Illegal Deforestation for Forest-risk Agricultural Commodities Dashboard: Kenya

Drafted as of: September 2023

This dashboard was written by Cassie Dummett and Sofia Tenorio Fenton. The authors wish to thank Kerstin Canby, Arthur Blundell, and Nicholas Goodman of Forest Trends for providing feedback on this document.

SUMMARY OF RISKS

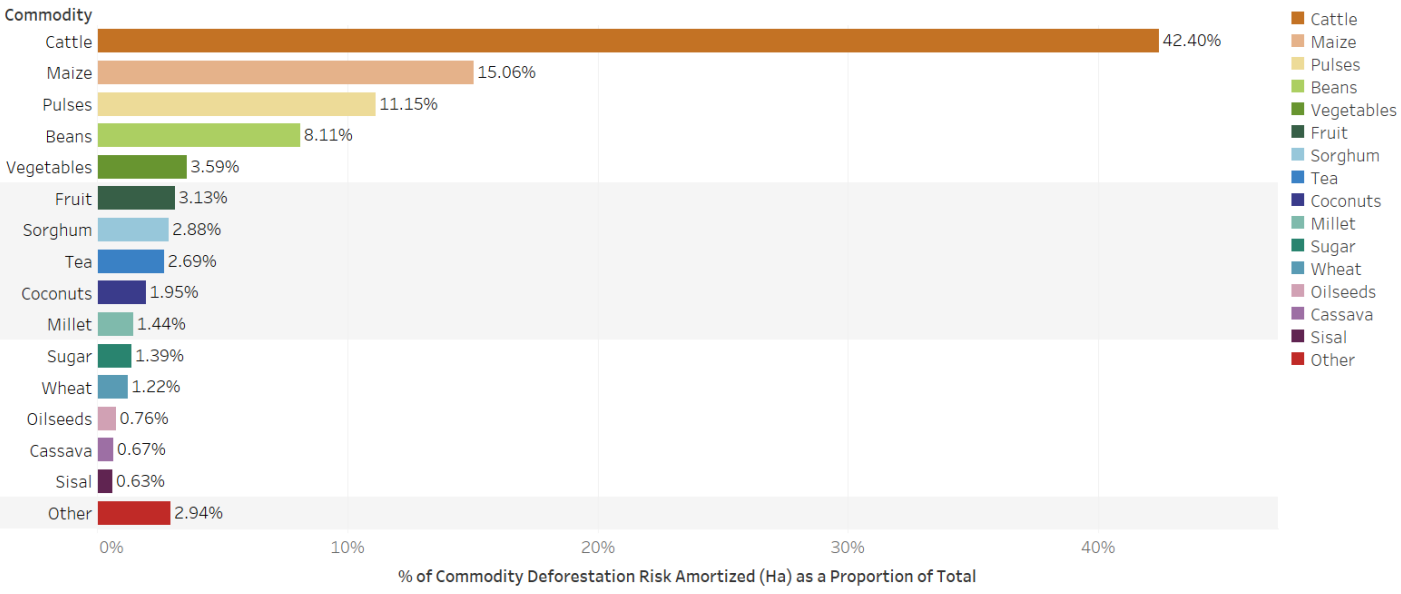
- **Governance Risk Score:** 68.6 (Higher-risk)[1]
- **Conflict State:** NO[2]

While data linking commodities to deforestation in Kenya exists, it is rarely disaggregated by specific commodity or risk of having been sourced from illegally cleared forest lands. Due to governance and enforcement challenges across both the forest and agricultural sectors in Kenya, commodities that are not traceable to their source should be considered at risk of being linked to illegal deforestation. All forests in Kenya, including those with protections, are threatened by agricultural conversion.

- Shifting cultivation is reportedly responsible for 85 percent of Kenya's forest loss. A further 4 percent is driven by commercial agriculture and mining.[3]
- Agriculture is the main driver of forest loss in Kenya due to production of cattle products, maize, pulses, beans, and vegetables. These products are responsible for 80 percent of deforestation and are mostly consumed domestically.
- Export-oriented cash crops, particularly tea, coffee, and tobacco, are associated with deforestation but at much lower levels. These exports carry a risk of illegal deforestation entering regulated markets.
- All of Kenya's forests – public, private, and community owned – are threatened by agricultural conversion. Agro-conversion is generally illegal in public forests, but protections can be reversed through excisions, degazetting, or an existing system of agroforestry known as *shamba*.
- The government has made public commitments to increasing the country's forest cover from 5.7 percent to 10 percent and net forest area has increased slightly since 2015. However, pressures are still increasing during times of drought and increasing population, and 2 percent of primary forests were lost between 2016 and 2020. In general, the legal and policy frameworks may be sufficient, but the Kenyan government struggles with implementation.
- Kenya's timber harvesting ban (2018-present) had a significant impact on forestry-dependent industries. The moratorium was lifted in July 2023, but the socio-economic and environmental impacts expected from this decision are still unclear. The ban was initially put in place to provide time to assess the landscape of Kenya's forest industry and address critical challenges such as institutionalized corruption and illegal harvesting. Despite the end of the ban, it is not clear whether any of the issues were addressed.

