Illegal Deforestation for Forest-risk Agricultural Commodities Dashboard: Colombia

Drafted as of: August 2024

SUMMARY OF RISKS

Governance Risk Score: 66.3 (Higher-risk)[a]

Governance Risk Score: NO[1,b]

- **Overall, Colombia's forest area has decreased by six percent since 2000,[2] but deforestation surged after the 2016 peace accord ("end-of-conflict" deforestation)[3], but decreased to lower levels in 2023.[4]**
- **From 2013 to 2023, 98% of tree cover loss in Colombia occurred within natural forest.[5]**
- **Criminal groups have stepped up economic activities – ranching, logging, mining and coca growing – that accelerate loss of woodland and jungle in areas the armed groups once controlled.**
- **Agricultural conversion is the main driver of forest loss in Colombia.**
- **The majority of Colombia's forest-risk agricultural products are consumed domestically, particularly beef.**
- **Agricultural exports with the highest deforestation risk are coffee and palm oil.**
- **Deforestation driven by beef exports to China[c] are increasing rapidly and have been linked to illegal forest conversion, including in protected areas.**

SUMMARY OF FRCS

Main forest-risk agricultural commodities (FRCs):[d,6]

- Cattle
- Timber
- Palm oil
- Coca (illicit)
- Coffee
- Rice
- Sugar

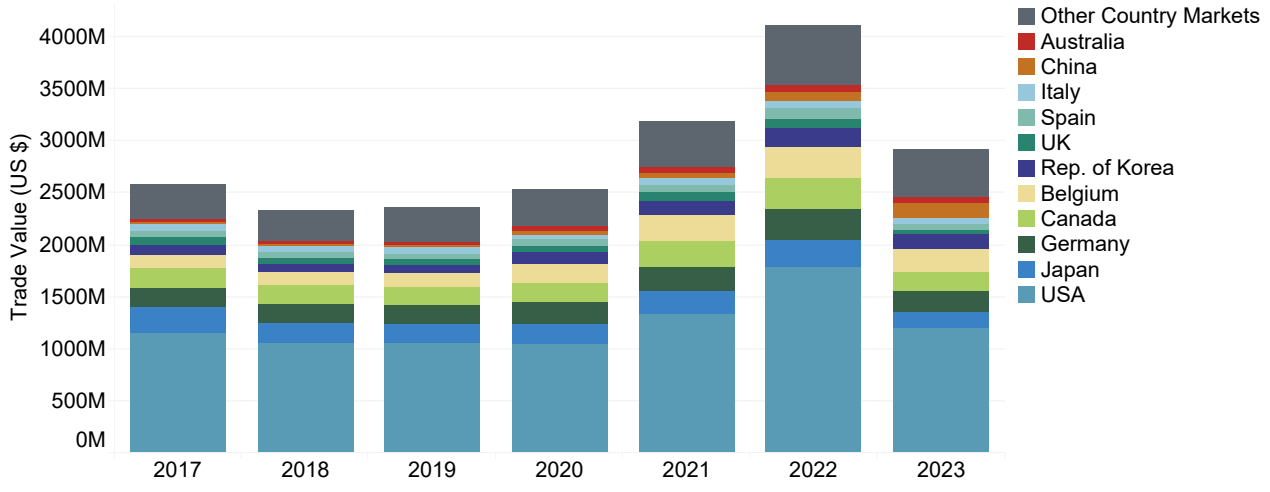
Main FRC exports:

- Coffee
- Beef
- Palm oil
- Cocaine from illicit coca

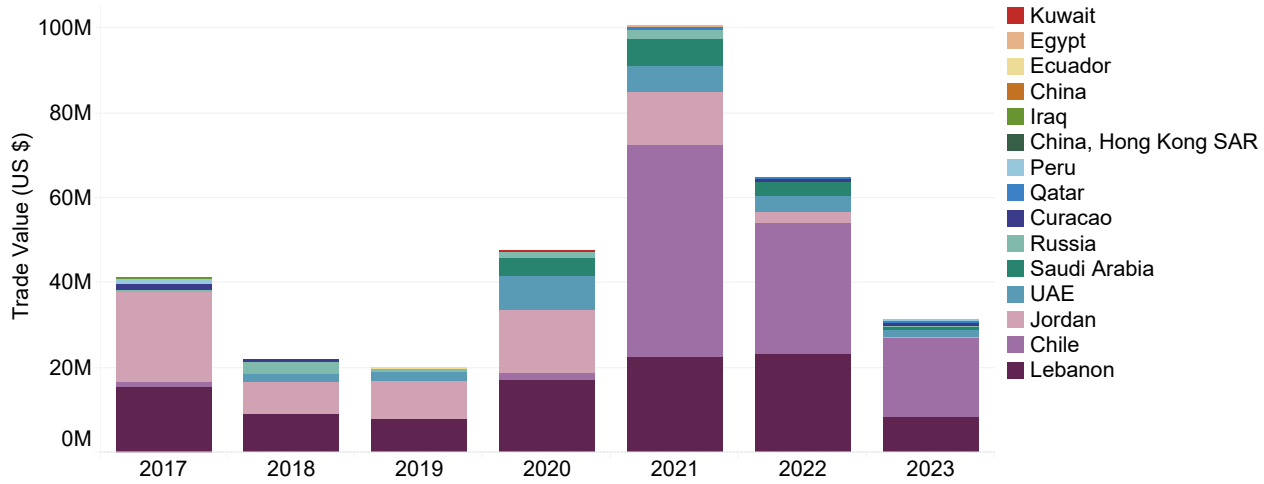
Timber or FRC-related Moratorium or Export Restriction in Effect):

Colombia has reportedly banned the export of primary wood products (including logs, sawnwood, blocks, benches, planks, tables, sheets, and chips) since 1966, although the exact coverage of such restrictions remains unclear.[7]

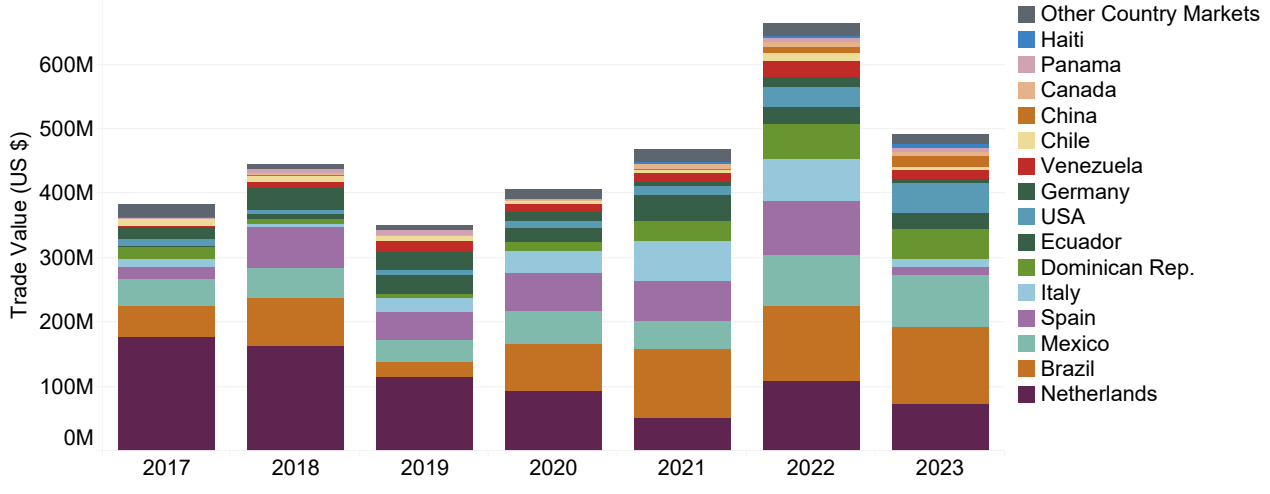
COLOMBIA'S COFFEE EXPORTS[8]



