



AGRINFO

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

A FRAMEWORK FOR
IDENTIFYING THE IMPACT OF
EU REGULATORY CHANGE

Asia

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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 producers and exporters of agri-food products 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 target information to 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 change in the EU. From the outset, one of the programme's challenges was to identify and prioritise these information needs.

While crucial to the implementation of the programme, evaluating the impact of regulations and policies on low- and middle-income countries is also central to the goal of "policy coherence for development" (PCD), a principle that is integral to the EU's decision-making process.¹ As the agricultural sector is crucial to many of the countries that the EU seeks to support, PCD 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 the process of policy coherence and complicates the development of strategies, such as accompanying measures and technical assistance, 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 Asian continent. Similar reports have been developed for the African, Latin American, and Central Europe and Middle East regions.

¹ Article 208, Treaty on the Functioning of the EU. "Union development cooperation policy shall have as its primary objective the reduction and, in the long term, the eradication of poverty. The Union shall take account of the objectives of development cooperation in the policies that it implements which are likely to affect developing countries."



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.² 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.³ The products considered as "agri-food" are those included in the Harmonised System (HS) 1–23.⁴ The products are considered at six-digit level.⁵

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

² WTO, [World Trade Report 2021 – Economic Resilience and Trade](#).

³ 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.

⁴ 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.

⁵ 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)*⁶ is a single figure derived from eight indicators⁷ that capture the overall economic profile of the country.
- The *UN Human Assets Index (HAI)*⁸ is a measure of a country's human capital, compiling six indicators⁹ 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:

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

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)¹⁰ 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.

⁶ <https://www.un.org/development/desa/dpad/least-developed-country-category/evi-indicators-ldc.html>

⁷ 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.

⁸ <https://www.un.org/development/desa/dpad/least-developed-country-category/ldc-data-retrieval.html>

⁹ 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.

¹⁰ 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. ASIA: OVERVIEW

As it has done throughout history, Asia today serves as a vital source of agri-food products. Of the 27.5 billion tonnes of agri-food products entering the EU from the Asia region, 25 tonnes originate in low- and middle-income countries. These exports have a value of approximately €45 billion. Palm oil is the largest export, representing around 21% of the total volume of agri-food goods traded, followed by oil cakes and rice (both 10%), fish and coffee (both 5%).¹¹ In value terms, palm oil is also marginally the largest export (14% of the total value of trade with the EU), with the fish sector sharing a comparable portion of overall trade. This is followed by coffee and tropical fruits/nuts (both 6%), rice (4%), preparations of fruit and vegetables, and meat preparations (both 3%).

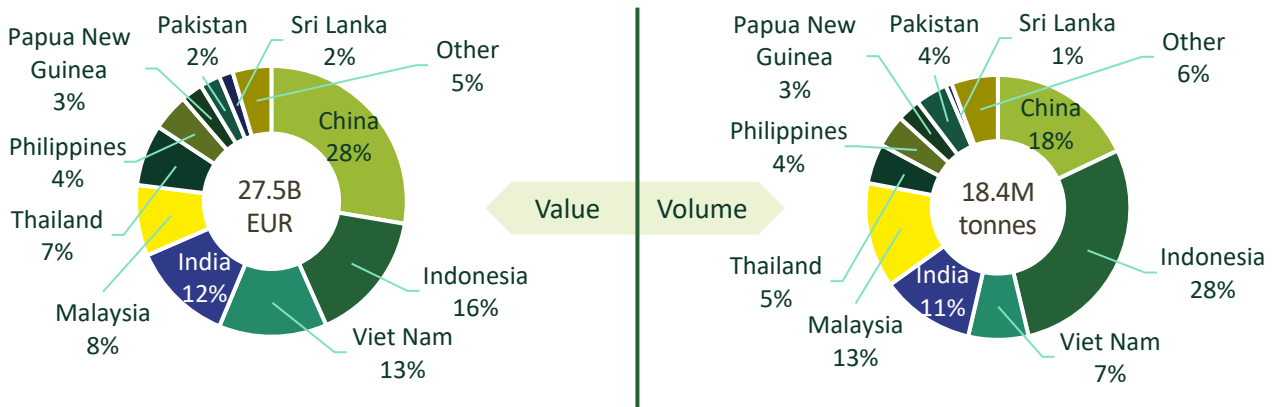
There is enormous divergence in the economic weight and trading power of countries covered in this report. In trade volume, six countries make up 82% of the total agricultural produce traded (see Figure 1). Oils and derived products are the region's largest export sector, representing 37% in terms of trade volumes and 27% of the value of exported agri-food products (see

¹¹ 20% of total agri-exports are non-food products (predominantly fatty acids and waxes) not covered in this report.



Table 1). The four largest export sectors – Indonesian palm oil (€1.9 billion), Vietnamese coffee (€1.5 billion), Malaysian palm oil and Philippines coconut oil (both €1 billion) – together total 23% of all export value of agri-food trade from the region’s low- and middle-income countries.

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



Source: COLEAD based on Eurostat



Table 1: Top 10 sectors exported from Asia to EU27 in agri-food, representing 88% in volume and 77% 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 (%)
15 – Animal or vegetable fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes	6,942,658	37	9,488,365	27.4
23 – Residues and waste from the food industry; prepared animal fodder	2,417,973	13	1,853,729	5.4
10 – Cereals	2,064,023	11	1,563,092	4.5
09 – Coffee, tea, maté and spices	1,306,592	7	3,727,574	10.8
20 – Preparations of vegetables, fruit, nuts or other parts of plants	902,632	5	1,600,893	4.6
17 – Sugars and sugar confectionery	901,675	5	424,482	1.2
03 – Fish and crustaceans, molluscs and other aquatic invertebrates	707,507	4	4,125,446	12
08 – Edible fruit and nuts; peel of citrus fruits or melons	531,634	3	1,957,702	5.7
22 – Beverages, spirits and vinegar	496,490	3	583,498	1.7
21 – Miscellaneous edible preparations	453,379	2	1,438,600	4.2

But this overall picture of trade with Asia hides a number of significant trade flows which, while relatively unimpressive in terms of total volume and value, have extremely important economic and social significance for the countries concerned. This report highlights a number of countries and sectors that, due to their overall development needs and critical dependence on agri-food trade with the EU, may be particularly sensitive to changes in EU regulations and therefore in need of information, and potentially further technical assistance and support.

The most sensitive countries in Asia from this perspective are the island nations Fiji, the Maldives, the Solomon Islands and Papua New Guinea. These countries have an exceptionally high reliance on agricultural exports (>75% of all goods trade with the EU made up of agri-food products), together with high development needs that make them potentially sensitive to regulatory changes that could impact their ability to export to the EU. Beyond these island countries, Pakistan, although representing only 2% of the region's trade volume with the EU, is identified as a particularly sensitive country. This reflects its relatively high development needs and overall reliance on the EU goods market (equivalent to 22% of its global exports).



The 15 countries in Asia most likely to be affected by changes to EU regulations

<i>Country</i>	<i>RII¹²</i>
Maldives	579
Solomon Islands	473
Papua New Guinea	239
Pakistan	83
Fiji	60
Iran	58
Sri Lanka	54
Afghanistan	39
Timor-Leste	37
Indonesia	33
Myanmar	32
Philippines	25
India	24
Viet Nam	20
Laos	19

Fish exports are generally essential to the region's island countries, although raw cane sugar is Fiji's most significant export sector. Palm oil is also a crucial export for Papua New Guinea and the Solomon Islands. Coffee is another product identified as particularly important to both Timor-Leste and Papua New Guinea, although together they make up less than 1% of the total quantity of coffee currently imported into the EU. Rice is also a particularly sensitive product across the region, and for Pakistan and Myanmar is identified as one of the 20 most sensitive products (see Figure 2). Iranian pistachios and undenatured ethyl alcohol (for both food and non-food applications) are also identified as products of particular importance from a trade and development perspective.