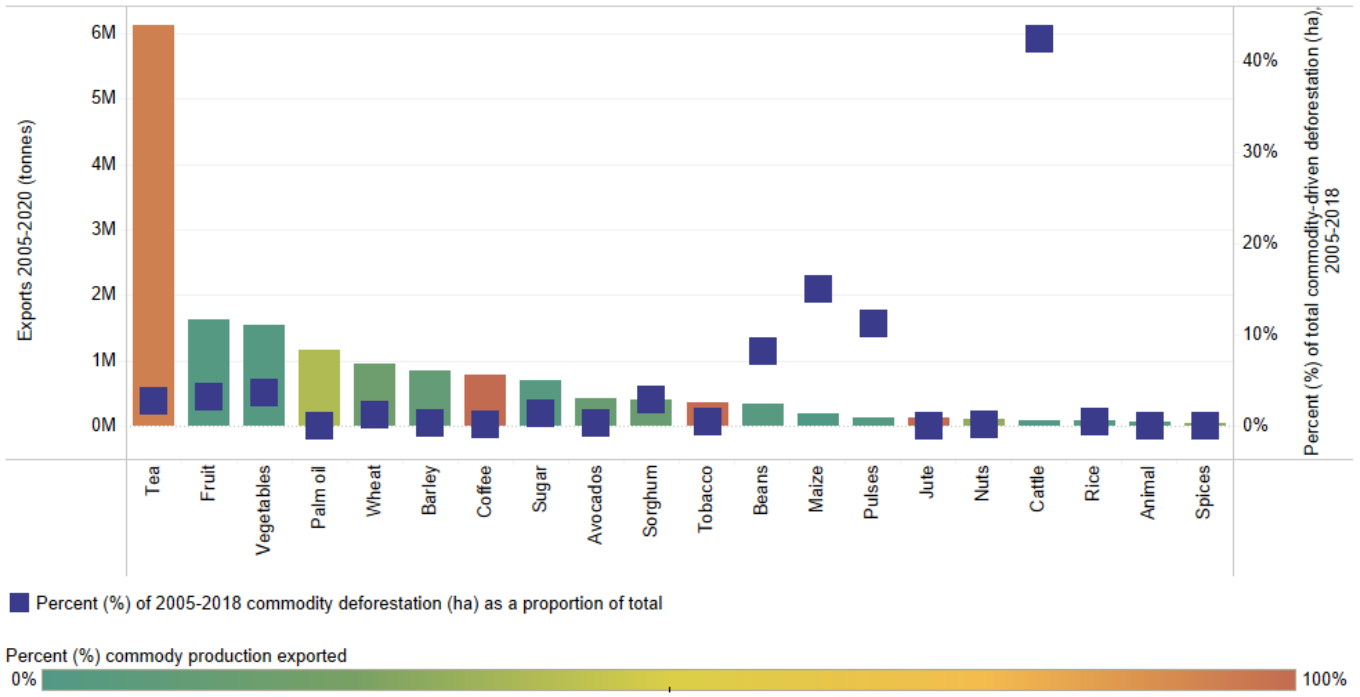
SUMMARY OF FRCs

KENYA'S COMMODITY-LINKED DEFORESTATION AS A PROPORTION OF COUNTRY TOTAL (%)[4a]



[a] Data considers Pendrill et al. 2022 values on amortized deforestation risk.

KENYA'S FRC EXPORTS AND PROPORTION OF COMMODITY-LINKED DEFORESTATION (%)[b,5]



LAND-USE SECTOR

- Forested area:[c]
  - 0.7 Mha of primary forest in 2021[d,6]
  - 7.1 Mha of canopy cover (15 percent) in 2022[7]
- Deforestation rate & area:
  - Average annual net gain in forest of 17.7 kha between 2015 and 2020[e,8]

[b] Data for 2005-2020 Sum Export Quantity in tonnes and percent of commodity production being exported come from FAOSTAT 2022. Percent of 2005-2018 commodity deforestation as a proportion of country total considers Pendrill et al. 2022 data on amortized deforestation risk.

[c] For the purpose of this dashboard, Forest Trends defines forest cover as an area with more than 15 percent tree canopy cover greater than five meters tall. This is the definition used by FAO and it accounts for Kenya's main forest type, Miombo, which is characterized by light tree canopy cover. However, to enable comparison across FRC country dashboards, the land-use sector section also shows forest cover and tree-cover loss based on a forest cover definition that accounts for 50 percent tree canopy cover greater than five meters tall. The baseline canopy cover is depicted with 15 percent or 50 percent in parenthesis.

[d] Primary forests are defined as forests having no detectable signs of human-caused alteration or fragmentation, as delineated per the intact forest landscape (IFL) method (Potapov et al. 2017).

[e] FAO reported an average net gain in forest area of 15 kha with increases in naturally regenerating forest between 2015 and 2020, reversing a trend of net loss until 2015. However, GFW identified an average annual (gross) loss of 24 kha between 2015 and 2020.

- 12,500 ha of *primary* forest (2 percent of the total) lost between 2016 and 2021[9]
- Net change of -247 kha of forest between 2000 and 2020[10]

- **Global ranking for forest loss in 2021:[f,11]**
  - 78th globally in forest loss
  - 51st in forest loss (10 percent cover) in the tropics
- **Total gross emissions from deforestation:[12]**
  - 50 Mt CO^2e per year between 2014 and 2018
- **Forest ownership (2015):[13]**
  - Public ownership: 1.3 Mha
  - Private ownership (including community ownership): 2.2 Mha
- **FRC production in 2020 (tonnes):[14]**
  - Sugar: 6.8 million
  - Vegetables: 5.1 million
  - Fruit: 5.1 million
  - Cattle: 4.4 million
  - Maize: 3.8 million
  - Beans: 0.8 million
  - Tea: 0.6 million
  - Pulses: 0.5 million
  - Coffee: 36,900
  - Tobacco: 10,688

- **Rate of expansion of agricultural land for relevant commodities in production area:[15]**

FRC	2005 Production Area (Ha)	2020 Production Area (Ha)	Total increase/decrease (Ha)	Percent increase/decrease
Maize	1,771,123	2,135,741	364,618	21%
Pulses	317,144	577,703	260,559	82%
Tea	141,300	269,400	128,100	91%
Beans	1,034,477	1,147,709	113,232	11%
Sorghum	122,368	219,657	97,289	80%
Vegetables	309,220	389,760	80,540	26%
Fruit	186,471	257,906	71,435	38%
Sugar	56,537	89,800	33,263	59%
Avocados	7,714	24,447	16,733	217%
Tobacco	18,500	15,409	-3,091	-17%
Wheat	159,477	132,231	-27,246	-17%
Coffee	170,000	119,700	-50,300	-30%
Pasture	22,028,000	22,199,000	171,000	1%

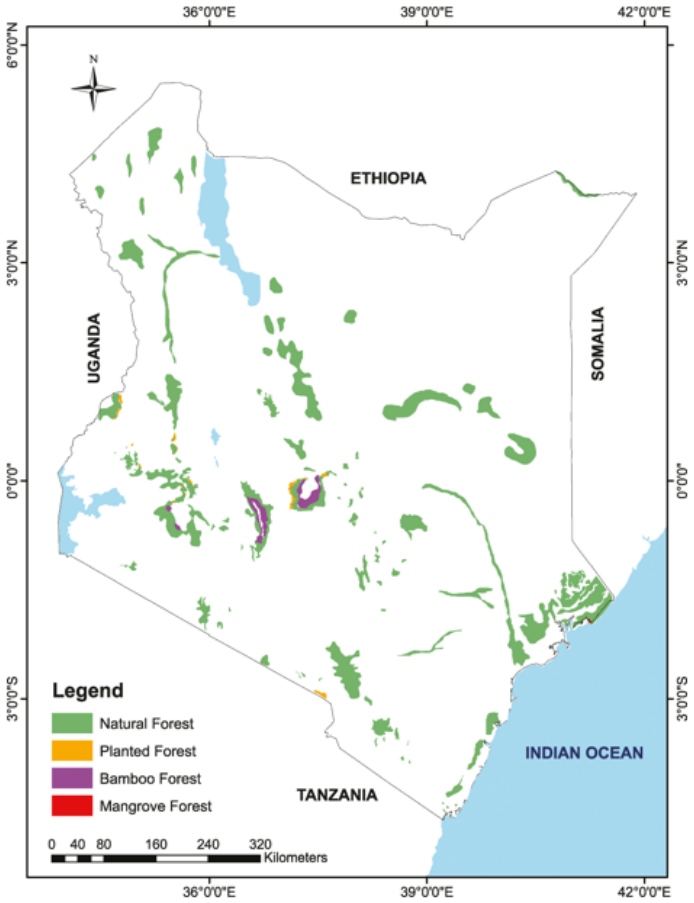
Natural forests cover 5.7 percent of Kenya's land area. Kenya's forest area extends for 10.5 Mha of which only 1.6 Mha (15 percent) has greater than 50 percent cover.[g,16]

[f] Forest loss is defined as the complete removal of forest cover.

