

# AGRI-FOOD TRADE WITH THE EU FROM LOW- AND MIDDLE- INCOME COUNTRIES

A FRAMEWORK FOR  
IDENTIFYING THE IMPACTS OF  
REGULATORY CHANGE

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AFRICA

April 2024



**AGRINFO**



Funded by  
the European Union



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# 1. INTRODUCTION

The AGRINFO programme aims to improve low- and middle-income countries' access to information on policy and regulatory change in the EU. In this way, it supports all actors involved in exporting of agri-food<sup>1</sup> products – competent authorities, producers and exporters – to keep up with and anticipate new rules, so that agricultural and processing practices can be adjusted to meet new requirements and ensure continued trade with Europe.

The information disseminated by AGRINFO, through its website, is free and open to all stakeholders. In addition, the programme strives to identify and target those countries and stakeholder groups for whom this information may be most important. To do so, we need to understand which products, in which countries, may be most affected by regulatory changes in the EU. From the outset, one of the programme's goals has been to prioritise these information needs.

As well as being crucial to the implementation of this programme, evaluating the impacts of regulations and policies on low- and middle-income countries is central to the goal of “policy coherence for development”, a principle that is integral to the EU's decision-making process.<sup>2</sup> As the agricultural sector is crucial to many of the countries that the EU seeks to support, policy coherence in relation to EU food-related measures is critically important. However, the quantity and diversity of agricultural produce entering Europe can make it complicated for EU decision-makers to identify those countries and agricultural sectors that may be affected by changes in European law. This hinders policy coherence and complicates the development of strategies that can support low- and middle-income countries in adjusting to new regulatory demands.

With these programme-oriented goals and broader policy challenges in mind, the AGRINFO programme has developed a Regulatory Impact Assessment methodology to assess the potential sensitivities of countries and value chains to changing market requirements.

Using this methodology, AGRINFO has compiled this series of reports to highlight the countries and agricultural sectors that are most likely to be significantly affected by changes to EU policies and regulations. The overall aim is to provide an additional tool for reflecting on policy impact, and to aid the development of communication and accompanying measures for the benefit of low- and middle-income countries.

These reports will be used as a reference point for the AGRINFO team when monitoring and evaluating new EU regulatory initiatives and in the development of communication and outreach strategies. We hope that they may also provide a helpful framework for those involved in the planning and development of technical assistance and accompanying measures in low- and middle-income countries.

This report focuses on the African continent. Reports have also been developed for the Asian, Latin American, and Central Europe and Middle East regions.

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<sup>1</sup> Harmonised System (HS) Chapters 1–23.

<sup>2</sup> Article 208, [Treaty on the Functioning of the EU](#).





## 2. REGULATORY IMPACT ASSESSMENT METHODOLOGY

### How to identify agricultural sectors particularly sensitive to EU regulatory change?

The simplest way to identify regulatory impact is to focus on those countries with the greatest trade with the EU. If an EU regulatory change has an impact on, for example, bananas, it is likely that the overall implications in terms of trade and number of operators affected (producers, processors, exporters) would be greatest in those countries exporting the highest volume of bananas to the EU. However, such an analysis gives only a limited picture as it does not take into account the relative importance of that trade for an individual country. In many cases, exports of a given product may be comparatively small in volume, but can be of crucial social and economic significance for the country concerned.

To identify trading partners that are most vulnerable to regulatory change, an approach is needed that focuses on the significance of agri-food trade from the perspective of the exporting country.

With this goal in mind, the AGRINFO programme has developed a Regulatory Impact Assessment (RIA) methodology based on two premises.

- **Limited trade diversification indicates economic vulnerability:** Where a country is reliant on a small number of export destination markets, its export revenue is vulnerable to sudden changes in demand and price volatility. Diversifying trade helps to reduce a country's exposure to shocks that can have a negative impact throughout the national economy.<sup>3</sup> Two elements of trade diversification are captured in the RIA methodology:
  - *product export diversification (PED):* the extent to which a country is dependent on its agri-food trade with the EU (ratio of agri-food exports to the EU/total goods exports to the EU)
  - *geographical export diversification (GED):* the extent to which a country is dependent on its trade with the EU compared to other export destinations (goods exports to the EU/global exports in goods).

The trade data used in this analysis are drawn from multiple sources, including CEPII BACI, IFPRI, Eurostat, UK Trade Info, and country-level National Statistics Offices.<sup>4</sup> The products considered as "agri-food" are those included in the Harmonised System (HS) 1–23.<sup>5</sup> The products are considered at six-digit level.<sup>6</sup>

The trade data in this report are based on average exports over a period of 3 years (2020–2022) unless specified otherwise.

- **Countries that are socially and economically vulnerable are less well-equipped to adjust to changing EU rules:** Low- and middle-income countries, and particularly least developed countries, may face difficulties in implementing policy and legal changes due to limited economic and human resources. The World Trade Organization reflects this by allowing longer transition periods for treaty implementation for least developed countries as part of special and differential treatment. The United Nations has developed social and economic indices to reflect these characteristics, which are

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<sup>3</sup> WTO, [World Trade Report 2021 – Economic Resilience and Trade](#).

<sup>4</sup> The COLEAD Market Insights data warehouse has been built over the years across multiple programmes managed by COLEAD. Data are continually cross-checked and updated, and have been compiled and triangulated using these various data sources.

<sup>5</sup> These HS chapters also include certain non-food products, e.g. plants and flowers. For simplicity, these are included in the definition of agri-food products, for example when considering a product's share of overall agri-food trade. However, these products are not highlighted in the maps or tables as they are not affected by food policy.

<sup>6</sup> The six-digit classifications evolve over time. In this database, the 2002 HS system is used as a fixed reference point to ensure continuity in the data to allow analysis over time. The conversion table used to convert emerging HS classifications back to the 2002 reference point comes from the United Nations Statistics Division: <https://unstats.un.org/unsd/classifications/Econ>. For example, the conversion from 2022 to 2002 can be found [here](#) [direct download].



commonly used by the European Commission in setting its development priorities (e.g. the European Development Fund):

- The *UN Economic and Environmental Vulnerability Index (EVI)*<sup>7</sup> is a single figure derived from eight indicators<sup>8</sup> that capture the overall economic profile of the country.
- The *UN Human Assets Index (HAI)*<sup>9</sup> is a measure of a country's human capital, compiling six indicators<sup>10</sup> that reflect a country's potential for sustainable development.

The RIA methodology used in this report combines these trade and socio-economic indicators to derive an overall measure of the potential impact of changing rules on a given country. Assuming that the countries most dependent on trade and with the greatest development needs will be the most sensitive to regulatory change, this methodology establishes a Regulatory Impact Indicator (RII) for each country as follows:

$$\begin{aligned}\text{Country RII} &= \text{socio-economic indicator} \times \text{dependence on trade indicator} \\ &= [(EVI + (1 - HAI))/2 \times (PED \times GED \times 100)]\end{aligned}$$

High development needs are indicated by a high EVI, but by a low HAI. The HAI is inverted in order to be able to combine these two indicators. The dependence on trade indicator is multiplied by 100 to bring that indicator into the same order of magnitude as the socio-economic indicator, to provide comparable weighting between the two.

An example of this calculation is set out in Annex I.

For individual products, a product RII is constructed by applying the percentage of that product's portion of a country's overall exports – a further indicator of export diversification – to the country RII. So, for example, if a country's banana exports represent 50% of its total agricultural exports:

$$\text{banana RII} = \text{country RII} \times 50\%$$

The tables in section 3 list the products that were found to be most sensitive (most vulnerable to regulatory change) for each region. These show the country; product; product RII; compound annual growth rate (CAGR)<sup>11</sup> in volume from 2013 to 2022 (unless otherwise specified); and indices relating to product and geographical export diversification.

### Limits of the methodology

Some limitations to this methodological approach are recognised. The evaluation of trade diversification only takes into account existing trade. There may be nascent markets in particular products that have considerable growth potential, but whose recent trade is not yet large enough to be captured in the analysis. This approach treats all product sectors within a country equally, while in practice some agri-food sectors are likely to have been targeted for specific public and private investment that leaves them more adept at adjusting to changing regulatory demands. Finally, the data do not take into account the specific organisational structure of the value chains analysed; for example, the number of smallholders involved in the chain. Such factors may be significant in terms of a value chain's ability to adapt to changing EU regulatory requirements.

Nevertheless, this methodology provides a clear snapshot of the relevant importance (and vulnerability) of agricultural exports to the EU from specific countries and sectors.

<sup>7</sup> <https://www.un.org/development/desa/dpad/least-developed-country-category/evi-indicators-ldc.html>

<sup>8</sup> Share of agricultural, forestry and fishing GDP, share of population in low elevated coastal zones, remoteness and whether landlocked, stability of agricultural production, instability of exports of goods and services, victims of disasters.

<sup>9</sup> <https://www.un.org/development/desa/dpad/least-developed-country-category/ldc-data-retrieval.html>

<sup>10</sup> The six indicators are: under-five mortality rate, prevalence of stunting, maternal mortality ratio, secondary school enrolment ratio, adult literacy rate, and gender parity rate index for secondary school enrolment.

<sup>11</sup> CAGR accounts for compounding effect, offering a more accurate reflection of evolution over time, and smoothing out fluctuations. It provides a nuanced understanding of growth trends ([Investopedia](#), 2023).



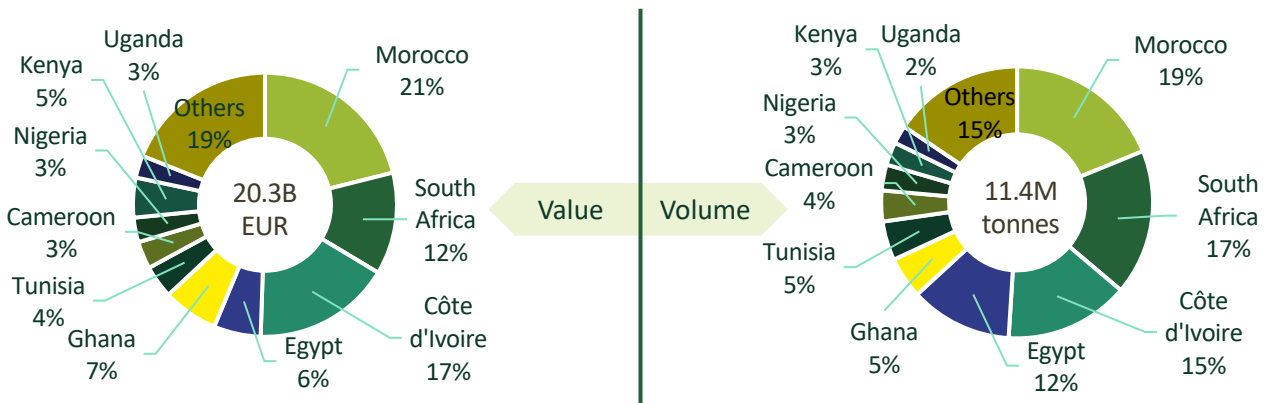


### 3. AFRICA: OVERVIEW

In total value terms, Africa’s €20 billion agri-food trade with the EU is equivalent to around half of Latin America’s exports of these products to the EU, and three-quarters of those of Asia. No single country dominates this trade, with Morocco leading (21% share in value terms), followed by Côte d’Ivoire (17%) and South Africa (12%). In terms of trade volumes, the fruit and nuts sector is most significant, making up 29% of the total volume of trade, followed by cocoa (17%) and vegetables (14%) (Table 1). From the perspective of value, however, cocoa is most important (23% of total value traded), followed by fruit and nuts (20%), vegetables and fish (both 9%), and coffee (8%).

The largest single product sector is cocoa from Côte d’Ivoire (trade worth €1.8 billion in 2022), far ahead of Ghana’s exports of the same product (€555 million). Within the fruit sector, the largest trade is in tomatoes from Morocco (€824 million) followed by grapes from South Africa (€372 million). After Moroccan tomatoes, coffee is the next product that brings the greatest revenue for an individual country, Uganda’s coffee trade with the EU totalling €544 million, followed by Ethiopia’s coffee exports (€459 million).

**Figure 1 : Share of agri-food exports from Africa to EU27 for 2020—2022, by value (left) and volume (right)**



Source: COLEAD, based on Eurostat





Table 1: Top 10 sectors exported from Africa to EU27 in agri-food: representing 90% by volume and 83% by value

HS Chapter	2022 – Volume (tonnes)	Share on total agri-food volume traded (%)	2022 – Value (thousand Euros)	Share on total agri-food value traded (%)
08 – Fruit and nuts	3,381,488	29	4,442,005	20
18 – Cocoa and cocoa preparations	2,047,729	17	5,166,117	23
07 – Vegetables and certain roots and tubers	1,653,076	14	2,127,043	9.4
23 – Residues and waste from the food industries; prepared animal fodder	717,366	6.1	361,087	1.6
17 – Sugars and sugar confectionery	635,164	5.4	315,332	1.4
15 – Animal or vegetable fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes	539,072	4.6	1,127,575	5.0
09 – Coffee, tea, maté and spices	483,045	4.1	1,893,740	8.4
12 – Oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruit; industrial or medicinal plants; straw and fodder	374,799	3.2	819,262	3.6
03 – Fish and crustaceans, molluscs and other aquatic invertebrates	373,846	3.2	2,034,734	9.0
20 – Preparations of vegetables, fruit, nuts or other parts of plants	358,685	3.0	555,020	2.4

The sheer size of Côte d'Ivoire's cocoa trade means that any changes to EU rules affecting this sector will be of acute importance for that country. In addition, this report highlights the potential widespread significance of regulatory change for numerous countries across the continent, including relatively minor exporters. The number of countries comparatively vulnerable to regulatory changes (e.g. RII > 100) is notably larger in Africa than in other regions of the world: 22 countries fall into this category in Africa, compared with nine countries in Latin America, and three countries in both Asia and Central Europe/Middle East (see Annex II).