Agricultural trade from the Pacific is characterised by limited trade diversification, that is a high reliance on single products, such as tuna in the Solomon Islands (totalling 71% of all agricultural trade), cane sugar from Fiji (72%), Samoan fruit/vegetable juice (60%) and coconut oil from Kiribati (61%). Such concentration of trade is generally less pronounced in the other Asian sub-regions, although there are significant exceptions such as coffee from Timor-Leste (99%), Bangladeshi shrimps (88%) and Mongolian animal intestines (72%).

In total, 26 products that may be particularly affected by EU regulatory changes (taking as a reference point those with a product RII >10) are identified throughout Asia and highlighted in the regional maps presented in this report. Table 2 provides an overview of those products. To provide 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 this report are those developed by the [United Nations Statistics Division](#).

¹² For further information on the indicators underlying the country RII, see Annex I.



Table 2: Overview of all sensitive products¹³ in Asia with RII >10, HS Chapter, and countries concerned

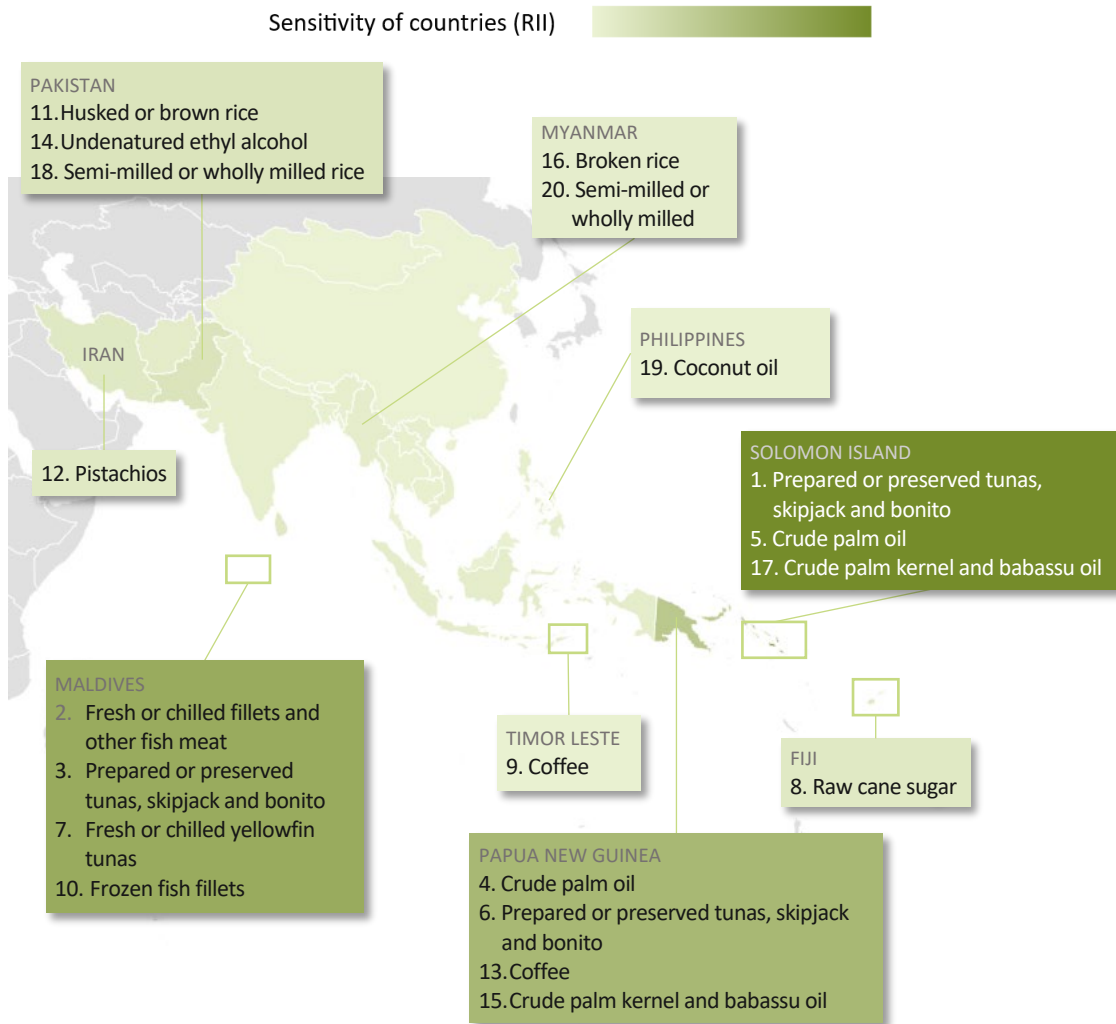
HS Chapter	Product	Countries
03 Fish and crustaceans, molluscs and other aquatic invertebrates	Fresh or chilled yellowfin tunas <i>Thunnus albacares</i>	Maldives
	Frozen yellowfin tunas <i>Thunnus albacares</i>	Solomon Islands
	Fresh or chilled fillets and other fish meat	Maldives, Sri Lanka
	Frozen fish fillets	Maldives
	Frozen shrimps/prawns	Bangladesh
08 Fruit and nuts	Pistachios	Iran
	Grapes (dried)	Afghanistan
09 Coffee, tea, maté and spices	Coffee (excl. roasted and decaffeinated)	Papua New Guinea, Timor-Leste
10 Cereals	Husked or brown rice	Pakistan
	Semi-milled or wholly milled rice	Cambodia, Myanmar, Pakistan
	Broken rice	Myanmar
15 Animal or vegetable fats and oils and their cleavage products; prepared animal fats; animal or vegetable waxes	Crude palm oil	Papua New Guinea, Solomon Islands
	Palm oil and its fractions, whether or not refined	Indonesia
	Crude coconut oil	Philippines
	Crude palm kernel and babassu oil	Papua New Guinea, Solomon Islands
16 Meat, fish or crustaceans, molluscs or other aquatic invertebrates; preparations thereof	Prepared or preserved tunas, skipjack and bonito	Maldives, Papua New Guinea
17 Sugars and sugar confectionery	Raw cane sugar (excl. added flavouring or colouring)	Fiji
22 Beverages, spirits and vinegar	Undenatured ethyl alcohol	Pakistan

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 significant for the countries concerned. The cut-off points used to determine sensitive products (product RII >10 or >1) in the regional maps or tables below are arbitrary ones used for comparison. Stimulating trade diversification across multiple sectors (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 for reflecting on agri-food trade from low- and middle-income countries, and as a reminder of who may most be affected by the EU's regulatory work.

