environmental impact assessments, corrupt and fraudulent authorizations, etc.) and on forest clearance (overharvesting, outside of boundaries, tax evasion, etc.). Breaches of international law or customary law are not included unless they are integrated into national legislation.

- *deforestation* writ large, all of which is of concern for its impacts on climate, biodiversity, and people;
- *agro-conversion* because it is the largest driver of permanent forest loss across the tropics;
- *illegal agro-conversion* because it is particularly egregious in its contravention of rights and shared community values as expressed through sovereign law and regulation; and,
- *agro-conversion for export* because the actors involved in these supply chains stretch around the globe, and consumers around the world share some culpability for deforestation.

This report revisits Forest Trends’ 2014 report, by reassessing the extent of illegal agro-conversion across the tropics from 2013 to 2019, and finds a similar story: more forest land is being illegally cleared to make way for agricultural crops and pastures than ever before.<sup>3</sup>

## KEY FINDINGS: GETTING AN ACCURATE PICTURE

This report finds that almost two-thirds (60 percent) of tropical forest loss was driven by commercial agriculture between 2013 and 2019. Almost three-quarters (69 percent) of this agro-conversion was conducted in violation of national laws and regulations (Figure 1). In fact, the rate of illegal deforestation during this period increased by 29% compared to 2000 to 2012: from 3.5 million hectares (Mha) per year to 4.5 Mha per year.

These estimates of illegal deforestation are likely an *underestimate* because many countries have only limited data on which to assess illegality. Thorough audits rarely happen. Thus an absence of evidence of illegality should not be taken as evidence of compliance with laws and regulations.

<sup>3</sup> The full report can be accessed at: <https://www.forest-trends.org/publications/illicit-harvest-complicit-goods/>



Figure 1 | Commercial Agriculture as a Driver of Illegal Tropical Forest Loss, 2013-2019.