Apart from Côte d'Ivoire, the most sensitive countries are islands: Cabo Verde, São Tomé and Príncipe, and Madagascar. Each is characterised by trade in goods highly oriented to the EU market (up to 76% of their global trade in the case of Cabo Verde), a large proportion of that trade being in agricultural products (95% of trade for São Tomé and Príncipe). In some instances, for example Somalia, a country appears high on the list even though its trade may be relatively limited, as its overall development needs accentuate the importance of that trade. Looking broadly across the five African sub-regions, the sensitivity of Eastern Africa and Western Africa to EU regulatory changes is comparable with average country RIIs of 207 and 244, respectively. The sensitivity of Northern and Southern Africa is, on average, considerably lower (RIIs of 85 and 61, respectively), with the Central African region (average RII of 147) in between. However, these averages hide considerable variability, with certain countries within these regions notably above average, for example Morocco (RII of 296) in Northern Africa, and Namibia (RII of 185) in Southern Africa.



## The 25 countries in Africa likely to be most affected by changes to EU regulations

<i>Country</i>	<i>RII<sup>12</sup></i>
Cabo Verde	1453
Côte d'Ivoire	823
São Tomé and Príncipe	802
Madagascar	593
Ethiopia	474
Cameroon	436
Burundi	412
Kenya	384
Uganda	377
Mauritania	359
Comoros	339
Sierra Leone	323
Morocco	296
Somalia	294
Gambia	230
Senegal	223
Ghana	219
Mauritius	186
Namibia	185
Liberia	176
Malawi	144
Tunisia	100
Togo	95
Tanzania	87
Rwanda	87

Cocoa is one of the specific agri-food products identified in this report as particularly sensitive to rule changes. However, the report also highlights more minor suppliers for which cocoa beans are a key export product: Sierra Leone, which provides only 0.9% of EU annual cocoa needs; and São Tomé and Príncipe, which delivers only 0.2%. Similarly, in East Africa coffee is of greatest importance not only to Uganda as Africa's largest supplier (6% of total EU coffee imports), but also to Ethiopia (2.8% of EU imports) and Burundi (0.14%). While comparatively small in terms of quantity and value, fish and seafood exports are also of crucial importance to countries across the continent, most notably Cabo Verde, Madagascar, Mauritania, Mauritius and Namibia. While not featuring among the 20 most sensitive products, due to their lower overall value, the other key product sectors are fruit, vegetables and oilseeds. In total, 113 products that may be particularly affected by EU regulatory changes (taking as a reference point those with a product RII > 10) are identified throughout Africa, and highlighted in the regional maps presented in this report. Table 2 gives an overview of these key products and their origin.

In addition to these value chains more traditionally associated with African trade, this report brings attention to the crucial socio-economic importance of other products that may be less familiar to EU policymakers. In particular, among the most sensitive 20 products (see Figure 2), it highlights the central role played by spices in Madagascar (cloves and vanilla) and Comoros (cloves), and the natural gums/resins trade in Somalia.

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<sup>12</sup> For further information on the indicators underlying the country RII, see Annex I.



Table 2: Overview of all sensitive products<sup>13</sup> in Africa with an RII above 10, HS Chapter, and countries concerned

HS Chapter	Product	Countries
03 Fish and crustaceans, molluscs and other aquatic invertebrates <sup>14</sup>	Freshwater and saltwater fish (other)	Mauritania, Senegal
	Frozen yellowfin tunas <i>Thunnus albacares</i> , skipjack or stripe-bellied bonito, bigeye tunas <i>Thunnus obesus</i>	Cabo Verde
	Frozen freshwater and saltwater fish	Namibia
	Fresh or chilled fillets and other fish meat	Tanzania, Uganda
	Frozen fish fillets	Cabo Verde, Gambia, Namibia
	Frozen fish meat, whether or not minced	Namibia
	Frozen rock lobster and other sea crawfish	Saint Helena
	Frozen shrimps/prawns	Gambia, Madagascar, Mozambique, Senegal
	Molluscs (frozen, dried, salted or in brine)	Cabo Verde, Gambia, Mauritania, Morocco, Senegal
07 Vegetables	Tomatoes	Morocco
	Beans	Kenya, Morocco, Senegal
	Kidney beans (dried)	Djibouti, Ethiopia
08 Fruit and nuts	Cashew nuts	Benin, Guinea-Bissau
	Other nuts <sup>15</sup>	Malawi
	Bananas/plantains	Cameroon, Côte d'Ivoire
	Dates	Tunisia
	Avocados	Kenya
	Mangoes/guavas/mangosteens	Burkina Faso
	Oranges	Zimbabwe
	Grapes	Namibia
	Watermelons	Morocco
	Melons	Senegal
	Raspberries, blackberries and similar	Morocco
	Cranberries, bilberries and similar	Morocco
	Passion fruit, lychees, tamarinds and similar fruits	Madagascar
09 Coffee, tea, maté and spices	Coffee	Burundi, Cameroon, Djibouti, Ethiopia, Kenya, Rwanda, Sierra Leone, Tanzania, Uganda
	Black tea	Kenya, Madagascar
	Vanilla	Comoros, Madagascar
	Cloves	Comoros
12 Oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruit, industrial or medicinal plants; straw and fodder	Soya beans	Benin, Togo
	Sesamum seeds	Somalia

<sup>13</sup> To be consistent across the continent, and to ensure comparability across regions, all those products with an RII > 10 are highlighted.

<sup>14</sup> More details on fish products are given in the regional tables and maps.

<sup>15</sup> Excluding coconuts, Brazil nuts, cashew nuts, almonds, hazelnuts, walnuts, chestnuts (*Castania*) and pistachios



13 Lac; gums, resins and other vegetable saps and extracts	Gum Arabic	Chad, Sudan
	Natural gums/resins (excl. gum Arabic)	Somalia
	Vegetable saps and extracts	Madagascar
15 Animal or vegetable fats, oils and waxes; prepared animal fats	Fats and oils of fish and their fractions	Mauritania
	Crude groundnut oil	Gambia
	Virgin olive oil	Tunisia
	Crude palm oil	Gabon, Liberia, São Tomé and Príncipe, Sierra Leone
	Crude coconut oil	São Tomé and Príncipe
	Beeswax and other insect waxes	Central African Republic
16 Meat, fish or crustaceans, molluscs or other aquatic invertebrates; preparations thereof	Fish, whole or in pieces (tunas, skipjack and bonito)	Cabo Verde, Côte d'Ivoire, Ghana, Madagascar, Mauritius
	Prepared or preserved mackerel	Cabo Verde
	Prepared or preserved fish	Cabo Verde
	Molluscs (prepared or preserved)	Gambia, Mauritania, Morocco, Senegal
17 Sugars and sugar confectionery	Raw cane sugar	Eswatini, Malawi, Mauritius
	Cane/beet sugar and sucrose	Mauritius
18 Cocoa and cocoa preparations	Cocoa beans	Cameroon, Côte d'Ivoire, Ghana, Guinea, Liberia, Madagascar, Nigeria, São Tomé and Príncipe, Sierra Leone, Togo, Uganda
	Cocoa paste (not defatted)	Cameroon, Côte d'Ivoire, Ghana
	Cocoa paste, wholly or partly defatted	Cameroon, Côte d'Ivoire
	Cocoa butter, fat and oil	Cameroon, Côte d'Ivoire, Ghana
	Cocoa powder	Côte d'Ivoire
	Chocolate and food containing cocoa	Côte d'Ivoire
20 Preparations of vegetables, fruit, nuts or other parts of plants	Prepared or preserved unshelled beans	Kenya, Madagascar
	Prepared or preserved pineapples	Kenya

Of particular note in the following regional overviews is that a large number of African countries is highly reliant on single products. In eight countries – Burundi, Chad, Guinea, Guinea-Bissau, Libya, Niger, Saint Helena, Sierra Leone – more than 85% of agricultural trade is made up of single products, with Libya exporting 95% tuna and Burundi exporting 99% coffee. This reliance magnifies the potential significance of regulatory changes such as revisions to EU phytosanitary measures, and emphasises the importance of timely adjustment to new compliance demands.

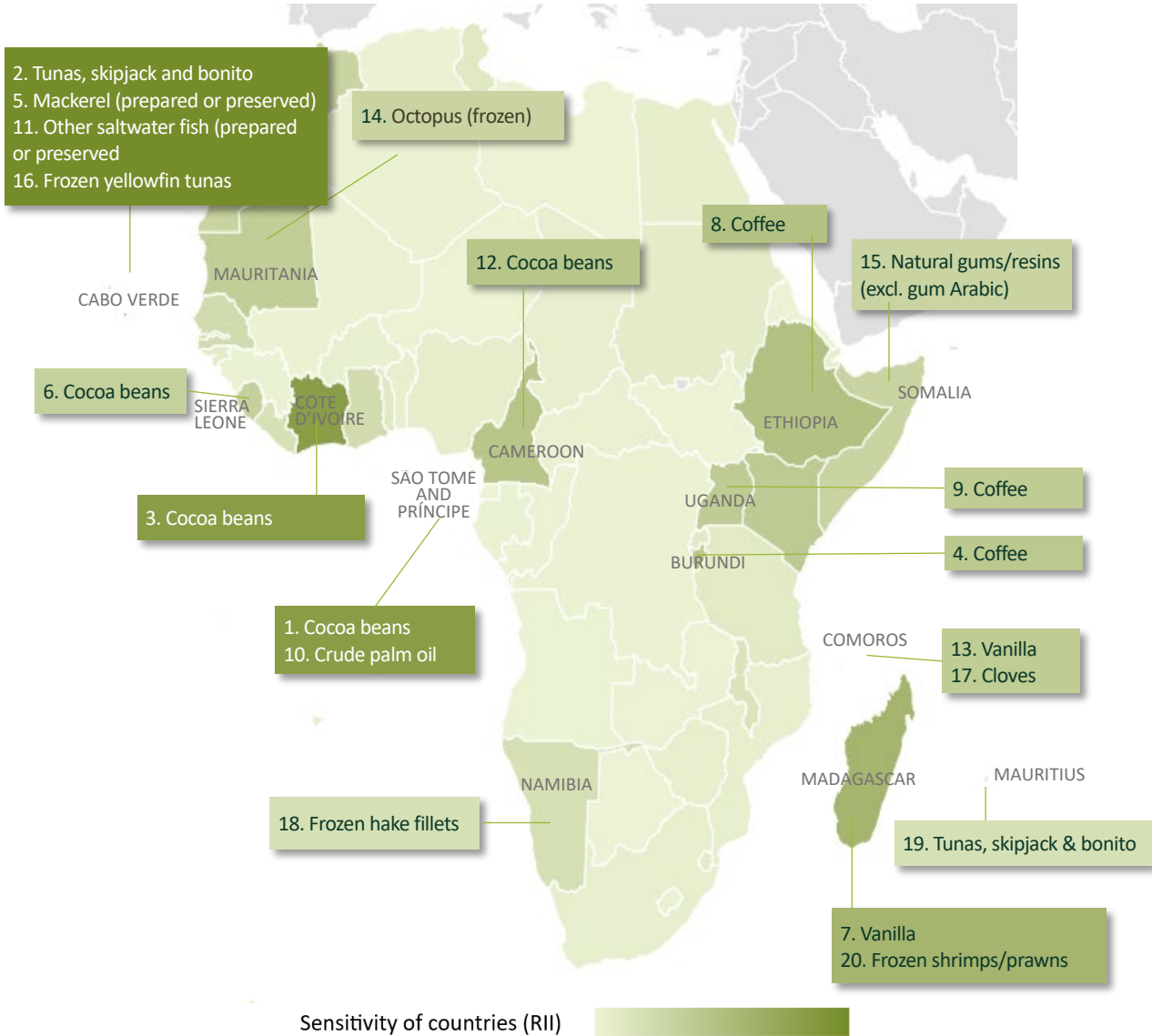
To provide a more complete view of regional agri-food trade, the tables in the following subsections include information on all products with a product RII > 1. The names and definitions of the regions used to organise the report are those developed by the [United Nations Statistics Division](#).

Figure 2 highlights the 20 most sensitive agri-food products according to the RIA methodology applied in this report (that is, those with the highest product RII). It should be emphasised that highlighting these products does not imply that other smaller or less developed value chains are less important. The cut-off point used to determine sensitive products in the regional maps below (RII > 10) is an arbitrary one used primarily as a point of comparison. Stimulating trade diversification across multiple sectors (both those identified as sensitive in this report and others) is crucial to long-term development and economic sustainability.



Nevertheless, this snapshot provides a useful framework and reminder as to who may most be affected by the EU's regulatory work.

**Figure 2: The 20 agri-food products across Africa where trade with the EU may be most sensitive to EU regulatory changes**



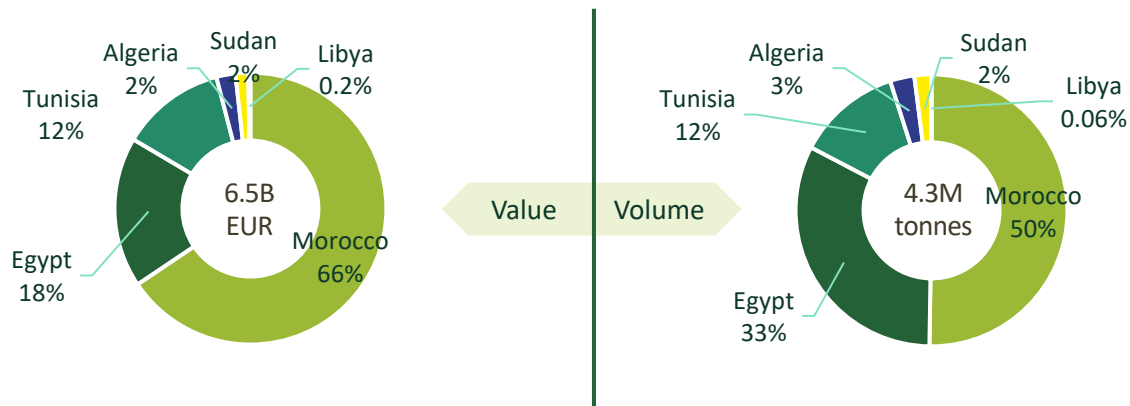
Source: COLEAD, based on Eurostat, CEPII BACI, IFPRI and UK Trade Data, and United Nations. See section 2 for more details.