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



Figure 2: The 20 agri-food products across Asia whose trade with the EU may be most sensitive to EU regulatory changes (those with the highest product RII)



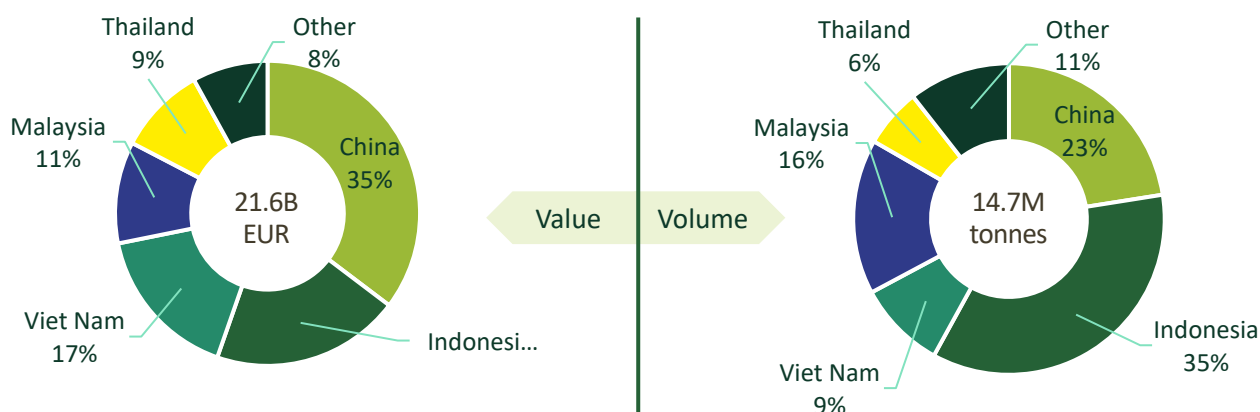
Source: COLEAD based on Eurostat, CEPII BACI, IFPRI and UK Trade Data, and the United Nations. See section 2 for more details.



3.1. Eastern and South-eastern Asia

In Eastern and South-eastern Asia, Indonesia is the largest agri-food exporter, with 35% of the total volume of trade from the region, followed by China and Malaysia (see Figure 3). China, whose agri-food trade is characterised by a high proportion of processed added value products (dominated by exports of fatty acids) is the most significant trading partner in terms of value, exporting the equivalent of 35% of the region’s agri-food trade. However, due to its relatively advanced development status and limited reliance on agri-food trade with the EU, none of China’s products is identified as sensitive according to the RIA methodology. The largest of Asia’s commodity exports identified as sensitive in terms of value are Indonesia’s trade in palm oil and Vietnam’s coffee, both exceeding €1.4 billion in value.

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



Source: COLEAD based on Eurostat

The country in Eastern and South-eastern Asia most likely to be affected by changes in EU food regulations is Timor-Leste, due to significantly higher development needs compared with neighbouring countries in the region. Timor-Leste is not highly dependent on the EU market (only 1% of total goods trade is destined for the EU), but agricultural products make up 88% of that trade. Indonesia is considerably less vulnerable with reference to development indicators, but is more dependent on the EU market (which receives 7% of the country’s total goods exports). Twenty-four per cent of Indonesia’s trade with the EU is in agri-food products. For a number of countries, trade with the EU in agri-food products has comparable importance. Four countries – Malaysia, Myanmar, Thailand and Vietnam – have a similar overall dependence on the EU market, the portion of goods destined for the EU ranging from 7 to 15%, and agricultural products making up between 9 and 14% of those exports. Among those countries, Myanmar is notably more vulnerable to regulatory change due to its relatively high development needs. No single-sector exports from China or North Korea are significant enough to feature on the list of sensitive products below.



Relative sensitivity of countries to changes in EU regulations

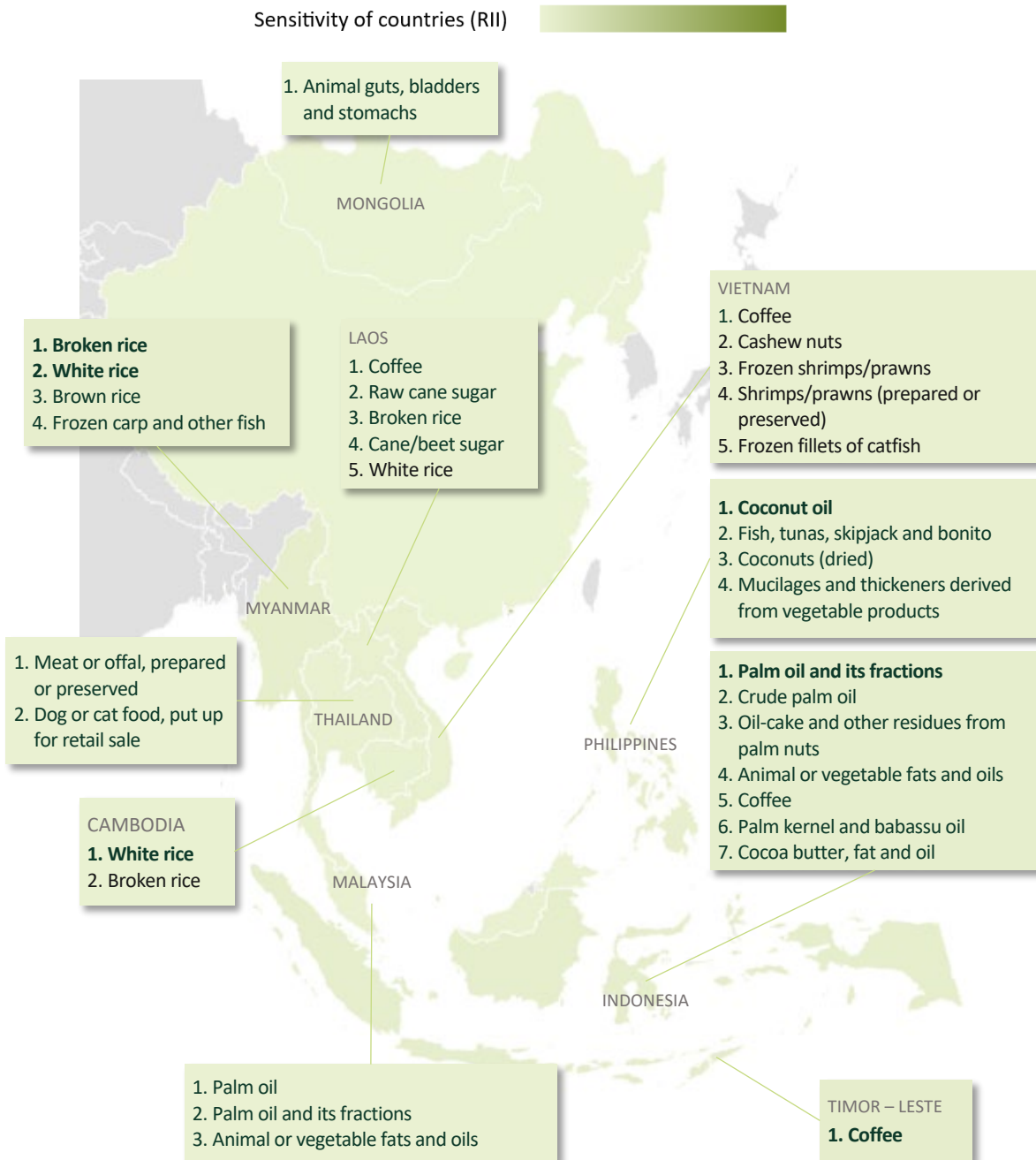
<i>Country</i>	<i>RII¹⁴</i>
Timor-Leste	37
Indonesia	33
Myanmar	32
Philippines	25
Viet Nam	20
Laos	19
Cambodia	16
Thailand	11
Malaysia	10
China	3
Mongolia	3
Korea (North)	0

An overview of the region's products potentially most sensitive to EU regulatory changes is provided in Figure 4, with the most sensitive products (product RII >10) highlighted in bold. Timor-Leste's exports almost entirely consist of coffee (>99% of total agricultural exports to the EU). This trade, which is of minimal importance in the context of the overall EU coffee trade, representing approximately 0.05% of all coffee imported into the EU, comprises almost 100% of Timor-Leste's total global goods exports. Other countries are similarly dependent on single exports: Cambodia and Myanmar's trade in rice products represents 83 and 84%, respectively, of their agricultural trade with the EU, while 72% of Mongolia's trade consists of animal intestines, and the Philippines trade in coconut products also exceeds 60% of its overall agricultural exports. Like Timor-Leste and Vietnam, Laos's major export is coffee, totalling 48% of its agricultural trade with the EU. Indonesia's, Malaysia's and Thailand's trade in agricultural products is relatively diversified, with no single product exceeding 35% of total exports. Thailand is notable in this respect with its largest export, chicken meat, representing only 12% of its agricultural trade.