[g] This relatively low level of cover is not itself an indicator of deforestation or degradation. Many of Kenya's forest areas are naturally sparse.

Forest area has been decreasing, with a 9 percent reduction in forest cover reported over the 2000-2020 period.[17] Kenya's forest loss peaked in 2017 with a loss of 33.7 kha, of which 7 percent was primary forest.[18]

Map 1: Kenya forest types and distribution



Source: National Forest Program Secretariat 2015

Deforestation reportedly generates an average of 48 Mt of CO2 emissions annually.[19] This represents 92 percent of Kenya's annual average CO2 emissions.[20] The highest emissions come from the conversion of dense montane forest to cropland or other land use, with an average of 528 tonnes of CO2 per hectare.

- Agriculture is the main driver of forest loss in Kenya due to production of cattle products, maize, pulses, beans, and vegetables mostly consumed domestically.

Shifting cultivation is reportedly responsible for 85 percent of Kenya's forest loss. A further 4 percent is driven by commercial agriculture and mining.[21] The Kenyan agricultural sector employs about 40 percent of the country's population (and more than 70 percent of the rural population) and contributes to 65 percent of national exports by value.[22]

Kenya's drivers of deforestation and degradation differ based on the ecosystem. Kenya has montane forest in the southwest, dryland forest in the north and south (as well as parts of coastal Kenya), and coastal and mangrove forest in the east (see Map 1).[23] In the montane

forests, analysis of deforestation focuses on a mixture of legal *excisions or degazetting* (see section below) and illegal encroachments into forest reserves. In drylands, newly settled pastoral populations drive forest conversion, with some sources linking charcoal production to deforestation.[24] In coastal areas, the urban markets of Malindi, Kalifi, and Mombasa drive agricultural expansion, and large-scale programs such as the Galana Kulalu irrigation project (which aimed to put one Mha under irrigation[25]) and its associated settlements drive natural vegetation conversion.[26]

The majority of Kenya's agricultural production is for the domestic market. The main agricultural commodities tied to deforestation include cattle, maize, pulses, and beans.[27] These are grown predominantly by smallholders for consumption on the domestic market.

Cattle (beef and leather) were linked to nearly 8,000 ha/year of deforestation between 2005 – 2018, representing 40 percent of Kenya's deforestation embodied in agricultural commodities. The number of cattle in Kenya nearly doubled between 2000 and 2020 to 21.6 million heads.[28] Nearly all beef (99.8 percent) is consumed domestically.[29]

Livestock grazing is associated with forest degradation as well as deforestation, particularly in the arid and semi-arid lands[h] that host 70 percent of Kenya's national herd.[30,31] In these areas, cattle are mainly dependent on communal grazing and naturally occurring food and water and are vulnerable to drought and other effects of climate change.[32]

In highland areas, where 15-18 percent of beef production occurs, cattle grazing generally occurs in land opened by fuelwood extraction or wildfires.[33] Large-scale ranches (2-5 percent of production)[34] co-exist with smallholders accounting for 80 percent of Kenya's milk production.[35] In the Mau Forest, the largest remaining montane forest in the Kenyan highlands, smallholder livestock-crop production dominates. Grazing is not the primary driver of deforestation but prevents vegetation regrowth.

The livestock sector contributes to 12 percent of Kenya's GDP and 42 percent of agricultural GDP. Kenya's Livestock Master Plan promotes further investment and growth.[36]

Maize, Kenya's staple crop, is linked to nearly 3,000 ha/year of deforestation, representing 15 percent of Kenya's deforestation embodied in agriculture.[37] Virtually all (99.6 percent) is consumed domestically; in fact, Kenya imports maize from neighbouring countries to meet domestic demand.[38,39,40,41] The price of maize doubled in 2022, partly due to drought and booming population demand. Three and a half million people needed food aid in 2022 after three consecutive poor rainy seasons. Drought risk has been exacerbated by deforestation.[42,43,44,45,46,47]

Maize is most often grown on farms one hectare in size, interspersed with beans, potatoes, millet, and cabbage.[48] The area under production increased by 31 percent between 2000 and 2020, but yields made minimal gains[49] due to the subdivision of landholdings, degraded soil,

[h] The arid and semi-arid lands occupy about 80 percent of Kenya's land surface and pastoralists produce 80 percent of Kenya's beef.

irregular rain, and lack of agricultural extension.[50] Average annual production for the 2011-2020 period was 3.6m tonnes.[51]

In many state-owned forests, Kenya implements a unique agroforestry practice known as *shamba*: "farmers tending tree saplings on state-owned forest land in return for being permitted to intercrop perennial food crops until canopy closure."[52] The *shamba* system was officially enshrined in Kenyan law with the Forest and Management Act of 2016, re-branded as the Plantation Establishment and Livelihood Improvement Scheme (PELIS). Intended to allow for and encourage local agricultural livelihoods while still preserving state forests, *shamba*/PELIS has instead facilitated illegal agro-conversion as a result of poor governance and corruption,[53] as well as increasing illegal grazing and causing damage from fires.[54,55,56] At the time of writing, the future of shamba was uncertain. Deputy President Rigathi Gachagua is reported to have said that Kenyans have the right to unrestricted access to forests because "it is unreasonable to deny Kenyans the chance to cultivate crops in forests and then import maize."[57]

In Kenya, an estimated 60 percent of maize trade is in the informal sector and subject to minimal government control.[58]

Beans[i] are linked to the deforestation of 1,528 ha/year, accounting for 8 percent of Kenya's agricultural forest risk, almost all for the domestic market (only 3 percent of Kenya's 2005-2020 production got exported).[59,60,61] Despite this, Kenya is the third largest producer of beans in East Africa, after Tanzania and Uganda, and the ninth largest in the world.[62] The export of dry beans was worth US$20m in 2020, with the main markets in India, Pakistan, Uganda, and South Sudan.[63,64]

The area of bean cultivation, often intercropped with maize, increased by a third between 2000 and 2020 to 1.1 Mha, while production increased 57 percent during that time.[65] Most beans are grown by smallholder farmers in the Rift Valley (33 percent of national production), Eastern (24 percent), Central (20 percent), Lake Victoria (18 percent), and Western (13 percent) regions.[66]

There are two voluntary sustainability standards operating for beans in Kenya: The East African Organic Production Standard and GlobalG.A.P. In 2018, only 215 ha were certified organic, while GlobalG.A.P. covered 8,200 ha (less than 1 percent of Kenya's bean production).[67] GlobalG.A.P. was started by British and European retailers who wanted to reassure customers about the "Good Agricultural Practices" behind their products, and the standard covers "food safety, workers' health and safety, and environmental sustainability." However, there are no requirements to prevent deforestation or address agro-conversion.[68]

Pulses[j] caused 2,101 ha/year of deforestation from 2005-2018. This was about 30 percent more than beans, even though the production area was half that of beans from 2005-2020.[69,70] Like beans, most pulses are consumed on the domestic market, and only 3 percent of production is exported. Pulse production has increased by two-thirds (66 percent) since 1990.[71] Pulses are grown by smallholders as secondary crops and are an important source of

[i] Beans are categorized as pulses (FAO 1994). However, given the significance of the crop, beans in their various forms (kidney, black, pinto, navy, etc.) are considered separately.