### 3.1 Northern Africa

Northern Africa’s €6.5 billion agri-food trade with the EU represents 32% of Africa’s total trade in these products by value, and 38% in terms of volume of trade. Morocco dominates, with a 66% share of the total value of the region’s trade with the EU, followed by Egypt (18%) and Tunisia (12%). In terms of volume, Egypt has a far greater share of trade due to exports in bulkier crops, including potatoes and sugar beet (Figure 3). Of the region’s sectors identified as sensitive to EU regulatory changes, the most economically significant are Moroccan tomatoes (worth €824 million in 2022), octopus exports (€472 million) and Tunisian olive oil (€450 million).

**Figure 3: Share of agri-food exports from North Africa to EU27 for 2020–2022, by value (left) and by volume (right)**



Source: COLEAD, based on Eurostat

Within the North African region, Morocco stands out as the country whose agri-food trade is most likely to be affected by EU rule changes, with 54% of its exports destined for the EU market, 24% of which are in the agri-food sector. Many of its agri-export sectors feature on the list of sensitive products below. Algeria is comparable to Morocco in terms of the UN’s socio-economic indices, and is highly dependent (86% of total exports) upon trade with the EU. However, only 1% of this is agri-food trade. Only their largest exports (dates, fruit stones, cane sugar) are highlighted here. Sudan has significantly greater development needs than other countries in the region, and is the country in the region with the greatest dependence on agricultural exports (29% all goods exports to the EU), but its overall reliance on the EU market for trade in goods is considerably lower than other countries in the region (6% of all exported goods destined for the EU market, compared to 54% in the case of Morocco).

#### Relative sensitivity of countries to changes in EU regulations

Country	RII
Morocco	296
Tunisia	100
Sudan	54
Egypt	46
Algeria	11
Libya	2

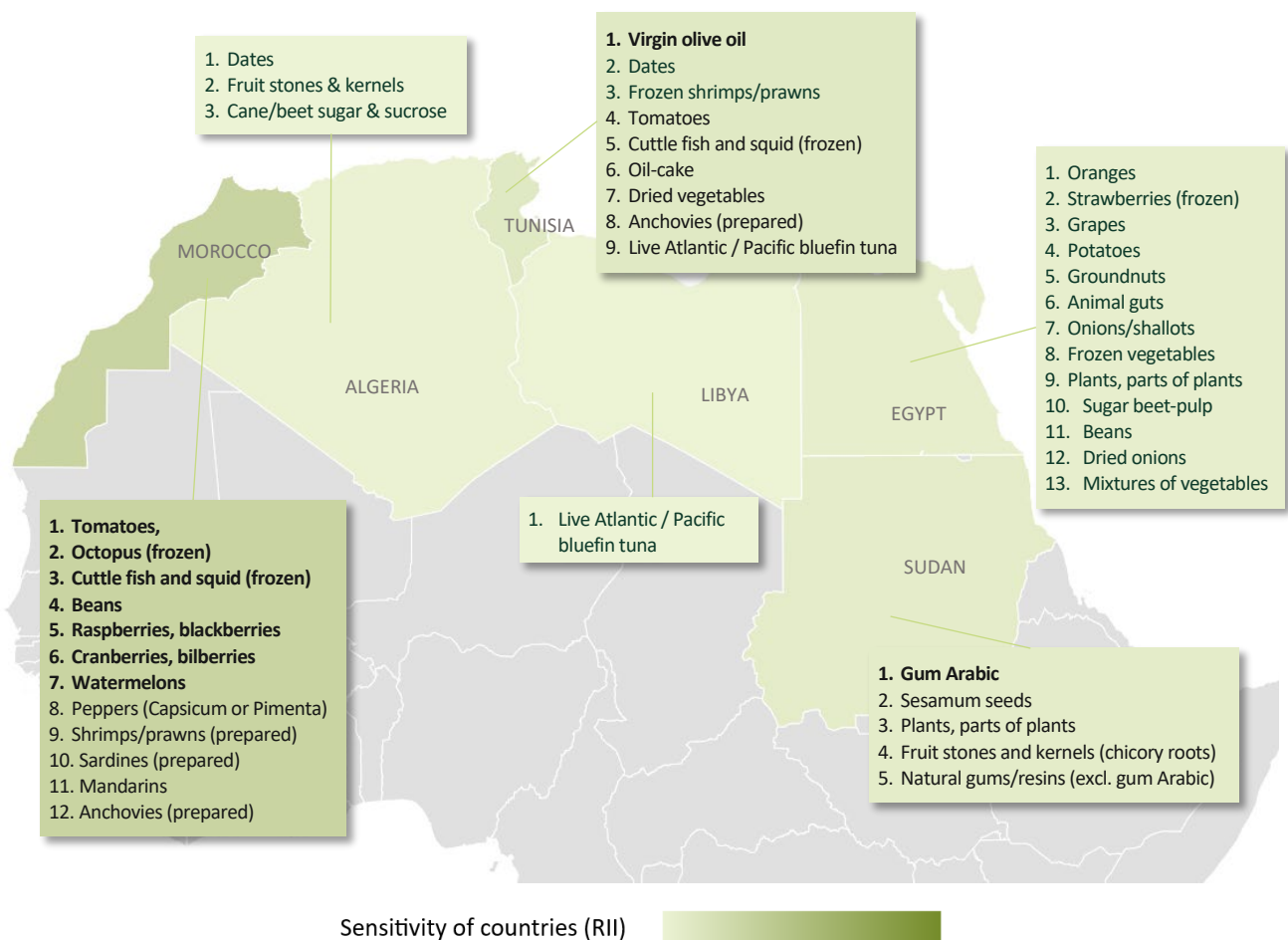
An overview of the region’s agri-food products potentially most sensitive to EU regulatory changes is provided in Figure 4, with the most sensitive products (RII > 10) highlighted in bold. Outside Morocco, only two sectors





are identified as highly sensitive: Tunisian olive oil, and gum Arabic from Sudan. Both countries are highly reliant on these single products, gum Arabic exports constituting 70% of Sudan’s total agri-food exports, and olive oil taking up a 49% share. By contrast, Morocco’s agri-food exports are highly diversified, with its largest exports, tomatoes, constituting only 15% of its overall trade. This helps explain why, in spite of the country’s high dependence on the EU market, the impacts of regulations on individual product sectors are likely to be far lower than those in other sub-regions of Africa (as reflected in the relatively low product RIIs).

**Figure 4: Major agri-food exports to the EU and (in bold, RII > 10) those products where trade with the EU may be most sensitive to EU regulatory changes**



Source: COLEAD, based on Eurostat, CEPII BACI, IFPRI and UK Trade Data, and the United Nations. See section 2 for more details.

The largest growth in agri-food exports over the past decade is seen in Morocco, most notably molluscs, but also watermelons and berries, with a CAGR of 65, 42 and 30%, respectively, between 2013 and 2022). Other products that have seen significant growth in the region are Egyptian strawberries, Algerian dates and Tunisian molluscs. There has been a notable decline in exports of Egyptian cane sugar and sesame seeds from Sudan.

Table 3 ranks the region’s most sensitive agri-food products<sup>16</sup> according to the product RII (including all products with an RII > 1). It includes information on the value and volume of those exports and the CAGR.

<sup>16</sup> HS Chapters 1 to 23.



Table 3: Sensitive products in North Africa

\*Rate with a star indicates that the CAGR is calculated on 2016–2022.

Country	Product – HS Code	Product Regulatory Impact Indicator (RII)	CAGR 2013*–2022, volume (%)	Single product's share of country's agri-food exports to EU27, avg. value 2020–2022 (%)	Volume exported to EU27 in 2022 (tonnes)	Value exported to EU27 in 2022 (thousand Euros)
Tunisia	Virgin olive oil – 150910	49	1.8	49.4	127,117	449,917
Sudan	Gum Arabic – 130120	49	4.8	70.1	66,710	92,839
Morocco	Tomatoes – 070200	45	5.5	15.2	557,225	824,007
Morocco	Octopus (frozen) – 160590	29	64.9	9.9	40,254	471,740
Morocco	Cuttle fish and squid (frozen) – 030799	20	43.3	6.8	37,172	282,999
Morocco	Beans – 070820	15	0.6	5.0	122,259	221,593
Morocco	Raspberries, blackberries, mulberries and loganberries – 081020	15	30.3	5.0	41,819	234,891
Tunisia	Dates – 080410	13	3.8	12.9	54,670	102,508
Morocco	Cranberries, bilberries and other fruits of the genus <i>Vaccinium</i> – 081040	11	26.4	3.8	38,174	185,568
Morocco	Watermelons – 080711	11	47.1	3.7	270,730	195,298
Morocco	Peppers ( <i>Capsicum</i> or <i>Pimenta</i> ) – 070960	9.3	6.6	3.2	143,354	164,730
Morocco	Shrimps/prawns (prepared or preserved) – 160520	9.0	3.6	3.1	14,010	114,788
Morocco	Sardines (prepared or preserved) – 160413	8.8	0.8	3.0	33,239	138,078
Morocco	Mandarins – 080520	7.6	7.5	2.6	104,796	110,315
Morocco	Anchovies (prepared or preserved) – 160416	7.3	0.0	2.5	12,562	107,816
Sudan	Sesamum seeds – 120740	6.0	–11.6	8.7	4,626	7,358
Tunisia	Frozen shrimps/prawns – 030613	5.8	–1.3	5.8	4,185	54,927
Egypt	Oranges – 080510	5.7	6.6	12.3	215,466	118,758
Tunisia	Tomatoes – 070200	4.8	7.9	4.7	21,634	45,194
Egypt	Strawberries (frozen) – 081110	4.3	23.0	9.2	129,578	143,660
Egypt	Grapes – 080610	3.6	5.1	7.8	45,271	88,496
Egypt	Potatoes – 070190	3.3	3.5	7.2	211,382	94,710
Algeria	Dates – 080410	3.3	9.3	30.6	26,903	37,831
Sudan	Plants, parts of plants – 121190	2.3	–1.6	3.2	1,489	4,974
Tunisia	Cuttle fish and squid (frozen) – 030799	2.2	13.4	2.2	3,070	24,733
Libya	Live Atlantic / Pacific bluefin tuna – 030199	2.1	8.2*	94.6	1,788	25,844
Sudan	Fruit stones and kernels (e.g. unroasted chicory roots) – 121299	1.9	2.1	2.7	1,556	4,730
Egypt	Groundnuts in shell– 120210	1.9	9.1	4.1	26,438	46,837
Tunisia	Oil-cake – 230690	1.9	–1.0	1.9	132,124	20,491
Egypt	Animal guts, bladders and stomachs – 050400	1.8	2.0	3.9	4,354	53,478
Algeria	Fruit stones and kernels (e.g. unroasted chicory roots)– 121299	1.7	8.1	16.2	2,478	38,997



<b>Egypt</b>	Onions/shallots – 070310	<b>1.6</b>	2.3	3.6	58,483	36,160
<b>Algeria</b>	Cane/beet sugar and sucrose – 170199	<b>1.6</b>	-13.3	15.1	28,270	14,064
<b>Egypt</b>	Frozen vegetables – 071080	<b>1.4</b>	9.2	3.1	29,791	47,284
<b>Tunisia</b>	Dried vegetables – 071290	<b>1.4</b>	-7.0	1.4	2,440	5,278
<b>Sudan</b>	Natural gums/resins (excl. gum Arabic) – 130190	<b>1.4</b>	6.4	2.0	704	2,723
<b>Egypt</b>	Plants, parts of plants – 121190 <sup>17</sup>	<b>1.3</b>	4.0	2.9	15,707	38,820
<b>Egypt</b>	Sugar beet-pulp – 230320	<b>1.2</b>	2.7	2.7	186,840	66,567
<b>Tunisia</b>	Anchovies (prepared or preserved) – 160416	<b>1.2</b>	-0.6	1.2	1,001	9,068
<b>Egypt</b>	Beans – 071333	<b>1.1</b>	6.5	2.5	39,117	40,530
<b>Egypt</b>	Dried onions – 071220	<b>1.0</b>	5.2	2.3	11,421	29,909
<b>Egypt</b>	Mixtures of vegetables – 071190	<b>1.0</b>	7.5	2.3	23,304	31,117
<b>Tunisia</b>	Live Atlantic / Pacific bluefin tuna – 030199	<b>1.0</b>	-0.3*	1.0	1,146	15,690

Source: COLEAD, based on Eurostat, CEPII BACI, IFPRI and UK Trade Data, and United Nations. See section 2 for more details.

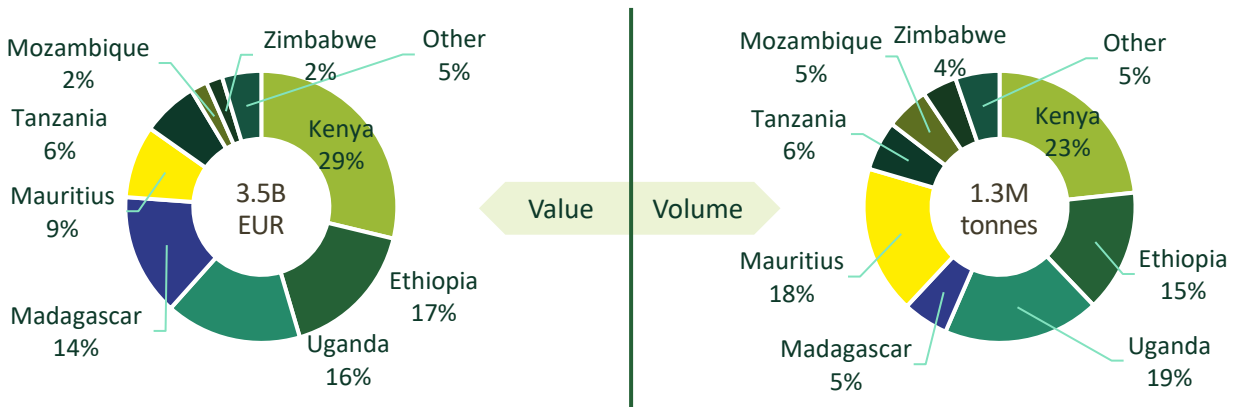
<sup>17</sup> Although not a food product, included here as falling within HS Chapters 1–23.