¹⁴ For further information on the indicators underlying the country RII, see Annex I.



Figure 4: Major agri-food exports to the EU and (in bold, RII >10) those products 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.

Across the region, the most notable growth over the past decade has been Myanmar’s exports of rice products (white, brown and broken rice), with a compound annual growth rate (CAGR) of 32% (broken), 109% (brown) and 46% (white). Coffee exports have declined in the same period in most countries, most significantly in Timor-Leste (CAGR –7%), with exports from Vietnam remaining stable. Exports of crude palm oil have decreased significantly from both Indonesia (CAGR –20%) and Malaysia (–9%), although exports of palm oil derivatives have expanded in both countries. Vietnamese cashew nuts is another sector with notable growth over the past decade (CAGR 13%).



Table 3 ranks the region's most sensitive agri-food products¹⁵ according to the product RII (including all products with RII >1). It includes information on the value and volume of those exports, and the CAGR.

Table 3: Sensitive products in Eastern and South-eastern Asia

* CAGR calculated on 2019–2022.

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)
Timor-Leste	Coffee (excl. roasted and decaffeinated) – 090111	37	–6.9	99.6	1,505	6,072
Myanmar	Broken rice – 100640	14	31.5	45.1	431,782	175,549
Philippines	Crude coconut oil – 151311	13	1.6	53.3	573,915	969,102
Myanmar	Semi-milled or wholly milled rice – 100630	12	45.5	39.2	338,478	188,509
Indonesia	Palm oil and its fractions, whether or not refined – 151190	12	6.8	35.3	1,578,368	1,897,598
Cambodia	Semi-milled or wholly milled rice – 100630	12	–0.4	73.6	189,670	174,582
Laos	Coffee (excl. roasted and decaffeinated) – 090111	9.1	–5.2	47.6	8,434	33,172
Viet Nam	Coffee (excl. roasted and decaffeinated) – 090111	6.0	0.4	30.5	648,154	1,494,199
Indonesia	Crude palm oil – 151110	5.5	–19.5	16.4	306,643	371,500
Viet Nam	Cashew nuts – 080132	4.0	12.6	20.1	115,126	751,742
Laos	Raw cane sugar (excl. added flavouring or colouring) – 170111	3.8	–18.3	20.2	1,328	1,308
Philippines	Fish, whole or in pieces (tunas, skipjack and bonito (<i>Sarda</i> spp.)) – 160414	3.4	5.2	13.5	36,069	180,422
Malaysia	Crude palm oil – 151110	3.3	–8.8	31.9	603,126	740,744
Malaysia	Palm oil and its fractions, whether or not refined – 151190	3.0	3.7	28.4	679,892	965,172
Mongolia	Animal guts, bladders and stomachs – 050400	2.2	1.5	71.6	474	11,284
Indonesia	Oil-cake and other solid residues, from palm nuts or kernels – 230660	2.0	–0.8	5.8	1,404,637	326,896
Indonesia	Animal or vegetable fats and oils – 151800	1.9	4.8	5.8	247,171	286,226
Philippines	Coconuts (dried) – 080111	1.8	2.4	7.3	42,118	117,814
Laos	Broken rice – 100640	1.7	42.8	8.7	7,574	6,514
Viet Nam	Frozen shrimps/prawns – 030613	1.6	7.5	8.3	36,775	374,827
Cambodia	Broken rice – 100640	1.5	4.7	9.5	29,539	21,286
Myanmar	Husked or brown rice – 100620	1.5	109.0	4.6	34,516	15,596
Indonesia	Coffee (excl. roasted and decaffeinated) – 090111	1.4	–3.2	4.3	104,579	262,829
Laos	Cane/beet sugar and sucrose – 170199	1.4	–40.6*	7.4	100	114
Thailand	Meat or offal, prepared or preserved – 160232	1.3	2.4	12.4	82,060	365,950
Thailand	Dog or cat food, put up for retail sale – 230910 ¹⁶	1.3	9.2	12.4	63,556	327,989
Malaysia	Animal or vegetable fats and oils, not elsewhere specified – 151800	1.3	37.6	12.6	278,898	343,059

¹⁵ HS Chapters 1–23.

¹⁶ Although not a food product, included here as falling within HS Chapters 1–23.



Philippines	Mucilages and thickeners derived from vegetable products – 130239	1.3	2.3	5.2	8,444	89,975
Myanmar	Frozen carp and other fish – 030379	1.3	9.6	4.0	4,558	12,924
Viet Nam	Shrimps/prawns (prepared or preserved) – 160520	1.1	11.7	5.5	27,661	266,234
Viet Nam	Frozen fillets of catfish – 030420	1.0	-7.7	5.3	64,125	265,220
Indonesia	Palm kernel and babassu oil and their fractions (excl. crude) – 151329	1.0	-5.3	3.1	105,919	209,319
Laos	Semi-milled or wholly milled rice – 100630	1.0	-11.0	5.4	762	795
Indonesia	Cocoa butter, fat and oil – 180400	1.0	8.2	3.0	29,037	115,711

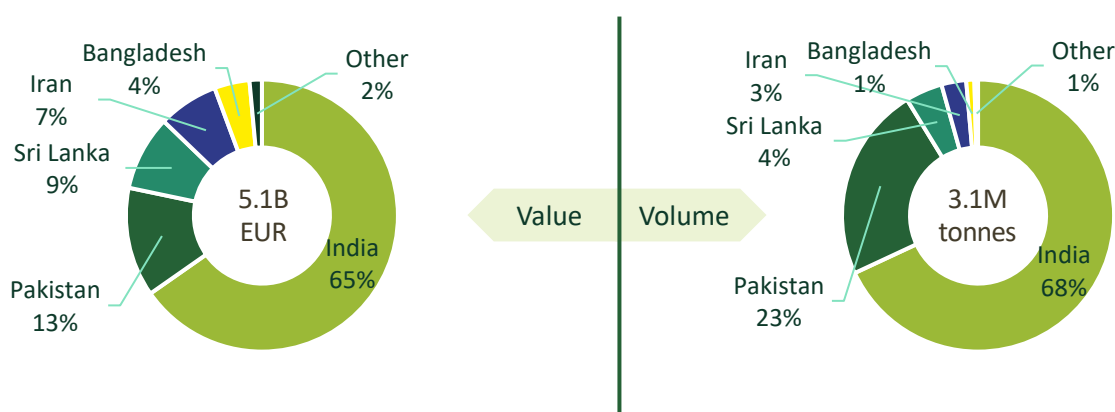
Source: COLEAD based on Eurostat, CEPPI BACI, IFPRI and UK Trade Data, and the United Nations. See section 2 for more details.



