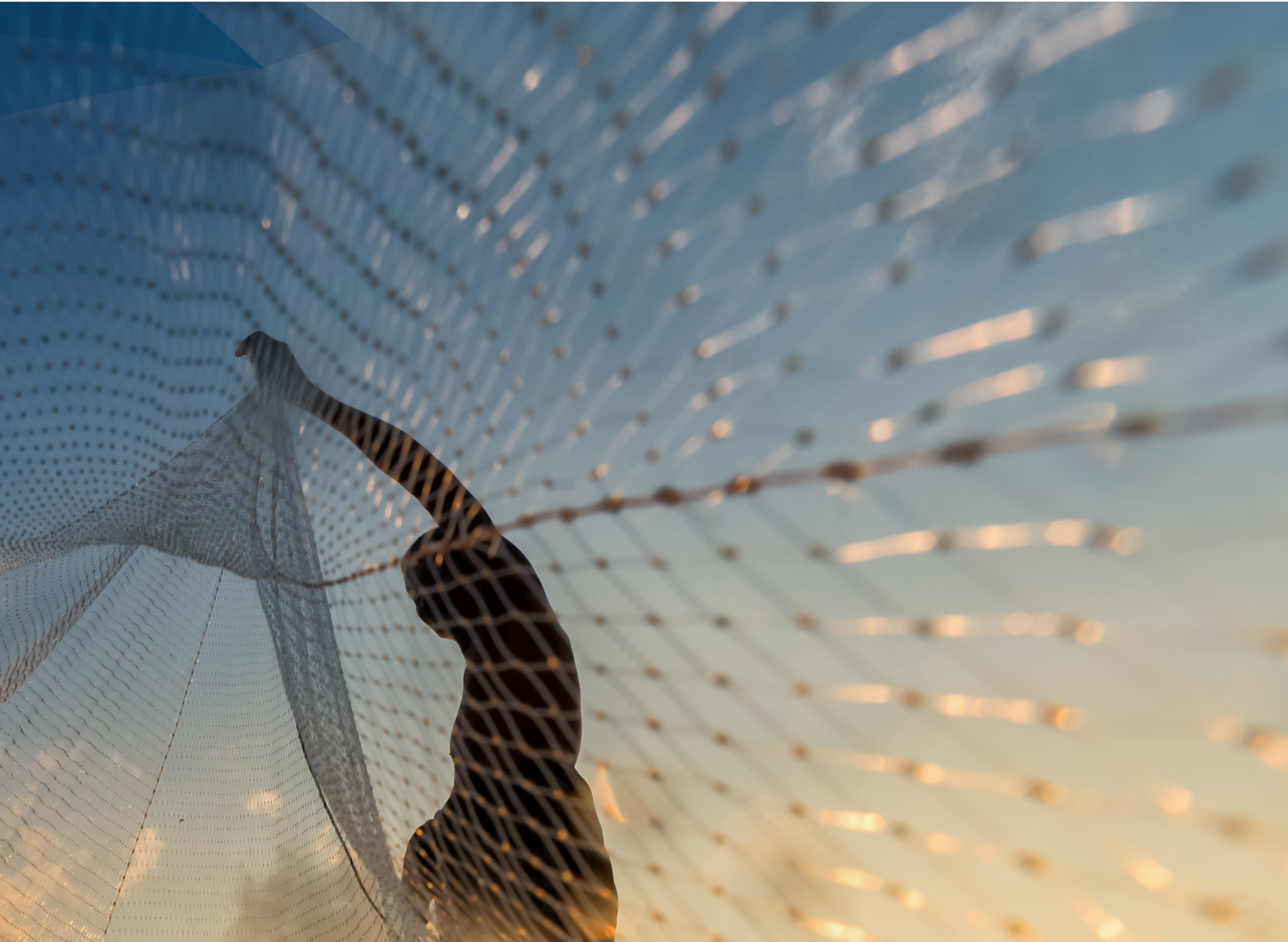




UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION



STANDARDS COMPLIANCE ANALYTICS

**BORDER REJECTIONS IN MAJOR GLOBAL MARKETS
INDONESIA**



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INTRODUCTION

Technical regulations and standards are increasingly prevalent and continuously evolving in the international trade of food and nonfood (industrial) products. Moreover, there is evidence that many developing countries face challenges in complying with the safety and quality requirements that these regulations and standards lay down. Since 2008, UNIDO has consistently gathered evidence on trade related-challenges and their evolution, particularly in the area of compliance with international market requirements, including quality, certification, and labeling.