### 3.2 Eastern Africa

East Africa's trade with the EU contributes only 11% of Africa's overall trade volume with the Union, but is relatively high in value terms – €3.5 billion or 17% of African agri-food trade – due to the high value of the region's exports such as fish, spices and coffee. Kenya is the largest exporter (29% of the region's agri-food export value), followed by Ethiopia (17%) and Uganda (16%). Madagascar takes a notable share of this trade (14%), largely due to exports of vanilla and fish. However, the most economically significant sector by far is coffee, led by Uganda (exports totalling €545 million) and Ethiopia (€459 million). This sector's exports (€1.3 billion in 2022) represent 37% of the value of East Africa's total agri-food trade.

**Figure 5 : Share of agri-food exports from Eastern Africa to EU27 for 2020–2022, by value (left) and by volume (right)**



Source: COLEAD, based on Eurostat.

With 31% of its global goods exports destined for the EU, and 52% of those EU exports made up of agri-food products, Madagascar is the country within Eastern Africa most likely to be affected by changes to EU regulations. Burundi, Ethiopia, Kenya and Uganda are also likely to be particularly sensitive to food regulatory changes, as all are highly reliant on agri-food exports, ranging between 83% (Ethiopia) and 96% (Uganda) of total goods exports to the EU. Somalia's trade with the EU is also dominated by agri-food products (89%), but the country is notably less reliant on the EU market than its neighbours in the region (trade with the EU representing only 5% of its global goods trade). Eritrea and South Sudan have very limited agri-food exports to the EU, and no product appears on the sensitive products list in Table 3 (all products falling below a product RII of 1).



### Relative sensitivity of countries to changes in EU regulations

<i>Country</i>	<i>RII</i>
Madagascar	593
Ethiopia	474
Burundi	412
Kenya	384
Uganda	377
Comoros	339
Somalia	294
Mauritius	186
Malawi	144
Rwanda	87
Tanzania	87
Djibouti	46
Mozambique	43
Zimbabwe	39
Zambia	7
Eritrea	1
South Sudan	1

An overview of the region's agri-food products potentially most sensitive to EU regulatory changes is provided in Figure 6, with the most sensitive products (product RII > 10) highlighted in bold. Coffee emerges as a particularly sensitive product for many countries, due not only to its overall economic importance, but also to many countries' high reliance on this single product for export income: coffee constitutes 99% of Burundi's agri-exports to the EU, 69% for Uganda and 55% for Ethiopia. Other countries' reliance on trade in spices is comparable. Vanilla represents 45% of Madagascar's and 67% of Comoros' agricultural exports to the EU. In the context of the region's overall trade with the EU, the value of Comoros' trade in vanilla and its other major food export, cloves, may appear small (approximately €5 million in total). However, this trade represents 9% of the country's global goods exports. Likewise, Somalia's natural gums and Malawi's cane sugar and tea exports are relatively low in absolute value, but significant in terms of these countries' current global trade.



**Figure 6: Major agri-food exports to the EU and (in bold, RII > 10) those products where trade with the EU may be most sensitive to EU policy changes**



Source: COLEAD, based on Eurostat, CEPII BACI, IFPRI and UK Trade Data, and United Nations. See section 2 for more details.

The largest growth in agri-food products in Eastern Africa occurs in the Zimbabwe berries sector (152% CAGR between 2015 and 2022). Mozambique has also seen significant export growth in sugar and avocados (79 and 64% CAGR, respectively). Exports of sesamum seeds have increased across the region in Somalia (49% CAGR), Mozambique (34%) and Uganda (23%). Expansion of agri-food exports is also notable in Rwanda, with growth in peppers (50% CAGR), and root/tuber flour and beans (34% for both products). The greatest decline in exports has been seen in the sugar sector, with an impact on Mozambique (-20%), Malawi (-18%) and Mauritius (-13% CAGR). There is also a notable downward trend in exports of a number of products identified as particularly sensitive from a regulatory perspective, notably vanilla and cloves from Comoros (-12 and -8% CAGR, respectively), and coffee from Burundi which has declined by 9% CAGR between 2013 and 2022.





Table 4 ranks the region's most sensitive agri-food products according to the product RII (including all products with an RII > 1). It includes information on the value and volume of those exports and the CAGR.

Table 4: Sensitive products in Eastern Africa

\*Rate with a star indicates that the CAGR is calculated on 2015–2022. \*\* CAGR calculated on 2017–2022.

Country	Product – HS Code	Product Regulatory Impact Indicator (RII)	CAGR <sup>18</sup> 2013*–2022, volume (%)	Single product's share of country's agri-food exports to EU27, avg. value 2020–2022 (%)	Volume exported to EU27 in 2022 (tonnes)	Value exported to EU27 in 2022 (thousand Euros)
Burundi	Coffee (excl. roasted and decaffeinated) – 090111	406	–8.5	98.6	4,755	22,647
Madagascar	Vanilla – 090500	265	–1.8	44.7	1,295	271,787
Ethiopia	Coffee (excl. roasted and decaffeinated) – 090111	262	1.1	55.2	92,502	459,095
Uganda	Coffee (excl. roasted and decaffeinated) – 090111	260	5.5	68.9	214,649	544,975
Comoros	Vanilla – 090500	227	–11.5	66.9	16	3,165
Somalia	Natural gums/resins (excl. gum Arabic) – 130190	220	20.9	74.6	1,710	23,734
Comoros	Cloves (whole fruit, cloves and stems) – 090700	111	–7.9	32.8	337	2,107
Mauritius	Tunas, skipjack and bonito (prepared or preserved) – 160414	92	0.6	49.6	33,842	163,875
Madagascar	Frozen shrimps/prawns – 030613	92	–1.6	15.6	6,325	81,972
Somalia	Sesamum seeds – 120740	71	*49.4	24.2	2,856	5,845
Rwanda	Coffee (excl. roasted and decaffeinated) – 090111	59	–1.5	67.7	7,771	40,483
Malawi	Raw cane sugar (excl. added flavouring or colouring) – 170111	52	–17.9	36.4	8,975	5,445
Malawi	Black fermented tea and partly fermented tea, > 3 kg – 090240	43	4.8	30.2	5,332	9,414
Kenya	Avocados – 080440	41	16.1	10.7	56,721	125,810
Madagascar	Unshelled beans <i>Vigna</i> spp., <i>Phaseolus</i> spp., prepared or preserved – 200559	40	9.0	6.7	10,880	38,162
Kenya	Coffee (excl. roasted and decaffeinated) – 090111	36	–3.4	9.4	20,059	126,587
Mauritius	Cane/beet sugar and sucrose – 170199	35	–13.4	18.7	70,441	39,024
Madagascar	Other fruits (passion fruit, lychees, tamarinds) – 081090	34	1.8	5.8	13,201	30,725
Madagascar	Tunas, skipjack and bonito (prepared or preserved) – 160414	32	0.3	5.4	9,174	38,971
Tanzania	Coffee (excl. roasted and decaffeinated) – 090111	31	0.3	35.4	35,495	106,128
Malawi	Other nuts – 080290	29	13.6	20.1	417	5,871
Djibouti	Coffee (excl. roasted and decaffeinated) – 090111	24	1.9	52.8	672	3,708
Madagascar	Vegetable saps and extracts – 130219	24	–4.3	4.0	64	14,291
Madagascar	Cocoa beans, whole or broken, raw or roasted – 180100	23	3.7	3.8	6,841	20,086

<sup>18</sup> CAGR, Compound Annual Growth Rate =  $\left(\frac{\text{Volume 2022}}{\text{Volume 2013}}\right)^{\frac{1}{2022-2013}} - 1$



<b>Mauritius</b>	Raw cane sugar (excl. added flavouring or colouring) – 170111	<b>20</b>	5.8	10.8	61,596	44,369
<b>Kenya</b>	Beans – 070820	<b>20</b>	0.7	5.1	13,358	48,394
<b>Zimbabwe</b>	Oranges – 080510	<b>18</b>	2.6	46.9	35,179	31,494
<b>Uganda</b>	Nile perch fillets (fresh or chilled) – 030410	<b>18</b>	–6.2	4.8	4,685	27,433
<b>Djibouti</b>	Kidney beans (dried) – 071333	<b>17</b>	–17.6	36.3	72	73
<b>Uganda</b>	Cocoa beans, whole or broken, raw or roasted – 180100	<b>16</b>	–2.6	4.3	9,237	24,595
<b>Ethiopia</b>	Kidney beans (dried) – 071333	<b>16</b>	–2.8	3.4	26,605	23,677
<b>Kenya</b>	Pineapples, prepared or preserved – 200820	<b>16</b>	–5.0	4.1	21,048	39,775
<b>Mozambique</b>	Frozen shrimps/prawns – 030613	<b>15</b>	2.1	36.2	2,758	24,838
<b>Kenya</b>	Black fermented tea and partly fermented tea, > 3 kg – 090240	<b>14</b>	4.7	3.7	18,745	44,193
<b>Kenya</b>	Unshelled beans <i>Vigna</i> spp., <i>Phaseolus</i> spp., prepared or preserved – 200559	<b>13</b>	–1.9	3.5	20,661	28,913
<b>Tanzania</b>	Nile perch fillets (fresh or chilled) – 030410	<b>11</b>	–8.1	12.4	3,453	21,674
<b>Kenya</b>	Other nuts – 080290	<b>9.5</b>	34.0	2.5	2,249	27,205
<b>Tanzania</b>	Nile perch fillets (frozen) – 030420	<b>8.1</b>	1.4	9.4	5,101	31,805
<b>Uganda</b>	Nile perch fillets (frozen) – 030420	<b>7.3</b>	3.0	1.9	2,641	15,819
<b>Madagascar</b>	Other beans (dried) – 071339	<b>7.1</b>	10.4	1.2	7,173	8,575
<b>Madagascar</b>	Cloves (whole fruit, cloves and stems) – 090700	<b>7.0</b>	7.9	1.2	1,569	9,433
<b>Kenya</b>	Plants, parts of plants – 121190	<b>6.9</b>	23.4	1.8	4,349	25,416
<b>Ethiopia</b>	Sesamum seeds – 120740	<b>6.5</b>	–6.2	1.4	1,739	3,192
<b>Uganda</b>	Nile perch (fresh or chilled) – 030269	<b>6.4</b>	–1.6	1.7	2,021	9,600
<b>Uganda</b>	Sesamum seeds – 120740	<b>6.4</b>	22.6	1.7	6,798	13,091
<b>Malawi</b>	Coffee (excl. roasted and decaffeinated) – 090111	<b>6.2</b>	–7.2	4.3	369	1,991
<b>Kenya</b>	Peas – 070810	<b>6.2</b>	3.0	1.6	3,744	16,685
<b>Tanzania</b>	Avocados – 080440	<b>5.8</b>	29.3	6.6	9,597	23,142
<b>Rwanda</b>	Beans – 070820	<b>5.3</b>	*34.3	6.1	588	2,741
<b>Mozambique</b>	Raw cane sugar (excl. added flavouring or colouring) – 170111	<b>5.1</b>	–19.6	11.9	19,499	7,214
<b>Mauritius</b>	Tunas, skipjack and bonito (frozen, fillets) – 030420	<b>4.9</b>	0.9	2.6	1,132	8,343
<b>Ethiopia</b>	Oil seeds and oleaginous fruits (other) – 120799	<b>4.9</b>	17.1	1.0	7,437	8,956
<b>Malawi</b>	Fruits of the genus <i>Capsicum</i> or <i>Pimenta</i> , dried or crushed or ground – 090420	<b>4.8</b>	–0.9	3.4	328	1,510
<b>Zimbabwe</b>	Avocados – 080440	<b>4.5</b>	19.3	11.5	3,945	9,422
<b>Rwanda</b>	Black fermented tea and partly fermented tea, > 3 kg – 090240	<b>4.5</b>	21.0	5.1	901	3,385
<b>Mozambique</b>	Cane/beet sugar and sucrose – 170199	<b>4.0</b>	*79.3	9.3	7,222	6,798
<b>Zimbabwe</b>	Peas – 070810	<b>4.0</b>	–2.9	10.1	1,815	5,368
<b>Mozambique</b>	Cashew nuts – 080132	<b>3.9</b>	20.0	9.1	787	4,837
<b>Uganda</b>	Vanilla – 090500	<b>3.8</b>	6.4	1.0	70	8,972
<b>Mozambique</b>	Sesamum seeds – 120740	<b>3.7</b>	33.8	8.7	4,491	8,881