3.2. Southern Asia

In terms of both trade volume and trade value, India plays a dominant role in agri-food trade with the EU, constituting 65% (in value) and 68% (in volume) of exports from Southern Asia. Pakistan is also a significant exporter in terms of volume (23% of southern Asian trade with the EU). However, in terms of value, relatively lucrative exports from Iranian (pistachios and saffron) and Sri Lanka (fish, food preparations and tea), compared with Pakistan’s main export (rice), provide these two countries with a more significant share of overall trade (see Figure 5).

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



Source: COLEAD based on Eurostat

Due to its extremely high dependence on agricultural exports (98% of total exports are to the EU) and its high economic vulnerability, the Maldives stands out as the country within Southern Asia most likely to be sensitive to changes in EU regulations. Second to the Maldives in the region is Pakistan, reflecting its relatively high development needs as identified by UN indicators, and its overall reliance on the EU goods market (equivalent to 22% of its global exports). Both Iran and Sri Lanka are relatively sensitive to EU regulatory change, with Iran more reliant upon agricultural trade (41 % of total goods trade compared to Sri Lanka’s 18%). Bangladesh and Bhutan are the countries in the region least dependent on agricultural exports, representing only 1% of their total goods exports .

Relative sensitivity of countries to changes in EU regulations

Country	RII ¹⁷
Maldives	579
Pakistan	83
Iran	58
Sri Lanka	54
Afghanistan	39
India	24
Bangladesh	14
Nepal	6
Bhutan	1

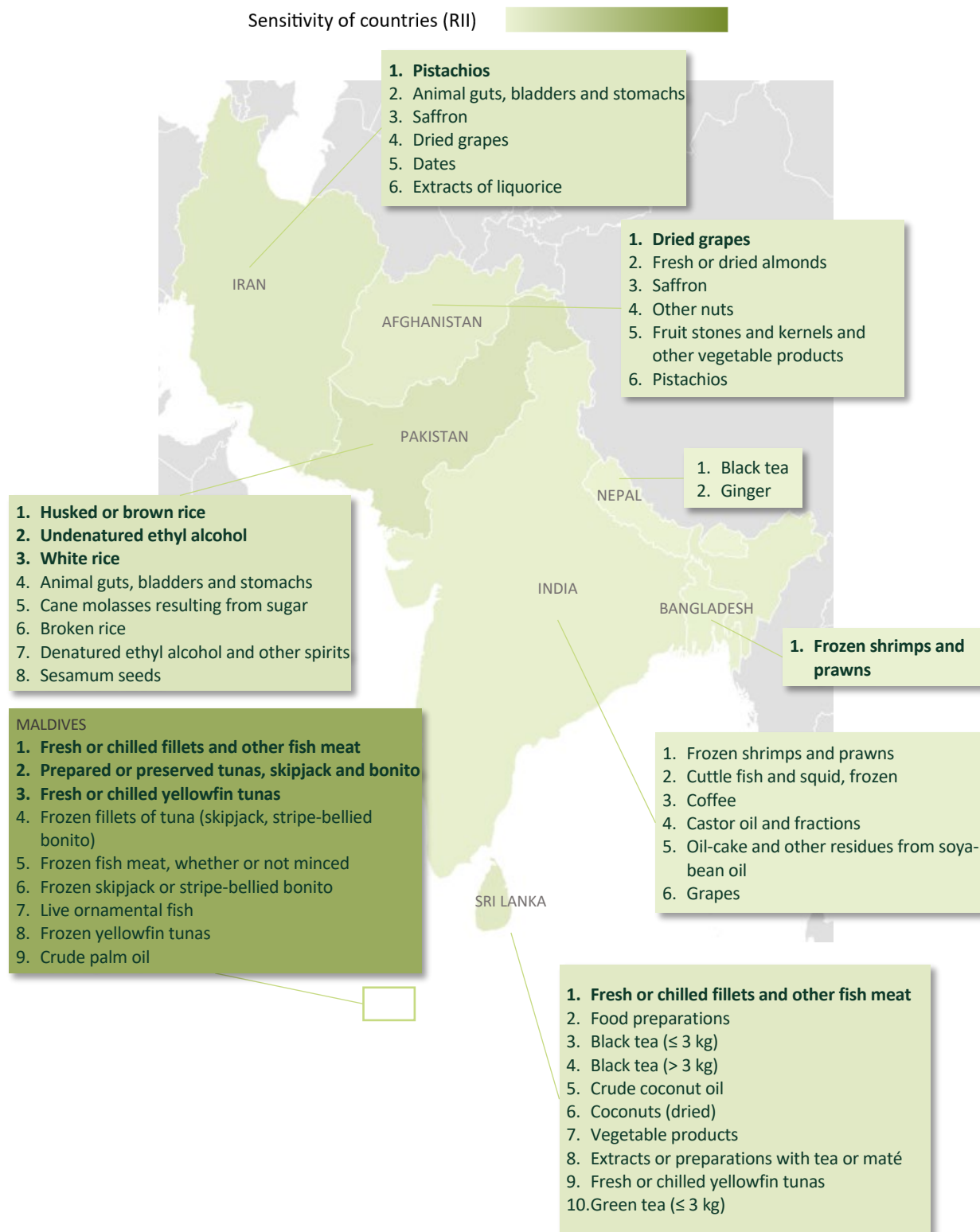
¹⁷ For further information on the indicators underlying the country RII, see Annex I.



An overview of the region's products potentially most sensitive to EU regulatory changes is provided in Figure 6, with the most sensitive products (product RII >-10) highlighted in bold. As a result of its overall sensitivity, the Maldives' various fish sector exports dominate the list of products potentially sensitive to EU rule changes, with palm oil the only non-fish product featuring (see Table 4). Generally speaking, agricultural exports are diverse in many Southern Asian countries, with single products generally totalling less than 50% of all agricultural trade. For example, Afghanistan's most prominent export product, dried grapes, totals 26% of the country's agri-food exports, whereas Sri Lanka's largest export, fresh/chilled fish, is only 19%. The notable exception is Bangladesh, whose shrimp exports make up 88% of its total agricultural exports. Shrimps are also the largest export product of India, representing 13%. Nuts are another significant export sector for the region: pistachios are Iran's largest export product (45% of total agri-food exports) and different sorts of nuts – almonds, pistachios and other nuts – in total make up 30% of Afghanistan's agricultural exports. Saffron is another notable regional export, especially for Iran (11% of its exports) and Afghanistan (12%).



Figure 6: Major agri-food exports to the EU and (in bold, RII >-10) those products 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.



Pakistan has seen significant growth in its major agricultural exports over the past decade: a 22% average CAGR in rice exports, and a 17% increase in trade of undenatured ethyl alcohol (for use in food and medicines). Afghanistan has also seen increases in trade of most products except pistachios, ranging from a 1.2% CAGR in exports of saffron to a 27% growth in almond trade with the EU, and 34% increase in other nuts. Sri Lankan agricultural exports have also generally been expanding, most notably exports of food preparations (including flavoured lactose syrup, compound alcoholic preparations) (29% CAGR) and coconut oil (30%). Indian exports have also increased, particularly in cuttlefish and squid, and in grapes. By contrast, Iran and Bangladesh have seen declines in their largest exports, Iranian pistachios exports decreasing by –5% CAGR, and Bangladeshi frozen shrimp exports declining by –4% CAGR. The Maldives has seen a long-term decline in exports of yellowfin tunas, skipjack and other fillets of fish, but an increase of 10% CAGR in trade of whole and pieces of fish, and 37% for frozen yellowfin tunas.

