SUPPLY CHAIN RISK · PROVENANCE · REGULATORY CONTAGION

Phantom Gum

Sudan's gum arabic trade survived the war's first two years. Its origins did not.

AUTHOR	DATE	DATA	COVERAGE	SAMPLE
Cormac Higgins	August 2026	UN Comtrade, HS 130120	2019–2025	Eight destination markets

§ Summary

The common account of gum arabic since April 2023 runs roughly as follows: Sudan's civil war disrupted the world's dominant supplier, exports collapsed, and buyers found alternatives elsewhere in the Sahel.

Buyer-side customs data complicate that account.

I downloaded the reported imports of eight destination markets (France, the United States, Germany, the United Kingdom, India, China, Saudi Arabia and the United Arab Emirates) for 2019 to 2025, from United Nations Comtrade (HS commodity code 130120). Buyer-reported records matter here because Sudan and Chad do not report their own trade to Comtrade, so their flows appear in international statistics only through what their customers declare. Three patterns emerge.

First, declared imports from Sudan did not fall during the war's first two years. These eight markets declared 65,862 tonnes from Sudan in 2019 and 69,980 tonnes in 2024, the latest year before the known 2025 filing gaps: an increase of roughly 6%. A decline appears only in the incomplete 2025 data.

Second, declared imports from four other partner countries, namely Chad, Mali, Egypt and South Sudan, rose substantially over the same period, from 24,145 tonnes in 2019 to 56,761 in 2024, an increase of 32,616 tonnes or about 135%. This was addition rather than substitution: both flows were elevated simultaneously in 2023 and 2024.

Third, the growth in the declared Mali flow was absorbed almost entirely by India. India's declared imports from Mali rose from 7,876 tonnes in 2019 to 25,472 in 2024, while French declared imports from Mali remained in the low hundreds of tonnes throughout.

Recorded shipments from the region to these eight markets were therefore higher during the war than before it. This note sets out the figures, tests the alternative explanations, and argues that the immediate evidence points more clearly to provenance, compliance and reputational exposure than to an aggregate shortage. Physical supply risk nevertheless remains material and cannot be excluded.

> **TWO BOUNDARIES BEFORE THE ANALYSIS**
>
> Comtrade records the declared partner country, which is a customs counterparty, not a verified harvest origin. And nothing here establishes that any particular consignment was illicit, or that any named company knowingly purchased conflict-affected material. What follows is an argument about aggregate recorded flows and the risk they imply.

1 Why substitution is difficult

Gum arabic is the dried sap of acacia species that grow across the Sahel. It functions as an emulsifier and stabiliser in soft drinks, confectionery, pharmaceutical coatings and cosmetics. It is difficult to replace in some major applications without reformulation, technical qualification, or changes in product performance and cost. Reuters has reported that Sudan produces around 80% of the world's gum arabic.[1]

Acacia stands in the gum belt are largely wild or semi-wild rather than intensively planted, so supply cannot be relocated quickly. Together with the reformulation barrier above, this can make short-term demand relatively resistant to price and supply shocks in applications where reformulation is difficult. That structural condition is why the flow figures below are worth attention.

2 Conflict context

Sudan's civil war began in April 2023. Reuters reported in March 2025 that the paramilitary Rapid Support Forces had taken control of the main gum-harvesting regions of Kordofan and Darfur late in the previous year.[1]

In July 2026 the United Nations human rights office published findings on gum arabic as a component of Sudan's war economy. United Nations News, summarising the report, records at least 3,700 tonnes looted by the Rapid Support Forces between January and June 2024, describes that looting as a form of compensation for fighters in the absence of salaries, and notes formal and informal charges levied on merchants along the more secure northern and eastern routes towards Port Sudan.[2] The same summary describes redirected routes: significant quantities moved from Rapid Support Forces areas in West Kordofan and parts of Darfur towards a demilitarised zone on the South Sudan border, then deeper into South Sudan, Juba and onward to Mombasa; and alternative routes towards Chad and onward to Douala in Cameroon, where the report states the gum is relabelled before it is exported and processed.[2] The Office of the High Commissioner for Human Rights account of the report urges neighbouring and transit states to strengthen customs checks and act against smuggling, document fraud and false claims of origin, and calls on the home states of companies linked to the value chain to strengthen oversight of conflict-affected sourcing.[3]

Whether any particular shipment in the data below relates to these documented practices is not something trade statistics can establish.