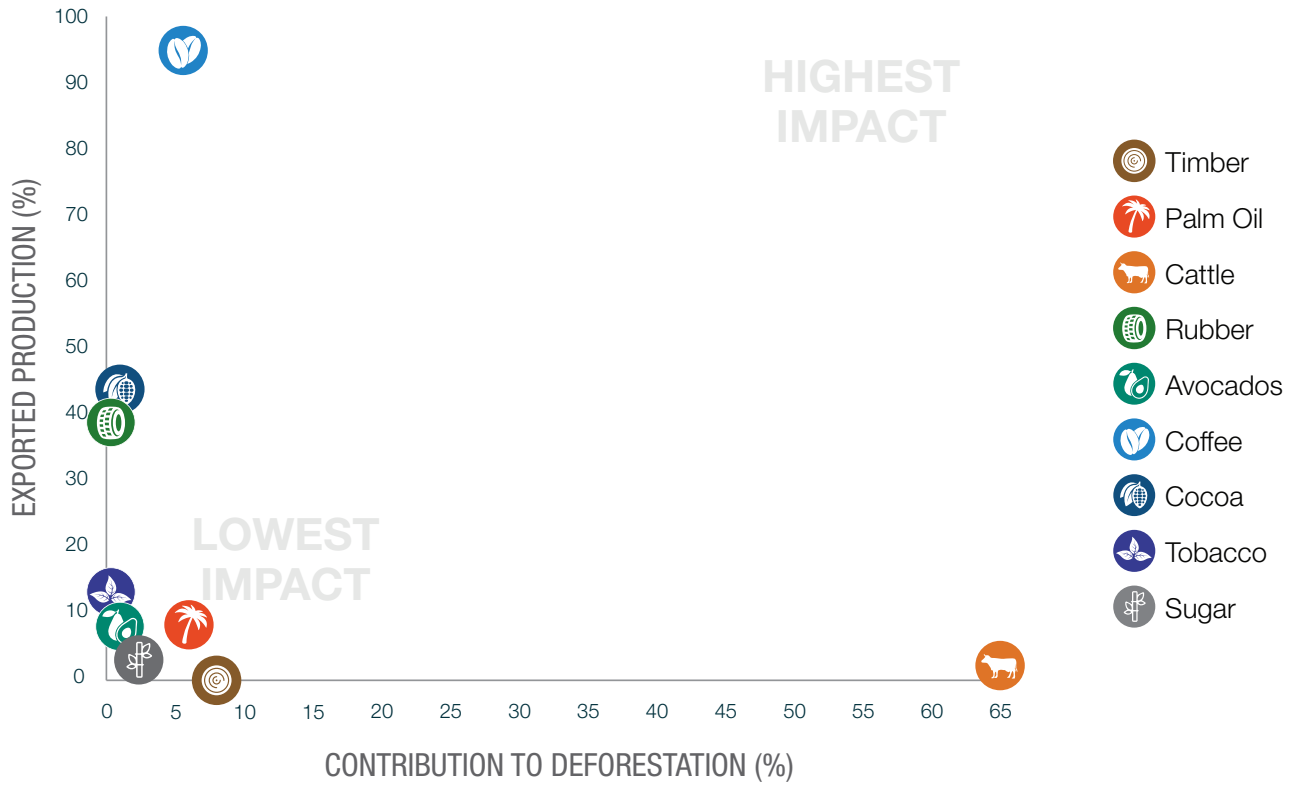
COLOMBIA'S BEEF EXPORTS[9]



COLOMBIA'S PALM OIL EXPORT[10]



COLOMBIA'S AGRICULTURAL AND TIMBER PRODUCTS LINKED TO DEFORESTATION AND THEIR EXPOSURE TO DEFORESTATION-REGULATED MARKETS[14,15]



LAND-USE SECTOR

Forested Area:

- 59 million hectares (Mha)[11]
- 81.1 Mha of 30 percent cover in 2022 (GFW 2023)
- 52.8 Mha of primary forest in 2022 (GFW 2023)

Deforestation Rate:

- 199,230 hectares (ha)/year (FAO 2020)
- 199,000 ha of primary forest loss (39 percent cover) in 2023 (GFW 2023)
- 128,455 ha of primary forest loss in 2020 (GFW 2023)

Global ranking for forest loss:[e]

- 14th globally in forest loss (6.6% decrease since 2020 and 1.1% of the global total) in 2023 (GFW 2023)
- 10th in forest loss (199k ha per year between 2015 to 2020) in the tropics in 2020 (GFW 2023)

Total Gross Emissions from deforestation:[f]

- 164 million Mt CO_2e in 2022 (50 percent cover)

Forest Ownership:[12]

- 66 percent public; 30 percent private (FAO FRA 2020)[13]

Certification extent by FRC:

- Timber certificate

RISKS ASSOCIATED WITH ILLEGAL FOREST CONVERSION

Deforestation linked to FRCs has fluctuated since the end of armed conflict in Columbia.[g]

Colombia's deforestation rate has fluctuated significantly since the end of armed conflict and the start of the peace process in 2016. Criminal gangs and private sector interests moved into the power and governance vacuum. Larger landowners took advantage of areas abandoned by small farmers.[16] After its peak in 2017, when 425,000 hectares (ha) of forest were lost, deforestation has fallen to lower levels. 2023 rates of primary forest loss dropped 49 percent compared to 2022, when only 266,000 ha were deforested, according to Global Forest Watch.[17]

The recent fall in deforestation is likely due to a combination of the actions by armed rebel groups (see below) and President Gustavo Petro's stronger environmental policies since late 2022. However, in October 2023, the government decided to spend $4.25 billion for 1.5 million ha (Mha) (3.7 million acres) of land for poor farmers or displaced peoples, as part of a bid to increase agricultural output and boost the peace process; its impact remains to be seen.[18]

Colombia's forest area, using the government's definition of 30 percent canopy cover, extends over 76.6 Mha.[h,19] Forest area has fallen by six percent since 2000. Colombia's Institute of Hydrology, Meteorology, and Environmental Studies (IDEAM) reported that deforestation in the Colombian Amazon fell 36 percent from 2021- to 2022, and 21 percent from 2022 to the last quarter of 2023.[20]

While some claim these gains represent a rapid win for President Petro's anti-deforestation campaign, another view is that much of the reduction has been due to armed rebel groups clamping down on illegal logging.[21] For example, the Estado Mayor Central (EMC), comprised of Revolutionary Armed Forces of Colombia (FARC) dissidents, has imposed a logging ban in Amazon areas under their control (e.g., parts of the Caqeueta, Meta, and Guaviare Departments). This ban was due to last the four years of President Petro's tenure and includes a 1 million Colombian pesos, or $251 USD penalty per deforested hectare. EMC's stated motive for the ban was the importance of forest cover and associated water availability for military operations, although another view was that this is a bargaining chip for EMC's broader agenda.[22]

Commercial agriculture is a major deforestation driver.

Deforestation from 2000-2022 reportedly generated 2.8 gigatons (Gt) of CO_2 emissions.[23] In 2022, Colombia's land use and forestry sector emitted an estimated 83.3 megatons (Mt) CO_2e, and the agriculture sector emitted a further 68.3 Mt CO_2e. Together, these sectors accounted for 56 percent of Colombia's annual emissions.[24] Colombia was ranked ninth in the world for agriculture-driven deforestation between 2001 and2022, and, due to the large proportion linked to cattle pasture, it was sixth for carbon emissions due to agricultural conversion. However, reduced rates of agricultural conversion in 2022 resulted in Columbia dropping out of the top fifteen globally for both agriculture-driven deforestation and emissions.[25]

Table 1 presents deforestation levels, or rates, associated with specific FRCs, although the varied methodological basis and time periods of these estimates makes them hard to compare across FRCs. Estimated deforestation rates attributable to the FRCs also vary significantly between different sources; at least some of these differences are due to definitional issues (e.g., mixing or combining indirect drivers (such as land grabbing) with direct drivers and inclusion of shifting agriculture/ cultivation as a deforestation driver[i]).