Table 4 ranks the region’s most sensitive agri-food products¹⁸ according to the product RII (including all products with RII >1). It includes information on the value and volume of those exports, and the CAGR.

Table 4: Sensitive products in Southern Asia

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

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)
Maldives	Fresh or chilled fillets and other fish meat – 030410	309	–4.4	53.4	1,757	28,085
Maldives	Fish, whole or in pieces (tunas, skipjack and bonito (<i>Sarda</i> spp.)) – 160414	165	9.6	28.6	3,791	16,744
Maldives	Fresh or chilled yellowfin tunas <i>Thunnus albacares</i> – 030232	56	–14.7	9.7	458	5,301
Maldives	Frozen fillets of tuna (skipjack, stripe-bellied bonito) – 030420	27	–8.3	4.7	24	168
Pakistan	Husked or brown rice – 100620	27	18.7	32.1	267,231	247,865
Iran	Pistachios – 080250	26	–5.3	44.8	9,909	110,841
Pakistan	Undenatured ethyl alcohol – 220710	25	16.7	29.8	370,759	386,056
Pakistan	Semi-milled or wholly milled rice – 100630	14	16.1	16.5	107,857	135,396
Bangladesh	Frozen shrimps/prawns – 030613	12	–4.1	87.7	18,703	223,595
Sri Lanka	Fresh or chilled fillets and other fish meat (species not specified) – 030410	11	1.6	19.3	5,100	93,965
Afghanistan	Grapes (dried) – 080620	10	10.5	26.2	2,407	3,783
Sri Lanka	Food preparations ¹⁹ – 210690	9.8	29.3	18.1	44,269	98,123
Iran	Animal guts, bladders and stomachs – 050400	8.0	5.1	13.9	2,324	69,104
Sri Lanka	Black fermented and partly fermented tea (≤ 3 kg) – 090230	8.0	0.5	14.7	11,071	79,078
Maldives	Frozen fish meat, whether or not minced – 030490	6.5	53.3*	1.1	148	573
Iran	Saffron – 091020	6.3	3.1	11.0	61	56,265

¹⁸ HS Chapters 1–23.

¹⁹ These include flavored lactose syrup, compound alcoholic preparations used for beverages, and other food preparations not included elsewhere in the customs nomenclature.



Maldives	Frozen skipjack or stripe-bellied bonito – 030343	6.2	33.8	1.1	384	628
Afghanistan	Almonds (or Karité) – 080212	5.9	27.4	15.1	742	3,785
Afghanistan	Saffron – 091020	4.7	1.2	12.1	4	2,613
Afghanistan	Other nuts – 080290	4.5	33.5	11.5	59	1,048
Iran	Grapes (dried) – 080620	4.3	-11.1	7.4	11,457	18,081
Afghanistan	Fruit stones and kernels (e.g. unroasted chicory roots) – 121299	3.8	2.5	9.9	193	733
Sri Lanka	Black fermented tea and partly fermented tea, > 3 kg – 090240	3.8	-1.5	7.0	7,912	39,844
Afghanistan	Animal guts, bladders and stomachs – 050400	3.8	8.8	9.7	–	–
Maldives	Live ornamental fish – 030110 ²⁰	3.1	4.0	0.5	6	336
India	Frozen shrimps/prawns – 030613	3.0	1.7	12.7	75,368	585,074
Pakistan	Animal guts, bladders and stomachs – 050400	2.9	1.5	3.5	1,044	35,988
Sri Lanka	Crude coconut oil – 151311	2.7	29.9	4.9	6,459	24,204
Iran	Dates – 080410	2.6	2.8	4.5	10,557	16,390
India	Cuttle fish and squid, frozen – 030799	2.4	10.7	10.0	77,685	469,615
Maldives	Frozen yellowfin tunas <i>Thunnus albacares</i> – 030342	2.4	37.1	0.4	100	209
Sri Lanka	Coconuts (dried) – 080111	2.2	4.4	4.1	8,695	21,603
Sri Lanka	Vegetable products – 140490	2.1	-1.2	4.0	19,783	17,818
India	Coffee (excl. roasted and decaffeinated) – 090111	2.1	1.8	8.6	151,502	412,755
Sri Lanka	Extracts or preparations with a basis of tea or maté – 210120	2.0	3.5	3.7	2,447	18,214
Sri Lanka	Fresh or chilled yellowfin tunas <i>Thunnus albacares</i> – 030232	2.0	10.7	3.6	1,250	19,665
Iran	Extracts of liquorice – 130212	2.0	-1.5	3.4	2,855	11,907
Pakistan	Cane molasses resulting from the extraction or refining of sugar – 170310	1.7	-2.4	2.1	158,234	36,922
India	Castor oil and fractions – 151530	1.7	-0.2	7.1	148,293	285,356
Pakistan	Broken rice – 100640	1.6	31.2	2.0	25,007	15,581
Maldives	Crude palm oil – 151110	1.6	-100**	0.3	–	–
Pakistan	Denatured ethyl alcohol and other spirits of any strength – 220720	1.6	12.4	1.9	22,831	22,728
Afghanistan	Pistachios – 080250	1.6	-5.6	4.1	53	588
Nepal	Black fermented tea and partly fermented tea, > 3 kg – 090240	1.4	-1.8	22.4	91	1,121
Pakistan	Sesamum seeds – 120740	1.4	6.1	1.7	7,045	15,033
India	Oil-cake and other solid residues resulting from the extraction of soya-bean oil – 230400	1.3	-6.2	5.3	243,061	165,714
Sri Lanka	Green tea (≤ 3 kg) – 090210	1.2	0.3	2.3	622	11,385
Nepal	Ginger – 091010	1.1	130**	16.8	247	1,195
India	Grapes – 080610	1.05	8.1	4.4	88,104	158,582

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

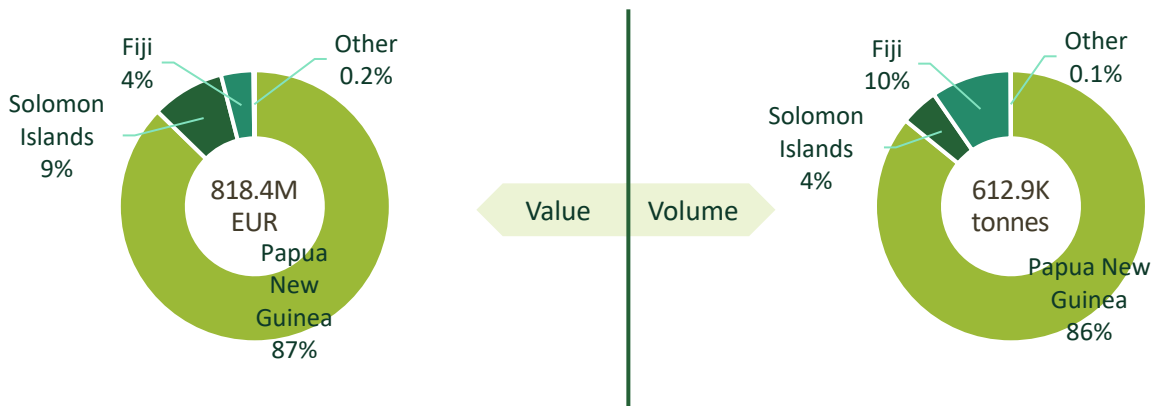
²⁰ Although not a food product, included here as falling within HS Chapters 1–23.