[j] The category includes dry peas, pigeon peas, lentils, chickpeas, and others.

protein in the diet of Kenyans, providing 20 percent of per capita protein intake.[72] Pulses are also used for fodder, the stems are used for fuel, and the roots fix nitrogen in the soil.[73]

Vegetables were linked to over 500 ha/year of deforestation between 2005 and 2018, with potato accountable for nearly half (45 percent) of this.[74] Potato is the second staple crop after maize and is cultivated under rain-fed conditions, mostly in highland areas. It is mostly grown by smallholders and is consumed domestically.[75,76]

- **Export-oriented cash crops, particularly tea, coffee, and tobacco, are also associated with approximately 5 percent of Kenya's deforestation. These exports carry a risk of illegal deforestation entering regulated markets.**

Tea products are almost fully exported (94 percent of total production in 2020).[77] Tea production was estimated to have caused the conversion of over 7,000 ha between 2005 and 2018,[78] and is also linked to deforestation due to need for firewood and charcoal to fuel the manufacturing process.[79] One factory alone was reported to use 2,000 cubic meters of wood per month to dry tea.[80] Alternatives such as briquettes made from sugarcane waste are being trialled.[81] The tea industry has invested in the development of timber plantations, and today Kenya has over 220,000 ha of state-owned (federal and local) plantations and 100,000 ha of private plantations.[82]

Over 140,00 ha of tea is cultivated by smallholders and a further 100,000 ha is in tea estates.[83] Kericho county is Kenya's biggest tea producing county and is in the southwest Mau Forest complex. The Mau Forest was cleared for tea plantations from the 1920s onwards, with 6,000 ha excised in the 1970s and 1980s, and encroachment that contributed to the destruction of 25 percent of the Mau Forest in the 1990s and 2000s.[84,85] A Prime Minister's Task Force investigation in 2009 concluded that "such an extensive and on-going destruction of a key natural asset … underlines a breakdown of law and order."[86] The list of beneficiaries of excisions based on political cronyism included Kiptagich Tea Estate and Kapkembu Tea Factory.[87] In 2018, the government put out a further list of companies with fake land titles and served them notice of eviction.[88]

Tea was Kenya's leading export in 2020, worth US$1.2 billion.[89] Top export destinations were Pakistan, Egypt, and the UK.[90] Kenya is the source of almost half the tea consumed in Britain.[91] However, climate change is predicted to shrink optimal tea-growing areas by 25 percent by 2050. Tea growers are already noticing impacts,[92,93] leading to fears that further crop expansion may come at the expense of forestlands just to maintain current production levels.

In 2019, 69 tea factories were Rainforest Alliance certified, 21 tea factories were Fair Trade certified, and a further 26 Rainforest Alliance and 6 UTZ[k] certifications were held by other actors.[94] The new Rainforest Alliance 2020 Certification program prohibits deforestation and the destruction of natural ecosystems and integrates the UTZ certification.[95,96]

Tobacco production peaked in the late 1990s and early 2000s.[97] Two tobacco companies dominate the market: British American Tobacco (BAT) and Mastermind Tobacco Company.

[k] Program and label for sustainable farming.

Farmers contracted by these two companies had approximately 3,500 hectares under tobacco, mostly in the Eastern, Western, and Nyanza regions.[98] BAT made some efforts on afforestation, planting over 50 million trees since 1978. However, studies from the 1980s and 1990s show that industry-led forestation projects were mostly a failure.[99] In general, corporate social responsibility initiatives by transnational tobacco companies have proven insufficient.

Tobacco production itself was estimated to have caused the conversion of over 1,000 ha between 2005 and 2018. However, the curing process for tobacco causes further deforestation, with each hectare of tobacco requiring an estimated 28 Mt of wood (or 6 kg of wood per kg of tobacco).[100] Using this average, 2020 tobacco production in Kenya (10,688 tonnes, all of which was exported) required 64,124 tonnes of wood.[101,102] Using Tanzania data, every hectare of tobacco leads to 0.2 ha of deforestation for fuelwood, so Kenya's 15,411 ha of tobacco harvested in 2019 may have led to an additional 3,471 ha of deforestation. This makes tobacco the second biggest forest-risk agricultural commodity (FRAC) in Kenya, linked to four times as much deforestation as maize.

A survey of farmers in Migori county reported that 37 percent sourced the firewood from their own farm, 24 percent from nearby scrubland, and 37 percent purchased it in the local market.[103] The study site lost 47 km^2 of forest between 1995 and 2016, of which 65 percent was due to tobacco production.[104] An environmental impact assessment in the same area concluded that "nothing was in place" regarding compliance with standards related to tobacco curing and resource use.[105] Farmers reported that indigenous and endangered tree species were being cut down for fuel and fragile ecosystems were being damaged.[106] The government moratorium on timber harvesting (1999-2012 and 2018-present) caused uncertainty in the timber sector, less investment in plantations, and additional timber expenditures for tobacco farmers.

Coffee was linked to 50 ha/year of deforestation from 2015-2018, all of which was exported.[107] Since 2000, coffee production has stagnated at about 50,000 tonnes and the extent of coffee plantations is slowly declining.[108] A shift from coffee to intensive food cropping may lead to a loss of tree species, since small coffee farms have traditionally intercropped with other trees and some native species.[109]

Coffee is mostly grown by smallholders, with less than a quarter of production coming from estates, and it contributes to the livelihoods of over 700,000 households.[110] Green coffee is one of Kenya's top five exports.[111] Fairtrade-UTZ began certifying organized smallholder coffee farms (co-operatives) in 2016, and in 2021 rolled out a deforestation reduction training program for some of its certified farmers.[112,113]

All of Kenya's forests are threatened by agricultural conversion. Agro-conversion is generally illegal in public forests, but protections can be reversed through "excisions or degazetting." Sixty-six thousand four hundred ha of forest reserves have been turned into agricultural land through this process.