<b>Uganda</b>	Nile perch (frozen) – 030379	<b>3.7</b>	4.1	1.0	1,242	6,591
<b>Kenya</b>	Pineapple juice – 200949	<b>3.6</b>	-12.2	0.9	2,726	5,935
<b>Tanzania</b>	Cocoa beans, whole or broken, raw or roasted – 180100	<b>3.4</b>	-6.2	3.9	2,023	5,561
<b>Rwanda</b>	Vegetable saps and extracts – 130219	<b>3.3</b>	10.6	3.8	8	1,622
<b>Ethiopia</b>	Other alliaceous vegetables – 070390	<b>3.3</b>	2.7	0.7	582	4,912
<b>Djibouti</b>	Natural gums/resins(excl. gum Arabic) – 130190	<b>3.2</b>	**0.0	7.0	0	0
<b>Mauritius</b>	Frozen yellowfin tunas <i>Thunnus albacares</i> – 030342	<b>3.2</b>	-0.3	1.7	2,253	6,317
<b>Ethiopia</b>	Beans – 070820	<b>3.1</b>	-6.3	0.6	1,432	3,149
<b>Rwanda</b>	Peppers ( <i>Capsicum</i> or <i>Pimenta</i> ) – 070960	<b>2.9</b>	50.0	3.3	642	2,081
<b>Mozambique</b>	Cane molasses resulting from the extraction or refining of sugar – 170310	<b>2.8</b>	**22.1	6.5	31,251	7,354
<b>Zimbabwe</b>	Berries ( <i>vaccinium</i> ) – 081040	<b>2.7</b>	*152.5	6.8	1,595	5,822
<b>Mauritius</b>	Prepared or preserved fish (excl. whole or in pieces) – 160420	<b>2.7</b>	-3.3	1.4	1,449	4,610
<b>Malawi</b>	Green tea in immediate packings of > 3 kg – 090220	<b>2.6</b>	**6.2	1.8	313	693
<b>Ethiopia</b>	Bread, pastry, cakes – 190590	<b>2.3</b>	13.3	0.5	1,081	3,125
<b>Mauritius</b>	Pineapples – 080430	<b>1.8</b>	-0.8	1.0	1,279	2,647
<b>Mauritius</b>	Other saltwater fish (chilled) – 030269	<b>1.8</b>	25.6	1.0	750	5,009
<b>Mozambique</b>	Avocados – 080440	<b>1.6</b>	**63.9	3.7	1,084	2,637
<b>Mauritius</b>	Wheat or meslin flour – 110100	<b>1.5</b>	0.0	0.8	3,906	2,486
<b>Zambia</b>	Coffee (excl. roasted and decaffeinated) – 090111	<b>1.5</b>	11.9	19.7	1,418	7,950
<b>Mozambique</b>	Black fermented tea and partly fermented tea, > 3 kg – 090240	<b>1.4</b>	-2.6	3.4	1,310	3,063
<b>Zambia</b>	Fruits of the genus <i>Capsicum</i> or <i>Pimenta</i> , dried, crushed or ground – 090420	<b>1.3</b>	54.5	18.1	5,302	10,991
<b>Mozambique</b>	Molluscs (prepared or preserved) – 160590	<b>1.3</b>	**6.9	3.1	547	3,990
<b>Rwanda</b>	Flour, meal and powder of roots or tubers– 110620	<b>1.3</b>	34.3	1.5	213	303
<b>Burundi</b>	Eggplants – 070930	<b>1.2</b>	1.1	0.3	40	74

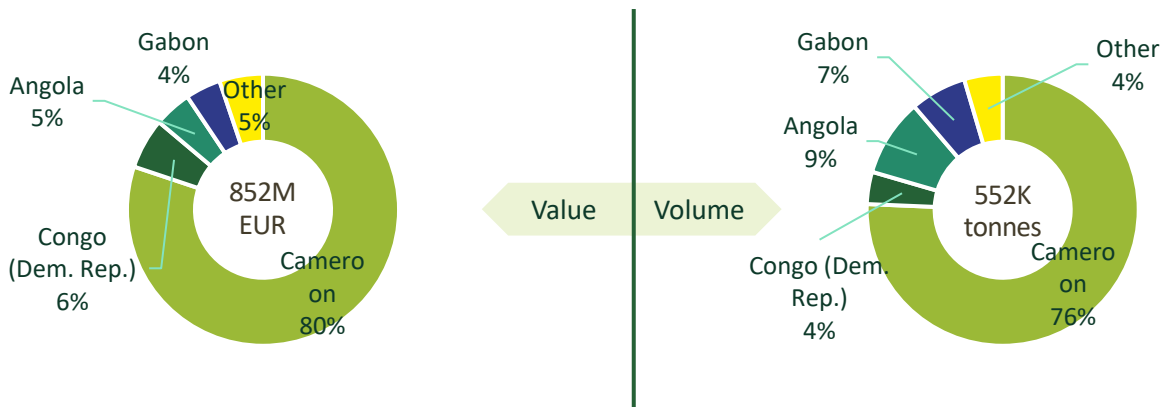
Source: COLEAD, based on Eurostat, CEPII BACI, IFPRI and UK Trade Data, and United Nations. See section 2 for more details.



### 3.3 Central Africa

Central Africa is the smallest contributor to overall African agri-food trade with the EU, representing just 4% of the value of that trade. The vast majority (80%) of this €850 million trade originates in Cameroon, followed by the Democratic Republic of the Congo (DRC) (6%), Angola (5%) and Gabon (4%) (Figure 7). A single sector – Cameroon’s cocoa exports – delivers 61% of the region’s agri-food trade in value terms (€517 million). Beyond Cameroon, most economically significant sectors are Gabon’s palm oil (€44 million) and DRC’s cocoa trade (€32 million).

**Figure 7: Share of agri-food exports from Central Africa to EU27 for 2020–2022, by value (left) and by volume (right).**



Source: COLEAD, based on Eurostat.

Unsurprisingly, given its dominance of agricultural commerce, Cameroon is identified as a country particularly likely to be influenced by changes to EU regulations. However, the most sensitive in this respect is São Tomé and Príncipe. With goods exports to the EU making up 46% of its global exports, and 95% of those goods from the agri-food sector, the country’s ability to access the EU market currently determines its overall export performance. Cameroon’s reliance on the EU market is even higher than São Tomé and Príncipe, constituting 51% of its total goods exports. However, Cameroon’s goods exports are significantly more diversified, with agricultural products making up only 28% of its total goods trade with the EU.

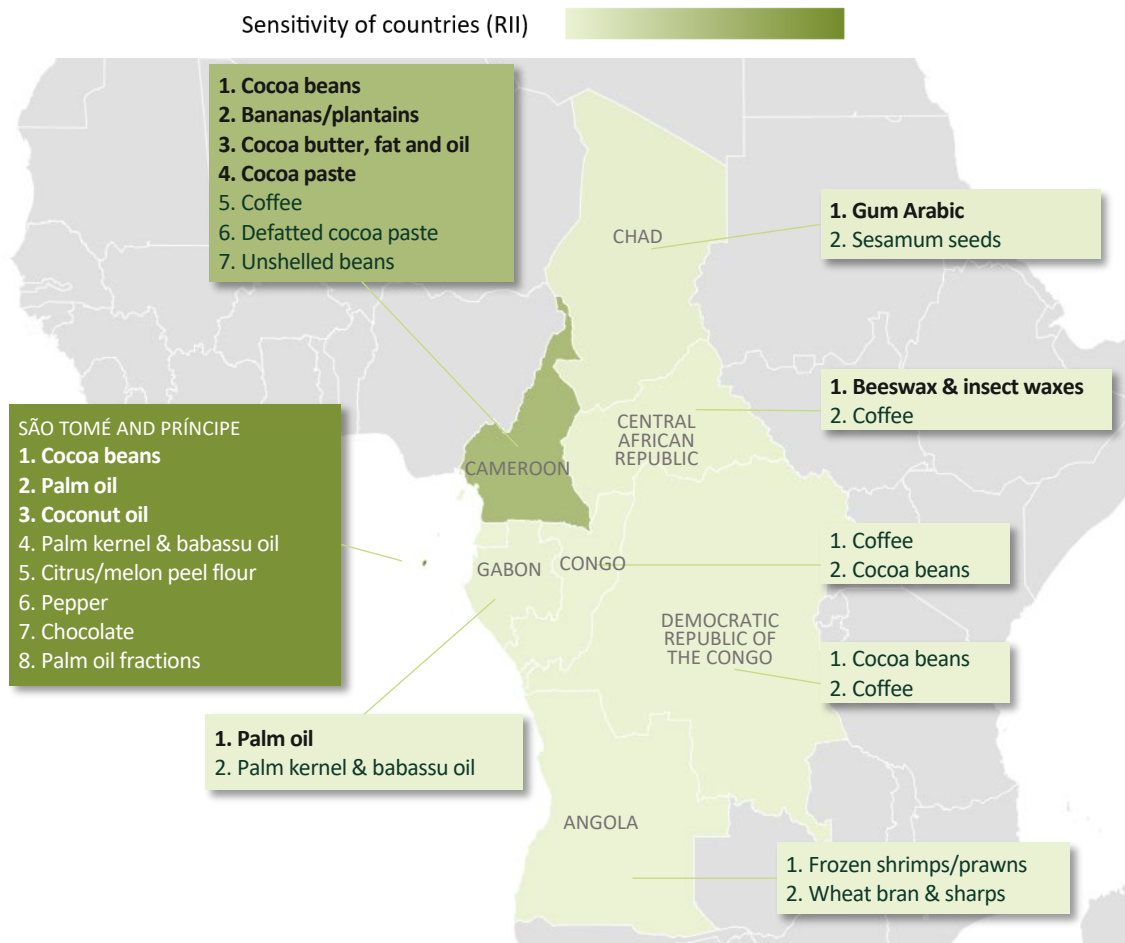
#### Relative sensitivity of countries to changes in EU regulations

Country	R/I
São Tomé and Príncipe	802
Cameroon	436
Chad	36
Central African Republic	17
Gabon	14
Democratic Republic of the Congo	10
Congo	6
Angola	5
Equatorial Guinea	1



An overview of the region’s agri-food products potentially most sensitive to EU regulatory changes is provided in Figure 8, with the most sensitive products (product RII > 10) highlighted in bold. São Tomé and Príncipe’s largest exports head this list: cocoa beans and crude palm oil (making up 62 and 30% of its agri-food exports, respectively). Due to its current dependence on EU trade, the country’s capacity to ensure future compliance, for example with the EU Deforestation Regulation ([2023/1115](#)) would have an impact on 40% of its global goods exports. At the same time, from the perspective of EU imports, the island’s significance is relatively small. Cocoa bean imports from São Tomé and Príncipe in 2022 contributed only 0.17% of total EU imports, and crude palm oil just 0.13%. Beyond cocoa, Cameroon’s other major agricultural export and most sensitive product is bananas, representing 20% of total agricultural exports. Two other products stand out in the region as being particularly sensitive due to limited trade diversification in both Chad and the Central African Republic. For Chad, gum Arabic makes up 83% of all agri-food exports; and 95% of the Central African Republic’s exports is beeswax. However, while used in food, beeswax is primarily used in cosmetics and therefore expected to be less affected by EU food law. The impact of EU regulatory change is expected to be less significant for other countries in the region due to the relatively low dependence on agricultural trade in the EU market. Nevertheless, trade diversification is limited: palm oil from Gabon (98% of exports), coffee from Congo (52%) and DRC (55%), and Angolan frozen shrimps (55%) are all sectors that are inherently vulnerable to EU regulatory developments.

**Figure 8: Major agri-food exports to the EU and (in bold, RII > 10) those products where trade with the EU may be most sensitive to EU policy changes**



Source: COLEAD, based on Eurostat, CEPII BACI, IFPRI and UK Trade Data, and United Nations. See section 2 for more details.



Across the region there has been a notable growth in exports of agricultural products over the past decade. Palm oil exports in particular have seen sizeable compound annual growth, ranging from an average of approximately 60% across palm oil products in Gabon to 295% for palm oil products from São Tomé and Príncipe. Other significant growth sectors are Angolan wheat bran (46% CAGR) and sesame seeds from Chad (25%). Cameroon's cocoa sector has grown, but there has been a decline in coffee and beans exports. The only country that has experienced an overall drop in agricultural exports is Congo, with decreases in the cocoa (–8% CAGR) and coffee (–5%) sectors.

Table 5 ranks the region's most sensitive agri-food products according to the product RII (including all products with an RII > 1). It includes information on the value and volume of those exports and the CAGR.

Table 5: Sensitive products in Central Africa  
\*CAGR calculated on 2017–2022.

Country	Product – HS Code	Product Regulatory Impact Indicator (RII)	CAGR <sup>19</sup> 2013*–2022, volume (%)	Single product's share of country's agri-food exports to EU27, avg. value 2020–2022 (%)	Volume exported to EU27 in 2022 (tonnes)	Value exported to EU27 in 2022 (thousand Euros)
São Tomé and Príncipe	Cocoa beans, whole or broken, raw or roasted – 180100	499	6.2	62.2	3,497	11,268
São Tomé and Príncipe	Crude palm oil – 151110	242	*293.9	30.2	3,736	5,530
Cameroon	Cocoa beans, whole or broken, raw or roasted – 180100	227	2.0	52.1	179,398	336,569
Cameroon	Bananas/plantains – 080300	86	–1.1	19.7	171,640	109,799
Cameroon	Cocoa butter, fat and oil – 180400	63	11.5	14.5	29,158	114,095
Chad	Gum Arabic – 130120	31	7.4	86.3	11,834	17,401
São Tomé and Príncipe	Crude coconut oil – 151311	29	12.3	3.6	64	256
Cameroon	Cocoa paste (excl. defatted) – 180310	19	6.2	4.3	11,816	35,834
Central African Republic	Beeswax and other insect waxes and spermaceti – 152190	16	0.5	94.7	112	680
Cameroon	Coffee (excl. roasted and decaffeinated) – 090111	14	–7.6	3.3	9,734	22,790
Cameroon	Cocoa paste, wholly or partly defatted – 180320	13	18.8	3.0	14,904	31,854
Gabon	Crude palm oil – 151110	11	*63.5	78.0	36,063	44,076
São Tomé and Príncipe	Crude palm kernel and babassu oil – 151321	7.1	143.7*	2.6	209	372
São Tomé and Príncipe	Flour, meal and powder of peel of citrus fruits or melons – 110630	6.1	*72.4	0.8	26	46
São Tomé and Príncipe	Pepper ( <i>Piper</i> ), neither crushed nor ground – 090411	5.6	–4.7	0.7	3	36
DRC	Cocoa beans, whole or broken, raw or roasted – 180100	5.5	30.8	54.8	12,746	32,289
Chad	Sesamum seeds – 120740	4.7	*24.9	13.2	589	1,366
São Tomé and Príncipe	Chocolate and other preparations containing cocoa in ≤ 2 kg – 180632	4.7	8.0	0.6	4	59
DRC	Coffee (excl. roasted and decaffeinated) – 090111	3.4	8.4	33.7	6,518	27,943
São Tomé and Príncipe	Palm oil and its fractions, whether or not refined – 151190	3.2	*117.0	1.2	104	169
Angola	Frozen shrimps/prawns – 030613	2.9	1.3	54.9	1,721	22,765