**Key findings include:**

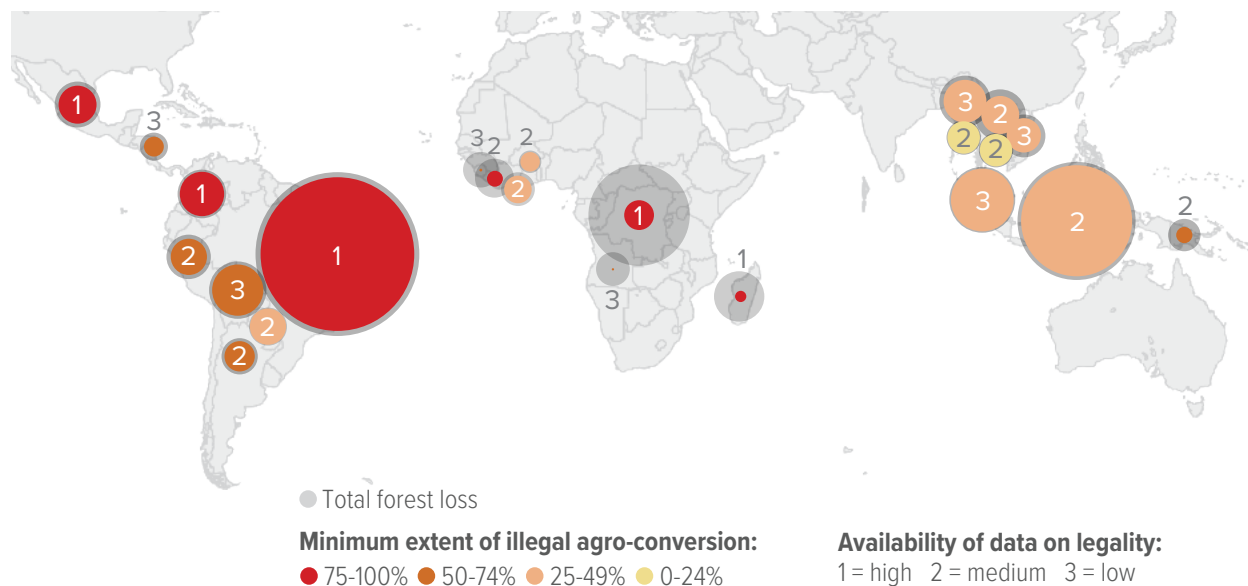
- 77 Mha of tropical forests were lost between 2013 and 2019:<sup>4</sup> the equivalent of clearing more than five Manhattans every day for seven years.** During this time, average annual tropical forest loss surged to more than 11 Mha per year, compared to 7.3 Mha per year in the first 12 years of the 21st century – an increase of 52 percent. Brazil, Indonesia, and the Democratic Republic of Congo (DRC) together accounted for 51 percent of all tropical forest loss between 2013 and 2019. All three have seen increases in average annual loss (by 14 percent, 17 percent, and 162 percent, respectively) during this time.
- Almost two-thirds (60 percent) of tropical deforestation between 2013 and 2019 was driven by commercial agriculture.** Commercial agriculture was the primary identifiable driver of forest loss everywhere except Africa, where subsistence agriculture reportedly drove almost all deforestation. More than 6.58 Mha of tropical forests were cleared each year to make way for commercial agricultural operations. This represents an *increase* of 28 percent in the average annual scale of agro-conversion as compared to 2000 to 2012.
- At least 69 percent of agro-conversion was conducted in violation of national laws and regulations, and this is likely an underestimate.** Illegal agro-conversion was responsible for at least 31.7 Mha of the total 77 Mha of tropical forest loss between 2013 and 2019 (Figure 2) – an area roughly the size of Norway. This equates to an average annual loss of more than 4.5 Mha per year, an increase of 28 percent from the 2000 to 2012 period (3.5 Mha per year). Illegal activities were narrowly defined as only those of material import, such as obtaining land illegally, clearing in excess of permits, fraud and corruption, human rights abuses, and breaches of environmental law. These estimates are considered conservative. In countries where governance is weak and corruption widespread, the lack of evidence of illegality is typically not an indication that the agro-conversion is in compliance, but an indication that more reporting is required. Where comprehensive compliance audits do exist, evidence of illegal deforestation is widespread. For example, in Brazil, at least 95 percent of *all* deforestation was illegal.<sup>5</sup> Similarly, Indonesia's Supreme Audit Agency found less than 20 percent of palm oil operations in compliance with national laws and regulations.

<sup>4</sup> Global Forest Watch. 2020. "Tree cover loss by dominant driver." Time range selected: 2001-2019. 2018. Washington DC, USA: Global Forest Watch, World Resources Institute. [www.globalforestwatch.org](http://www.globalforestwatch.org).

<sup>5</sup> Forest Trends. 2021. *Illicit Harvest, Complicit Goods: The State of Illegal Deforestation for Agriculture*. Washington DC, USA: Forest Trends. [www.forest-trends.org/publications/illicit-harvest-complicit-goods/](http://www.forest-trends.org/publications/illicit-harvest-complicit-goods/)



**Figure 2 | Extent and proportion of agro-conversion in violation of national laws and regulations (minimum estimate), 2013-2019<sup>4</sup>**



**4. Soy, palm oil, and cattle products drive global figures of illegal deforestation, but other smaller-scale commodities, such as cocoa, rubber, coffee, and maize, are also leading causes of illegal deforestation in some regions, with devastating effect.**

Identifiable illegal deforestation is pervasive in the expansion of croplands for soy (93 percent of agro-conversion across all soy-growing countries in this study), cocoa (93 percent), and cattle products (beef at 81 percent and leather at 87 percent). The global average proportion of illegality for palm oil (59 percent) is constrained by low data availability in Malaysia, although 81 percent of clearing for Indonesia's palm oil is estimated to be illegal. Global estimates for commodities like rubber, coffee, and maize are limited by data availability, but are still high enough to show significant issues with legal compliance. The country case studies that accompany this report detail coffee and cocoa production expanding into protected areas in Honduras and West Africa; in Argentina, maize is the leading driver of deforestation, of which at least 65 percent is in contravention of land zoning laws.