Colombia's 2020 National Policy for the Control of Deforestation and Sustainable Management of Forests (CONPES) identified agriculture as the main driver of deforestation, a category that includes traditional farming, large-scale livestock production, industrial agriculture, and coca production[42]. Global Forest Watch has also estimated that shifting agriculture is responsible for 62 percent of Colombia's forest loss, with 34 percent linked to commercial agriculture and mining and four percent to forestry.[43]

89 percent of deforestation for commercial agriculture was likely illegal.

Forest Trends has estimated that at least 89 percent of deforestation for commercial agriculture was likely illegal in Colombia.[44] This is based partly on a 2018 Supreme Court ruling that illegal land grabbing under the guise of pasture expansion was responsible for 60-65 percent of forest loss, illegal coca production was responsible for 20-22 percent, and a further unspecified amount was linked to industrial agriculture.[45] It is important to note that the 2021 Environment Law makes it illegal to clear more than one hectare of forest without authorization. Illegal deforestation incurs a prison sentence of up to 15 years, and the funding of deforestation carries harsher penalties.[46] Colombia considers 2010 as the cut-off date for the agricultural frontier This means land that was forest on December 31st, 2010 should remain as forest, and if it is converted to agriculture, it should revert to forest.[47]

TABLE 1: RANGE OF DEFORESTATION LEVELS LINKED TO FRCS			
FRC	**Deforestation rate or proportion**	**Time period (if given)**	**Source**
Pasture/beef	50% of Amazon deforestation	2005-2012	Minambiente (2020)[26]
Pasture/beef	68% of agriculture-driven deforestation (3 million ha)	2001-2022	Persson et al. 2023[27]
Pasture/beef	One third of agriculture-driven deforestation	2022	Persson et al. 2023[28]
Pasture/illegal land grabbing	60-65% of total deforestation		Supreme Court Ruling 2018[29]
Beef exports	4% of deforestation area due to beef	2005-2018	Pendrill et al (2022)[30]
Coffee exports	7,500 ha per year	2005-2018	Pendrill et al (2022)[31]
Coca	13% of total deforestation		Minambiente (2023)[32]
Coca	20-22% of total deforestation		Supreme Court Ruling 2018[33]
Palm oil	10,000 ha per year	2013-2018	Pendrill et al (2022)[34]
Palm oil	1.5% of total deforestation	2011-2017	Minambiente (2023)[35]
Palm oil	3,807 ha – supply chains of 6 companies	2021-2022	Sierra Praeli (2023)[36]
Sugar exports	2,800 ha per year	2013-2018	Pendrill et al (2022)[37]
Commercial agriculture & mining	34% of total deforestation		Global Forest Watch (2023)[38]
Shifting agriculture	62% of total deforestation		Global Forest Watch (2023)[39]
Forest plantations	4% of total deforestation		Global Forest Watch (2023)[40]
Forest plantations	8% of total deforestation	2005-2018	Pendrill et al (2022)[41]

Environmental defenders have continued to face injury and death threats. At least 28 indigenous leaders were murdered in 2023, according to the Institute of Development and Peace Studies.[48]

Deforestation in protected areas

Over two-thirds (21.7 Mha) of Colombia's total forest area (31.5 Mha) are in protected areas, but protected area forest has been receding sharply. For example, the area of protected forest decreased 1.4 Mha from 2000 to 2022.[49] Deforestation in protected areas and their buffer zones increased dramatically following Colombia's peace agreement with the Revolutionary Armed Forces of Colombia (FARC).[50] Prior to the peace agreement, forest cover gave a strategic advantage to the rebel groups. After deforestation occurred, criminal gangs moved in and worked with FARC splinter groups to seize land and extract extortion money from farmers for deforested land.[51]

About 46 percent of Colombia's forest land is collectively owned under legal title by communities, with the rest owned by the state. Indigenous peoples and Afro-Colombian communities have an important role as forest custodians.[j]

From 2019 to 2022, ex-President Iván Duque launched Operation Artemis, a military drive to end deforestation. This involved 23,000 soldiers deployed to retake deforested land, and 21 military operations in national parks and forest reserves. While many arrests were made, critics said there were human rights violations and that the real drivers of deforestation were not addressed. In 2022, the government reported the recovery of 27,046 ha of the deforested land - a fraction of the 424,243 ha deforested.[52] In September 2022, Susanna Muhamad, the new Minister for the Environment, announced a new approach "that emphasizes social, economic and productive aspects for communities, without losing control in the territories, but now persecuting the leadership that causes this harm to natural resources".[53]

Analysis by forest-risk commodity.

Beef (pasture expansion)

Deforestation link

Conversion for pasture is the main cause of deforestation in Colombia. Since 2001, it is estimated that 68 percent of Colombia's three million hectares of agriculture-driven deforestation has been due to pasture expansion, and the government's strategy for tackling deforestation under CONPES reported that 50 percent of Amazon forest conversion between 2005 and 2012 was for cattle pasture. In 2017, over 183,000 ha of Amazon forest were converted, most of which was illegal clearance of land for cattle ranching.[54] This proportion has fallen. In 2022, the share of deforestation due to cattle pasture was about a third of all agricultural conversion.[55]

In 2021, an estimated 37 percent of Colombia's land area was in pasture, over double the area considered suitable for it.[56] However, much of the conversion happened decades ago,[57] and a large area of Colombia comprises natural savanna, grasslands, and floodplains, (as in the Casanare, Cesar, Córdoba, Meta, and Vichada Departments) where ranching is an appropriate and potentially sustainable land use.

Conversion to pasture is also strongly linked to illegal land grabbing, as emphasized by the 2018 Supreme Court ruling. Prior to 2017, converting forest to pasture and grazing cattle was a major means of obtaining access to land titles. Although the law was changed in 2017 to make it illegal, this practice has continued, fuelled by rocketing land values and extortion by criminal gangs. There are documented cases of small- scale farmers forced to sell deforested land to cattle ranchers.[58] Another source notes that "the large-scale cattle business is permeated by illegality and violence, including corruption, extortion, cattle "laundering," financing by armed gangs and displacement of local communities."[59]

Cattle ranching in national parks is illegal. Article 13 of the Second Law of 1959 and Article 30 of Law-Decree 2811 of 1974 prohibit livestock activities in protected areas. Despite this, illegal cattle ranching in protected areas increased significantly from 2016 to 2020.[60] For example, it has especially impacted the Tinigua and Chiribiquete National Parks.[61] The latter, Colombia's largest tropical rainforest national park, lost more than 300,000 ha of forest cover in five years, and gained 650,000 heads of cattle.[62] In 2021, the Office of the Attorney General arrested ten people for funding deforestation in Chiribiquete National Park and reported that it had halted two large construction projects in the protected area.[63]

As recently noted by Javeriana University (Bogota) environmental researcher Gabriel Tobón: "the expansion of livestock farming in the Amazon often leads to the appropriation of land by powerful economic groups."[64] Indigenous groups have also complained that the authorities invest in roads and power lines for the settler populations who move into deforested areas.[65] Illegal deforestation for cattle was also reported in La Macarena National Park and Amazon Forest Reserve. The Environmental Investigation Agency (EIA) has also alleged that the companies Grupo Exito (which belongs to Casino Group), Colsubsidio, and Carnatural were purchasing from suppliers who bought from ranchers illegally raising cattle in national parks.[66]