3 The sample

The eight markets in this analysis are France, the United States, Germany, the United Kingdom, India, China, Saudi Arabia and the United Arab Emirates. They were selected as eight commercially significant destination markets with usable buyer-side records: France, Germany, the United Kingdom and the United States as major European and North American processing and consumption markets; India and China as the largest Asian destinations; and Saudi Arabia and the United Arab Emirates because both have been described in reporting as re-export points, notwithstanding their small recorded volumes.

This sample is not the entire world market, and I have not established a worldwide ranking of buyers. Saudi Arabia and the United Arab Emirates are small by declared volume and are included for their reported re-export role rather than their size. All totals in this note are sample totals.

4 Declared imports from Sudan

Combined declared imports from Sudan, eight-market sample:

EXHIBIT 1 · DECLARED IMPORTS FROM SUDAN, EIGHT-MARKET SAMPLE

Year	Tonnes	Note
2019	65,862	
2020	68,433	
2021	67,898	
2022	101,529	Outlier, see below
2023	70,271	War begins April
2024	69,980	Latest year before known filing gaps
2025	54,494	Partial: China and the United Arab Emirates have not filed

Source: United Nations Comtrade, HS 130120, downloaded 17 August 2026.

Using 2024, declared imports from Sudan were about 6% above 2019. France declared 43,027 tonnes from Sudan in 2024 against 40,895 in 2019.

The 2022 figure is an outlier roughly 50% above surrounding years. Customs records cannot determine whether this reflects shipment timing, demand, inventory accumulation, classification, estimation or another reporting effect. It remains unexplained. I use 2019 as the pre-war baseline because 2020 and 2021 sit within 4% of it, which makes 2022 the anomaly rather than the norm; readers who prefer 2022 as the comparator should note that the direction of the 2024 change reverses on that basis.

The 2025 figure is incomplete, because two markets in the sample have not filed. On current filings it is a floor rather than an outcome.

It is worth noting a divergence here. The Africa Report has stated that Sudanese exports officially fell by nearly half in 2025 to around 60,000 tonnes.[4] That figure derives from Sudanese-side reporting; the buyer-side declarations above are a different measurement of a related flow, and the two need not agree.