In their efforts to improve compliance, the challenge for national governments and donors is to allocate scarce financial and technical resources amongst a plethora of capacity building needs. Therefore, there is a need to identify where the most acute compliance challenges are faced—in a trade context this means identifying the products and markets with the highest rates of non-compliance—thus, recording rejections. To address this need, the Standards Compliance Analytics (SCA) tool can be used to leverage rejection data and determine the key compliance challenges faced by exporting countries. Consequently, this tool enhances the targeting of investments in building relevant compliance capacities. More detailed information about the SCA tool can be found in the Annex.

Using the SCA tool, this report analyzes the trends and patterns of Indonesian agri-food import rejections in five major international markets, namely Australia, China, the European Union (EU-28), Japan, and the

United States (US). The objective of this report is to gain insights into the challenges faced by Indonesia in complying with product quality and safety standards and regulations in agri-food trade, both within regional and global markets.

The present report was prepared by UNIDO and was validated during a roundtable workshop. During this workshop, valuable feedback was provided by attendees from the Ministry of Marine Affairs and Fisheries (MMAF), the Ministry of Agriculture (MoA), the Ministry of Trade (MoT), the Ministry of Industry (MoI), the Food and Drugs Authority (BPOM), the National Standardization Agency (BSN), and the Food and Beverage Entrepreneurs' Association (GAPMMI) as well as from fisheries' associations. Based on the analysis of the rejection data and consultation with various stakeholders, recommendations are provided and can be divided into three categories: National quality infrastructure system; Industry compliance, competitiveness, and sustainability; and Culture for quality.

The report was developed under the [Global Quality and Standards Programme](#) (GQSP), funded by Switzerland through its State Secretariat for Economic Affairs (SECO).

The [UNIDO Knowledge Hub](#) offers abundant information, online trainings, and digital tools about Quality Infrastructure, including the [SCA](#) tool. Any feedback and comments on this report are welcomed and can be addressed to knowledgehub@unido.org.

CONTEXT



A. COUNTRY PROFILE



Country	The Republic of Indonesia
Continent	Southeastern Asia
Population	273.8 million (2021)
GDP	USD 1.186 trillion (2021)
GDP per capita	USD 4,333 (2021)
Value added by Agriculture, Forestry and Fishing	12.4 % of GDP (2022)
Food Safety Index	100 (2017)
Logistics Performance Index (overall)	3 (2023)
3 Year Average of Food Production	161 (2015–2017; unit: USD 1 per capita)

Indonesia has recently lost its prized upper middle income status, a mere year after achieving it, as the region's largest COVID-19 outbreak reversed the country's progress in poverty reduction and employment. As of 2020, the World Bank downgraded Indonesia to **lower middle income**¹ status due to its gross national income (GNI) per capita falling from USD 4,050 to **USD 3,870**, a decline of 4.44%. In 2019, Indonesia had advanced to upper middle income status with a GNI per capita of **USD 4,140**², its first time in that band since rankings going back to 1988. In late 2021, Indonesia's growth rate accelerated after recovering from the devastating COVID Delta variant outbreak, ending the year with a 3.7% growth rate. This positive momentum carried into the first quarter of 2022, with the economy expanding by **5.1%** (year-on-year), despite a brief spike in COVID-19 cases. Since the end of 2021, the drivers of growth have gradually shifted from exports and public consumption towards private consumption and investment. However, the global economic environment has been disrupted by the ongoing war in Ukraine since February 2022. This has led to rising commodity prices and de-risking in global financial markets. In the near term, Indonesia has benefited from a positive terms-of-trade effect through