Forests are classified according to three types of ownership: public, community and private.[114] The Kenya Forest Service has the mandate to manage public forests.[115] Forest reserves, now also classified as a type of public forest, account for nearly two-thirds (64 percent) of Kenya's forests.[116]

Except under licence or permit, livestock grazing and cultivation are illegal in public forests and wood production is only allowed in plantations. Offences can lead to fines and/or imprisonment.[117,118] Despite these restrictions on forest use, Kenya's forests are threatened by agro-conversion, logging, and fuelwood collection. Encroachment for subsistence and commercial agriculture is common in public forests, and shifting cultivation is commonplace in community forests. As mentioned before, shifting cultivation is responsible for approximately 85 percent of Kenya's forest loss. A further 4 percent is driven by commercial agriculture and mining.[119]

Agro-conversion can be made legal in public forests by excisions or degazetting. According to the Ministry of Environment and Forestry, 66,400 ha of montane forest has been excised from forest reserves into agriculture.[120] This represents approximately 0.06 percent of Kenya's forest reserves (1,178,470 ha).[121]

Kenya has made commitments to increase the country's forest cover from 5.7 percent to 10 percent. However, pressures to expand the area under agricultural production are still increasing. Existing policies and/or their implementation seem insufficient.

Kenya's Vision 2030, the country's development blueprint for 2008-2030, aims to accelerate industrialization while protecting the environment and natural resources to make Kenya a middle-income country.[122] Guided by Kenya's Vision 2030, Kenya's Climate Change Action Plan aims to increase forest cover from 5.7 percent to 10 percent of the total land area.[123,124,125] Kenya's climate targets include reducing deforestation and forest degradation through a combination of participatory management, improved enforcement, and limiting access, as well as reforestation, afforestation, and restoration of degraded forest land.[126] This is meant to contribute to a 32 percent reduction of carbon emissions by 2030. In addition, the Government of Kenya is signatory to the COP-26 Glasgow Declaration on Forests, which aims to halt and reverse forest loss and land degradation by 2030.[127] Despite these ambitions, the Forest Conservation and Management Amendment drafted in 2021 has been criticized for weakening the power of Kenya's Forest Service to veto proposed boundary changes and make it easier for developers to move into protected areas.[128,129]

The montane forests account for 32 percent of Kenya's forests and provide many ecosystem goods and services, including regulating more than 75 percent of Kenya's freshwater resources.[130,131,132] Steps have been taken to protect and regenerate them, though often mired in political controversy about evictions.[133]

In 2009, there was a government eviction that affected many indigenous families living within the Mau Forest Complex, East Africa's largest native montane forest. The African Court of Human and Peoples' Rights later ruled that the state must pay reparations and grant collective land titles to the Indigenous Ogiek people for evicting them from their ancestral land in the Southwestern Mau Forest Reserve.[134] The government argued the evictions were

necessary to protect the forest, but in fact the Prime Minister's Task Force identified that land promised to the Ogiek for settlements and other areas had been excised through "illegal and/or irregular allocation" and "the encroachment benefited politically well-connected individuals and Government officials" (ROK 2009). In total, irregular and illegal excisions are estimated to have caused the loss of 25 percent of the Mau Forest Complex and to have contributed to drought and environmental degradation.[135,136] In 2018, once again, thousands of families living inside the Mau Forest Complex were evicted by the Ministry of Environment and Forestry. However, despite this government intervention and other civil society initiatives to address poverty-fuelled deforestation, this is still a major threat for the Mau Forest Complex and montane forests in Kenya.[137,138]

The dry north, east, and central highlands are the focus of agroforestry. The government announced a plan to plant Mukau trees (*Melia volkensii*) on five million acres of land as an initiative that combines livelihoods with carbon sinks.[139]

Kenya's timber harvesting ban (2018-present) had a significant impact on forestry-dependent industries. The moratorium was lifted in July 2023. The socio-economic impacts expected from this decision are still unclear.

The government of Kenya banned timber harvesting in 1999 until 2012. A second moratorium on logging public and community forests was established in 2018 to allow for reassessment and rationalization of the country forest sector, with a Task Force Report on the Forest Resources Management and Logging Activities in Kenya recommending that major governance issues needed to be addressed before the moratorium be lifted.[140,141] The 2018 moratorium resulted in a shortage of wood materials, disrupted the establishment of plantations, and impacted many forestry-dependent industries such as tea and tobacco.[142,143]

Private tree growers and timber importers benefited from the moratorium.[144] Six weeks after the 2018 moratorium was imposed, a new provision allowed commercial logging to continue while the transport and export of timber was still banned, increasing the risk of loggers seeking illicit ways to bring their products to the markets. At the same time, small-scale loggers were reportedly ignoring the moratorium and continued with their logging activities.[145]

On April 16, 2023, Kenya's Forestry Permanent Secretary announced the end of the logging ban by July 2023, without reference to whether the forest governance challenges identified in 2018 had been addressed, such as institutionalized corruption, illegal harvesting, weak enforcement and compliance, mismanagement of plantations, and unfair allocation of forest resources.[146,147] Kenya's government stated its intention to put a policy in place for sustainable tree harvesting before ending the ban in July 2023, but the current status of any such policy is unclear.[148]

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 Reading

- Albertazzi, S. & F. di Matteo. 2022. “How politics has subverted conservation efforts to protect Kenya’s Mau Forest.” TheConversation.com.
- Kenya Forest Service. 2014. *Kenya Forest Policy* http://www.kenyaforestservice.org/index.php/download/forest-policy-2014/.
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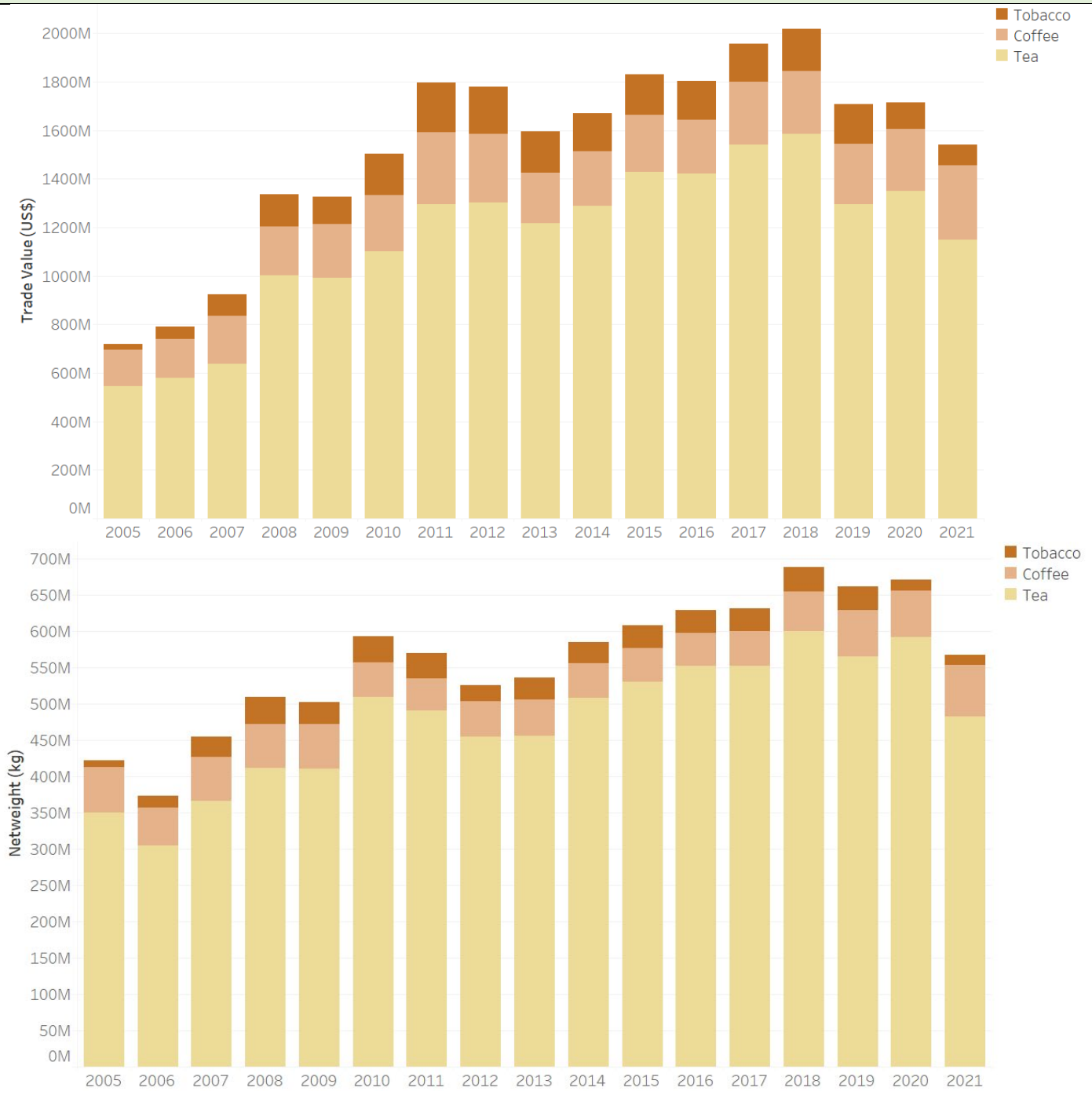
TRADE PROFILE

