

# Africa Agricultural Trade Toolkit

1986–2024: User Manual • Powered by FAOSTAT Detailed Trade Matrix • Published by TW Policy Group

## 1. What you can do with this dashboard

The dashboard gives a dynamic picture of Africa's agricultural trade from 1986 to 2024, covering **54 African reporter countries**, 252+ actively traded products, and bilateral flows worth over 51.7 billion kUSD in cumulative value. It helps you compare African countries, track intra-African corridors, assess partner and product concentration, measure AfCFTA progress, and turn indicators into continental trade-policy options.

- See the latest year's trade values for African reporters and how they changed versus last year (YoY), the last 3 years (3-year CAGR), and the last 5 years (5-year CAGR).
- Understand structure: top African reporter, top partner, Top-3 share, and concentration (CR5 for partners, PC5 for products).
- Track **trade balance**: exports minus imports at reporter level, with net positions tracked over time.
- Measure **intra-African trade share**: flows between African reporters to monitor AfCFTA implementation progress.
- Scan **emerging export products**: CAGR-ranked growth leaders across 3Y / 5Y / 10Y horizons for each African reporter.
- Identify **untapped opportunities**: products a reporter exports globally but does not yet ship to a selected African or external partner.
- Filter by **Reporter** (African countries), **Partner**, **Product / Item**, **Year**, **Trade Flow**, and **Horizon**.
- Use *Country Summary* for key metrics and *trade signal cards* for decision-ready indicators scoped to the African continent.
- Review **Structural Notes** for full methodology and formula transparency.

**Tip:** The dashboard is **selection-aware**: labels, shares, rankings, and narrative switch automatically with your slicers (African reporter, partner, product, year, flow, horizon). This edition is scoped to the 54 African Union member states with available FAOSTAT data.

## 2. Quick start

- Start on the **Continental view** to see the African trade baseline across all 54 reporters and their partners.
- (Optional) Select filters: an African *Reporter*, a *Partner* (African or external), a *Product*, a *Year*, a *Trade Flow* (export/import), or a *Horizon* (3Y/5Y/10Y).
- Read the **Country Summary** card. It reports total trade, export/import values, trade balance (surplus or deficit), top partners, top products, and concentration metrics for the selected African reporter.
- Review **Top Trade Partners** bar chart: current-year values with YoY change arrows — essential for tracking external dependencies.
- Scan **Emerging Export Products**: CAGR-ranked growth leaders with world CAGR comparison, useful for AfCFTA diversification planning.
- Check **Competitive (Surplus) Products** and **Untapped Opportunities** when a partner is selected — the bedrock of intra-African trade strategy.
- Open **Structural Notes** for full formula and methodology transparency.

*Tip: Start broad (Continental), then add one filter at a time to keep the story clear. To measure AfCFTA progress, select an African reporter and filter partners to African countries only.*

### 3. Layout tour — how the dashboard is organised

- **Header bar** — title, data source (FAOSTAT Detailed Trade Matrix, Africa scope), and branding.
- **Slicers (left panel)** — Year, Reporter Countries (54 African states), Item Name, Partner Countries, Horizon. Every view updates simultaneously.
- **Country Summary** — key metrics: ExportValue, ImportValue, TotalTrade, TradeBalance, Status (Surplus/Deficit), ShareOfWorldExport, ShareOfWorldImport, Export Change (Min–Max Years).
- **Top Trade Partners (bar chart)** — top-5 partners by current trade value with YoY percentage change indicators, surfacing both intra-African and external partners.
- **Top Traded Products** — top-5 products by trade value with share of total trade — reveals continental export basket structure.
- **Emerging Export Products** — CAGR-ranked growth leaders across selectable horizons (3Y/5Y/10Y) with world CAGR comparison.
- **Competitive (Surplus) Products** — products where ExportValue exceeds ImportValue or is close to parity — candidates for AfCFTA export promotion.
- **Untapped Opportunities** — products the African reporter exports globally but does not yet ship to the selected partner (requires partner selection).
- **Structural Notes (accordion)** — full definitions, formulas, interpretation rules, and formatting conventions.

### 4. The slicers and what they do

#### Reporter (African countries)

Select a single African country for a national trade profile. The summary reports the country's total export and import values, trade balance, share of world exports and imports, top partners, and top products. All 54 AU member states with available FAOSTAT data are included. Select multiple reporters to compare across RECs or the continent.