Since cattle ranching in protected areas is illegal, cattle cannot be registered or vaccinated.[67] However, EIA's investigation found that while cattle vaccination and movement data in protected areas are collected, the data are not publicly available. Sharing records with other government departments and the public would greatly improve transparency and help enforcement.[68]

Exports

Until now, most of Colombia's beef production has been for domestic production. For example, between 2005 and 2018, only four percent of deforestation-linked beef cattle were exported.[69] According to another source, "the Americas" were the top importers of this deforestation-linked beef (71,200 ha of deforestation in 2021), followed by the United States (4,360 ha) and China (3,800 ha).[70]

However, this is changing radically following a trade protocol agreement between Presidents Petro and Xi Jinping in October 2023 that explicitly includes beef. The first container of Colombian beef was due to arrive in China in early 2024. Projected beef exports to China alone were 100,000-250,000 tons.[71]

The agreement implies a tripling of Colombia's beef exports in a few years, with a significant share likely to come from the Amazon biome, protected areas, etc. In spite of government efforts to implement the Colombian Environmental Seal (SAC) for sustainable livestock farming, traceability systems for beef are poorly developed, and legality risks are high (e.g., from

small producers and intermediaries operating in protected areas that input into exporters' supply chains). The China trade agreement focuses on sanitary requirements rather than traceability.[72] Another concern is that most of Colombia's beef goes to undiscriminating markets. According to government data in 2022, the main destination was Russia (about 20,000 tons) followed by Chile (about 7,000 tons), Lebanon, Egypt, Lybia, and Saudi Arabia.[73]

Coca

Deforestation link

Colombia accounts for about 60 percent of the world's coca supply from an area of about 230,000 ha.[74] This is for both legal and mainly national consumption in its raw form, and illicit coca production for making and (mainly) exporting cocaine. According to the Ministry of Environment and Sustainable Development), coca production was responsible for about 13 percent of Colombia's deforestation in 2023.[75] In 2022, IUCN also reported that over half of Colombia's illicit crops (totaling over 200,000 ha) were grown in protected areas, including in the territories of Indigenous and Afro-descendant communities.[76] For example, coca was identified as a key driver of deforestation in the Macrarena National Park and Nukak National Nature Reserve,[77] and it was linked to the financing of large-scale environmental crimes.[78]

There are also linkages between illicit coca production, cattle ranching, and land grabbing. Land grabbing has historically been the main underlying or indirect cause of deforestation. Thus, "cattle and cocaine accompany deforestation at all scales" and "often the land is cleared for other purposes like land grabbing or even to support drug activities, but the land is occupied by cattle nevertheless."[79] Coca is also an important indirect deforestation driver, being noted for its "pioneering effect - coca growing tends to attract other destructive activities."[80]

According to recent reports, coca production, whether illicit or not, has fallen sharply since 2022, when coca prices fell by over 40 percent.[81] Current deforestation due to coca is less than an earlier estimate of the Ministry of Environment, which estimated that coca accounted for 20-22 percent of deforestation.[82] On the other hand, another recent report notes that (more broadly, not just Colombia) "forest loss is being accelerated by a metastasis of organized crime, including a surge in cocaine production, trafficking, and consumption."[83]

Exports – cocaine (from elicit coca)

The export of cocaine derived from illicitly grown coca is of course unknown, but it continues to be a key driver of deforestation, albeit less so than before the 2022 price fall. It is also clear that the export trade is interlinked with timber. For example, it has been reported that Colombian drug traffickers have been subcontracting local timber companies to conceal drugs in the hulls of boats, and transporting them to ports via Brazil, Guyana, Suriname, and Venezuela. Brazilian federal police made 16 major seizures of cocaine[84] concealed in wood shipments between 2017 and 2021 alone.[85]

Palm oil

Deforestation link

Colombia is Latin America's largest producer of palm oil, with nearly 450,000 hectares (1.1 million acres) of oil palm plantations in 2020. The country has become the world's fourth largest producer[86] and exporter[87] of palm oil. With another 100,000 immature plantings, production is expected to grow by about 20 percent over the next few years.

It is estimated that from 2013 to 2018, palm oil expansion was responsible for nearly 10,000 ha of deforestation per year.[88] Analysis by Institute of Hydrology, Meteorology, and Environmental Studies (IDEAM) of the relationship between palm oil and deforestation from 2011 to 2017 found that deforestation on land with palm plots was equivalent to 1.5 percent of national deforestation and did not rank it as a key deforestation driver.[89] A Zero Deforestation Palm Oil agreement was signed in 2017 by over forty organizations,[90] and over a quarter of national production has been certified as "sustainable."

Despite this, there are some well-documented cases demonstrating illegal forest conversion, such as in the Nurak-Maku indigenous reserve.[91] Recent research on the supply chains of export-oriented companies, reported below, also implies a stronger deforestation linkage than the analysis by IDEAM, and therefore the government, may currently perceive.

Around 28 percent of Colombia's production complies with a certification standard, such as the Roundtable on Sustainable Palm Oil (RSPO) and Rainforest Alliance Standards, making it the leading exporter of certified palm oil in Latin America.

Approximately 50 percent of plantations have been established on landscapes that were transformed by human activity long ago (most often for cattle pasture). Colombia's palm oil sector promotes itself as "deforestation-free;" however, this

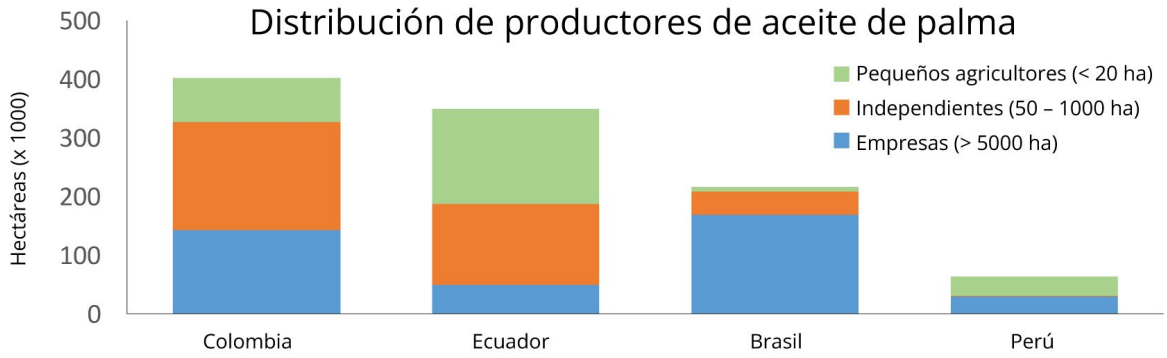
claim ignores the land-use change and environmental degradation that accompanies expansion into the Llanos Orientales region, which now accounts for about 40 percent of palm oil produced in Colombia.

Smallholders represented a small minority of plantation area in Colombia until 2000, when the government initiated the Alianzas Productivas, an initiative that supports collaboration between smallholder associations and industrial-scale producers.

When the program started in 1999, there were an estimated 390 farmers with oil palm groves smaller than 20 ha; by 2015, almost 55,000 smallholder families were participating in the initiative. This program is expected to expand over the short term as part of Colombia's efforts to provide economic opportunity to displaced people who reside, or once resided, in conflict areas.

Many of Colombia's palm oil farmers are mid and larger scale compared to Ecuador, as shown in Figure 1, reflecting the opportunities for corporations to establish new plantations. Investment in the Amazonian Caquetá Department, for example, has long been suppressed due to civil conflict, but the peace and reconciliation process provides an opening for expansion of the industry into the region.