3.3. Pacific Islands: Micronesia, Polynesia and Melanesia

Of the Pacific island countries, Papua New Guinea is the major exporter of agri-food products, contributing 87% of the €818 million trade with the EU. The Solomon Islands' relatively high-value fish exports contribute to the country's 9% of agri-food trade exports in value terms, with Fiji the only other major exporter among the Pacific Islands (see Figure 7).

Figure 4: Distribution of agri-food exports from Micronesia, Polynesia and Melanesia to EU27 for 2020–2022, in value (left) and volume (right)



Source: COLEAD based on Eurostat

All three island countries are potentially highly sensitive to changes in the EU food regulations according to the RIA methodology. In its trade with the EU, the Solomon Islands is entirely reliant on agricultural trade, with the agri-food sector making up 100% of its total goods exports to the EU. The European market represents 13% of its total goods exports, so it is the Pacific country most likely to be affected by changes in EU rules. Fiji and Papua New Guinea are also both highly reliant on agricultural trade, with agricultural exports totalling between 75 and 80% of all goods exports.

However, due to its high reliance on the EU market (8% of all goods destined for the EU, compared with Fiji's 3%) and its more pronounced development needs, Papua New Guinea is identified being more vulnerable to EU regulatory changes. Some other countries in the region, including the Marshall Islands and Wallis and Futuna, are reliant on the European market for trade in goods, but are not active in agricultural trade. Many Pacific countries are characterised by high levels of economic vulnerability, and therefore are potential beneficiaries of growth in agricultural trade. However, in the light of *current* trade patterns, these countries are unlikely to be significantly sensitive to changes to EU rules. Due to the very limited trade in agricultural products, no products from six Pacific countries – Micronesia (Federated States of), Nauru, Niue, Palau, Tuvalu, and Wallis and Futuna – feature on the sensitive countries list below.



Relative sensitivity of countries to changes in EU regulations

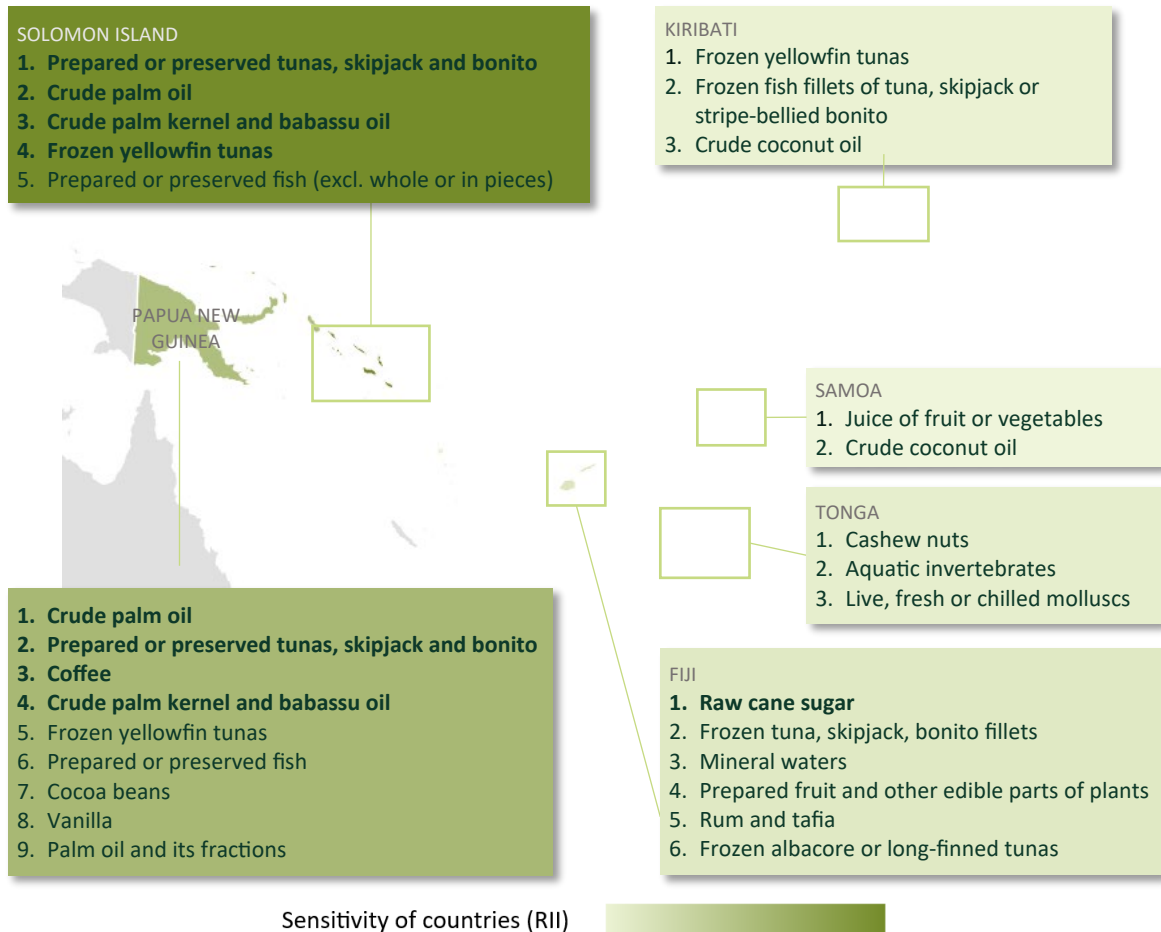
<i>Country</i>	<i>RII²¹</i>
Solomon Islands	473
Papua New Guinea	239
Fiji	60
Tonga	10
Kiribati	8
Vanuatu	6
Samoa	5
Tokelau	1
Marshall Islands	1
Micronesia (Federated States of)	0
Nauru	0
Niue	0
Palau	0
Tuvalu	0
Wallis and Futuna	0

An overview of the region's products potentially most sensitive to EU regulatory changes is provided in Figure 8, with the most sensitive products (product RII >10) highlighted in bold. The Solomon Islands and Fiji are dominated by exports of single products: 71% of Solomon Islands agri-food exports comprises prepared or preserved tuna, skipjack and bonito, while raw cane sugar make up 72% of Fiji's agricultural exports. By contrast, Papua New Guinea's largest export, palm oil, makes up only 48% of agricultural exports, and is accompanied by strong trade in fish, coffee and palm oil. Palm oil is also a significant export for the Solomon Islands, and five of the 10 agri-food exports identified as most significant in the region fall within the scope of the European Deforestation Regulation 2023/1115, suggesting that this new legislation may be particularly significant for the Pacific island countries. For example, more than 65% of Papua New Guinea's palm oil exports is destined for the EU, representing approximately 3% of the country's total goods exports. For other Pacific countries, single products are identified as vulnerable to changing food rules: cashew nuts from Tonga, frozen tunas and other fish fillets from Kiribati, and fruit/vegetable juice from Samoa.

²¹ For further information on the indicators underlying the country RII, see Annex.



Figure 8: Major agri-food exports to the EU and (in bold, RII >10) those products 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.

Across the region, the growth in trade has largely been in the export of fish, with growth ranging from 6.5% CAGR in prepared or preserved tuna exports from Papua New Guinea to 60% CAGR (since 2017) in frozen tuna from the Solomon Islands. Exports of palm oil from Papua New Guinea have grown marginally over the same period, but palm oil exports from the Solomon Islands have declined by comparable amounts. Fiji's cane sugar exports have increased by 9% CAGR since 2013.