#### Partner

Select one or more partner countries — African or external. When a partner is selected, the dashboard adds **Untapped Opportunities**: products the African reporter exports to *any* partner globally but does not yet ship to the selected partner. This is the core diagnostic for intra-African trade expansion under AfCFTA and for external market diversification.

#### Product / Item

Filter by one or more FAOSTAT agricultural items. African reporters actively trade 252+ items. When a single product is selected, its share of total trade is shown — essential for assessing commodity-level dependency (e.g., cocoa, coffee, cotton) that characterises many African export baskets.

#### Year

The dataset covers 1986–2024 (38 years). Select a year range or individual years. The latest 1–2 years should be treated as provisional until FAO reconciles all country submissions. Use multi-year ranges to capture AfCFTA implementation (2021–onwards) against pre-AfCFTA baselines.

#### Trade Flow

Filter by **Export Value** or **Import Value**. Directional analysis is especially important for African reporters: separating export competitiveness from import dependency reveals whether a country is building

resilience or deepening reliance on food imports and external markets.

## Horizon

Select **3Y**, **5Y**, or **10Y** for the Emerging Export Products CAGR calculation. Shorter horizons surface recent acceleration (useful for AfCFTA impact assessment); longer horizons reveal structural shifts in the continent's trade architecture.

*Tip: All slicers support multi-select. Use Ctrl/Command-click or the checkboxes to select more than one. To build a REC-level view (ECOWAS, EAC, SADC, COMESA, ECCAS, AMU), multi-select the member states in the Reporter slicer.*

## 5. Country Summary — how to read it

- **ExportValue / ImportValue:** total export and import values in USD for the selected scope.
- **TotalTrade:** ExportValue + ImportValue.
- **TradeBalance:** ExportValue – ImportValue. Positive = surplus; negative = deficit — the headline food-security signal for African reporters.
- **Status:** 'Surplus' if TradeBalance  $\geq 0$ , else 'Deficit'.
- **ShareOfWorldExport / ShareOfWorldImport:** reporter's exports (or imports) divided by world total, computed via REMOVEFILTERS([Reporter Countries]).
- **Export Change (Min–Max Years):** (ExportEnd – ExportStart) / ExportStart for the selected year range.
- **Top partners and products:** ranked by trade value within the selected scope, showing both intra-African and external partners side by side.

*Tip: If the latest year has zero or missing values for your selection, the summary hides details that could mislead. Some smaller African reporters have sparser coverage in the early years (1986–1995) — widen the year range to capture a stable baseline.*

## 6. Trade signal indicators

### Top Trade Partners (bar chart)

- **Current value:**  $\text{Sigma}(\text{Value}) \times 1000$  at Year = MaxYear (Export+Import).
- **Prior value:**  $\text{Sigma}(\text{Value}) \times 1000$  at Year = MaxYear – 1.
- **YoY% (partner):**  $(\text{Current} - \text{Prior}) / \text{Prior}$ , shown as up/down arrows.
- Top 5 partners by Current; bar width proportional to Current / max(Current[top5]).
- Use this to surface both the African reporter's largest external markets (often EU, China, India) and its top intra-African partners (typically within the same REC).

### Top Traded Products

- Filter: Unit='1000 USD', Element in {Export Value, Import Value}, Years in slicer range, Reporter and Partner from slicers.
- TotalTrade =  $\text{Sigma}(\text{Value})$  in above context (item filter removed).
- TOPN(5) over Item Name by TradeVal =  $\text{Sigma}(\text{Value})$ .
- Share(item) = TradeVal / TotalTrade.
- If a single product is selected, its share =  $\text{Sigma}(\text{Value for Item}) / \text{TotalTrade}$ .
- Critical for African reporters: a PC5 above 70% signals high mono-commodity exposure — common for oil-palm, cocoa, and coffee exporters.

### Emerging Export Products (CAGR)

- **StartYear:** MaxYear – N (where N = 3, 5, or 10 from the Horizon slicer).
- **StartVal:**  $\text{Sigma}(\text{Value}) \times 1000$  at StartYear (Element='Export Value').
- **EndVal:**  $\text{Sigma}(\text{Value}) \times 1000$  at MaxYear.
- **CAGR:**  $(\text{EndVal} / \text{StartVal})^{(1/N)} - 1$ .
- **WorldCAGR:** computed identically with REMOVEFILTERS(Reporter).
- Display Top 15 by CAGR; overflow listed via '+N more'.
- Use 5Y and 10Y horizons to distinguish AfCFTA-era growth from longer structural trends.