<sup>19</sup> CAGR, Compound Annual Growth Rate =  $\left(\frac{\text{Volume 2022}}{\text{Volume 2013}}\right)^{\frac{1}{2022-2013}} - 1$





<b>Congo</b>	Coffee (excl. roasted and decaffeinated) – 090111	<b>2.9</b>	–4.7	51.6	2,585	8,635
<b>Gabon</b>	Crude palm kernel and babassu oil – 151321	<b>2.8</b>	*55.7	19.3	7,359	12,705
<b>Congo</b>	Cocoa beans, whole or broken, raw or roasted – 180100	<b>2.1</b>	–8.1	37.6	2,160	3,887
<b>Cameroon</b>	Unshelled beans <i>Vigna, Phaseolus</i> , prepared or preserved – 200559	<b>1.8</b>	–10.4	0.4	1,035	1,991
<b>Central African Republic</b>	Coffee (excl. roasted and decaffeinated) – 090111	<b>1.3</b>	–37.5	7.4	1	8
<b>Angola</b>	Bran, sharps and other residues of wheat – 230230	<b>1.2</b>	*45.8	22.5	61,315	16,733

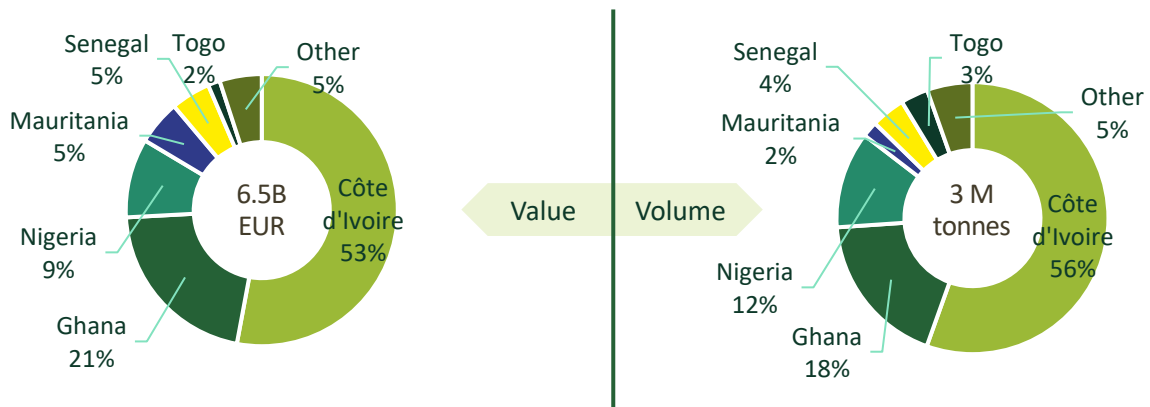
Source: COLEAD, based on Eurostat, CEPII BACI, IFPRI and UK Trade Data, and United Nations. See section 2 for more details.



### 3.4 Western Africa

Western Africa is the second largest exporting subregion (26% of the overall volume of Africa–EU agri-food trade), but matches North Africa in terms of the value of their trade (€6.5 billion or 32% of the continent’s total trade value with the EU). With a 56% share of that trade, Côte d’Ivoire is the largest agri-food exporter in the region, followed by Ghana (21% share in value terms) and Nigeria (9%) (Figure 9). Côte d’Ivoire and Ghana’s sectors in cocoa and chocolate products, each with the value of approximately €4 billion, represent 62% of the region’s total agri-food trade value. Beyond cocoa, the region’s largest sectors in value terms are Mauritania’s octopus (€306 million), Côte d’Ivoire’s banana (€291 million) and Togo’s soybean trade (€102 million).

**Figure 9: Share of agri-food exports from Western Africa to EU27 for 2020–2022, by value (left) and volume (right).**



Source: COLEAD, based on Eurostat.

Notwithstanding the dominance of Côte d’Ivoire’s trade (its cocoa-related trade alone constitutes 45% of the region’s agri-food exports), Cabo Verde is the country potentially most affected by EU regulatory changes. Seventy-six per cent of the country’s exports are destined for the EU, of which 79% are agri-food products. In other words, 60% of its global goods trade essentially consists of fish and seafood exports to the EU, so the country’s trade is highly sensitive to changes in this policy area. Other countries in the region are far less dependent on trade with the EU, for example, for Guinea, Mali and Niger trade with the EU represents less than 5% of their global goods exports. Mauritania and Sierra Leone receive high scores according to the RIA methodology, Mauritania due to its high dependence on agricultural products (54%), and Sierra Leone reflecting the social and economic vulnerabilities identified by the UN. Ghana and Liberia are high on the continent’s list of sensitive countries, Ghana because of its high reliance on exports of agricultural products (68% of its total goods trade), and the Liberia due to its high developmental needs as defined by UN indicators.



### Relative sensitivity of countries to changes in EU regulations

<i>Country</i>	<i>RII</i>
Cabo Verde	1,453
Côte d'Ivoire	823
Mauritania	359
Sierra Leone	323
Gambia	230
Senegal	223
Ghana	219
Liberia	176
Togo	95
Guinea-Bissau	72
Nigeria	53
Benin	36
Saint Helena	33
Burkina Faso	32
Guinea	15
Mali	10
Niger	4

An overview of the region's agri-food products potentially most sensitive to EU regulations is provided in Figure 10, with the most sensitive products (product RII > 10) highlighted in bold. In addition to Côte d'Ivoire's cocoa and Cabo Verde's fish trade, Sierra Leone's cocoa beans (85% of the country's total agri-food exports) and Mauritania's molluscs (62% of agri-food exports) are identified as sectors which could be particularly affected by regulatory change. In addition to Sierra Leone, cocoa dominates Guinea's (87% of agri-food exports) and Nigeria's (66%) agricultural trade, and is also identified as a sensitive product for Togo (17% of that country's trade). Where not dominated by cocoa, many Western African countries are nevertheless highly dependent upon a single agricultural product. St Helena relies on the export of frozen lobsters (87% of agri-food exports), Guinea-Bissau on cashew nuts (86%), Niger on tubers and roots (85%), Togo on soya beans (60%), and Mali on mangoes (43%). Gambia is overall the most dependent on agri-food exports, which comprise 91% of its total goods trade with the EU, with molluscs making up 36% of those exports.





The largest export growth across the region over the past decade has been in the palm oil sector, with a 90% CAGR in Liberia's exports, and 58% for Sierra Leone. Trade with the EU in molluscs, essentially octopus and squid, has also greatly expanded, by 80% CAGR in the case of Mauritania, 64% in Senegal and 44% in Gambia. There has also been notable growth in the soya bean sector, with sizeable increases in exports of beans (Benin, 422% CAGR and Togo, 30% CAGR), and 62% CAGR expansion of Nigerian soya bean oil-cake exports. Unshelled cashew nuts from Guinea-Bissau, a key export product, has also seen notable growth (47% CAGR).

Table 6 ranks the region's most sensitive agri-food products according to the product RII (including all products with an RII > 1). It includes information on the value and volume of those exports and the CAGR.

Table 6: Sensitive products in Western Africa.

\*CAGR calculated on 2016–2022. \*\* CAGR calculated on 2017–2022.

Country	Product – HS Code	Product Regulatory Impact Indicator (RII)	CAGR <sup>20</sup> 2013*–2022, volume (%)	Single product's share of country's agri-food exports to EU27, avg. value 2020–2022 (%)	Volume exported to EU27 in 2022 (tonnes)	Value exported to EU27 in 2022 (thousand Euros)
Cabo Verde	Tunas, skipjack and bonito (prepared or preserved) – 160414	479	29.9	33.0	4,958	27,739
Côte d'Ivoire	Cocoa beans, whole or broken, raw or roasted – 180100	450	4.7	54.7	803,103	1,847,866
Cabo Verde	Mackerel (prepared or preserved) – 160415	314	2.6	21.6	1,945	11,846
Sierra Leone	Cocoa beans, whole or broken, raw or roasted – 180100	276	6.0	85.4	15,505	40,656
Cabo Verde	Other saltwater fish (prepared or preserved) – 160419	232	–2.8	16.0	1,041	7,801
Mauritania	Octopus (frozen) – 160590	221	**3.5	61.5	24,901	306,234
Cabo Verde	Frozen yellowfin tunas <i>Thunnus albacares</i> – 030342	116	–38.9	8.0	19	75
Liberia	Cocoa beans, whole or broken, raw or roasted – 180100	92	7.7	52.3	13,085	28,676
Côte d'Ivoire	Cocoa paste (excl. defatted) – 180310	92	–3.7	11.1	109,242	341,467
Cabo Verde	Cuttle fish and squid (frozen) – 030799	91	**3.2	6.3	525	3,183
Ghana	Cocoa beans, whole or broken, raw or roasted – 180100	89	–2.5	40.6	231,943	555,841
Liberia	Crude palm oil – 151110	83	90.3	47.4	37,432	46,913
Gambia	Cuttle fish and squid (frozen) – 030799	82	**43.7	35.5	2,202	13,924
Cabo Verde	Tunas, skipjack and bonito (frozen, fillets) – 030420	80	40*	5.5	877	4,184
Côte d'Ivoire	Cocoa butter, fat and oil – 180400	75	4.2	9.1	90,160	363,735
Gambia	Octopus (frozen) – 160590	68	**20.0	29.4	842	7,450
Guinea-Bissau	Cashew nuts (shelled) – 080132	61	46.6	85.8	602	3,265
Togo	Soya beans – 120100	56	29.7	59.7	120,273	102,066
Côte d'Ivoire	Bananas/plantains – 080300	55	4.5	6.7	290,779	220,497
Cabo Verde	Frozen skipjack or stripe-bellied bonito – 030343	52	–100	3.6	–	–
Senegal	Octopus (frozen) – 160590	43	**7.5	19.4	8,049	76,806
Ghana	Cocoa butter, fat and oil – 180400	41	4.7	18.7	54,524	222,254

<sup>20</sup> CAGR, Compound Annual Growth Rate =  $\left(\frac{\text{Volume 2022}}{\text{Volume 2013}}\right)^{\frac{1}{2022-2013}} - 1$



<b>Mauritania</b>	Cuttle fish and squid (frozen) – 030799	<b>39</b>	80.0	11.0	4,418	31,645
<b>Cabo Verde</b>	Flours, meals and pellets of fish and aquatic invertebrates, unfit for human consumption – 230120	<b>38</b>	*30.8	2.6	1,848	2,064
<b>Mauritania</b>	Seabream and other saltwater fish (fresh or chilled) – 030269	<b>36</b>	–3.1	10.1	4,597	38,818
<b>Côte d’Ivoire</b>	Cocoa paste, wholly or partly defatted – 180320	<b>34</b>	9.5	4.1	89,831	209,859
<b>Nigeria</b>	Cocoa beans, whole or broken, raw or roasted – 180100	<b>32</b>	–0.5	59.5	144,481	319,779
<b>Côte d’Ivoire</b>	Chocolate and other food preparations containing cocoa > 2 kg – 180620	<b>31</b>	28.5	3.7	48,416	145,130
<b>Saint Helena</b>	Frozen rock lobster and other sea crawfish (cooked) – 030611	<b>29</b>	*–1.7	86.7	32	894
<b>Sierra Leone</b>	Crude palm oil – 151110	<b>28</b>	*58.1	8.8	6,900	7,977
<b>Ghana</b>	Cocoa paste (excl. defatted) – 180310	<b>27</b>	2.7	12.5	61,199	188,768
<b>Cabo Verde</b>	Frozen bigeye tunas <i>Thunnus obesus</i> – 030344	<b>26</b>	–43.5	1.8	2	8
<b>Senegal</b>	Frozen shrimps/prawns – 030613	<b>24</b>	–2.7	10.9	4,212	37,752
<b>Senegal</b>	Cuttle fish and squid (frozen) – 030799	<b>23</b>	63.8	10.3	7,433	48,271
<b>Gambia</b>	Frozen shrimps/prawns – 030613	<b>23</b>	40.6	9.9	345	3,311
<b>Côte d’Ivoire</b>	Tunas, skipjack and bonito (prepared or preserved) – 160414	<b>21</b>	–4.1	2.6	21,372	115,208
<b>Senegal</b>	Beans – 070820	<b>21</b>	8.7	9.4	16,924	31,585
<b>Senegal</b>	Sea bream (fresh or chilled) – 030285	<b>19</b>	–2.4	8.7	2,391	29,064
<b>Togo</b>	Cocoa beans, whole or broken, raw or roasted – 180100	<b>16</b>	–7.8	17.3	4,618	10,499
<b>Gambia</b>	Crude groundnut oil – 150810	<b>15</b>	–1.3	6.5	691	1,266
<b>Sierra Leone</b>	Coffee (excl. roasted and decaffeinated) – 090111	<b>15</b>	–6.3	4.5	1,328	2,760
<b>Mauritania</b>	Fats and oils of fish and their fractions – 150420	<b>14</b>	–5.9	3.9	7,510	18,389
<b>Guinea</b>	Cocoa beans, whole or broken, raw or roasted – 180100	<b>13</b>	17.2	86.6	19,119	40,183
<b>Ghana</b>	Tunas, skipjack and bonito (prepared or preserved) – 160414	<b>13</b>	5.4	5.9	18,752	97,899
<b>Gambia</b>	Flat fish and other fish (frozen, fillets) – 030420	<b>12</b>	4.0	5.1	297	1,561
<b>Benin</b>	Soya beans – 120100	<b>12</b>	421.7	32.5	14,941	11,795
<b>Burkina Faso</b>	Mangoes/guavas/mangosteens – 080450	<b>11</b>	12.7	35.5	9,619	30,214
<b>Côte d’Ivoire</b>	Cocoa powder, not containing added sugar – 180500	<b>11</b>	1.5	1.3	22,926	62,244
<b>Benin</b>	Cashew nuts – 080132	<b>10</b>	20.9	29.0	774	5,926
<b>Senegal</b>	Melons – 080719	<b>10</b>	2.1	4.5	15,175	12,179
<b>Gambia</b>	Other saltwater fish (frozen) – 030389	<b>9.7</b>	32.4	4.2	305	1,132
<b>Senegal</b>	Mangoes/guavas/mangosteens – 080450	<b>9.5</b>	3.8	4.3	10,204	11,257
<b>Mauritania</b>	Frozen fish livers and roes – 030380	<b>9.4</b>	14.2	2.6	886	11,721
<b>Ghana</b>	Fixed vegetable fats and oils and their fractions (other) – 151590	<b>9.2</b>	5.3	4.2	25,831	62,642
<b>Mauritania</b>	Flours, meals and pellets of fish and aquatic invertebrates, unfit for human consumption – 230120	<b>9.1</b>	–9.2	2.5	9,013	12,738