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

Table 5: Sensitive products in Micronesia, Polynesia and Melanesia

*CAGR calculated on 2015–2022. **CAGR calculated on 2017–2022

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)
Solomon Islands	Prepared or preserved tunas, skipjack and Atlantic bonito, whole or in pieces (excl. minced) – 160414	337	7.1	71.3	8,647	56,319
Papua New Guinea	Crude palm oil – 151110	114	0.1	47.6	328,196	403,520
Solomon Islands	Crude palm oil – 151110	102	–6.2	21.5	14,037	18,305
Papua New Guinea	Prepared or preserved tunas, skipjack and bonito, whole or in pieces (excl. minced) – 160414	66	6.5	27.7	46,416	229,593
Fiji	Raw cane sugar (excl. added flavouring or colouring) – 170111	43	8.6	72.0	71,242	34,875
Papua New Guinea	Coffee (excl. roasted and decaffeinated) – 090111	25	3.3	10.5	21,727	115,289
Papua New Guinea	Crude palm kernel and babassu oil – 151321	24	2.6	10.0	60,196	101,679
Solomon Islands	Crude palm kernel and babassu oil – 151321	14	–2.6	2.9	1,201	2,197
Solomon Islands	Frozen yellowfin tunas <i>Thunnus albacares</i> – 030342	12	59.7**	3.9	2,278	5,468
Fiji	Frozen fillets of tuna, skipjack or stripe-bellied bonito – 030420	8.2	23.4	13.7	399	3,954
Solomon Islands	Prepared or preserved fish (excl. whole or in pieces) – 160420	7.3	14.3*	1.6	815	2,406
Tonga	Cashew nuts – 080132	5.4	Not enough trade recorded to calculate growth	52.5	17	105
Vanuatu	Plants, parts of plants used in perfumes or pharmacy – 121190 ²²	4.3	–17.6	67.6	2	612
Kiribati	Frozen yellowfin tunas <i>Thunnus albacares</i> – 030342	3.7	Not enough trade recorded to calculate growth	45.2	No trade recorded in 2022	No trade recorded in 2022
Tonga	Aquatic invertebrates (excl. crustaceans, molluscs, sea cucumbers, sea urchins and jellyfish) – 160590 ²³	3.6	19.3**	34.6	1	14
Samoa	Juice of fruit or vegetables, unfermented (excl. containing spirit, mixtures, citrus, pineapples, tomatoes, grapes) – 200980	3.3	–2.1	60.1	72	147
Papua New Guinea	Frozen yellowfin tunas <i>Thunnus albacares</i> – 030342	3.0	–0.2	1.3	4,381	12,210
Kiribati	Frozen fillets of tuna, skipjack or stripe-bellied bonito – 030420	2.6	Not enough trade recorded to calculate growth	32.2	5	58
Fiji	Mineral waters and aerated waters – 220110	2.2	74.7*	3.7	1,560	1,701
Papua New Guinea	Prepared or preserved fish (excl. minced) – 160420	2.0	18.2	0.8	2,272	8,312

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

²³ Although not a food product, included here as falling within HS Chapters 1–23.



Fiji	Fruit and other edible parts of plants, prepared or preserved – 200899	1.9	2.9	3.2	434	1,641
Papua New Guinea	Cocoa beans, whole or broken, raw or roasted – 180100	1.7	-13.2	0.7	1,523	3,776
Papua New Guinea	Vanilla – 090500	1.7	101	0.7	59	6,359
Kiribati	Crude coconut oil – 151311	1.7	Not enough trade recorded to calculate growth	20.4	No trade recorded in 2022	No trade recorded in 2022
Fiji	Rum and tafia – 220840	1.6	194*	2.7	150	1,331
Samoa	Crude coconut oil – 151311	1.4	132**	25.5	16	37
Fiji	Frozen albacore or long-finned tunas <i>Thunnus alalunga</i> – 030341	1.3	-3.5	2.2	272	1,058
Papua New Guinea	Palm oil and its fractions, whether or not refined – 151190	1.2	-57.0	0.5	8	13
Tonga	Live, fresh or chilled molluscs – 030791	1.2	-100*	11.3	No trade recorded in 2022	No trade recorded in 2022

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 (RII) calculation

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

=

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

Cambodia

UN Economic
Vulnerability Index

EVI = 30.6

UN Human Assets Index
adjusted (1 – HAI)

1 – HAI = 25.7

Product Export
Diversification

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

PED = 0.04

Geographic Export
Diversification

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

GED = 0.14

$$= (30.6 + 25.7)/2 \times (0.04 \times 0.14 \times 100) = 28.15 \times 0.56$$

$$= 15.7$$

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 South-eastern Asia

Table 6: Details of the agri-trade Regulatory Impact Indicator (RII) for each country in Eastern and south-eastern 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)
Cambodia	16	4	14	30.6	25.7
China	3	2	15	22.8	4.3
Indonesia	33	24	7	21.7	16.7
Korea (North)	0	<1	<1	26.9	8.8
Laos	19	19	4	27.0	27.2
Malaysia	10	8	8	23.5	10.5
Mongolia	3	15	1	48.8	4.7
Myanmar	32	9	15	24.3	26.1
Philippines	25	14	8	27.3	15.7
Thailand	11	9	7	27.6	6.0



Timor-Leste	37	88	1	38.7	30.5
Viet Nam	20	9	11	31.3	12.0

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

Southern Asia

Table 7: Details of the agri-trade Regulatory Impact Indicator (RII) for each country in Southern 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)
Afghanistan	39	35	2	44.8	58.0
Bangladesh	14	1	43	27.2	24.7
Bhutan	1	1	4	25.7	20.5
India	24	7	13	28.4	25.7
Iran	58	41	6	36.4	8.6
Maldives	579	98	22	42.7	10.6
Nepal	6	5	5	24.7	25.1
Pakistan	83	9	24	31.2	42.4
Sri Lanka	54	18	20	24.4	6.8

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

Micronesia, Polynesia and Melanesia

Table 8: Details of the agri-trade Regulatory Impact Indicator (RII) for each country in Micronesia, Polynesia and Melanesia

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)
Fiji	60	78	3	39.6	5.8
Kiribati	8	79	<1	51.7	18.5
Marshall Islands	1	<1	71	59.9	20.4
Micronesia (Federated States of)	0	4	<1	50.1	16.7
Nauru	0	9	<1	30.3	8.0
Niue	0	<1	2	43.7	1.6
Palau	0	<1	13	34.8	7.9
Papua New Guinea	239	77	8	30.9	46.5
Samoa	5	29	1	28.2	3.9
Solomon Islands	473	100	13	45.1	26.2
Tokelau	1	1	4	57.1	17.2
Tonga	10	10	5	43.7	1.6
Tuvalu	0	<1	7	57.1	17.2
Vanuatu	6	10	2	39.6	22.5
Wallis And Futuna	0	<1	22	57.1	17.2

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 9: 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	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 (Federated States of) – 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			



Africa	Latin America & Caribbean	Asia	Europe and Central Asia
Average RII 182	Average RII 94	Average RII 52	Average RII 40
Algeria – 11			
Mali – 10			
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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COLEAD

France – Avenue du Viaduc 3, Bât B3A – CP 90761 – 94550 Chevilly Larue
network@coled.link | www.coled.link