¹ World Bank. World Bank Country and Lending Groups. <https://datatopics.worldbank.org/world-development-indicators/the-world-by-income-and-region.html>

² World Bank (2021). GNI per capita, Atlas method (current \$) – Indonesia. The World Bank Data. <https://data.worldbank.org/indicator/NY.GNP.PCAP.CD?locations=ID>

higher export and fiscal earnings. Nevertheless, the country is feeling the pressures of rising prices and tightening external finance.³

The Logistic Performance Index (LPI) measures the efficiency of trade-related logistics activities in a country, including international shipment, logistics quality, customs clearance, infrastructure, and tracking and tracing. Thus, a higher LPI score indicates better logistics performance and greater competitiveness in the global market. A key component of the country's exports business, Indonesia's LPI is presented in **Table 1**.⁴ The overall LPI score is **3**, and Indonesia is ranked 61st out of 139 countries in the study. Unfortunately, Indonesia's ranking dropped 15 places in just five years, falling from 46th place in 2018. This decline could be due to challenges that revolved around labor relations, pricing, and a lack of transparency when setting regulations and standards and implementing them.⁵

³ World Bank (2022). Financial Deepening for Stronger Growth and Sustainable Recovery. <https://openknowledge.worldbank.org/bitstream/handle/10986/37584/IDU087850c8a0b204043f608dea019acef5f2be1.pdf?sequence=5>

⁴ World Bank. Logistics Performance Index (LPI) – International Scorecard Page - Indonesia. 2023. <https://lpi.worldbank.org/international/scorecard/line/C/IDN/2023>

⁵ International Trade Administration. Indonesia- Market challenges. ITA. <https://www.trade.gov/country-commercial-guides/indonesia-market-challenges>

TABLE 1: INTERNATIONAL LPI IN 2023 – INDONESIA

DATA TABLE

(Toggle Rank and Score for Subindicators)

Country	Year	LPI Score	Customs	Infrastructure	International shipments	Logistics competence	Tracking & tracing	Timeliness
Indonesia	2023	3	2.8	2.9	3	2.9	3	3.3

The Global Competitiveness Index (GCI) comprises up to 103 indicators derived from a combination of data sources from international organizations and the World Economic Forum’s survey. It encompasses various factors, including institutions, infrastructure, Information and Communications Technology (ICT) adoption, macroeconomic stability, health, skills, product market, labor market, financial system, market size, business dynamism, and innovation capability, among others. The GCI provides a score ranging between 1 to 100. In 2019, Indonesia obtained a score of 64.63, ranking 50th, and experienced a five-place decline compared to the previous year, indicating a modest decrease in its GCI score. Within the Association of Southeast Asian Nations (ASEAN), Indonesia secured fourth place, trailing behind Singapore (1st), Malaysia (2nd), and Thailand (4th). Noteworthy strengths of Indonesia include its market size (82.4, 7th) and macroeconomic stability (90.0, 54th). However, there is definite room for improvement across various pillars of the index, particularly in areas such as technology accessibility and innovation.⁶

The agriculture sector, which includes the forestry and fisheries sub-sectors, contributed to **13.3%**⁷ of Indonesia’s gross domestic product (GDP) in 2021 and employed 29% of the workplace in 2021,⁸ according to the World Bank. The industrial sector accounted for almost **41.4%**⁹ of the country’s GDP in 2022, and employed **22%**¹⁰ of the active population in 2021. This sector is focused on food processing, garments, textiles, shoes, machine-building, mining, coal, steel, cement, chemical fertilizer, glass, tires, oil, and mobile phones. Its two main subsectors are mining and manufacturing. The latter, which refers to a segment of the economy in which raw material is converted into tangible output ‘products’ through value addition, contributed to nearly

19%¹¹ of Indonesia’s GDP in 2021 employing **22.7%**¹² of the population in 2020 and representing the most popular subsector in terms of foreign direct investment (FDI).¹³ For the last decade, the services sector has continued to rise in importance in its contribution to Indonesia’s economy. Indeed, it accounted for **42.8%**¹⁴ of its GDP in 2021 and employed half of the workforce.¹⁵ The services sector has surpassed the agriculture and industrial sectors in terms of contribution to GDP.