FIGURE 1. DISTRIBUTION OF OIL PALM BY FARM SIZE IN COLOMBIA, ECUADOR, BRAZIL, AND PERU



Increased efforts have been made over the past decade to monitor palm cultivation's links with deforestation, such as the palm maps[92] produced by IDEAM. IDEAM also provides deforestation maps[93] and an inventory of legal and illegal crops[94], with the help of the Agustín Codazzi Geographic Institute, the country's official cartographer.

Most of Colombia's palm oil producers belong to the Federation of Palm growers (Fedepalma). It is a powerful union that was created in 1962 to offer technical, technological, and financial support to growers, and to help them achieve international certification. In 2017, Fedepalma signed a zero-deforestation agreement with several government ministries. While Fedepalma has been criticised[95] for overlooking smaller farmers, for becoming involved in legal conflicts over land, and having a powerful lobbying capacity, it also facilitates the application and monitoring of public and trade union policies with emphasis on developing conservation agreements.

Exports

Depending on the source, between a third[96] and half[97] of Colombia's palm oil is exported. Most of the exports go to Europe and Latin America, with Brazil, the Netherlands, Spain, Mexico, and Italy as the main importers in 2022.[98] Although IDEAM did not rank palm oil as a key deforestation driver,[99] recent IUCN research on the supply chains of six companies (linked to 11 palm oil mills) that have been mainly supplying the EU found 3,807 ha of deforestation linked to palm oil between 2021 and 2022.[100] The IUCN research also revealed:

- Land "obtained through intimidation and without due consent from indigenous landowners," forced displacement of indigenous and other groups over land issues, including by an RSPO certified company, and creation of fake companies to buy company-leased land.
- A range of environmental impacts, including watershed damage, savanna burning, and pollution.

- The founder of one of the companies was arrested in February 2022, accused of being the country's worst deforester, as well as of illegal mining, bribery, and fraud.
- Indirect and direct deforestation threats (e.g., over 23,000 hectares burned between 2021 and 2022 in areas near the mills). As noted by the lead researcher, referring to one of the companies operating close to the forest frontier, "although we cannot confidently say that palm oil extraction mills are linked to advancing deforestation, it could be said that, in the near future, oil palm sites will most likely expand into areas that are currently being deforested."

It is also important to note that, with reference to the upcoming EUDR, Colombia does not currently have legislation on the legality of the origin of palm oil, much of it reputed to be from informal or illegal sources.[101] According to the "Colombia 2020 Palm Oil Barometer," prepared by the NGO *Solidaridad*, only 28 percent of Colombia's palm oil production was "sustainable" (although this was higher than Indonesia (19 percent) and Malaysia (23 percent)), with one of the critical issues being the need to develop strong traceability systems.[102]

Coffee

Deforestation linkage

Colombian coffee is predominantly an export crop (see below).

It is mainly grown by smallholders - 95 percent of coffee farmers have less than five hectares - in Andean departments from Guajira in the north to Cauca near the Pacific coast in the south. The estimated average annual deforestation footprint of coffee from 2005 to 2018 was 7,500 ha.[103]

Most coffee-growing land in Colombia has been in use for decades. But a combination of factors, particularly climate change, could trigger a new wave of forest clearance. Coffee production is moving to or expanding into higher altitude and rainfall areas. According to Trase (2020), this is putting significant forest areas at risk: 827,000 ha in the Antioquia Department, 618,3000 ha in the Cauca Department, and 133,000 ha in the Chocó Department.[104]

Exports

Colombia is the world's third largest coffee exporter (after Brazil and Vietnam), with its main market being the United States. The biggest exporter is the Federación Nacional de Cafeteros, a non-profit company that also provides agricultural extension services to coffee producers, along with a purchase guarantee at market prices.

Colombia exported about 700,000 tonnes in 2021. Easily the main buyer of this was the United States (290,000 tonnes in 2021), followed by Germany, Canada, Japan and Belgium, each of them importing 50,000-55,000 tonnes.[105]

With its strong export orientation, an estimated 92 percent of the coffee area linked to deforestation from 2015 to 2018 was attributable to exports.[106] Unlike for cocoa and palm oil, there is no zero-deforestation agreement for coffee. With some observers predicting a tripling of global coffee demand by 2050, and climate change causing it to migrate to higher altitude/rainfall areas, coffee is set to continue to be an important FRC export. A 2022 Trase report on how Germany is preparing for the EU law on deforestation-free exports "highlights Colombia as an important source of deforestation risk for its exports of coffee."[107]

Sugar

Colombia's second most important FRC export, according to the data, has been sugar. An estimated 2,800 ha of deforestation per year from 2013 to 2018 was attributable to sugar exports.[108]

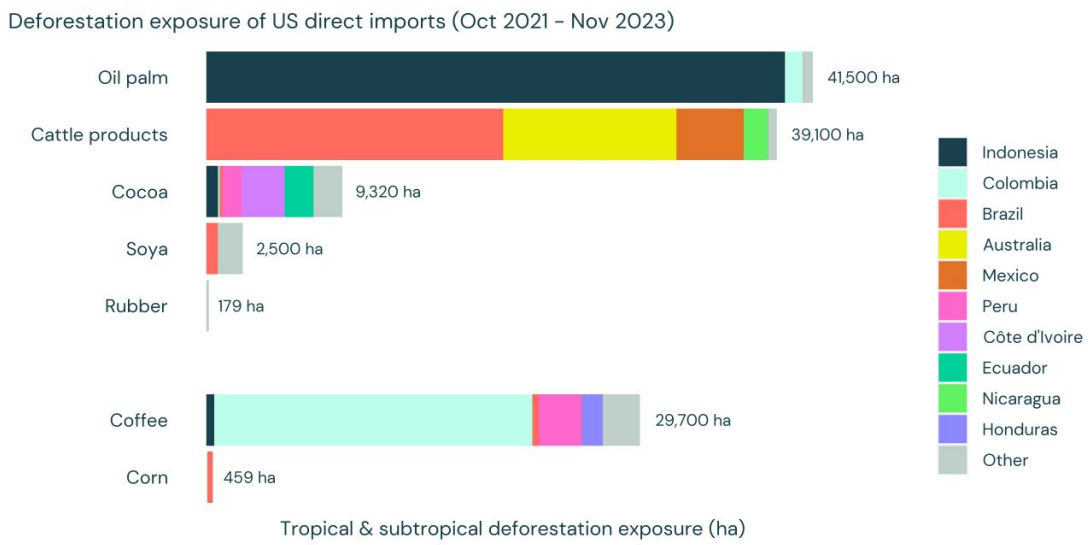
Plantation timber

The area of plantation forest in Colombia has more than doubled from 2000 to 2020 to about 427,400 ha. according to FAO.[109] Estimates of deforestation due to forest plantations ranged from four percent to eight percent from 2005 to 2018.[110]

Importance of Colombia in exposure of US to "imported deforestation"

Colombia was second only to Indonesia in its importance in exposing the U.S. to tropical deforestation through FRCs, according to a 2024 Trase analysis;[111,k] it was responsible for 19 percent (or 23,200 ha) of US tropical deforestation exposure from FRCs from October 2021 to November 2023. This was based on an analysis of the direct imports[l] of seven FRCs: palm oil, cattle products, coffee, cocoa, soybeans, corn, and rubber. As shown in Figure 2, Colombia's importance was almost entirely due to coffee. Coffee comprised 94 percent of Colombia's contribution to US deforestation exposure.

FIGURE 2. DEFORESTATION EXPOSURE OF US DIRECT IMPORTS (OCT 2021 – NOV 2023)



Source: Trase (2024)

REPORTS & ADDITIONAL RESOURCES

A list of relevant reports and additional online tools to complement this country report is available at: https://www.forest-trends.org/fptf-idat-home/.