5 Declared imports from four other partner countries

EXHIBIT 2 · DECLARED IMPORTS FROM FOUR OTHER PARTNER COUNTRIES, EIGHT-MARKET SAMPLE

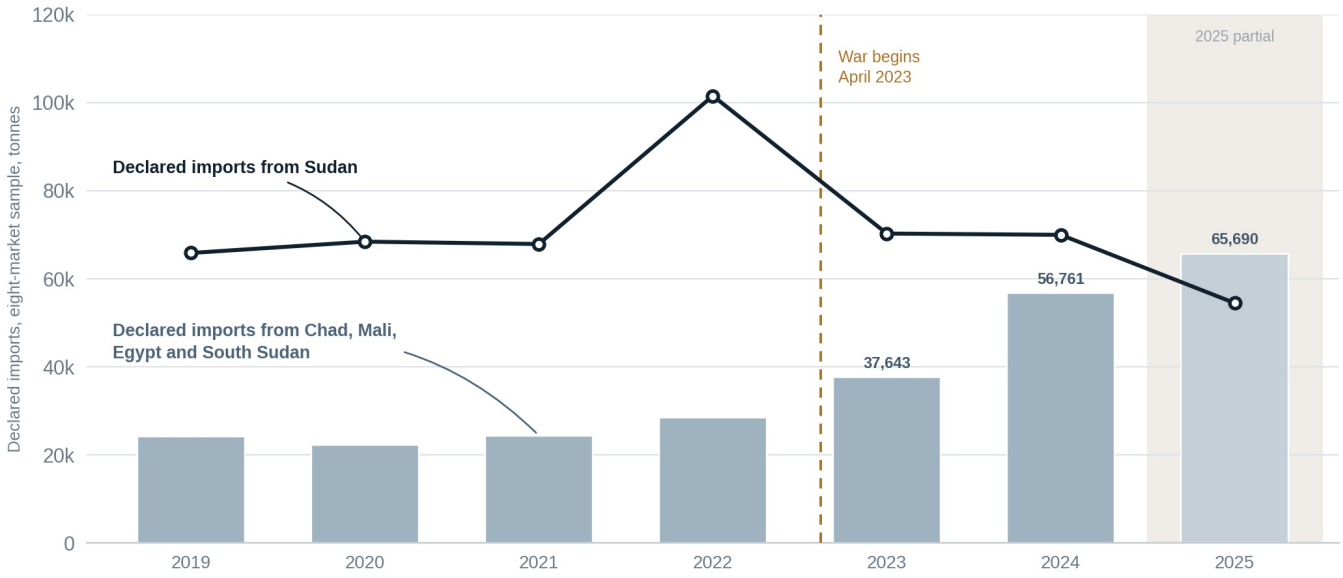
Partner	2019	2022	2024	2025 (partial)
Chad	15,835	19,318	24,819	34,392
Mali	8,155	8,998	27,577	27,727
Egypt	1	19	3,217	1,717
South Sudan	154	107	1,148	1,854
Total	**24,145**	**28,442**	**56,761**	**65,690**

Source: United Nations Comtrade, HS 130120, downloaded 17 August 2026. Comtrade records declared partner country, not verified harvest origin.

Between 2019 and 2024 declared flows from these four partners rose by 32,616 tonnes, or about 135%. Chad rose about 57% and Mali about 238% over that period.

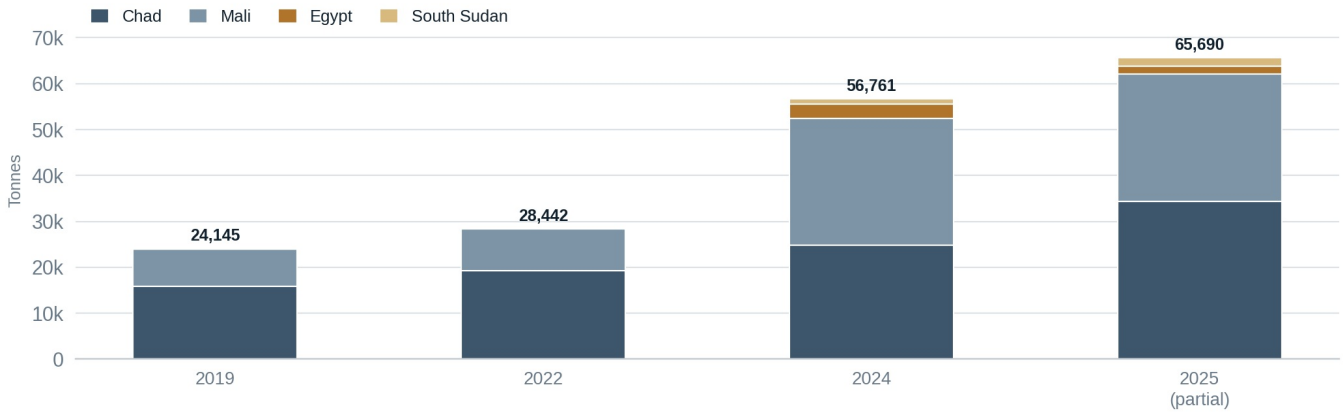
Chad and Mali are producing countries with substantial pre-war baselines visible in this dataset. Egypt and South Sudan had minimal recorded pre-war flows: Egypt's declared flow was one tonne in 2019 and 3,217 tonnes in 2024. Egypt has no comparable domestic acacia production base, which makes its flow harder to account for by a domestic supply response than Chad's or Mali's.