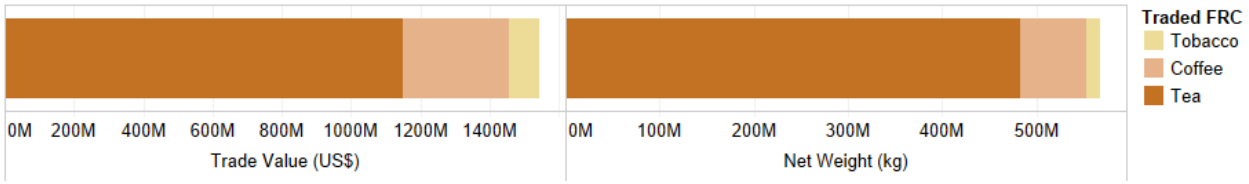
The figures below show the trade trends for the three main FRCs traded with international markets: coffee, tea, and tobacco.

GLOBAL IMPORTS OF TOP THREE FRAC PRODUCTS FROM KENYA (2005-2021)[149]

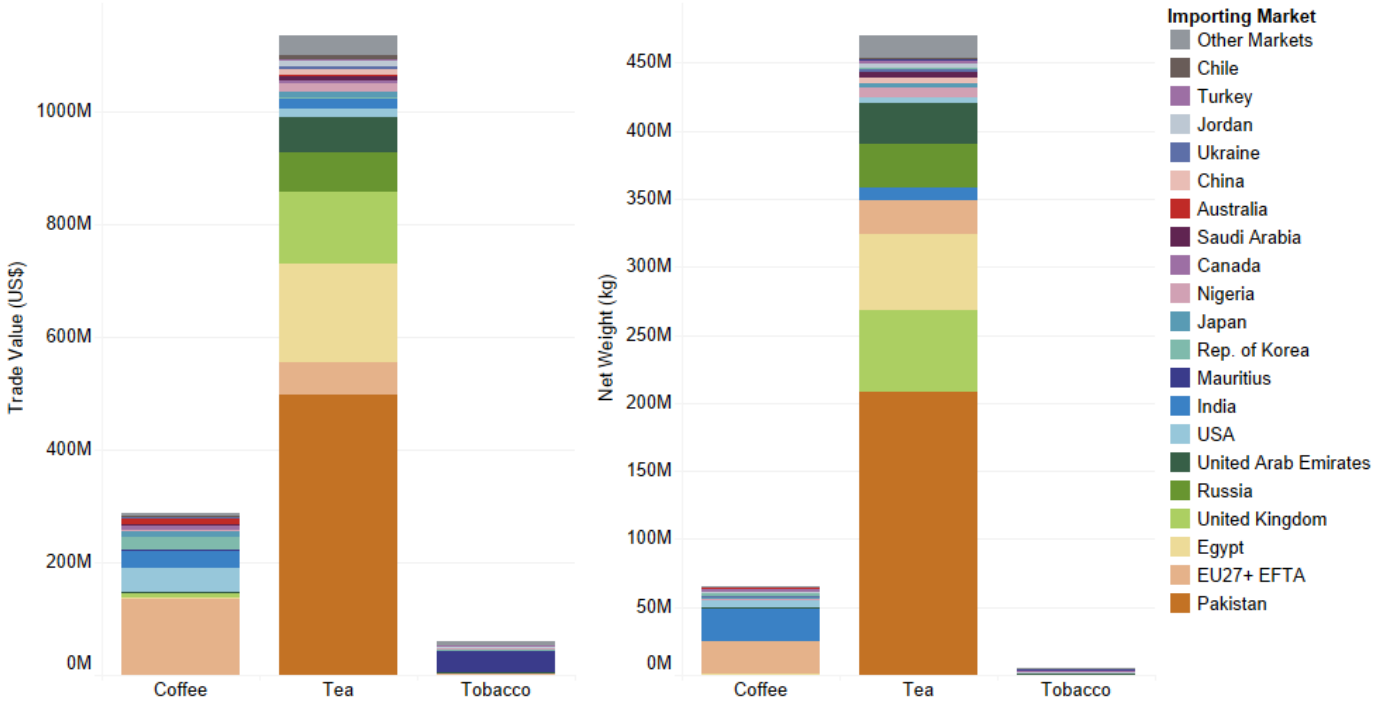


2021 GLOBAL IMPORTS OF TOP THREE FRAC PRODUCTS FROM KENYA[150]

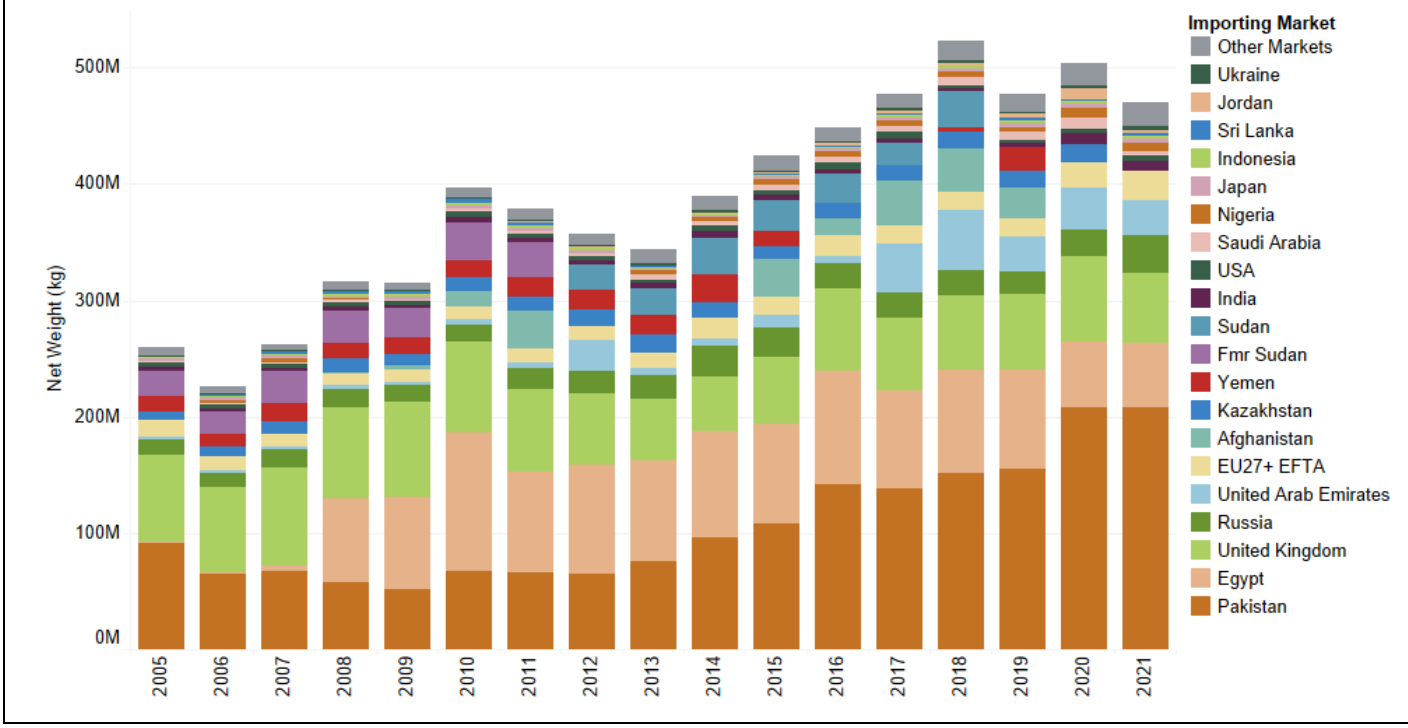
TRADED COMMODITIES BY TRADE VALUE (US$) AND NET WEIGHT (KG)