<b>Ghana</b>	Cocoa powder, not containing added sugar – 180500	<b>8.1</b>	3.1	3.7	22,409	60,219
<b>Burkina Faso</b>	Fixed vegetable fats and oils and their fractions (other) – 151590	<b>7.9</b>	20.2	24.9	11,244	18,795
<b>Senegal</b>	Tomatoes – 070200	<b>7.8</b>	-5.2	3.5	4,684	7,512
<b>Cabo Verde</b>	Prepared or preserved fish (excl. whole or in pieces) – 160420	<b>7.4</b>	14.9	0.5	41	210
<b>Senegal</b>	Crude groundnut oil – 150810	<b>7.2</b>	4.4	3.2	7,012	12,494
<b>Ghana</b>	Bananas/plantains – 080300	<b>7.0</b>	5.1	3.2	53,273	38,080
<b>Burkina Faso</b>	Cashew nuts – 080132	<b>6.8</b>	15.6	21.4	2,705	17,304
<b>Côte d'Ivoire</b>	Mangoes/guavas/mangosteens – 080450	<b>6.7</b>	6.4	0.8	29,729	30,761
<b>Côte d'Ivoire</b>	Coffee (excl. roasted and decaffeinated) – 090111	<b>6.6</b>	-5.1	0.8	13,163	29,678
<b>Ghana</b>	Cocoa paste, wholly or partly defatted – 180320	<b>6.4</b>	8.9	2.9	19,509	38,071
<b>Mauritania</b>	Other saltwater fish (frozen) – 030379	<b>6.4</b>	0.2	1.8	2,283	6,446
<b>Senegal</b>	Other saltwater fish (frozen) – 030379	<b>5.8</b>	-8.2	2.6	2,175	6,674
<b>Nigeria</b>	Oil-cake and other solid residues resulting from the extraction of soya bean oil – 230400	<b>5.8</b>	*62.1	10.9	106,342	75,143
<b>Gambia</b>	Frozen flat fish – 030339	<b>5.3</b>	6.0	2.3	318	928
<b>Senegal</b>	Frozen yellowfin tunas <i>Thunnus albacares</i> – 030342	<b>5.0</b>	-1.5	2.2	2,926	7,031
<b>Guinea-Bissau</b>	Crude palm oil – 151110	<b>4.5</b>	86.1	6.3	351	533
<b>Mali</b>	Mangoes/guavas/mangosteens – 080450	<b>4.4</b>	4.0	42.9	6,935	7,134
<b>Senegal</b>	Flat fish and other fish (fillets, fresh or chilled) – 030410	<b>4.3</b>	-5.3	1.9	662	5,913
<b>Togo</b>	Cashew nuts – 080132	<b>4.2</b>	26.9	4.5	844	4,986
<b>Nigeria</b>	Frozen shrimps/prawns – 030613	<b>4.1</b>	2.6	7.7	4,029	53,461
<b>Benin</b>	Mangoes/guavas/mangosteens – 080450	<b>4.0</b>	55.9	11.2	416	3,196
<b>Benin</b>	Pineapples – 080430	<b>3.9</b>	-7.5	11.0	1,399	2,543
<b>Gambia</b>	Mangoes/guavas/mangosteens – 080450	<b>3.7</b>	-5.6	1.6	121	197
<b>Niger</b>	Ethnic roots and tubers – 071490	<b>3.6</b>	3.7	84.7	2,297	2,627
<b>Nigeria</b>	Cocoa butter, fat and oil – 180400	<b>3.4</b>	-1.4	6.3	11,771	43,234
<b>Nigeria</b>	Sesamum seeds – 120740	<b>2.9</b>	-0.3	5.5	23,007	42,684
<b>Togo</b>	Groundnuts in shell – 120210	<b>2.6</b>	7.9	2.7	1,772	2,778
<b>Togo</b>	Pineapple juice, unfermented, Brix value ≤ 20 at 20°C – 200941	<b>2.5</b>	52.2	2.7	4,171	3,943
<b>Mauritania</b>	Rock lobster and other sea crawfish – 030621	<b>2.5</b>	13.5	0.7	146	2,963
<b>Togo</b>	Pineapples – 080430	<b>2.3</b>	2.8	2.5	1,248	2,010
<b>Mali</b>	Fruit and other edible parts of plants, prepared or preserved – 200899	<b>2.3</b>	10.0	22.5	4,490	4,212
<b>Togo</b>	Coffee (excl. roasted and decaffeinated) – 090111	<b>2.3</b>	-13.3	2.4	2,051	4,324
<b>Ghana</b>	Other fruits (passion fruit, lychees, tamarinds) – 081090	<b>2.1</b>	4.9	1.0	3,479	12,806
<b>Burkina Faso</b>	Soya beans – 120100	<b>2.1</b>	*13.0	6.5	8,588	7,434
<b>Ghana</b>	Pineapples – 080430	<b>2.0</b>	-12.1	0.9	7,270	10,524
<b>Guinea-Bissau</b>	Cashew nuts (unshelled) – 080131	<b>1.7</b>	-100	2.4	-	0



<b>Guinea-Bissau</b>	Vegetable saps and extracts – 130219	<b>1.4</b>	60.2	1.9	139	65
<b>Nigeria</b>	Ginger – 091010	<b>1.3</b>	12.9	2.5	7,821	20,263
<b>Togo</b>	Ethnic vegetables – 070990	<b>1.2</b>	-1.5	1.3	1,012	1,228
<b>Mali</b>	Sesamum seeds – 120740	<b>1.1</b>	4.1	11.0	1,547	2,004
<b>Benin</b>	Pineapple juice, unfermented, Brix value $\leq$ 20 at 20°C – 200941	<b>1.1</b>	*79.1	3.1	714	726

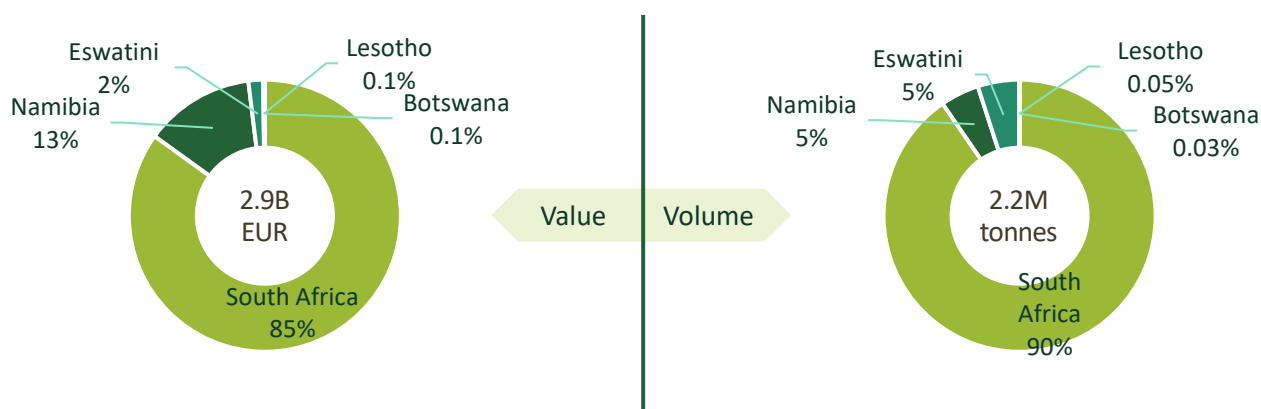
Source: COLEAD, based on Eurostat, CEPII BACI, IFPRI and UK Trade Data, and United Nations. See section 2 for more details.



### 3.5 Southern Africa

Southern Africa’s agri-food trade with the EU largely comprises exports from South Africa, making up 90% of the volume of trade from this region (Figure 11). However, in value terms Namibia is a relatively strong performer, exporting 13% of the region’s €2.9 billion agri-trade with the EU (compared to its 5% share of the volume of trade). The region’s best performing export sectors are South African grapes (€373 million) and oranges (€324 million), followed by frozen hake fillets from Namibia (€216 million).

**Figure 11: Share of agri-food exports from Southern Africa to EU27 for 2020–2022, by value (left) and by volume (right).**



Source: COLEAD, based on Eurostat.

Namibia is the country in Southern Africa identified as being most sensitive to regulatory developments in the EU. This is due to a relatively high reliance on the EU market (21% of its global goods trade) and, within that trade, a high dependence on agri-food exports (31% of total exports). Eswatini’s agricultural trade with the EU is considerably more dominant (84% of total goods trade), but only 2% of its goods trade is destined for the EU. Both Botswana and Lesotho have relatively limited agri-food trade with the EU. South Africa is less reliant on EU trade than Namibia or Eswatini, but with 16% of all South African goods destined for the EU, and 12% of those exports in agri-food sectors, it remains a sensitive country (particularly when viewed in a global context, see Annex II).

#### Relative sensitivity of countries to changes in EU regulations

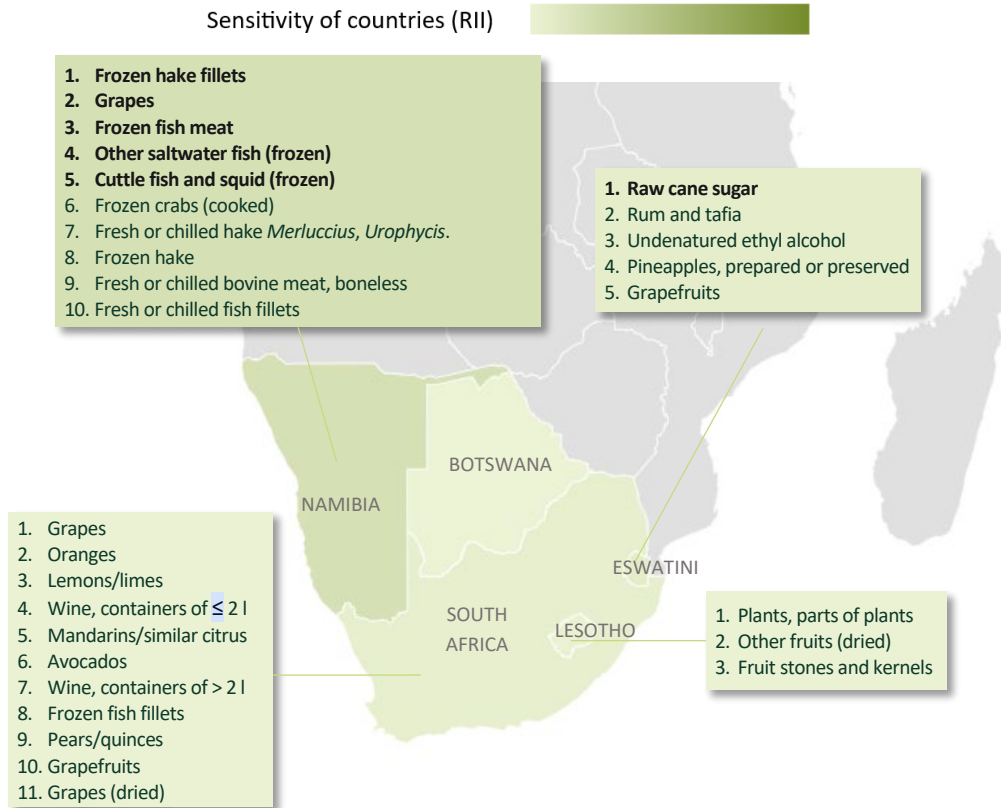
Country	RII
Namibia	185
Eswatini	63
South Africa	44
Lesotho	12
Botswana	2

An overview of the region’s agri-food products potentially most sensitive to EU regulatory changes is provided in Figure 12, with the most sensitive products (product RII > 10) highlighted in bold. A relatively limited number of products within the region are identified as highly sensitive. With the exception of grapes, which make up 10.3% of Namibia’s exports, the country’s trade with the EU is dominated by various types of fish and seafood, the largest of which are considered sensitive. No South African products are identified as highly sensitive, due in part to the country’s relatively diverse trade in agri-food products. For example, South Africa’s largest export products, grapes and oranges, represent only 14 and 13%, respectively, of its total EU-



destined agri-food exports. By contrast, Eswatini is highly reliant on exports of cane sugar (76% of agri-food trade) and therefore particularly vulnerable to regulatory changes affecting this product. This trade represents 4% of total EU sugarcane imports. Dried fruit from Lesotho, although valued at less than €1 million, represents 34% of total agri-food exports to the EU.

**Figure 12: Major agri-food exports to the EU and (in bold, RII > 10) those products where trade with the EU may be most sensitive to EU policy changes**



Source: COLEAD, based on Eurostat, CEPII BACI, IFPRI and UK Trade Data, and United Nations. See section 2 for more details.

The largest growth over the past decade was seen in frozen cuttle fish and squid from Namibia (CAGR of 57%), followed by export of crabs (36% CAGR) from the same country. Exports in fruit from the region have also risen, most notably in lemons (29% CAGR) and mandarins (14%) from South Africa, and grapefruit from Eswatini (15%). While highlighted as one of the most sensitive products in the region, sugar from Eswatini is also the product that has seen the greatest decline, with a CAGR of -12%. Exports of certain types of fish from Namibia, and of South African wine, have also decreased over the past decade at -5% CAGR.