A. AGRICULTURE SECTOR

The Indonesian agriculture sector, including the fisheries sub-sector, presents a contrasted picture. On one hand, it enjoys a strong hold over certain export crops including **palm oil, cocoa, rubber, seafood, and coffee**. On the other hand, it suffers from a persistent dependence on imports to cover its basic products’ needs including wheat, soy, milk, and meat. It is no wonder then that since its independence in 1945, Indonesia’s top priority has been to achieve self-sufficiency as to ensure its food security.¹⁶ For the last few years, access to food has increased and undernutrition has decreased although the disparity across regions remains significant with more than 20 million people still facing the risk of hunger and 9.8% of the population, or 26.4 million people, still living under the national poverty line in 2020.¹⁷

⁶ Schwab, K. World Economic Forum. 2019. The Global Competitiveness Report 2019. https://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf

⁷ World Bank (2022). Agriculture, forestry, and fishing, value added (% of GDP) – Indonesia. The World Bank Data. <https://data.worldbank.org/indicator/NV.AGR.TOTL.ZS?locations=ID>

⁸ World Bank (2021). Employment in agriculture (% of total employment) – Indonesia. The World Bank Data. <https://data.worldbank.org/indicator/SL.AGR.EMPL.ZS?locations=ID>

⁹ World Bank (2021). Industry (including construction), value added (% of GDP) - Indonesia. The World Bank Data. <https://data.worldbank.org/indicator/NV.IND.TOTL.ZS?locations=ID>

¹⁰ World Bank (2021). Employment in industry (% of total employment) – Indonesia. The World Bank Data. <https://data.worldbank.org/indicator/SL.IND.EMPL.ZS?locations=ID>

¹¹ World Bank (2021). Manufacturing, value added (% of GDP) – Indonesia. The World Bank Data. <https://data.worldbank.org/indicator/NV.IND.MANF.ZS?locations=ID>

¹² Trading Economics (2021). Indonesia – Employment in Industry (% of Total Employment). <https://tradingeconomics.com/indonesia/employment-in-industry-percent-of-total-employment-wb-data.html>

¹³ Dezan Shira & Associates (2022). Doing business in Indonesia. Economic Indicators and Indonesia’s GDP, FDI, and Trade trends. [https://www.aseanbriefing.com/doing-business-guide/indonesia/why-indonesia/indonesia-economy#:~:text=Foreign%20investment%20in%20Indonesia%20in,US%24108%20billion\)%20in%202024.](https://www.aseanbriefing.com/doing-business-guide/indonesia/why-indonesia/indonesia-economy#:~:text=Foreign%20investment%20in%20Indonesia%20in,US%24108%20billion)%20in%202024.)

¹⁴ World Bank (2021). Services, value added (% of GDP) – Indonesia. The World Bank Data. <https://data.worldbank.org/indicator/NV.SRV.TOTL.ZS?locations=ID>

¹⁵ World Bank (2021). Employment in services (% of total employment) – Indonesia. The World Bank Data. <https://data.worldbank.org/indicator/SL.SRV.EMPL.ZS?locations=ID>

¹⁶ Ministère de l’Agriculture et de la Souveraineté Alimentaire (2019). Contexte agricole et relations internationales – Indonésie. <https://agriculture.gouv.fr/indonesie>

¹⁷ World Food Programme (2020). SMERU Research Report. Strategic Review of Food Security and Nutrition in Indonesia. <https://docs.wfp.org/api/documents/WFP-0000119830/download/?ga=2.41355170.1400766196.1642189974-1483160441.1642189974>

Since 2014, significant investments have been made in **palm oil**, which has become a flagship agricultural product of Indonesia. Indonesia is now the largest exporter in the world of palm oil. In 2022, its total palm oil exports amounted to **45.58 million metric tons** and this amount actually increased in 2021 despite reduced demands from its key market India, which has introduced higher import duties on palm oil.¹⁸ Together with Malaysia, Indonesia remains the world's leading producer and exporter of palm oil. In addition, while Malaysia exports most of the palm oil it produces, Indonesia is also one of the world's biggest consumers of palm oil as it uses it as both an edible oil and for biofuels.¹⁹ Along with the palm oil and sugar industries, the private sector joined hands with the government in developing its fisheries. Exports of cultivated shrimps from large farms in western Java and southern Sumatra have seen a boom in recent years.²⁰