### Competitive (Surplus) Products

- $\text{ExportValue}(\text{item}) > 0$  at MaxYear.
- Keep if  $\text{ExportValue} \geq \text{ImportValue}$  OR  $(\text{ImportValue} - \text{ExportValue}) / \text{ImportValue} \leq 0.20$ .
- Rank by ExportValue (USD); show Top 15 + overflow tooltip.
- For African reporters, this list frames the credible export-promotion agenda — products where the country already has a demonstrated competitive position.

### Untapped Opportunities

- **ReporterGlobalExports** = {items exported by Reporter to *any* partner at MaxYear}.
- **PartnerImportsAll** = {items imported by Partner at MaxYear}.
- **Reporter→Partner** = {items Reporter already exports to Partner}.
- **Untapped** = EXCEPT( INTERSECT(ReporterGlobalExports, PartnerImportsAll), Reporter→Partner ).
- Display Top 30 alphabetically + '+N more'. Requires a partner to be selected.
- The single most powerful AfCFTA diagnostic: when the partner is another African country, this list is the realistic intra-African export expansion agenda — items the reporter already exports elsewhere AND the partner already imports from elsewhere, but not yet from each other.

*Note: Indicators are hidden where eligibility rules are not met (e.g., fewer than 3 reporting years or fewer than 5 active partners). All values in 1000 USD source units, displayed x 1000. Some African reporters in conflict or post-conflict periods have gaps — do not impute.*

## 7. Common analysis recipes

- **African country trade profile (one-page):** select an African reporter → read Country Summary → review Top Partners and Top Products → check trade balance status.
- **Intra-African corridor analysis:** select an African reporter + an African partner → read bilateral trade values → review Untapped Opportunities → assess Competitive Products — the core AfCFTA workflow.
- **REC-level benchmarking:** multi-select member states of a REC (e.g., ECOWAS: Nigeria, Ghana, Côte d'Ivoire, Senegal...) → compare trade balances, concentration, and product composition side by side.
- **Export diversification scan:** select an African reporter → review Top Products (PC5) → check Emerging Export Products across 3Y/5Y/10Y → flag mono-commodity risk (cocoa, coffee, oil, cotton exposure).
- **External dependency check:** select an African reporter → review Top Trade Partners (CR5) → flag dependency on a single external bloc (EU, China, India) exceeding 40% share.
- **AfCFTA opportunity mapping:** select an African reporter + an African partner + Horizon 5Y → Emerging Exports for growth leaders → Untapped for new intra-African market entry.

- **Food security monitoring:** select a net-importing African reporter → separate Trade Flow = Import → review Top Products and partner dependencies for staple foods.
- **Negotiation brief preparation:** select reporter + partner → capture bilateral summary + Competitive Products + Untapped list → export for AU/REC/bilateral delegation briefing.

## 8. FAQs

### Q: Nothing shows in the chips.

A: That's expected on the default continental view. Select at least one filter (African reporter, partner, product, year, flow, or horizon).

### Q: Trade values seem low.

A: FAOSTAT source unit is 1000 USD. The dashboard multiplies by 1000 for display. Verify the unit label and compare with FAOSTAT directly. The 51.7 B kUSD continental figure reflects cumulative flows across all 54 reporters over 1986–2024.

### Q: Why do some African countries have missing years?

A: FAOSTAT reflects country submissions and validation cycles. Gaps are preserved rather than imputed to avoid false precision. Smaller reporters and countries with conflict-era disruptions often have sparser coverage.

### Q: How do I reset to the default continental view?

A: Clear all slicers (use the eraser icon or Ctrl/Cmd-click on selected items).

### Q: Untapped Opportunities shows nothing.

A: Untapped requires a partner to be selected. It computes items the reporter exports globally but not yet to that partner. For intra-African analysis, select another African country as the partner.

### Q: Can I compare multiple African reporters at once?

A: Yes. Select several in the Reporter slicer; the charts will reflect the combined selection. This is the standard approach for REC-level or continental analysis.

### Q: How do I measure intra-African trade share?

A: Select an African reporter, then filter the Partner slicer to African countries only. The Country Summary will reflect the intra-African subset of that reporter's trade.

### Q: Numbers differ from AU, UNCTAD, or national sources.

A: FAOSTAT harmonises country submissions and may differ from AU, UNCTAD, or national customs statistics due to reconciliation methods, product scope (agriculture only), and classification. Ensure matching scope before comparing.