EXHIBIT 3 · DECLARED GUM ARABIC IMPORTS BY PARTNER GROUP, 2019 TO 2025



Comtrade records declared partner country, not verified harvest origin. Sudan and Chad do not report their own trade; figures are their buyers' declarations. Sample is not the world market. Aggregates are recorded trade flows, not unique physical production. 2025 is partial: China and the United Arab Emirates have not filed. Source: United Nations Comtrade, HS 130120, downloaded 17 August 2026.

EXHIBIT 4 · COMPOSITION OF THE FOUR-PARTNER FLOW, YEARS WITH PUBLISHED DETAIL



Partner-level detail shown for the years tabulated in Exhibit 2. Source: United Nations Comtrade, HS 130120, downloaded 17 August 2026.

6 Testing the alternative explanations

The increase above is a fact about declared trade. Attributing any part of it to redirected Sudanese material is an inference, and it should be tested.

Genuine production and trade growth in Chad and Mali

The Africa Report attributes Chad's export growth to competitive prices, new warehouses and improved road infrastructure, and describes renewed interest in production from Chad, Kenya, Senegal and Mali as buyers seek to diversify.[4] This plausibly explains a material share of the increase and cannot be dismissed.

Trade diversion from other origins

Some of the apparent growth is redistribution rather than new material. Declared flows from Senegal in this sample fell from 4,144 tonnes in 2019 to 348 in 2024, and Cameroon's fell to near zero.

Improved reporting coverage

This is the most important methodological caveat and it cuts against my argument. In the bilateral dataset France recorded flows from six of the sampled partner countries in 2019 and eight in 2024. Some of the apparent increase reflects partner origins appearing in returns that previously went unrecorded, rather than new physical trade.

Commercial substitution

Buyers may have shifted toward lower-cost origins for ordinary commercial reasons unrelated to the conflict.

Species and grade

HS 130120 does not distinguish *Acacia senegal* (hashab) from *Vachellia seyal* (talha). Chadian production is weighted toward seyal and Sudanese toward hashab. To the extent the increase is seyal, it is a different product serving different applications and less readily explained as redirected Sudanese material. The tariff code cannot separate them and I have not attempted to.

> **ROBUSTNESS CHECK**
>
> France is both the largest buyer in the sample and a major re-exporter, so I recalculated the four-partner totals excluding France entirely. The pattern holds: 16,890 tonnes in 2019 rising to 41,128 in 2024, an increase of about 144%. The finding does not depend on any single reporter.

Direction of the reporting bias

The United Arab Emirates last filed for 2023 and China has not filed for 2025. Both are buyers whose inclusion would raise totals, so their absence makes the later figures conservative rather than inflated.

These explanations plausibly account for part of the increase, but the available evidence does not allow their individual contributions to be quantified. The remaining uncertainty is most material in flows involving countries with low recorded pre-war volumes, and it coincides with documented regional rerouting and relabelling. I would treat anyone claiming an exact figure for redirected material with caution.

7 Customs unit values

Dividing declared trade value by declared net weight gives a customs unit value. This is not a market price. It reflects contract terms, product grade, processing stage and declaration practice. Gum arabic trades in distinct grades and species, and raw material is not comparable per kilogram with processed or spray-dried product.

With that caveat, declared 2025 customs unit values (partial year) were 2.23 US dollars per kilogram for Chad and 2.76 for Sudan. French exports, which are largely processed material, were declared at 5.53 dollars per kilogram in 2025 against 3.09 in 2019.

The difference between the Chad and Sudan figures could reflect provenance or documentation requirements, but it could equally reflect species, grade, processing, contract structure, shipment composition or reporting differences. No causal interpretation is possible from the aggregate customs unit values alone.

Two cells, Mali and Cameroon in 2024, produced customs unit values above 29 dollars per kilogram; these are almost certainly weight-reporting faults and are excluded from this section.

8 Double counting

France imports raw gum and exports processed material: it declared 61,798 tonnes of imports and 49,166 tonnes of exports in 2024.

Each bilateral observation represents a separate reported border movement. However, aggregating those observations may count the same physical material at more than one stage of the chain. The combined totals in this note should therefore be interpreted as recorded trade flows, not unique physical production. **No figure here should be read as an estimate of how much gum arabic was harvested.**

9 The regulatory question

The United Nations human rights office has called on transit states to act against document fraud and false claims of origin, and on the home states of companies in the value chain to strengthen oversight of conflict-affected sourcing.[3] That is a recommendation, not law.