Key additional reading:

1. Colombia's Environmental Crime Bill (2021) https://dapre.presidencia.gov.co/normativa/normativa/LEYpercent202111percent20DELpercent2029percent20DEpercent20JULIOpercent20DEpercent202021.pdf
2. Environmental Investigation Agency (2021). Tainted Beef https://us.eia.org/report/20210527-tainted-beef-report/
3. González, D. (2024). Colombia's beef exports could boom, but sustainability is a concern. Diálogo Chino, January 25, 2024. https://dialogochino.net/en/agriculture/388186-colombias-beef-exports-could-boom-but-sustainability-is-a-concern/
4. IUCN (2022). "Drivers of Deforestation in the Colombian Amazon: Cattle Ranching." https://www.iucn.nl/en/publication/drivers-of-deforestation-in-the-colombian-amazon-cattle-ranching/
5. Mongabay (2022). "Colombia's new anti-deforestation law provokes concern for small-scale farmers." https://news.mongabay.com/2022/01/colombias-new-anti-deforestation-law-provokes-concern-for-small-scale-farmers/Rodríguez-de-Francisco, J. C., Del Cairo, C. Ortiz – Gallego, et al. J. (2021). Post-conflict transition and REDD+ in Colombia: Challenges to reducing deforestation in the Amazon. Forest Policy and Economics. 127, 102450.
6. Sierra Praeli, Y. (2023). Supply chain report investigates deforestation tied to palm growing in Colombia. Mongabay News, 1 August 2023. https://news.mongabay.com/2023/08/supply-chain-report-investigates-deforestation-tied-to-palm-growing-in-colombia/.

METHODOLOGY & TERMINOLOGY NOTES

[a] The overall country governance risk scores reflect Forest Trends' 2021 updated assessment of national-level independent political, governance, business, economic and corruption indices which draw on a broad range of relevant underlying data from the World Bank, African Development Bank, Asian Development Bank, Inter-American Development Bank, International Fund for Agricultural Development's programming criteria, United Nations and governmental aggregated data, as well as independent surveys and other primary data to provide an average relative governance and corruption risk score for 211 countries globally. Countries scoring less than 25 are considered "Lower-Risk," countries scoring between 25 and 50 are "Medium-Risk" and countries scoring above 50 are "Higher-Risk." The risk scores can only give an indication of the likely level of illegal deforestation in a country and ultimately speaks to the risk that corruption and poor governance undermines rule of law in the land sector. A full methodology is available on the ILAT Risk website: https://www.forest-trends.org/fptf-ilat-home/..

[b] Colombia has experienced significant internal conflict for decades, primarily driven by various armed groups, drug trafficking, and socio-political tensions, making it historically categorized as a conflict state. However, recent peace negotiations and efforts to address underlying issues have led to improvements in stability and security, suggesting a transitioning status away from being solely defined as a conflict state. Following the 2016 peace agreement, armed guerrilla groups, most notably the National Liberation Army (ELN) and the Estado Mayor Central (EMC), were still active in several Departments (Noriega, 2023).

[c] In October 2023, the Chinese and Colombian heads of state signed 12 agreements, including two that laid out steps to advance Colombian beef and quinoa exports to China. (https://www.usip.org/publications/2023/11/china-colombia-relations-are-growing-if-slowly#:~:text=The%20heads%20of%20state%20signed,approximately%20%2419%20billion%20trade%20relationship).

[d] Amortized deforestation refers to the amount of deforestation embodied in the production of associated commodities. Not all land-use change results in commodity production (Pendrill et al., 2022).

[e] Forest loss is defined as the complete removal of forest cover. Forest cover is defined as areas with greater than 50 percent tree cover with trees that are greater than five meters tall.

[f] This dashboard quantifies the amount of greenhouse gas emissions (expressed in mega-tons (Mt) of carbon dioxide equivalent emissions) from deforestation and other disturbances (forest fire and drainage of organic soils), as reported by Global Forest Watch (using methodology from Harris et al., 2021).

[g] There is evolving research literature on the impacts of the peace process on coca-induced deforestation, biodiversity, and related themes. For example: https://www.nature.com/articles/s41598-023-28918-0. https://www.earth.com/news/balancing-agricultural-expansion-and-biodiversity-loss-in-colombia/.

[h] Colombia's definition of forest under the Kyoto protocol is land occupied mainly by trees that may contain shrubs, palms, herbs, and lianas in which tree cover predominates, with a minimum crown density of 30 percent, a minimum canopy height of 5 meters, and a minimum area of 1 hectare (IDEAM, 2020. https://www.andi.com.co/Uploads/dnp%20proyecto%20borrador%202020-10-27%20Documento%20CONPES%20Deforestacion_VDiscusion%20Publica.pdf.).

[i] As noted in an UNFCCC document, "according to FAO's own definition of forest, shifting cultivation does not cause deforestation, but forest modification" (UNFCCC. 2012. Drivers of Deforestation: Facts to be considered regarding the impact of shifting cultivation in Asia. Submission to the SBSTA on the Drivers of Deforestation by Asia Indigenous Peoples Pact (AIPP) and International Work Group for Indigenous Affairs (IWGIA). https://unfccc.int/resource/docs/2012/smsn/ngo/235.pdf.).

[j] Analysis of deforestation across the Amazon biome found that protected areas had the lowest primary forest loss rate (0.12 percent), closely followed by indigenous territories (although these had a higher fire loss rate).

[k] The Trase (2024) study draws strongly on the analysis by Pendrill et al (2022).

[l] It therefore excludes imports of processed products, or other "embedded" sources of deforestation exposure.

WORKS CITED

[1] World Bank Group's Fragile, Conflict and Violence Group. 2023. "Harmonized List of Fragile Situations." Accessed Jan 2nd, 2024. https://www.worldbank.org/en/topic/fragilityconflictviolence/brief/harmonized-list-of-fragile-situations.

[2] FAO. 2020. "Global Forest Resources Assessment 2020, Main Report."

[3] Mounu Prem, Santiago Saavedra, Juan F. Vargas,End-of-conflict deforestation: Evidence from Colombia's peace agreement, World Development, Volume 129, 2020, 104852, ISSN 0305-750X, https://doi.org/10.1016/j.worlddev.2019.104852. (https://www.sciencedirect.com/science/article/pii/S0305750X19305017)

[4] Global Forest Watch (GFW). 2023. "Tree cover loss in Colombia." Accessed on 20/12/2023 from www.globalforestwatch.org.

[5] Global Forest Watch (GFW). 2023. "Tree cover loss in Colombia." Accessed on 20/12/2023 from www.globalforestwatch.org.

[6] Pendrill, Florence, Gardner, Toby A., Meyfroidt, Patrick et al. (2022) "Disentangling the numbers behind agriculture-driven tropical deforestation." Science. 1168. ISSN 0036-8075 https://doi.org/10.1126/science.abm9267.

[7] https://www.funcionpublica.gov.co/eva/gestornormativo/norma.php?i=78153.

[8] United Nations Statistics Division. 2024a. "UN Comtrade." United Nations Statistics Division. Accessed June 24, 2024. https://comtrade.un.org/data/.

[9] Ibid.

[10] Ibid.

[11] (FAO FRA 2020)

[12] FAO. 2020. "Global Forest Resources Assessment 2020, Colombia Country Report." Food and Agriculture Organization of the United Nations. Accessed December 3rd, 2023. https://www.fao.org/3/cb0099es/cb0099es.pdf.

[13] MWE 2013. Ministry of Water and the Environment. National Forest Plan. https://mwe.go.ug/sites/default/files/National%20Forest%20Plan&20Uganda.pdf.

[14] Pendrill et al. 2022.

[15] FAOSTAT 2023

[16] Paz Cardona, Antonio. 2019. "As the Amazon burns, Colombia's forests decimated for cattle and coca" Mongabay. 26 Sep 2019. https://news.mongabay.com/2019/09/as-the-amazon-burns-colombias-forests-decimated-for-cattle-and-coca/. Accessed 10.19.2020.