Agricultural production:

Indonesia is one of the world's largest producers and exporters of agricultural products such as palm oil, natural rubber, cocoa, seafood, coffee, rice, and spices. In recent decades, the agricultural sector was a major source of employment in the country. However, its contribution to the country's GDP has declined as the country has shifted towards industrialization. This shift can be observed when noting that Indonesia's agricultural contribution to the country's GDP amounted to USD 157.5B in 2021. In relative terms, the agricultural share of GDP had been steadily increasing, peaking at 15.3% in 2009, but it then dropped to 13.3% in 2021.²¹

Indonesia spans 1.877 million square kilometers,²² with approximately 14% considered arable land in 2020. The share of arable land has increased from 9.9% in 1969 to 14% in 2018, an annual growth of about 0.77%.²³ Indonesia consists of 17,508 islands covering an area along the equator between the Indian and Pacific oceans. In the fisheries sector, with a total production of more than **21.8 metric tons** of various commodities (including seaweeds, which amounted to 11M tons), Indonesia ranked second among producers of fisheries in the world after China in 2020. During the same year, the total production of the fisheries sector amounted to 23.16M tons, a small increase compared to the production in 2015 (3.8%). Of the total production in

¹⁸ Statista Research Department (2020). Agriculture/Farming. Volume of total palm oil exports Indonesia. <https://www.statista.com/statistics/706786/production-of-palm-oil-in-indonesia/#:~:text=Indonesia%20is%20the%20world%27s%20top,the%20beginning%20of%20the%20year>.

¹⁹ Statista Research Department (2021). Agriculture/Farming. Palm oil industry in Indonesia. <https://www.statista.com/topics/5921/palm-oil-industry-in-indonesia/>.

²⁰ Britannica. Economy of Indonesia. <https://www.britannica.com/place/Indonesia/Economy>

²¹ World Bank (2021). Agriculture, forestry and fishing, value added (% of GDP)-Indonesia. The World Bank Data. <https://data.worldbank.org/indicator/NV.AGR.TOTL.ZS?locations=ID>

²² World Bank (2020). Land area (sq. km). Indonesia. <https://data.worldbank.org/indicator/AG.LND.TOTL.K2?locations=ID>

²³ Tradingeconomics (2021). Arable Land (% of Land Area)- Indonesia. <https://tradingeconomics.com/indonesia/arable-land-percent-of-land-area-wb-data.html>

2020, around 9.9M tons was seaweed (42.8%), 7.7M tons were captured fish, while the remainder was from aquaculture (5.54M tons). In 2022, the total export value of fisheries from Indonesia reached \$6.24B.²⁴

In 2021, cereal production reached **74.4M metric tons**, a **2.71%** annual increase from 21.6M metric tons in 1972.²⁵ As for rice, paddy production reached an estimated **54.4M tons** in 2021 showing an increase from 19.4M tons in 1972 reaching an average annual growth rate of **2.23%**.²⁶ Vegetables production increased from 2.39M tons harvested in 1972 to **13M tons** in 2021 growing at an average annual growth rate of 3.85%.²⁷ Indonesia's roots and tubers production exhibited fluctuations in recent years but generally showed an increasing trend over the 1972–2021 period, reaching a production of **21.1M tons** in 2021.²⁸

Agriculture exports:

During the last five years, Indonesian exports have increased from USD 164B in 2016 to USD 248B in 2021;²⁹ thus ranking Indonesia as the **27th exporter** in the world. The most recent exports comprised coal briquettes (USD 28.4B), palm oil (USD 27.3B), petroleum gas (USD 8.1B), ferroalloys (USD 7.2B), and large flat-rolled stainless steel (USD 6.7B). The most common destinations for these exports were China (USD 54.5B), the United States (USD 26.2B), Japan (USD 18.6B), India (USD 14.5B), and Singapore (USD 13B).