I found no announced proposal for a gum-arabic-specific European Union regime.

Adjacent due-diligence architecture exists. The European Union operates the Deforestation Regulation, which applies to a specified list of commodities, and the Corporate Sustainability Due Diligence Directive, which imposes obligations at company rather than commodity level. In the United States, Section 1502 of the Dodd-Frank Act established supply-chain due diligence for specified conflict minerals. I have described these from general knowledge and have not verified their scope against the primary legal texts for this note; readers should consult those texts directly, and I am not a lawyer.

My view, clearly labelled as a low-confidence developing forecast rather than current policy, is that gum arabic is a plausible future candidate for stronger provenance requirements. The conflict-minerals precedent is an analogy, not proof that equivalent rules will emerge for this commodity.

10 Three testable predictions

Prediction one

Within 18 months, at least one major European processor, manufacturer, industry body or public authority will announce enhanced provenance or conflict-risk measures concerning Sudanese or Sahelian gum arabic.

- **Confirming indicators:** enhanced supplier-documentation requirements; verified-origin sourcing commitments; an industry traceability initiative; a public consultation; conflict-risk guidance.
- **Disconfirming evidence:** the absence of any material provenance initiative despite continued scrutiny.

Prediction two

If European provenance requirements tighten, some unverified flows will be redirected rather than eliminated.

- **Confirming indicator:** Indian and Chinese declared imports continuing to rise as European volumes flatten.
- **Disconfirming evidence:** aggregate declared flows falling across all destinations, indicating demand destruction rather than redirection.
- **Note:** the condition is not yet met. I am not claiming European demand is currently constrained.

Prediction three

Declared flows from Chad continue to rise in the 2026 filings.

- **Confirming indicator:** 2026 filings showing Chad above 2025 levels.
- **Disconfirming evidence:** Chad's declared flows flattening or falling. Falling Chad-declared flows would not by itself distinguish among route closure, customs enforcement, harvest weakness, demand changes, reporting gaps or an earlier temporary increase. Independent production and shipment-level evidence would be needed to distinguish domestic output growth from rerouting.

11 Commercial implications

The immediate evidence points more clearly to provenance, compliance and reputational exposure than to an aggregate shortage. Physical supply risk nevertheless remains material and cannot be excluded: concentration of supply in an active conflict zone is not a stable condition, and the 2025 partial data may or may not mark the beginning of a genuine decline.

For investors

Potential financial exposure may sit with processors and downstream manufacturers using gum arabic, although public data are presently insufficient to identify which listed companies face material Sudan-related exposure or to quantify possible earnings effects. This note does not identify any such company.

For corporates

The practical question is whether current supplier documentation would withstand an origin audit. On the evidence above, declared partner country is not a reliable proxy for harvest origin in this market.

For policymakers

Before the conflict, the gum arabic sector supported the livelihoods of millions of Sudanese and provided an important source of income for rural communities.[3] A verification regime that simply excludes Sudanese-origin material risks removing income from smallholders while leaving armed actors, who have other revenue sources including gold,[2] comparatively less affected. Any credible traceability scheme has to solve for smallholder inclusion, or it will cause harm in the course of trying to prevent it.

§ Evidence boundary

FACT	INFERENCE	UNKNOWN	FORECAST
The buyer-reported customs flows above; the increase in flows declared from the selected partner countries; the documented reporting gaps; the externally sourced findings on looting, trafficking and routes.	That some additional declared flows may represent rerouted or relabelled Sudanese material.	The precise harvest origin of individual shipments; how much of the increase each explanation accounts for; whether any named company purchased conflict-affected material; the legality of specific transactions; the financial materiality for listed companies.	Possible stronger provenance requirements; possible redirection of flows; potential commercial differentiation between verified and unverified supply.