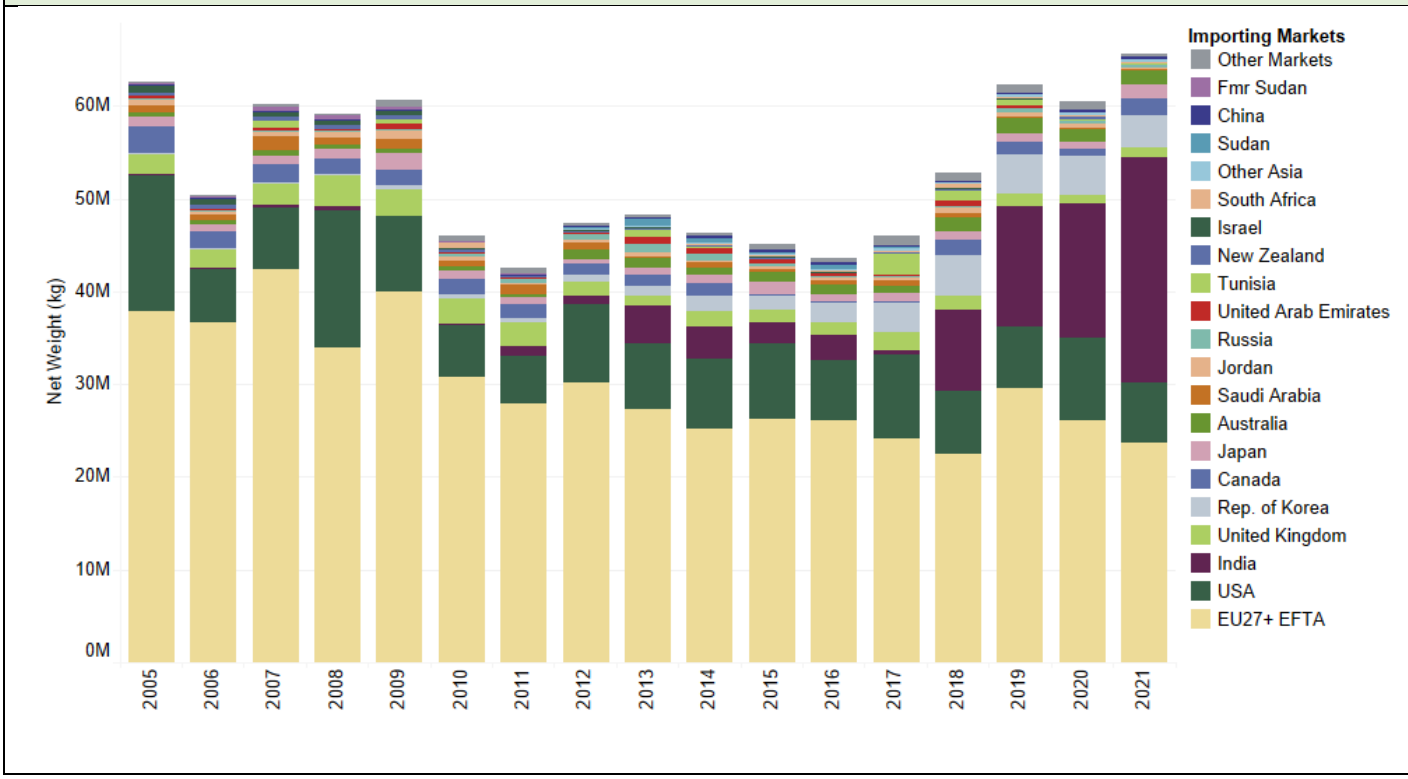
TRADED COMMODITIES BY IMPORTING MARKETS



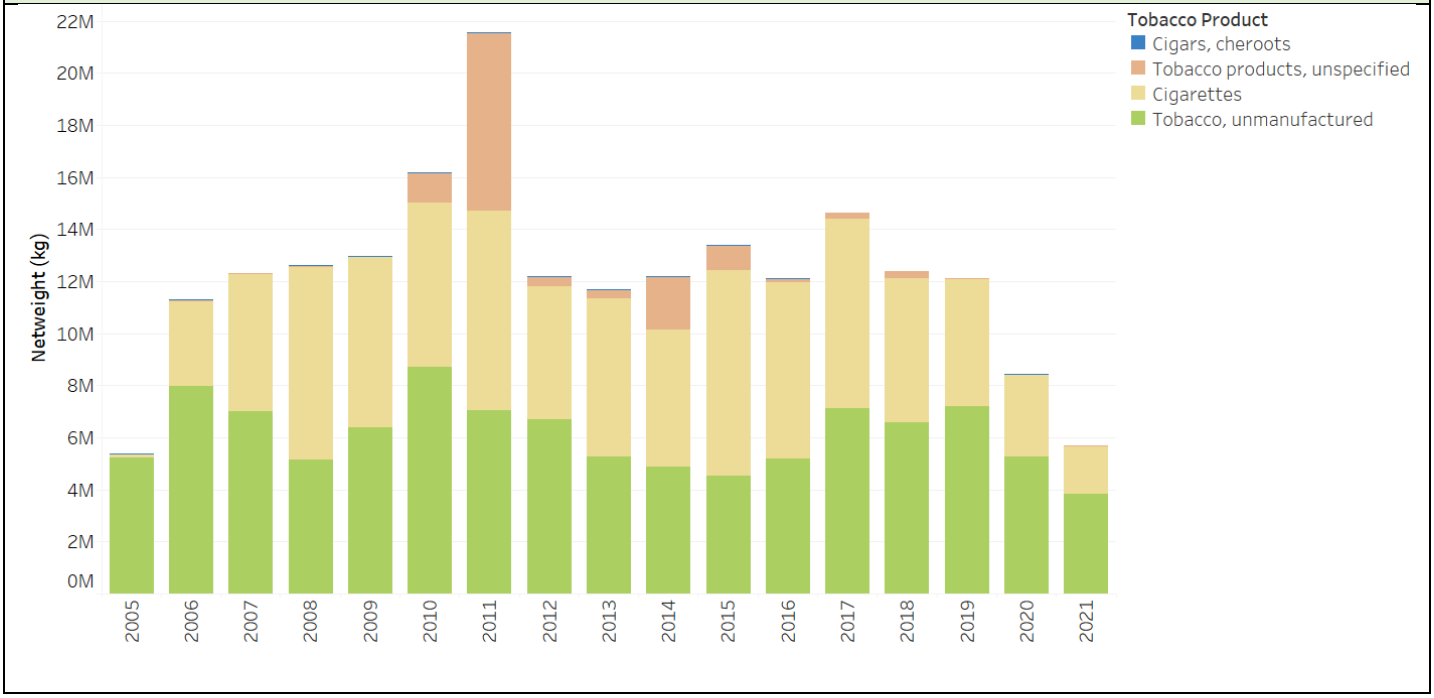
GLOBAL TEA PRODUCT IMPORTS FROM KENYA BY MARKET (2005-2021)[151]



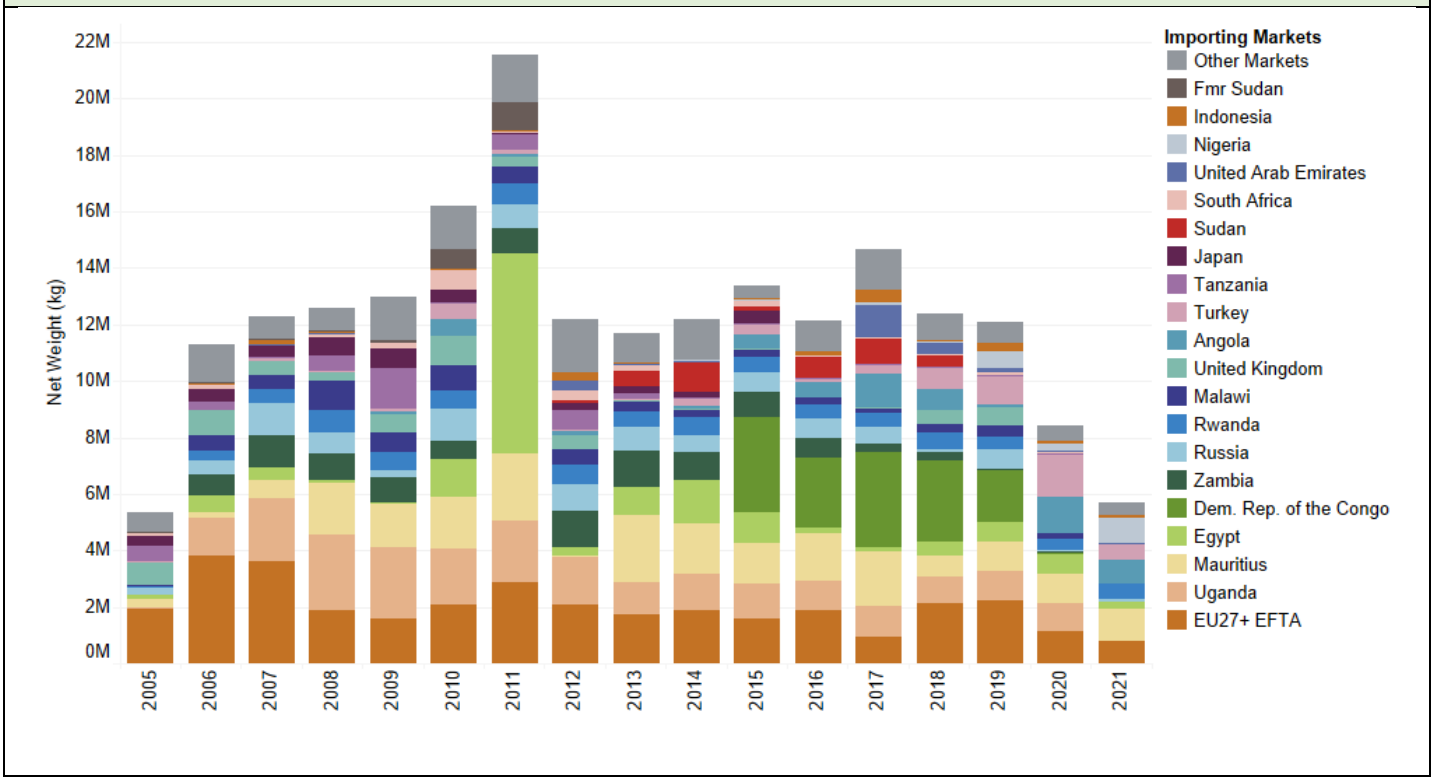
GLOBAL COFFEE PRODUCT IMPORTS FROM KENYA BY MARKET (2005-2021)[152]



GLOBAL TOBACCO PRODUCT IMPORTS FROM KENYA (2005-2021)[153]



GLOBAL TOBACCO PRODUCT IMPORTS FROM KENYA (2005-2021)[154]



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[1] 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/

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