As for the agricultural sector, Indonesia exported palm oil valued at **USD 27.3B** in 2021, allowing it to become the largest exporter of palm oil in the world. This highly sought-after agricultural product was mainly exported to China (USD 4.22B), India (\$3.45B), Pakistan (USD 2.84B), the US (USD 1.38B), and Bangladesh (USD 1.36B). Indonesia exported **USD 10.4B** in 2021 in foodstuffs and was the 19th largest exporter of foodstuffs in the world. The main destinations were the US (USD 1.72B), China (USD 1.07B), the Philippines (USD 971M), Malaysia (USD 665M), and Vietnam (USD 616M).³⁰ In 2021, Indonesia exported a total of **USD 4.17B** in animal products and the main destinations were the US (USD 1.46B), China (USD 912M), Japan (USD 429M), Singapore (USD 184M), and Hong Kong (USD 9153M)³¹.

²⁴ UNIDO (2023). Global Quality and Standards Programme (GQSP) Phase 2. Project Document.

²⁵ Knoema (2021). Cereals production quantity. <https://knoema.com/atlas/Indonesia/Cereal-production>

²⁶ Knoema (2021). Rice, paddy production quantity. <https://knoema.com/atlas/Indonesia/topics/Agriculture/Crops-Production-Quantity-tonnes/Rice-paddy-production>

²⁷ Knoema. Indonesia - Vegetables primary production quantity. <https://knoema.com/atlas/Indonesia/topics/Agriculture/Crops-Production-Quantity-tonnes/Vegetables-primary-production>

²⁸ Knoema. Indonesia - Roots and tubers production quantity. <https://knoema.com/atlas/Indonesia/topics/Agriculture/Crops-Production-Quantity-tonnes/Roots-and-tubers-production>

²⁹ Observatory of Economic Complexity (2021). Country Profile-Indonesia. OEC. <https://oec.world/en/profile/country/idn>

³⁰ Observatory of Economic Complexity (2021). Foodstuffs in Indonesia. OEC. <https://oec.world/en/profile/bilateral-product/foodstuffs/reporter/idn>

³¹ Observatory of Economic Complexity (2021). Animal products in Indonesia. OEC. <https://oec.world/en/profile/bilateral-product/animal-products/reporter/idn>