[17] World Resources Institute. Forest Pulse. The Latest on the World's Forests. 4 April 2024. Accessed 17 April 20224. https://research.wri.org/gfr/latest-analysis-deforestation-trends?utm_campaign=treecoverloss2023&utm_medium=bitly&utm_source=MonthlyRecap.

[18] Acosta, Luis Jaime. 2024. Colombia to spend $4.25 billion to buy land for poor farmers. October 13, 2023. Reuters. Accessed 15 March 2024. https://www.reuters.com/world/americas/colombia-spend-425-billion-buy-land-poor-farmers-2023-10-13/.

[19] Global Forest Watch (GFW). 2023. "Tree cover loss in Colombia." Accessed on 20/12/2023 from www.globalforestwatch.org.

[20] IDEAM, 2023. http://www.ideam.gov.co/documents/11769/126276518/Boletin+34+-+I+Trimestre+2023/439f4f75-6db3-42a1-afca-870bad6811a1?version=1.2.

[21] Noriega, C. 2023. The Secret to Colombia's drop in deforestation? Armed Groups. Al Jazeera 22 August 2023. Accessed March 7th, 2024. https://dialogochino.net/en/agriculture/388186-colombias-beef-exports-could-boom-but-sustainability-is-a-concern/.

[22] Ibid.

[23] Harris, N.L., Gibbs, D.A., Baccini, A., Birdsey, R.A., De Bruin, S., Farina, M., Fatoyinbo, L., Hansen, M.C., Herold, M., Houghton, R.A. and Potapov, P.V., 2021. "Global maps of twenty-first century forest carbon fluxes." Nature Climate Change, 11(3), pp.234-240.

[24] Persson et al., 2023. Preliminary data Deforestation Driver and Carbon Emission (DeDuCE) model. https://www.chandrakant.science/DeDuCE.

[25] Ibid.

[26] Minambiente 2020 Estrategia-Integral-de-control-a-la-Deforestacion-y-Gestion-de-los-Bosques.pdf (minambiente.gov.co) accessed December 15th 2023.

[27] Persson et al. 2023 preliminary data Deforestation Driver and Carbon Emission (DeDuCE) model

[28] Persson et al. 2023 preliminary data Deforestation Driver and Carbon Emission (DeDuCE) model

[29] Supreme Court ruling of 2018

[30] Pendrill, Florence, Gardner, Toby A., Meyfroidt, Patrick et al. (2022)

[31] Pendrill, Florence, Gardner, Toby A., Meyfroidt, Patrick et al. (2022)

[32] Minambiente. 2023 https://www.minambiente.gov.co/el-13-de-la-deforestacion-anual-del-pais-esta-vinculada-a-cultivos-de-uso-ilicito/

[33] Supreme Court ruling of 2018, page 34

[34] Pendrill, Florence, Gardner, Toby A., Meyfroidt, Patrick et al. (2022)

[35] Minambiente. 2023 https://www.minambiente.gov.co/el-13-de-la-deforestacion-anual-del-pais-esta-vinculada-a-cultivos-de-uso-ilicito/

[36] Sierra Praeli, Y. (2023). Supply chain report investigates deforestation tied to palm growing in Colombia. Mongabay News, 1 August 2023.

[37] Pendrill, Florence, Gardner, Toby A., Meyfroidt, Patrick et al. (2022)

[38] Global Forest Watch (GFW). 2023. "Tree cover loss in Colombia." Accessed on 20/12/2023 from www.globalforestwatch.org.

[39] Global Forest Watch (GFW). 2023. "Tree cover loss in Colombia." Accessed on 20/12/2023 from www.globalforestwatch.org.

[40] Global Forest Watch (GFW). 2023. "Tree cover loss in Colombia." Accessed on 20/12/2023 from www.globalforestwatch.org.

[41] Pendrill, Florence, Gardner, Toby A., Meyfroidt, Patrick et al. (2022)

[42] Minambiente 2020 Estrategia-Integral-de-control-a-la-Deforestacion-y-Gestion-de-los-Bosques.pdf (minambiente.gov.co) accessed December 15th 2023.

[43] GFW. "Tree cover loss in Colombia."

[44] Forest Trends 2021 https://www.forest-trends.org/publications/illicit-harvest-complicit-goods/.

[45] Supreme Court ruling of 2018, page 34

[46] https://news.mongabay.com/2022/01/colombias-new-anti-deforestation-law-provokes-concern-for-small-scale-farmers/

[47] Personal Communication, Iván Darío Valencia Rodríguez, Coordinador - Estrategia Colombiana de Desarrollo Bajo en Carbono, Dirección de Cambio Climático y Gestión del Riesgo, Minambiente, 2021.

[48] https://indepaz.org.co/lideres-sociales-defensores-de-dd-hh-y-firmantes-de-acuerdo-asesinados-en-2023/

[49] GFW 2023

[50] Clerici, N., Armenteras, D., Kareiva, P. et al. Deforestation in Colombian protected areas increased during post-conflict periods. Sci Rep 10, 4971 (2020). https://doi.org/10.1038/s41598-020-61861-y

[51] Ibid.

[52] Operation Artemis: Colombia's failed military operation to stop deforestation (mongabay.com)

[53] Ibid.

[54] Rodríguez-de-Francisco, J. C., Del Cairo, C. Ortiz – Gallego, et al. J. 2021. Post-conflict transition and REDD+ in Colombia: Challenges to reducing deforestation in the Amazon. Forest Policy and Economics. 127, 102450.

[55] Persson et al. 2023 preliminary data Deforestation Driver and Carbon Emission (DeDuCE) model https://www.chandrakant.science/DeDuCE.

[56] Instituto Geográfico Agustín Codazzi – IGAC. (2021). Colombia, un país con una diversidad de suelos ignorada y desperdiciada.

[57] Personal Communication, Iván Darío Valencia Rodríguez, Coordinador - Estrategia Colombiana de Desarrollo Bajo en Carbono, Dirección de Cambio Climático y Gestión del Riesgo, Minambiente, 2021.

[58] Clerici, N., Armenteras, D., Kareiva, P. et al. (2020) Deforestation in Colombian protected areas increased during post-conflict periods. Sci Rep 10, 4971 https://doi.org/10.1038/s41598-020-61861-y.

[59] Molina, Maria. 2022. Drivers of deforestation in the Colombian Amazon: cattle ranching. IUCN Netherlands. 2 November, 2022. https://www.iucn.nl/en/publication/drivers-of-deforestation-in-the-colombian-amazon-cattle-ranching/#note15954719.

[60] https://us.eia.org/wp-content/uploads/2021/05/Tainted_Beef-EIA.pdf

[61] https://www.maaproject.org/2023/state-of-the-amazon/

[62] Botero 2020

[63] https://news.mongabay.com/2021/04/deforestation-advances-in-colombias-chiribiquete-national-park-as-cattle-invade/

[64] Noriega, C. 2023. The Secret to Colombia's drop in deforestation? Armed Groups. Al Jazeera 22 August 2023. Accessed March 7th, 2024. https://dialogochino.net/en/agriculture/388186-colombias-beef-exports-could-boom-but-sustainability-is-a-concern/

[65] Ibid.

[66] https://us.eia.org/wp-content/uploads/2021/05/Tainted_Beef-EIA.pdf

[67] https://www.iucn.nl/en/publication/drivers-of-deforestation-in-the-colombian-amazon-cattle-ranching/#note15480413

[68] https://us.eia.org/wp-content/uploads/2021/05/Tainted_Beef-EIA.pdf

[69] Pendrill, Florence, Gardner, Toby A., Meyfroidt, Patrick et al. (2022).