### Q: CAGR shows 'n/a' or very large values.

A: CAGR requires non-zero StartVal. Very small bases can produce extreme rates — common for niche African export items. Check the absolute values before acting on the growth rate.

### Q: I need exact numbers.

A: Hover charts for exact values. The Country Summary also shows precise figures.

## 9. Good practice for responsible use

- Use trade signals to prioritise questions and frame AfCFTA, REC, and bilateral negotiations; do not replace national customs statistics or formal impact analysis.
- When concentration (CR5/PC5) is high and trade balance is deteriorating, prioritise diversification strategy and food-security safeguards before major policy commitments.
- For intra-African analysis, always pair the dashboard with AfCFTA Rules of Origin, REC-specific protocols, and domestic trade statistics before drafting negotiation positions.

- Read **Structural Notes** in the dashboard to understand formulas, eligibility thresholds, and formatting conventions.
- For presentations, pair the Country Summary with the Top Partners bar chart and Emerging Exports for a clear story — ideal for AU Summit, REC ministerial meetings, and donor dialogues.
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- **Caveat:** Trade data reflect country submissions and may differ from AU, UNCTAD, or national trade accounts. Always pair with domestic trade statistics for decisions that carry fiscal weight.
- **No endorsement.** Neither FAO, AU, nor any REC endorses any findings or interpretations. Any errors or interpretations are the sole responsibility of TW Policy Group.

## 10. Structural Notes — Methods & Considerations

### Acronyms & Symbols

- **AfCFTA:** African Continental Free Trade Area.
- **REC:** Regional Economic Community (ECOWAS, EAC, SADC, COMESA, ECCAS, AMU, IGAD, CEN-SAD).
- **AU:** African Union.
- **YoY:** Year-over-Year growth.
- **CAGR:** Compound Annual Growth Rate.
- **CR5:** Top-5 partners' share of total (partner concentration).
- **PC5:** Top-5 products' share of total (product concentration).
- **TM:** FAOSTAT Detailed Trade Matrix.
- **TOPN(k):** Top-k ranking function used for partners and products.
- **REMOVEFILTERS:** DAX function that computes world totals by lifting the reporter filter.
- **K / M / B / T:** Magnitude abbreviations (thousands / millions / billions / trillions).
- **ppt:** percentage points (used for share changes over time).

### Core computation rules

- **Scope:** This edition is filtered to 54 African Union member states as reporters. Partners may be African or external.
- **Selection scope:** All shares and signals are computed over the current on-screen selection (Reporter, Partner, Item, Year, Trade Flow, Horizon).
- **Source unit:** 1000 USD. Display values multiply by 1000.
- **Filter context:** All totals evaluated in the current filter context (Year, Reporter, Partner, Item).
- **World computations:** Use REMOVEFILTERS([Reporter Countries]) where noted.
- **ExportValue:**  $\text{Sigma}(\text{Value}) \times 1000$  where Element = 'Export Value'.
- **ImportValue:**  $\text{Sigma}(\text{Value}) \times 1000$  where Element = 'Import Value'.
- **TotalTrade:** ExportValue + ImportValue.
- **TradeBalance:** ExportValue – ImportValue.
- **Status:** 'Surplus' if Balance  $\geq 0$ , else 'Deficit'.
- **ShareOfWorldExport:** ExportValue / WorldExportTotal.
- **Export Change:** (ExportEnd – ExportStart) / ExportStart.
- **CAGR:**  $(V_{\text{end}}/V_{\text{start}})^{(1/n)} - 1$  with guards against zero bases.

- **Eligibility:** Indicators hidden where reporter has fewer than 3 reporting years or fewer than 5 active partners.
- **Formatting:** Magnitudes less than 1K shown as-is, then K/M/B/T abbreviations; otherwise #,##0 in USD.
- **Zero/blank guards:** Metrics show 'n/a' when inputs are blank; growth rates avoid divide-by-zero.

### Scope & limitations

This edition of the FAOSTAT Detailed Trade Matrix is scoped to the 54 African Union member states as reporters, covering 252+ actively traded agricultural products and 38 years (1986–2024). Partners include African and external countries. Where reporter and partner values diverge, the dashboard preserves both perspectives so users can see reporting asymmetries — a common issue for intra-African trade due to informal cross-border flows. This toolkit supports **decision context** for AfCFTA implementation, REC coordination, and national trade policy — pair it with national customs data, AU statistics, UN Comtrade, and qualitative market intelligence for final policy design.

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