§ Methodology

Data. United Nations Comtrade, HS commodity code 130120 (gum arabic), annual, 2019 to 2025, downloaded 17 August 2026. Two queries, both reproducible on the free Comtrade tier:

1. Reporters Sudan, Chad, Nigeria, Senegal, Mali, Niger, Cameroon, Kenya, Egypt, South Sudan, Ethiopia, Central African Republic, United Arab Emirates, Saudi Arabia, India, France, United States, Germany, United Kingdom, China; partner World; both flows.

2. Reporters France, United States, Germany, United Kingdom, India, China, Saudi Arabia, United Arab Emirates; partners Sudan, Chad, Egypt, South Sudan, Mali, Central African Republic, Cameroon, Senegal, Nigeria; import flow.

Sudan and Chad returned no data as reporters, which is why the analysis rests on query 2. Volumes are net weight converted to tonnes. Customs unit values are primary value divided by net weight.

Reporting completeness. The United Arab Emirates last filed 2023; China has not filed 2025; the United Kingdom, Saudi Arabia and the United States report intermittently against smaller partners. All 2025 figures are partial and labelled as such throughout. 2024 is used for the primary comparison, which also places it beyond the pre-war harvest already in the supply chain when the conflict began in April 2023.

Estimated values. Comtrade flags some quantities as estimated rather than directly reported. In the bilateral dataset the estimated share of rows by reporter is: France 34%, Germany 32%, Saudi Arabia 20%, China 4%, India 3%, and zero for the United States, the United Kingdom and the United Arab Emirates.

Exclusions. Two customs unit-value cells (Mali 2024, Cameroon 2024) exceeding 29 US dollars per kilogram are excluded from the unit-value section as probable weight-reporting faults. No volume figures are excluded from any table.

What this data cannot show. Comtrade records declared partner countries, not verified harvest origin. It cannot identify individual consignments or companies, or establish the legal status of any shipment.

Legal status. Nothing here alleges unlawful conduct by any named company or individual. Discrepancies between declared partner country and harvest origin can arise from legitimate transit, re-export, processing and classification practices as well as from misdeclaration.

Corrections are welcome and will be published.

§ Sources

[1] Reuters, "Here's a look at how one key ingredient in Coca-Cola, M&Ms is smuggled from war-torn Sudan", 4 March 2025, as republished by Malay Mail. Cited for Sudan's approximately 80% share of world supply and for Rapid Support Forces control of Kordofan and Darfur.

[2] United Nations News, "Looted gold and gum arabic are bankrolling Sudan's war, UN warns", July 2026, summarising the report of the Office of the High Commissioner for Human Rights. Cited for the 3,700 tonnes looted January to June 2024, compensation of unpaid fighters, checkpoint charges, the South Sudan and Mombasa route, the Chad and Douala route, relabelling, and gold as an alternative revenue source.

[3] Office of the High Commissioner for Human Rights, "The hidden cost of gum arabic: Inside Sudan's war economy", 15 July 2026. Cited for the recommendations to transit states and to home states of companies, and for pre-conflict smallholder livelihoods.

[4] The Africa Report, "How gum arabic, the ingredient that puts the gloss in Coke, Pepsi and M&Ms, is fuelling the conflict in Sudan", 16 April 2026. Cited for Chad's pricing, warehousing and road infrastructure, for diversification interest across Chad, Kenya, Senegal and Mali, and for the Sudanese-side 2025 export figure.

[5] Trade data: United Nations Comtrade Database, HS 130120, accessed 17 August 2026. comtradeplus.un.org

I have not cited page or section numbers from the underlying United Nations report because my citations are to the published summaries listed above rather than to the full report document. Readers verifying these claims should consult the primary report.

NEXT ISSUE Issue 2 will examine Chad's declared flows against buyer-side records in more detail, and look at the Mali flow to India.

UNDERCOVERED COMMODITIES · ISSUE 1 · AUGUST 2026. This document is independent research prepared for information purposes only. It does not constitute investment advice, a recommendation, an offer or a solicitation to buy or sell any security or commodity, and it is not legal advice. All trade figures are drawn from the United Nations Comtrade Database and record declared partner countries rather than verified harvest origin. Nothing in this document alleges unlawful conduct by any named company or individual. Corrections are welcome and will be published.