Table 7 ranks the region's most sensitive agri-food products according to the product RII (including all products with an RII > 1). It includes information on the value and volume of those exports and the CAGR.



Table 7: Sensitive products in Western Africa.

\*CAGR calculated on 2016–2022.

Country	Product – HS Code	Product Regulatory Impact Indicator (RII)	CAGR <sup>21</sup> 2013*–2022, volume (%)	Single product's share of country's agri-food exports to EU27 avg. value 2020–2022 (%)	Volume exported to EU27 in 2022 (tonnes)	Value exported to EU27 in 2022 (thousand Euros)
Namibia	Frozen hake fillets – 030420	99	0.9	53.5	46,831	216,162
Eswatini	Raw cane sugar (excl. added flavouring or colouring) – 170111	47	–11.5	75.7	83,449	39,047
Namibia	Grapes – 080610	19	6.6	10.3	25,976	41,322
Namibia	Frozen fish meat, whether or not minced – 030490	19	7.6	10.0	13,517	50,396
Namibia	Other saltwater fish (frozen) – 030379	13	–2.0	6.9	3,944	27,932
Namibia	Cuttle fish and squid (frozen) – 030799	6.8	57.5	3.7	7,812	18,764
South Africa	Grapes – 080610	6.1	5.0	13.9	199,679	372,683
South Africa	Oranges – 080510	5.7	0.6	13.2	382,929	323,935
Eswatini	Rum and tafia – 220840	5.5	2.0	8.8	5,990	6,574
Namibia	Frozen crabs, incl. crabs in shell (cooked) – 030614	5.3	36.0	2.9	5,255	16,253
Lesotho	Plants, parts of plants – 121190 <sup>22</sup>	5.0	5.1	42.8	389	1,964
Namibia	Fresh or chilled hake <i>Merluccius, Urophycis</i> – 030269	4.7	–8.2	2.5	2,038	13,216
Lesotho	Other fruits (dried) – 081340	4.0	–5.9	34.1	291	908
Namibia	Frozen hake <i>Merluccius, Urophycis</i> – 030378	3.7	–4.1	2.0	2,772	6,719
Namibia	Fresh or chilled bovine meat, boneless – 020130	3.6	6.8	1.9	1,627	13,789
South Africa	Lemons/limes – 080550	2.8	28.5	6.5	204,713	194,167
Eswatini	Undenatured ethyl alcohol – 220710	2.7	–18.5	4.3	1,150	1,283
Namibia	Fresh or chilled fish fillets – 030410	2.5	–7.3	1.3	1,683	4,461
South Africa	Wine of fresh grapes in containers of ≤ 2 l – 220421	2.3	–4.7	5.2	35,946	128,572
South Africa	Mandarins/similar citrus – 080520	2.2	14.2	5.1	125,173	140,518
South Africa	Avocados – 080440	1.8	0.0	4.1	140,980	117,767
South Africa	Wine of fresh grapes, in containers of > 2 l – 220429	1.6	–4.4	3.6	125,593	93,365
South Africa	Frozen fish fillets – 030420	1.5	3.8	3.5	53,478	88,550
Eswatini	Pineapples, prepared or preserved – 200820	1.4	6.6	2.2	1,407	2,187
Eswatini	Grapefruits – 080540	1.4	14.9	2.2	805	512
Lesotho	Fruit stones and kernels (e.g. unroasted chicory roots) – 121299	1.3	25.0*	11.4	86	406
South Africa	Pears/quinces – 080820	1.3	–2.0	2.9	75,583	86,320
South Africa	Grapefruits – 080540	1.1	–2.1	2.6	75,538	51,784
South Africa	Grapes (dried) – 080620	1.0	8.3	2.4	77,073	55,462

Source: COLEAD, based on Eurostat, CEPII BACI, IFPRI and UK Trade Data, and United Nations. See section 2 for more details.

<sup>21</sup> CAGR, Compound Annual Growth Rate =  $\left(\frac{\text{Volume 2022}}{\text{Volume 2013}}\right)^{\frac{1}{2022-2013}} - 1$

<sup>22</sup> Although not a food product, included here as falling within HS Chapters 1–23.



## ANNEX I – REGULATORY IMPACT INDICATOR (RII) BY REGION

### I. Example of RII calculation

Country RII = socio-economic indicator x dependence on trade indicator

$$= [(EVI + (1 - HAI))/2 \times (PED \times GED \times 100)]$$

#### Algeria

UN Economic  
Vulnerability Index

EVI = 30.8

UN Human Assets Index  
adjusted (1-HAI)

HAI = 9.8

Product Export  
Diversification

(Agri-food exports to EU27  
/  
Total exports to EU27)

PED = 0.61%

Geographic Export  
Diversification

(Total exports to EU27  
/  
Total exports to the world)

GED = 86.04%

$$= (30.8 + 9.8)/2 \times (0.61\% \times 86.04\% \times 100) = 20.6 \times 0.52$$

$$= 11$$

### II. RII by region

The following tables include details of the various indicators used to calculate country Regulatory Impact Indicators (RII) by region.

#### Northern Africa

Table 8: Details of the agri-trade Regulatory Impact Indicator (RII) for each country in Northern Africa

Country	Agri-trade RII	Agri-food exports to EU27 / Total exports to EU27 (%)	Total exports to EU27 / Total exports to the world (%)	UN Economic Vulnerability Index (EVI)	UN Human Assets Index adjusted (1-HAI)
Algeria	11	1	86	30.8	9.8
Egypt	46	11	25	16.1	16.7
Libya	2	<1	81	37.3	16.4
Morocco	296	24	54	29.8	16.9
Sudan	69	29	6	37.9	38.1
Tunisia	100	8	69	27.9	9.2

Source: COLEAD, based on Eurostat, CEPII BACI, IFPRI and UK Trade Data, and United Nations. See section 2 for more details.





## Eastern Africa

Table 9: Details of the agri-trade Regulatory Impact Indicator (RII) for each country in Eastern Africa

Country	Agri-trade RII	Agri-food exports to EU27 / Total exports to EU27 (%)	Total exports to EU27 / Total exports to the world (%)	UN Economic Vulnerability Index (EVI)	UN Human Assets Index adjusted (1-HAI)
Burundi	412	87	11	38.7	46.1
Comoros	339	35	27	37.7	32.8
Djibouti	46	44	2	53.9	38.1
Eritrea	1	2	1	50.2	42.8
Ethiopia	474	83	14	34.3	44.7
Kenya	384	90	14	33.4	26.8
Madagascar	593	52	31	34.8	39.3
Malawi	144	15	22	44.5	44.5
Mauritius	186	55	24	22.4	5.9
Mozambique	43	4	25	41.4	46.1
Rwanda	87	61	4	32.3	32.4
Somalia	294	89	5	51.9	75.7
South Sudan	1	0	10	54.6	78.0
Tanzania	87	36	6	34.7	38.9
Uganda	377	96	11	29.1	42.2
Zambia	7	8	3	41.7	32.9
Zimbabwe	39	15	7	49.3	29.6

Source: COLEAD, based on Eurostat, CEPII BACI, IFPRI and UK Trade Data, and United Nations. See section 2 for more details.

## Central Africa

Table 10: Details of the agri-trade Regulatory Impact Indicator (RII) for each country in Central Africa

Country	Agri-trade RII	Agri-food exports to EU27 / Total exports to EU27 (%)	Total exports to EU27 / Total exports to the world (%)	UN Economic Vulnerability Index (EVI)	UN Human Assets Index adjusted (1-HAI)
Angola	5	1	18	45.6	48.0
Cameroon	436	28	51	23.4	38.8
Central African Republic	17	2	22	27.7	72.6
Chad	36	1	54	51.8	81.7
Congo	6	2	11	24.9	31.3
DRC	10	4	7	28.3	52.1
Equatorial Guinea	1	0	41	18.7	32.9
Gabon	14	3	19	25.5	21.5
São Tomé and Príncipe	802	95	46	25.8	10.6

Source: COLEAD, based on Eurostat, CEPII BACI, IFPRI and UK Trade Data, and United Nations. See section 2 for more details.



## Western Africa

Table 11: Details of the agri-trade Regulatory Impact Indicator (RII) for each country in Western Africa

Country	Agri-Trade RII	Agri-food exports to EU27 / Total exports to EU27 (%)	Total exports to EU27 / Total exports to the world (%)	UN Economic Vulnerability Index (EVI)	UN Human Assets Index adjusted (1-HAI)
Benin	36	65	1	33.0	50.6
Burkina Faso	32	53	1	48.6	44.0
Cabo Verde	1453	79	76	39.9	8.8
Côte d'Ivoire	823	83	30	19.9	47.0
Gambia	230	91	6	51.3	36.2
Ghana	219	68	13	27.9	21.5
Guinea	15	7	5	28.8	60.2
Guinea-Bissau	72	75	2	41.0	56.0
Liberia	176	8	47	40.2	54.8
Mali	10	51	0	49.3	54.4
Mauritania	359	54	15	45.2	45.9
Niger	4	2	3	48.5	64.4
Nigeria	53	3	36	36.6	56.5
Saint Helena	33	24	8	30.3	3.9
Senegal	223	66	9	43.0	33.6
Sierra Leone	323	19	34	40.3	58.3
Togo	95	65	5	23.3	41.2

Source: COLEAD, based on Eurostat, CEPII BACI, IFPRI and UK Trade Data, and United Nations. See section 2 for more details.

## Southern Africa

Table 12: Details of the agri-trade Regulatory Impact Indicator (RII) for each country in Southern Africa

Country	Agri-Trade RII	Agri-food exports to EU27 / Total exports to EU27 (%)	Total exports to EU27 / Total exports to the world (%)	UN Economic Vulnerability Index (EVI)	UN Human Assets Index adjusted (1-HAI)
Botswana	2	0	17	50.9	16.9
Eswatini	63	84	2	37.3	22.9
Lesotho	12	1	24	43.4	37.4
Namibia	185	31	21	39.2	16.5
South Africa	44	12	16	33.2	13.8

Source: COLEAD, based on Eurostat, CEPII BACI, IFPRI and UK Trade Data, and United Nations. See section 2 for more details.



## ANNEX II – OVERVIEW OF COUNTRY RII PER REGION

Table 13 : Overview of country Regulatory Impact Indicator (RII) per region in decreasing order

Africa	Latin America & Caribbean	Asia	Europe and Central Asia
Average RII 182	Average RII 94	Average RII 52	Average RII 40
Cabo Verde – 1453	Belize – 420	Maldives – 579	Moldova – 201
Côte d’Ivoire – 823	Honduras – 237	Solomon Islands – 473	Ukraine – 123
Sao Tome and Principe – 802	Grenada – 235	Papua New Guinea – 239	Syrian Arab Republic – 128
Madagascar – 593	Ecuador – 228	Pakistan – 83	Serbia – 78
Ethiopia – 474	Guatemala – 203	Fiji – 60	Albania – 77
Cameroon – 436	Cuba – 179	Iran – 58	Kosovo – 47
Burundi – 412	Argentina – 123	Sri Lanka – 54	Georgia – 41
Kenya – 384	Peru – 119	Afghanistan – 39	Yemen – 37
Uganda – 377	Costa Rica – 118	Timor-Leste – 37	Lebanon – 37
Mauritania – 359	Nicaragua – 88	Indonesia – 33	North Macedonia – 31
Comoros – 339	Colombia – 83	Myanmar – 32	Bosnia and Herzegovina – 26
Sierra Leone – 323	Venezuela – 82	Philippines – 25	Turkey – 24
Morocco – 296	Paraguay – 74	India – 24	Kyrgyzstan – 12
Somalia – 294	Brazil – 69	Viet Nam – 20	Kazakhstan – 12
Gambia – 230	Guyana – 63	Laos – 19	Belarus – 11
Senegal – 223	Panama – 54	Cambodia – 16	Armenia – 10
Ghana – 219	Dominican Republic – 50	Bangladesh – 14	Montenegro – 9
Mauritius – 186	Bolivia – 37	Thailand – 11	Azerbaijan – 6
Namibia – 185	El Salvador – 36	Malaysia – 10	Uzbekistan – 6
Liberia – 176	Dominica – 36	Tonga – 10	Jordan – 5
Malawi – 144	Jamaica – 34	Kiribati – 8	Tajikistan – 3
Tunisia – 100	Suriname – 29	Nepal – 6	Turkmenistan – 1
Togo – 95	Haiti – 10	Vanuatu – 6	Iraq – 0.3
Tanzania – 87	Antigua and Barbuda – 7	Samoa – 5	
Rwanda – 87	Mexico – 4	China – 3	
Guinea-Bissau – 72	Saint Vincent and the Grenadines – 3	Mongolia – 3	
Sudan – 69	Saint Lucia – 0.8	Tokelau – 1.3	
Eswatini – 63	Montserrat – 0	Bhutan – 0.6	
Nigeria – 53		Marshall Islands – 0.5	
Egypt – 46		Wallis and Futuna – 0.5	
Djibouti – 46		Micronesia – 0.3	
South Africa – 44		Nauru – 0.1	
Mozambique – 43		Niue – 0	
Zimbabwe – 39		Tuvalu – 0	
Benin – 36		Korea (North) – 0	
Chad – 36		Palau – 0	
Saint Helena – 33			
Burkina Faso – 32			
Central African Republic – 17			
Guinea – 15			
Gabon – 14			
Lesotho – 12			
Algeria – 11			
Mali – 10			



Africa	Latin America & Caribbean	Asia	Europe and Central Asia
Average RII 182	Average RII 94	Average RII 52	Average RII 40
DRC – 10			
Zambia – 7			
Congo – 6			
Angola – 5			
Niger – 4			
Libya – 2			
Botswana – 2			
Equatorial Guinea – 0.9			
South Sudan – 0.7			
Eritrea – 0.6			



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