[70] The Global Environmental Impacts of Consumption (GEIC) Indicator 2023 https://commodityfootprints.earth/.

[71] https://dialogochino.net/en/agriculture/388186-colombias-beef-exports-could-boom-but-sustainability-is-a-concern/

[72] Ibid

[73] Ibid

[74] Hoejris Dahl, Miel. 2023. As Colombia's coca economy crashes, new opportunities — and threats — arise. Mongabay, 15 November 2023. https://news.mongabay.com/2023/11/as-colombias-coca-economy-crashes-new-opportunities-and-threats-arise/

[75] Minambiente. 2023 https://www.minambiente.gov.co/el-13-de-la-deforestacion-anual-del-pais-esta-vinculada-a-cultivos-de-uso-ilicito/

[76] https://www.iucn.nl/en/publication/drivers-of-deforestation-in-the-colombian-amazon-illicit-crops/#note15480414

[77] https://www.maaproject.org/2023/state-of-the-amazon/

[78] Drug Policy Reform & Environmental Justice International Coalition (2023) "Revealing the missing link to Climate Justice: Drug Policy"

[79] p.21. Tropical Forest Alliance. 2022. Targeted Technical Expert Discussions (TTED) on Commodity-Driven Deforestation and Sustainable Production in Brazil and Colombia. https://www.tropicalforestalliance.org/assets/Uploads/TTED-final-report-26Jan.pdf

[80] Hoejris Dahl, Miel. 2023. As Colombia's coca economy crashes, new opportunities — and threats — arise. Mongabay, 15 November 2023. https://news.mongabay.com/2023/11/as-colombias-coca-economy-crashes-new-opportunities-and-threats-arise/

[81] Hoejris Dahl, Miel. 2023. As Colombia's coca economy crashes, new opportunities — and threats — arise. Mongabay, 15 November 2023. https://news.mongabay.com/2023/11/as-colombias-coca-economy-crashes-new-opportunities-and-threats-arise/

[82] Kjestad, Bjorn and Puerta, F., How Organized Crime Profits from Deforestation in Colombia. 7 January 2019. https://insightcrime.org/news/analysis/organized-crime-deforestation-colombia/

[83] Muggah, Robert. 2023. How drugs are destroying the Amazon. Foreign Policy, August 6, 2023. https://foreignpolicy.com/2023/08/06/amazon-drugs-coca-cocaine-deforestation-environment-biodiversity-climate-change-criminal-brazil-peru-colombia-bolivia-lula-logging/

[84] aPublica, "A íntima relação entre cocaína e madeira ilegal na Amazônia," last modified December 1, 2022, https://apublica.org/web-stories/a-intima-relacao-entre-cocaina-e-madeira-ilegal-na-amazonia/.

[85] Muggah, Robert. 2023. How drugs are destroying the Amazon. Foreign Policy, August 6, 2023. https://foreignpolicy.com/2023/08/06/amazon-drugs-coca-cocaine-deforestation-environment-biodiversity-climate-change-criminal-brazil-peru-colombia-bolivia-lula-logging/

[86] "Palm Oil." IndexMundi, Accessed June 13, 2024. https://www.indexmundi.com/agriculture/?commodity=palm-oil.

[87] "Palm Oil." IndexMundi, Accessed June 13, 2024. https://www.indexmundi.com/agriculture/?commodity=palm-oil.

[88] Pendrill, Florence, Gardner, Toby A., Meyfroidt, Patrick et al. (2022)

[89] https://www.minambiente.gov.co/images/BosquesBiodiversidadyServiciosEcosistemicos/pdf/Acuerdo_cero_deforestacion/LpercentC3percentADnea_base_deforestacipercentC3percentB3n_PPT_rev_dic2020.pdf

[90] https://cerodeforestacioncolombia.co/acuerdos/acuerdos-cero-deforestacion/

[91] FCDS. (2022). Seguimiento de la pérdida de bosque y cambio de cobertura en el arco de deforestación en la Amazonía Colombiana (abril 2021 – marzo 2022).

[92] "Interactive Map of Colombia." Colombia en Mapas, Instituto Geográfico Agustín Codazzi (IGAC). Accessed June 13, 2024. https://www.colombiaenmapas.gov.co/?e=-84.91517894470337,-1.9023441813754207,-60.96498363220974,11.768554453834582,4686&b=igac&l=773&u=0&t=1&servicio=773.

[93] "Monitoring of Forest and Carbon in Colombia." Sistema de Monitoreo de Bosques y Carbono (SMByC), Instituto de Hidrología, Meteorología y Estudios Ambientales (IDEAM). Accessed June 13, 2024. http://smbyc.ideam.gov.co/MonitoreoBC-WEB/reg/indexLogOn.jsp.

[94] "Interactive Map of Colombia." Colombia en Mapas, Instituto Geográfico Agustín Codazzi (IGAC). Accessed June 13, 2024. https://www.colombiaenmapas.gov.co/?e=-84.91517894470337,-1.9023441813754207,-60.96498363220974,11.768554453834582,4686&b=igac&l=773&u=0&t=1&servicio=773.

[95] "How Colombia Became Latin America's Palm Oil Powerhouse." Mongabay News, May 2018. Accessed June 13, 2024. https://news.mongabay.com/2018/05/how-colombia-became-latin-americas-palm-oil-powerhouse/.

[96] FAOSTAT 2023

[97] https://news.mongabay.com/2023/08/supply-chain-report-investigates-deforestation-tied-to-palm-growing-in-colombia/

[98] https://oec.world/en/profile/bilateral-product/palm-oil/reporter/col

[99] https://www.minambiente.gov.co/images/BosquesBiodiversidadyServiciosEcosistemicos/pdf/Acuerdo_cero_deforestacion/L%C3%ADnea_base_deforestaci%C3%B3n_PPT_rev_dic2020.pdf

[100] https://news.mongabay.com/2023/08/supply-chain-report-investigates-deforestation-tied-to-palm-growing-in-colombia/

[101] Ibid

[102] Ibid

[103] Pendrill et al. “Disentangling the numbers behind agriculture-driven tropical deforestation.”

[104] https://insights.trase.earth/insights/colombia-coffee-futures/

[105] https://trase.earth/insights/colombia-coffee-futures

[106] Pendrill, Florence, Gardner, Toby A., Meyfroidt, Patrick et al. (2022)

[107] https://trase.earth/insights/germany-prepares-for-eu-law-on-deforestation-free-imports

[108] Pendrill, Florence, Gardner, Toby A., Meyfroidt, Patrick et al. (2022)

[109] Curtis et al 2018

[110] Pendrill, Florence, Gardner, Toby A., Meyfroidt, Patrick et al. (2022)

[111] Trase. 2024. Deforestation exposure of US direct imports from October 2021 to November 2023. Global Canopy and Stockholm Environment Institute. http://resources.trase.earth/documents/Briefings/US_FOREST_Act_analysis_r

This Illegal Deforestation and Agricultural Commodities Dashboard (Dashboard) was drafted by Forest Trends and funded by a grant from the United States Department of State, Bureau of Oceans and International Environmental and Scientific Affairs. The opinions, findings, and conclusions stated herein are those of the authors and do not necessarily reflect those of the United States Department of State or any other party. The United States supports efforts to raise awareness of and combat global illegal logging and associated trade. This dashboard contributes to these ongoing efforts.

The Dashboards have been compiled from publicly available information sources to support risk assessments on the legality of timber products entering international supply chains. The Dashboards are for educational and informational purposes only. The Dashboards will be updated periodically based on newly available information.

Forest Trends shall not be liable for any indirect, incidental, consequential, special, punitive or other similar damages, including but not limited to loss of revenues, lost profits, lost data or business interruption or other intangible losses (however such losses are qualified), arising out of or relating in any way to any party's reliance on the information contained in the Dashboards.