**5. Emissions from illegal agro-conversion account for at least 42 percent of all emissions from tropical deforestation.**

Illegal agro-conversion was likely responsible for at least 2.7 gigatons (Gt) of carbon-dioxide equivalent (CO<sub>2</sub>e) per year, and 19 Gt of CO<sub>2</sub>e between 2013 and 2019. On an annual basis, that's more than India's emissions from fossil fuels in 2019, and if illegal agro-conversion were a country, its emissions would be third-largest after China and the US. The largest producer of emissions from illegal agro-conversion was Latin America (13.7 Gt), mainly due to massive forest loss in Brazil associated with fires over the last few years.

**6. More than 31 percent of agricultural commodities linked to deforestation were exported, raising significant concerns about their association with illegal deforestation.**

In 2019, exports of more than ten agricultural commodities valued at US\$55 billion were linked to agro-conversion – mostly those grown in Latin America and Asia. This trade represents emissions of at least 1.2 Gt CO<sub>2</sub>e per year from more than 14 Mha of forest land cleared between 2013 and 2019.

<sup>6</sup> Figure 2 represents only the 23 countries assessed in this study, which together account for 85 percent of global tropical forest loss.



It is not possible to calculate at a global level precisely what share of illegally produced commodities are ultimately exported from their country of origin. This report examines 23 case study countries and finds at least one-fifth – and in some cases virtually all – of agricultural exports were linked to illegal deforestation, depending on the commodity and country of origin. Given the evidence available, the risk is non-negligible and must be assumed to be high for widely traded commodities like soy and palm oil.

- 7. Deforestation for agro-commodity production that is driven by export demand varies, but has increased overall since 2013, which will affect the potential impact of consumer and demand-side measures.** However, the proportion of production linked to agro-conversion that is then exported has declined from 49 percent in the 2000 to 2012 period to 31 percent since 2013. This is because in some countries, deforestation is not driven by commercial agriculture (DRC, Madagascar, Sierra Leone) or their agricultural products are not destined for export (Colombia, Bolivia, Mexico). In these countries especially, demand-side measures such as corporate purchasing policies or import regulations will be less effective than programs which strengthen domestic governance; programs for sustainable management of the land and forest sectors must take leading roles.

Demand-side measures, however, will be effective when a high proportion of deforestation for agro-commodity production is being driven by export demand, as is the case for example in Indonesia, Malaysia, and Laos. However, agro-exports are increasingly headed to markets in China and India, where regulatory and consumer pressures for environmental protections are lower. If demand-side regulatory measures are only adopted in some major markets (such as the US, Europe, and Australia) but not in others, a bifurcation of trade is likely, with high-risk commodities continuing to find buyers in import markets without legislation or trade measures blocking illicit goods.

## CONCLUSION

Even in the face of shortcomings in producer country monitoring and reporting (in particular, a lack of rigorous auditing), the evidence presented in this report reveals that illegal agro-conversion and the subsequent illegality of associated agricultural commodities remains an immense problem that has been getting worse. This report reveals the ugly truth: that much of global agribusiness trade is linked to operations that illegally clear forests.

While the findings of this report seem dire, there is hope. Brazil was successful in drastically reducing deforestation up until 2012 – and in doing so contributed more to addressing climate change through a reduction in related emissions than any other single country. Indonesia more recently received US\$160 million in compensation payments from the international community in recognition of deforestation and emissions averted. Forest Trends observes continued leadership from some corners of industry. There is increasing global political focus on natural climate solutions, including legislation addressing the imports of agricultural products associated with deforestation – either legal or illegal – now being developed by the EC, UK, and US.

In a forthcoming report, Forest Trends will propose a path forward for curbing illegal land-use change and advancing forest country objectives for zero deforestation. In the meantime, this report shows that **too much of the world's agricultural production and trade carries a high risk of including illicit harvests, leaving companies and their customers complicit in tropical forest loss and trafficking in illegal products.**





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 report 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.

Other policy and information briefs can be found at [www.forest-trends.org](http://www.forest-trends.org).

with support from:

