



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

A FRAMEWORK FOR
IDENTIFYING THE IMPACTS OF
REGULATORY CHANGE

Europe and the Middle East

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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 agri-food¹ 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.² 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 Eastern and Southern Europe and Central and Western Asia. Similar reports have been developed for the Africa, Asia and Latin America regions.

¹ Harmonised System (HS) Chapters 1–23.

² 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.³ 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.⁴ The products considered as "agri-food" are those included in the Harmonised System (HS) 1–23.⁵ The products are considered at six-digit level.⁶

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

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

⁴ 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.

⁵ 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.

⁶ 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)*⁷ is a single figure derived from eight indicators⁸ that capture the overall economic profile of the country.
- The *UN Human Assets Index (HAI)*⁹ is a measure of a country's human capital, compiling six indicators¹⁰ 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:

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

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

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)¹¹ 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.

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

⁸ 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.

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

¹⁰ 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.

¹¹ 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).



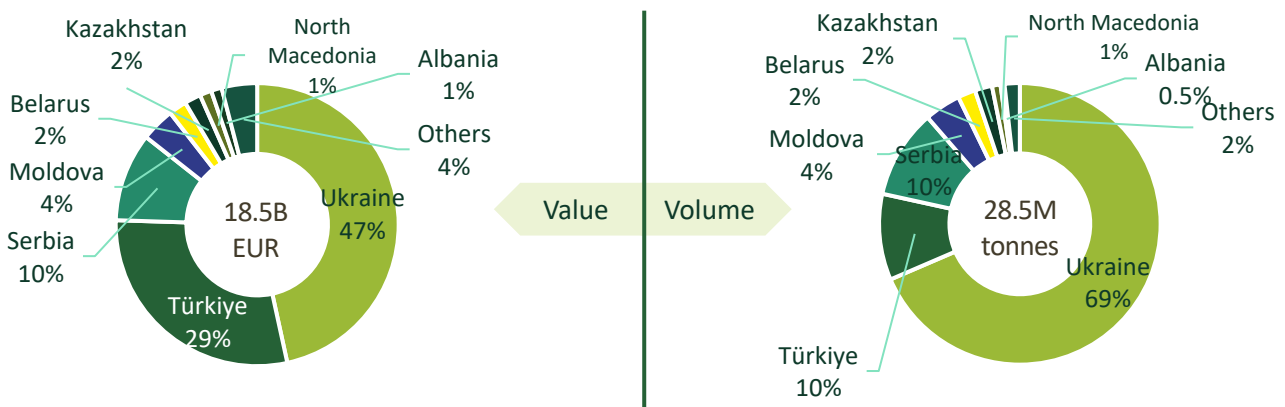


3. EUROPE AND THE MIDDLE EAST: OVERVIEW

In 2022, the region covered by this report – comprising two subregions, Eastern and Southern Europe, and Central and Western Asia¹² – exported 28.5 million tonnes of agri-food products to the EU, worth €18.5 billion. Ukraine contributed 69% of the volume of that trade, dwarfing the second largest exporter Türkiye (with a 10% share in volume). However, in value terms Türkiye’s higher proportion of value-added products (such as prepared fruits and soft drinks) contribute to a 29% share of that trade compared to Ukraine’s 47%. Serbia is the other major exporter, with 10% of the region’s trade in both value and volume (see Figure 1).

While exports of cereals (50% in volume terms) and oilseeds (16%) form the bulk of the region’s trade, fruit and vegetable exports are more economically significant, together contributing 24% of the region’s total value of trade. This is followed by exports of cereals (22%), oilseeds (17%) and vegetable oils/animal fats (16%) (see Table 1). The region’s largest single export sectors to the EU are also among the most significant globally, Ukraine’s exports of maize (€3.3 billion) and sunflower oil (€2.1 billion) only surpassed by Brazil (coffee, soybeans and oil-cakes) and Argentina (oil-cakes).

Figure 1: Share of agri-food exports from Europe and the Middle East to EU27 for 2020–2022, in value (left) and volume (right)



Source: COLEAD based on Eurostat

¹² For details of the countries included in the two subregions covered by this report, see the tables in Annex I.



Table 1: Top 10 sectors exported from Eastern and Southern Europe, and Western and Central Asia, to EU27 in agri-food, representing 97% in volume and 88% in value.

HS Chapter	2022 – Volume (tonnes)	Share on total agri-food volume traded (%)	2022 – Value (thousand Euros)	Share on total agri-food value traded (%)
10 – Cereals	18,276,709	51	5,405,438	22
12 – Oilseeds and oleaginous fruits; miscellaneous grains, seeds and fruit; industrial or medicinal plants; straw and fodder	6,028,814	17	4,152,819	17
15 – Animal or vegetable fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes	2,744,145	7.7	3,954,069	16
23 – Residues and waste from the food industry; prepared animal fodder	2,460,653	6.9	929,433	3.7
08 – Edible fruit and nuts; peel of citrus fruits or melons	1,355,846	3.8	2,938,673	12
22 – Beverages, spirits and vinegar	900,545	2.5	713,430	2.9
20 – Preparations of vegetables, fruit, nuts or other parts of plants	891,187	2.5	1,753,657	7.1
07 – Edible vegetables and certain roots and tubers	852,592	2.4	978,863	3.9
17 – Sugars and sugar confectionery	630,757	1.8	580,340	2.3
19 – Preparations of cereals, flour, starch, milk, pastry products	295,066	0.8	586,680	2.4

Source: COLEAD based on Eurostat

Notwithstanding Ukraine's accentuated needs due to the current geopolitical context (not reflected in the RIA methodology), two other countries, Moldova and Syria, are identified as the countries in Europe and the Middle East most likely to be sensitive to changes in EU regulations. Moldova is highly reliant on trade with the EU (61% of its global trade is with this partner), a high proportion of which is agricultural trade (35% of its total goods trade). In spite of its relatively small portion of trade in terms of volume (0.1%), Syria is by far the country in the region most dependent upon trade in agri-food products. These exports make up 68% in value of the country's goods trade compared to 38% in the case of Ukraine, the country next most reliant on agricultural trade. With three countries comparatively vulnerable to regulatory changes (RII >100), the region is comparable to Asia, but in broad terms less likely to be impacted by EU regulations than Latin America (nine countries with RII >100) or Africa (22 countries).

The 10 countries in Europe and the Middle East likely to be most affected by EU regulatory changes

Country	RII ¹³
Moldova	201
Syria	128
Ukraine	123
Serbia	78
Albania	77
Kosovo	47
Georgia	41
Yemen	37
Lebanon	37
North Macedonia	31

¹³ For further information on the indicators underlying the country RII, see Annex I.



Across the region, among those products relatively sensitive to change (with a product RII >10), regulations on oils (relevant to Moldova, Syria and Ukraine) and fish/seafood (Albania and Yemen) could potentially affect the largest number of countries. However, there is a wide variety of products (see Table 2) among those most sensitive sectors. This reflects the highly diversified nature of the agri-food trade in Eastern and Southern Europe in particular. Belarus is the most reliant on a single sector, rape oil making up 36% of the country's total agricultural exports, but relative to most countries globally, this still indicates a relatively high level of trade diversity.. Trade is considerably less diversified in Central and Western Asia. Kidney beans from Kyrgyzstan, fruit stones from Tajikistan and hazelnuts from Azerbaijan all exceed 50% of each country's exports, with hazelnuts from Azerbaijan being equivalent to 98% of its total trade in volume terms. In total, just 16 products are identified as particularly vulnerable, compared to 26 in Asia, 52 in Latin America and 113 in Africa, in part reflecting the relatively high level of trade diversification. Table 2 provides an overview of those products. For a more complete view of regional agri-food trade, the tables in the sub-regions sections below 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](#).

Table 2: Overview of all sensitive products from the regions analysed with an RII >10, HS Chapter and countries concerned

HS Chapter	Product	Countries
03 Fish and crustaceans, molluscs and other aquatic invertebrates	Frozen saltwater fish	Yemen
	Cuttle fish and squid (frozen)	Yemen
07 Vegetables	Mixtures of vegetables (preserved)	Syria
08 Fruit and nuts	Hazelnuts	Georgia
	Berries (frozen)	Serbia
09 Coffee, tea, maté and spices	Cumin seeds	Syria
10 Cereals	Maize (excl. seed)	Moldova, Ukraine
	Wheat and meslin (excl. durum wheat)	Moldova
12 Oilseeds and oleaginous fruits; miscellaneous grains, seeds and fruit; industrial or medicinal plants; straw and fodder	Low erucic acid rape or colza seeds	Ukraine
	Sunflower seeds, whether or not broken	Moldova
15 Animal or vegetable fats and oils and their cleavage products; prepared animal fats; animal or vegetable waxes	Virgin olive oil	Syria
	Crude sunflower-seed or safflower oil	Moldova, Ukraine
16 Meat, fish or crustaceans, molluscs or other aquatic invertebrates; preparations thereof	Shrimps/prawns (prepared or preserved)	Albania
22 Beverages, spirits and vinegar	Wine of fresh grapes in containers of ≤ 2 l	Moldova



Figure 2 **Error! Reference source not found.** highlights the 20 most sensitive agri-food products according to the RII 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 (RII >10) in the regional maps below 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 Central Europe and the Middle East whose trade with the EU may be most sensitive to EU regulatory changes



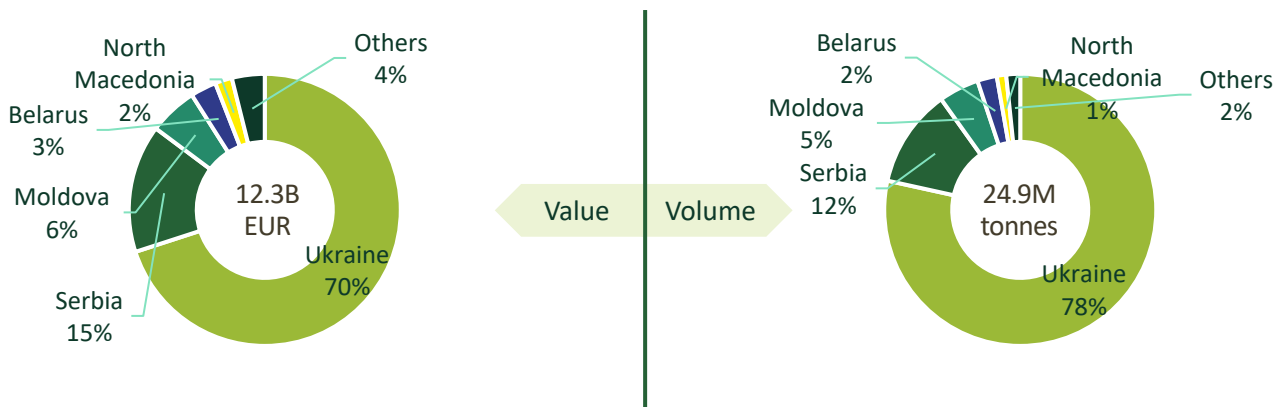
Source: COLEAD based on Eurostat, CEPII BACI, IFPRI and UK Trade Data, and the United Nations. See section 2 for more details.



3.1 Eastern and Southern Europe

The €12.3 billion trade in 2022 of agri-food products from Eastern and Southern Europe to the EU was dominated by exports of wheat and other cereals, making up in total 56% of that trade. Oilseeds are the next most significant sector (18% of total agri-food trade with the EU), followed by derivatives from oilseeds, such as vegetable oils and oil-cakes (14% of agri-food exports). Fruit and vegetable exports, which dominate in the Central and Western Asia region (see section 3.2), contribute only 2% to that overall trade.

Figure 3: Share of agri-food exports from Eastern and Southern Europe to EU27 for 2020–2022, in value (left) and volume (right)



Source: COLEAD based on Eurostat

The development needs of countries in this region are not characterised by the UN.¹⁴ Therefore for this analysis the sensitivity of agri-food sectors is determined predominantly by trade dependence on the EU market. In this respect, Moldova is identified as particularly vulnerable due to its overall reliance on trade with the EU (61% of its global trade is with this partner) and high proportion of agricultural trade (35% of its total goods trade). Ukraine is the country in this region with the highest proportion of agricultural trade (38% of its total goods trade), but its overall trade is considerably less dependent on the EU market (35% of its global trade). All the countries in the region have extensive trade with the EU, with the exception of Belarus (only 13% of total goods trade destined for the EU). Changes in EU rules are expected to have relatively limited effects on Montenegro given its limited agricultural exports (1% of total goods trade).

¹⁴ See Table 5.



Relative sensitivity of countries to changes in EU regulations

<i>Country</i>	<i>RII</i>
Moldova	201
Ukraine	123
Belarus	11
Serbia	78
Albania	77
Kosovo	47
North Macedonia	31
Bosnia and Herzegovina	26
Montenegro	9

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 (product RII >10), highlighted in bold. Oilseed products and cereals are the most sensitive among Ukraine's and Moldova's exports. Among the many sensitive Moldovan products, a number are also significant from the perspective of European imports. Moldova's trade in sunflower seeds contributes 19% of all EU imports, and its exports of walnuts make up 13% of total EU demand for that product.

In comparison with the Central and Western Asia region, agricultural trade from Eastern and Southern Europe is considerably more diversified. The country with the greatest dependence on a single agricultural product is Belarus, whose rape/colza oil exports constitute 37% of its overall agricultural exports. The other most dominant sectors in the region are mushrooms from Montenegro (24% of agricultural trade), Moldovan sunflower seeds (20%) and Ukrainian maize (25%). Of Albania's exports, 39% are from the fisheries sector, comprising mainly shrimps, anchovies, dried and salted fish fillets, and frozen cuttle fish and squid; the country also exports a range of fruit, olives and bakery products.



Figure 4: Major agri-food exports to the EU and (in bold) those products whose trade with the EU has the greatest socio-economic impact



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



Trade data between 2013 and 2022 (which does not capture more recent trade disruption caused by conflict in the region) points to significant growth in exports of cereals, oilseeds and oilseed derivatives, particularly in Moldova and Ukraine. Albania has seen significant growth in all its major export products, most notably shrimps with a compound annual growth rate (CAGR) of 35%, sea bream (31%) and cucumbers/gherkins (30%). More modest growth in exports has been seen in North Macedonia with the largest growth in bakery products (CAGR 8%) and vegetable mixtures (5%); and in Bosnia and Herzegovina exports of soft drinks saw the most significant expansion (2%).

Table 3: Sensitive products in Eastern and Southern Europe

*CAGR calculated on 2016–2022.

Country	Product – HS Code	Product Regulatory Impact Indicator (RII)	Compound annual growth rate (CAGR ¹⁵) 2013*–22, 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)
Moldova	Sunflower seeds, whether or not broken – 120600	40	20.0	20.2	358,794	264,496
Ukraine	Maize (excl. seed) – 100590	31	6.5	25.0	12,022,546	3,323,607
Moldova	Crude sunflower-seed or safflower oil – 151211	31	9.1	15.2	109,663	171,328
Ukraine	Crude sunflower-seed or safflower oil – 151211	24	15.4	19.2	1,549,163	2,144,041
Moldova	Maize (excl. seed) – 100590	22	25.0	10.8	535,127	158,105
Ukraine	Low erucic acid rape or colza seeds – 120510	14	1.6	11.5	1,964,375	1,211,275
Albania	Shrimps/prawns (prepared or preserved) – 160520	12	34.7*	15.8	3,033	43,468
Moldova	Wine of fresh grapes in containers of ≤ 2 l – 220421	12	6.2	5.8	20,097	45,470
Serbia	Berries (frozen) – 081120	12	–0.2	14.6	68,441	316,899
Moldova	Wheat and meslin (excl. durum wheat) – 100190	11	14.9	5.3	191,255	56,941
Serbia	Maize (excl. seed) – 100590	9.7	11.8	12.3	664,455	191,921
Moldova	Wine of fresh grapes, in containers of ≤ 2 l (excl. sparkling wine) – 200979	8.7	–4.6	4.4	25,034	26,532
Moldova	Walnuts – 080232	8.5	–8.0	4.2	3,774	21,361
Albania	Anchovies (prepared or preserved) – 160416	7.7	1.0	10.0	2,350	24,375
Albania	Plants, parts of plants – 121190	7.1	4.0	9.2	6,595	23,278
Albania	Fish fillets, dried, salted or in brine, not smoked – 030530	7.1	25.2	9.2	1,657	21,448
Moldova	Low erucic acid rape or colza seeds – 120510	6.9	3.5	3.5	51,880	32,795
Ukraine	Sunflower seeds, whether or not broken – 120600	6.5	54.8	5.3	1,886,296	1,240,183
Moldova	Undenatured ethyl alcohol – 220710	6.3	7.7*	3.1	26,438	34,044
Ukraine	Wheat and meslin (excl. durum wheat) – 100190	5.3	43.7	4.3	2,990,278	904,033
Kosovo	Waters, with added sugar, sweetener or flavour – 220210	5.1	44.0	10.9	6,446	4,611

¹⁵ CAGR, compound annual growth rate = $\left(\frac{\text{Volume 2022}}{\text{Volume 2013}}\right)^{\frac{1}{2022-2013}} - 1$



Kosovo	Prepared or preserved meat or offal of ducks, geese and guinea fowl – 160239	4.7	Not enough trade data to calculate growth	9.9	615	6,565
Ukraine	Soya beans – 120100	4.3	0.7	3.5	822,590	487,160
Ukraine	Oil-cake and other solid residues from sunflower seeds – 230630	4.2	-2.7	3.4	1,124,311	316,218
Albania	Olives, prepared or preserved – 200570	4.0	19.0	5.2	12,304	13,150
Belarus	Low erucic acid rape or colza oil – 151411	3.9	16.4	36.9	202,872	279,603
Ukraine	Sunflower-seed or safflower oil and their fractions – 151219	3.5	33.6	2.9	275,747	465,530
Kosovo	Plants, parts of plants – 121190	3.4	13.4	7.2	296	2,649
Albania	Tomatoes – 070200	3.4	11.8	4.4	12,117	9,368
Kosovo	Berries (frozen) – 081120	3.3	47.1	7.1	475	2,131
Kosovo	Non-alcoholic beverages (excl. water, fruit or vegetable juices and milk) – 220290	3.3	22.1	7.0	5,916	2,975
Albania	Sea bream (fresh, chilled) – 030269	3.3	30.7	4.3	2,317	9,712
Serbia	Waters, with added sugar, sweetener or flavour – 220210	3.2	50.6	4.1	130,667	124,106
Albania	Cucumbers/gherkins – 070700	3.1	29.8	4.1	18,688	14,123
Serbia	Wheat and meslin (excl. durum wheat) – 100190	3.0	4.8	3.8	357,277	110,198
North Macedonia	Bread, pastry, cakes and other bakers' wares – 190590	3.0	7.6	9.3	10,433	26,191
Serbia	Crude soya-bean oil – 150710	2.9	9.6	3.7	56,891	90,847
Albania	Molluscs (frozen, dried, salted or in brine) – 030799	2.8	23.9*	3.7	1,064	9,563
Albania	Peppers (<i>Capsicum</i> or <i>Pimenta</i>) – 070960	2.7	46.3	3.6	9,018	9,262
Serbia	Dog or cat food for retail sale – 230910	2.7	14.8	3.5	31,252	78,046
Ukraine	Crude soya-bean oil – 150710	2.7	16.3	2.2	202,244	257,080
Serbia	Other fruit/nuts (frozen) – 081190	2.4	-1.5	3.1	45,195	66,563
Serbia	Cane/beet sugar and sucrose – 170199	2.3	-7.6	3.0	87,825	66,478
Bosnia and Herzegovina	Berries (frozen) – 081120	2.3	-0.8	9.0	2,946	15,393
North Macedonia	Vegetables and their mixtures, prepared or preserved (excl. vinegar or frozen) – 200590	2.3	4.8	7.2	8,076	20,057
Kosovo	Mushrooms – 070959	2.2	84.7	4.7	348	1,751
Bosnia and Herzegovina	Sunflower-seed or safflower oil and their fractions – 151219	2.2	1.4	8.5	19,194	39,221
Montenegro	Mushrooms (dried) – 071239	2.2	9.9	23.3	70	2,508
Kosovo	Vegetables, fruit, nuts and other edible parts of plants, prepared or preserved – 200190	2.1	21.3	4.5	1,415	1,823
Albania	Bread, pastry, cakes, and other bakers' wares – 190590	2.1	8.2	2.8	3,146	8,253
North Macedonia	Wine of fresh grapes, in containers of > 2 l – 220429	2.1	-4.6	6.7	32,202	17,212
North Macedonia	Other brassicas – 070490	1.8	1.7	5.7	30,256	14,985
Serbia	Protein concentrates and textured protein substances – 210610	1.8	5.6	2.3	33,876	55,117
Kosovo	Peppers (<i>Capsicum</i> or <i>Pimenta</i>) – 070960	1.7	14.6	3.6	1,403	1,315



Kosovo	Wine of fresh grapes, in containers of > 2 l – 220429	1.7	-7.4	3.6	2,260	1,344
North Macedonia	Fresh or chilled lamb carcasses and half-carcasses – 020410	1.6	-2.1	4.9	2,150	15,016
Moldova	Cane/beet sugar and sucrose – 170199	1.5	-13.1	0.8	6,165	2,984
Serbia	Sunflower–seed or safflower oil and their fractions – 151219	1.5	-4.5	1.9	26,650	43,985
Kosovo	Roasted coffee (excl. decaffeinated) – 090121	1.5	15.8	3.1	171	922
Bosnia and Herzegovina	Waters, with added sugar, sweetener or flavour – 220210	1.5	1.7	5.6	40,165	12,001
Ukraine	Natural honey – 040900	1.5	10.7	1.2	46,093	121,079
North Macedonia	Wine of fresh grapes in containers of ≤ 2 l – 220421	1.2	5.5	3.7	9,057	9,206
North Macedonia	Peppers (<i>Capsicum</i> or <i>Pimenta</i>) – 070960	1.1	-0.4	3.6	14,184	9,487
Montenegro	Ethnic vegetables (frozen) – 071080	1.1	11.4	12.1	243	1,568
Belarus	Other fruit/nuts (frozen) – 081190	1.1	-1.9	10.6	12,540	35,186
Bosnia and Herzegovina	Sweet biscuits – 190531	1.1	1.0	4.3	5,487	9,590

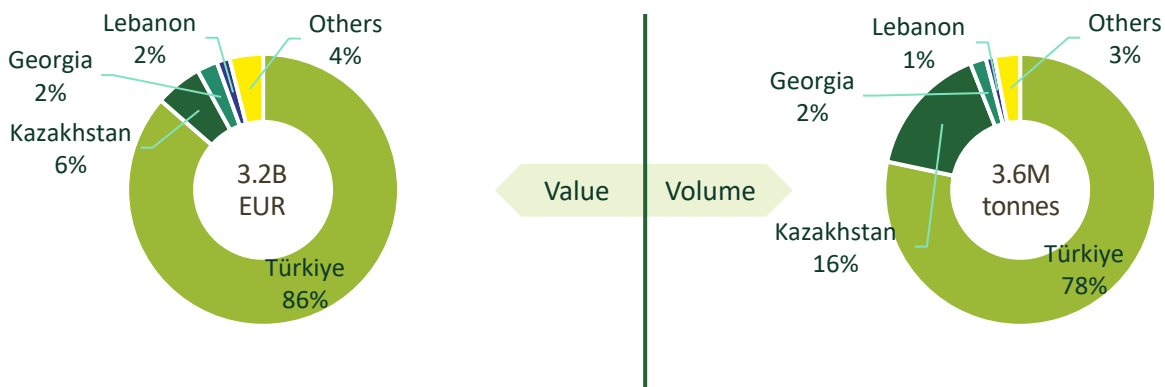
Source: COLEAD based on Eurostat, CEPII BACI, IFPRI and UK Trade Data, and the United Nations. See section 2 for more details.



3.2 Central and Western Asia

Türkiye is by far the largest agri-food exporter in the Central and Western Asia region, contributing 86% in value terms of the region's trade with the EU (see Figure). Fruit and vegetables dominate the exports from the region, with this sector constituting almost 50% of the 3.6 million tonnes of agri-food products traded in 2022. Wheat and water/other soft drinks are the next largest export sectors, each totalling around €0.4 million (11% of total exports) in 2022. Other significant sectors are fisheries (3% of agri-food exports), products of the milling industry including pasta, biscuits and bakery goods (2%), and fruit juices (2%). Kazakhstan, also a large exporter in volume terms (with a 16% share of the region's trade), predominantly exports linseeds, which are comparatively low-value, so its share of regional trade with the EU in value terms is relatively small (only 6%).

Figure 5: Share of agri-food exports from Western and Central Asia to EU27 for 2020–2022, in value (left) and volume (right)



Source: COLEAD based on Eurostat

Notwithstanding its relatively small portion of this trade in terms of volume (0.7%), Syria is the country that may be most affected by changes in EU food regulations, due to its high development needs (as identified by the UN) and its high dependence on agricultural exports to the EU (68% of its total goods trade to the EU). After Syria, Georgia and Lebanon are the countries in the region most dependent on agricultural trade (18% of total goods trade for both countries). Yemen is slightly less reliant than these countries on agricultural exports to the EU (14% of total goods trade), but scores relatively highly according to the RII methodology, as it is the country with the greatest development needs in the region. For Turkmenistan and Iraq, with limited agricultural trade with the EU, no single sector is identified as sensitive to EU regulatory change.



Relative sensitivity of countries to changes in EU regulations

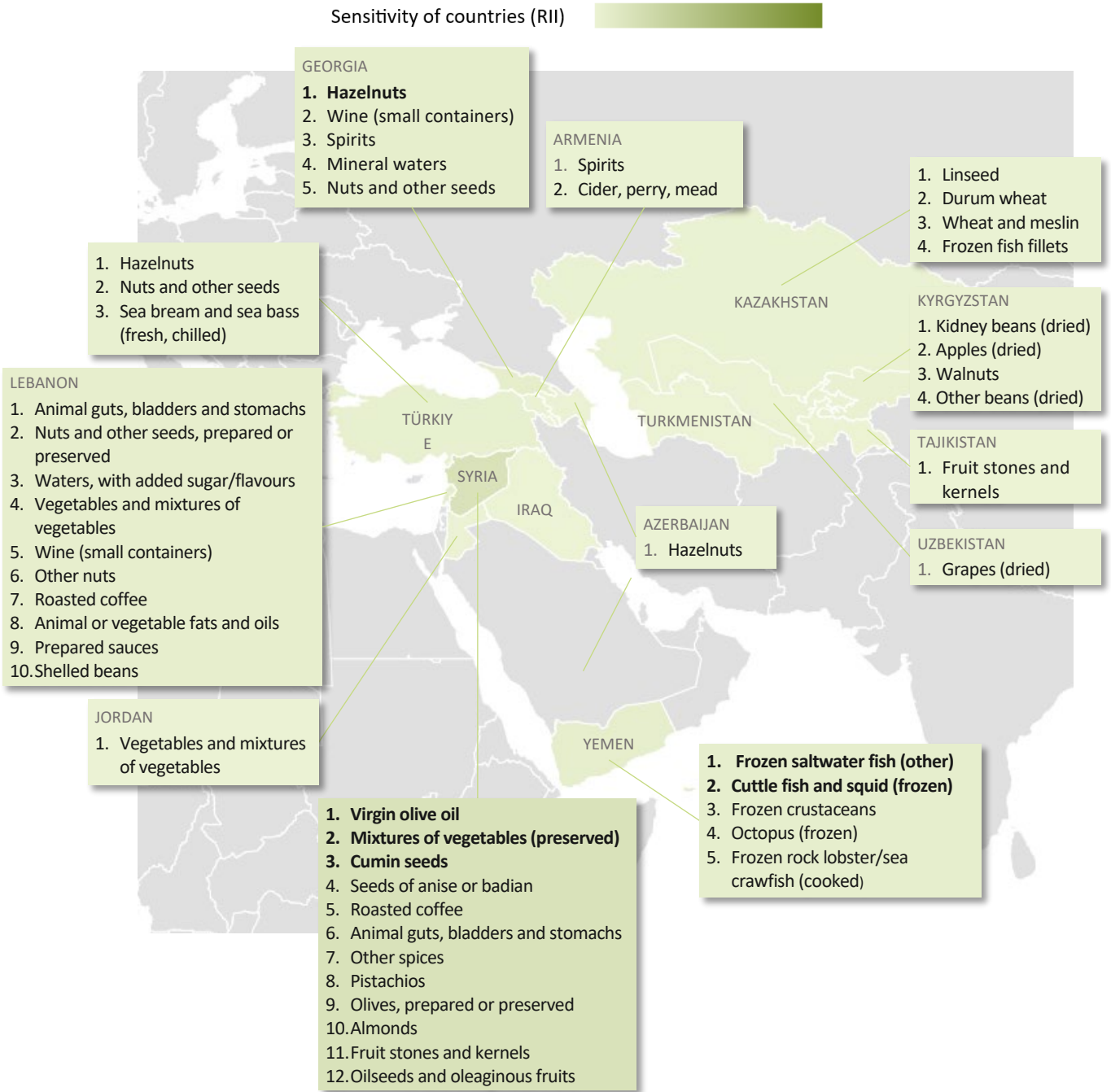
<i>Country</i>	<i>RII¹⁶</i>
Syria	128
Georgia	41
Yemen	37
Lebanon	37
Türkiye	24
Kyrgyzstan	12
Kazakhstan	12
Armenia	10
Azerbaijan	6
Uzbekistan	6
Jordan	5
Tajikistan	3
Turkmenistan	1
Iraq	0

An overview of the region's agri-food products potentially most sensitive to EU regulatory changes is provided in Figure , with the most sensitive products (product RII >10) highlighted in bold. Leading this list is Syria's virgin olive oil, although Syria's exports of this product to the EU represent only 1.7% of total EU olive oil imports. Other more sensitive products have greater impact on the EU market, with Georgia's trade in hazelnuts representing 7% of EU imports, and cumin seeds from Syria forming 5% of imports. The largest of the agri-food exporters have relatively diversified markets. Türkiye's greatest export product, hazelnuts, represents just 12% in value of its overall agricultural exports, with other nuts contributing a further 11%. Syria, while generally highly reliant on agricultural trade, also has notably diversified exports, with olive oil its most traded product making up 13% of its total agricultural trade. Other countries in the region have less diversified trade. Yemen's exports are dominated by fish, with frozen fish and cuttlefish/squid totalling more than 80% of agricultural exports to the EU. Ninety per cent of Azerbaijan's agricultural trade consists of hazelnuts, and Tajikistan's trade is dominated by trade in fruit stones and kernels (75% of total agricultural trade). Kazakhstan, the region's largest exporter, is highly reliant on exports of linseed (49% of total agricultural exports) while Kyrgyzstan exports predominantly dried kidney beans (53% of agricultural trade).

¹⁶ For further information on the indicators underlying the country RII, see Annex I.



Figure 6: Major agri-food exports to the EU and (in bold) those products whose trade with the EU has the greatest socio-economic impact



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

Hazelnuts has been one of the largest growth sectors across the region over the past decade, with a CAGR ranging from 1.6% in Türkiye, the largest hazelnut exporter, to 32% in Georgia for in-shell hazelnuts. Other notable growth sectors have been durum wheat from Kazakhstan (32% CAGR); cuttle fish and squid (24%) and frozen octopus (24%) from Yemen; walnuts from Kyrgyzstan (20%); and prepared vegetables from Jordan (25% CAGR). Agricultural exports from Syria have declined across many sectors, but there has been overall growth in exports of preserved mixed vegetables, oilseeds, olives, olive oil, spices and coffee. Among the region's larger export sectors, the greatest decline has been in trade of dried kidney beans from Kyrgyzstan (-10% CAGR) over the past decade.



Table 4: Sensitive products in Central and Western Asia

*CAGR calculated on 2017–2022.

Country	Product – HS Code	Product Regulatory Impact Indicator (RII)	Compound annual growth rate (CAGR ¹⁷) 2013*–22, 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)
Syria	Virgin olive oil – 150910	16	1.5	12.8	2,623	6,130
Yemen	Frozen saltwater fish (other) – 030379	16	2.8	43.6	2,495	10,020
Syria	Mixtures of vegetables (preserved) – 071190	15	6.7	11.6	2,865	6,429
Georgia	Hazelnuts, shelled – 080222	14	–4.8	35.5	11,008	53,727
Syria	Cumin seeds – 090930	13	–13.6	10.0	748	2,385
Yemen	Cuttle fish and squid (frozen) – 030799	11	23.8	29.8	2,259	13,661
Syria	Seeds of anise or badian – 090910	7.7	0.6	6.0	1,071	2,632
Lebanon	Animal guts, bladders and stomachs – 050400	7.5	4.7	20.4	1,099	28,911
Syria	Roasted coffee (excl. decaffeinated) – 090121	7.4	38.3	5.8	518	2,639
Syria	Animal guts, bladders and stomachs – 050400	7.1	–19.8	5.5	23	342
Georgia	Wine of fresh grapes in containers of ≤ 2 l – 220421	6.7	10.7	16.4	9,747	29,862
Kyrgyzstan	Kidney beans (dried) – 071333	6.5	–9.9	52.5	3,755	6,057
Kazakhstan	Linseed, whether or not broken – 120400	5.7	10.3	48.8	259,224	213,113
Azerbaijan	Hazelnuts, shelled – 080222	5.5	12.7	89.8	10,061	58,103
Syria	Other spices – 091099	5.3	15.1	4.2	747	1,608
Syria	Pistachios – 080250	5.2	–11.0	4.1	218	1,816
Armenia	Spirits obtained by distilling grape wine or grape marc – 220820	4.6	8.5	45.0	1,106	8,194
Lebanon	Nuts and other seeds, incl. mixtures, prepared or preserved – 200819	4.2	6.1	11.5	2,821	10,869
Georgia	Spirits obtained by distilling grape wine or grape marc – 220820	4.2	5.4	10.4	6,916	15,081
Georgia	Mineral waters and aerated waters – 220110	3.7	–0.6	9.1	15,281	9,536
Syria	Olives, prepared or preserved – 200570	3.3	26.9	2.6	917	996
Georgia	Hazelnuts, in shell – 080221	3.2	32.2	7.9	5,195	16,149
Türkiye	Hazelnuts, shelled – 080222	2.9	1.6	12.4	123,593	607,196
Yemen	Frozen crustaceans, including cooked by steaming or boiling – 030619	2.7	–8.1	7.4	89	1,264
Yemen	Octopus (frozen) – 160590	2.7	*24.2	7.3	344	2,340
Lebanon	Waters, with added sugar, sweetener or flavour – 220210	2.6	14.5	7.1	5,100	8,122
Türkiye	Nuts and other seeds, incl. mixtures, prepared or preserved – 200819	2.5	0.8	10.6	99,627	564,767
Syria	Almonds (or karité) – 080212	2.3	–1.2	1.8	121	515

¹⁷ CAGR, compound annual growth rate = $\left(\frac{\text{Volume 2022}}{\text{Volume 2013}}\right)^{\frac{1}{2022-2013}} - 1$



Syria	Fruit stones and kernels (e.g. unroasted chicory roots) – 121299	2.2	–15.5	1.7	174	683
Tajikistan	Fruit stones and kernels (e.g. unroasted chicory roots) – 121299	2.2	27.7	74.5	312	1,265
Syria	Oilseeds and oleaginous fruits (other) – 120799	2.1	7.6	1.6	379	895
Lebanon	Vegetables and mixtures of vegetables, prepared or preserved (excl. vinegar or frozen) – 200590	2.0	4.1	5.5	3,724	5,460
Lebanon	Wine of fresh grapes in containers of ≤ 2 l – 220421	2.0	6.1	5.5	1,101	7,313
Lebanon	Other nuts – 080290	2.0	–29.6	5.5	8	404
Georgia	Nuts and other seeds, incl. mixtures, prepared or preserved – 200819	1.7	9.4	4.1	1,300	6,882
Uzbekistan	Grapes (dried) – 080620	1.6	8.9	26.6	9,182	13,808
Kazakhstan	Durum wheat – 100110	1.5	31.8	13.1	126,845	68,802
Kyrgyzstan	Apples (dried) – 081330	1.5	–0.5	12.1	1,141	1,826
Kyrgyzstan	Walnuts – 080232	1.5	20.2	12.0	918	4,668
Kazakhstan	Wheat and meslin (excl. durum wheat) – 100190	1.4	10.3	11.6	215,401	103,844
Yemen	Frozen rock lobster and other sea crawfish (cooked) – 030611	1.3	19.0	3.5	40	836
Türkiye	Sea bream and sea bass (fresh, chilled) – 030269	1.2	11.5	5.1	60,282	297,975
Kazakhstan	Frozen fish fillets – 030420	1.2	–0.7	10.2	6,793	51,877
Lebanon	Roasted coffee (excl. decaffeinated) – 090121	1.2	5.6	3.2	399	3,100
Lebanon	Animal or vegetable fats and oils, not elsewhere specified – 151800	1.1	–3.1	3.1	2,896	4,435
Lebanon	Preparations for sauces and prepared sauces; mixed condiments and seasonings – 210390	1.1	14.8	3.0	1,091	3,932
Jordan	Vegetables and mixtures of vegetables, prepared or preserved (excl. vinegar or frozen) – 200590	1.1	25.1	19.4	4,087	9,934
Armenia	Cider, perry, mead and other fermented beverages and non-alcoholic beverages, not elsewhere specified. – 220600	1.02	17.1	10.0	686	1,920
Kyrgyzstan	Other beans (dried) – 071339	1.02	12.3	8.3	732	1,293
Lebanon	Shelled beans <i>Vigna</i> spp., <i>Phaseolus</i> spp., prepared or preserved – 200551	1.00	19.4	2.7	3,406	2,930

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



ANNEX I – INDICATORS PER REGION

I. Example of Regulatory Impact Indicator calculation

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

Albania

UN Economic Vulnerability Index	UN Human Assets Index adjusted (1 – HAI)	Product Export Diversification (Agri-food exports to EU27 / Total exports to EU27)	Geographic Export Diversification (Total exports to EU27 / Total exports to the World)
EVI = 15.6	1-HAI = 2.9	PED = 10.08%	GED = 82.40%

$$= [(15.6 + 2.9)/2] \times (10.08\% \times 82.40\% \times 100) = 9.25 \times 8.31 \\ = 76.8$$

II. Indicators per region

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

Eastern and Southern Europe

Table 5: Details of the agri-trade Regulatory Impact Indicator (RII) for each country in Eastern and Southern Europe

Countries	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)
Moldova	201	35	61	15.6*	2.9*
Ukraine	123	38	35	15.6*	2.9*
Serbia	78	13	65	15.6*	2.9*
Albania	77	10	82	15.6*	2.9*
Kosovo	47	15	34	15.6*	2.9*
North Macedonia	31	4	78	15.6*	2.9*
Bosnia and Herzegovina	26	4	74	15.6*	2.9*
Belarus	11	9	13	15.6*	2.9*
Montenegro	9	1	81	15.6*	2.9*

*As the UN does not publish development indicators for countries in this region, the indicators assigned to Türkiye, a geographically proximate country, are taken as a proxy.

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



Central and Western Asia

Table 6: Details of the agri-trade Regulatory Impact Indicator (RII) for each country in Central and Western Asia

Countries	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)
Syria	128	68	6	36.5	22.8
Georgia	41	18	18	24.5	1.6
Yemen	37	14	7	35.1	42.3
Lebanon	37	18	10	27.6	11.8
Türkiye	24	7	38	15.6	2.9
Kyrgyzstan	12	14	4	38.6	5.5
Kazakhstan	12	2	38	33.6	1.7
Armenia	10	4	14	35.0	5.4
Azerbaijan	6	<1	87	36.2	7.0
Uzbekistan	6	9	3	36.3	4.3
Jordan	5	8	4	26.4	9.6
Tajikistan	3	2	6	40.2	11.3
Turkmenistan	1	1	4	35.2	7.6
Iraq	0	<1	19	39.7	24.7

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



ANNEX II – OVERVIEW OF COUNTRY RII PER REGION

Table 7: Overview of country Regulatory Impact Indicator (RII) by region in decreasing order

Africa	Latin America and 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	Syria – 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	Türkiye – 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 and 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			



GROWING PEOPLE