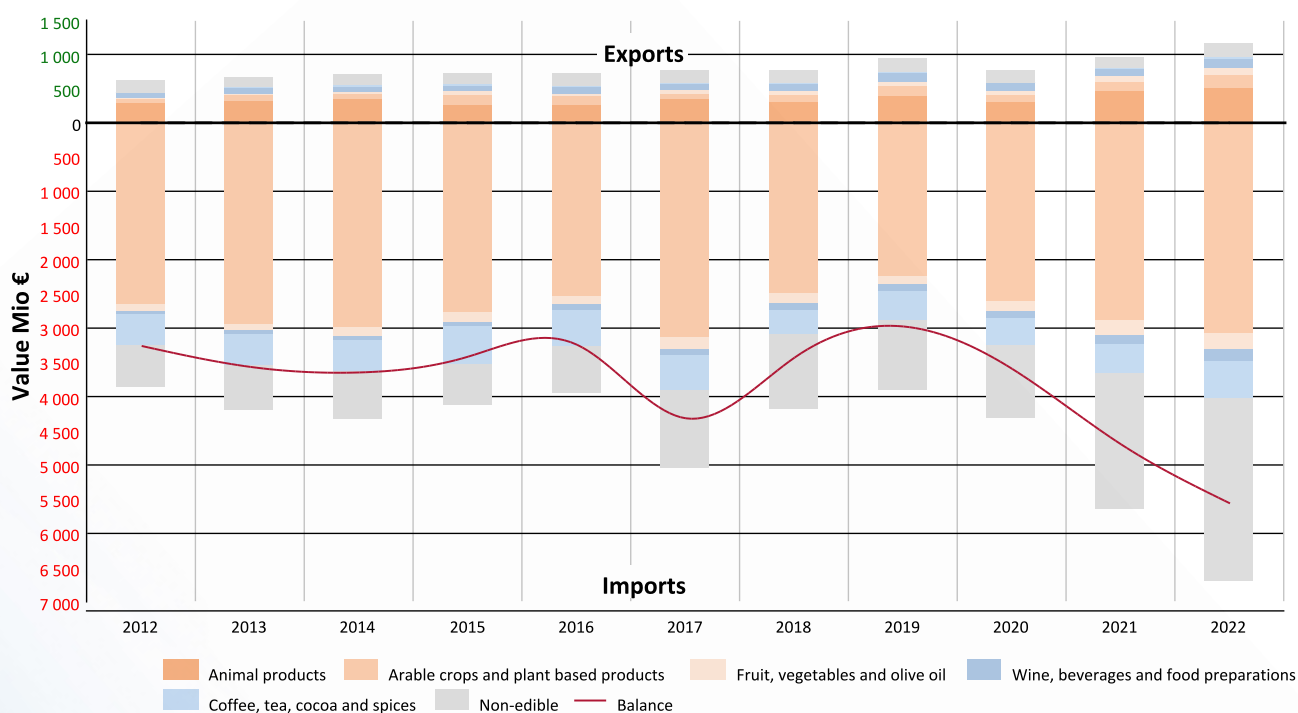
Fishery products are among the most exported products from Indonesia and in 2022 the total fisheries' exports amounted to 1.22M tons valued at USD 6.24B, which was an increase from 1.08M tons valued at USD 4.52B in 2017. The main seafood products exported were shrimp, tuna/skipjack, marine fish, and seaweed with the main export markets being the US, Japan, and other Asian countries. Indonesian agricultural exports grew **15.8%** in 2020 compared to 2019 according to Indonesia's agricultural minister in his address to the parliament. The Minister also specified that agricultural exports reached 451.8 trillion rupiah (USD 32.23B) compared

to the 390.2 trillion rupiah in 2019 (USD 1 = 14,020 rupiah).³² Although not one of the top destinations for Indonesian food exports, it is interesting to note that the export of agricultural products to the EU as shown in **Figure 1**³³ has shown a dramatic 42% increase from 2019 to 2022.

³² Reuters (2020). Agriculture exports up 15.8%. Reuters Staff - Indonesia. <https://www.reuters.com/article/indonesia-agriculture-idUSL4N2Ko13G>

³³ EU Commission Directorate-General for Agriculture and Rural Development (2023, April 18). *AGRI-FOOD TRADE STATISTICAL FACTSHEET European Union - Indonesia*. EU Commission. <https://agriculture.ec.europa.eu/system/files/2023-05/agrifood-indonesia-en.pdf>

FIGURE 1: STRUCTURE OF EU AGRI-FOOD TRADE WITH INDONESIA, 2012–2022



C. INTERNATIONAL TRADE

Since 1995, Indonesia has been a member of the World Trade Organization (WTO) and prior to that a member of the General Agreement on Tariffs and Trade (GATT) since 24 February 1950.³⁴ Indonesia is a member of the Association of South East Asian Nations (ASEAN),³⁵ which translates into being a member of the ASEAN Free Trade Area (AFTA). Other members of AFTA include Brunei, the Philippines, Vietnam, Laos, Myanmar, Malaysia, Singapore, Thailand, and Cambodia. Together, ASEAN members adopted a Food Safety Policy in 2015.³⁶ ASEAN, and by extension Indonesia, has concluded the Regional Comprehensive Economic Partnership (RCEP). RCEP is a free trade agreement, which entered into force on 1 January 2022, between its members and its five FTA partners (Australia, China, Japan, New Zealand, and the Republic of Korea). Indonesia also has preferential trade agreements in place with India and Hong Kong.

The EU and Indonesia have been strengthening their ties in recent years, with discussions on a bilateral trade agreement dating back to 2016. This can be noted from the amount of bilateral trade between the two blocs amounting to EUR 20.6 billion in 2020, with EU exports worth EUR 7.2B and EU imports EUR 13.3B. The EU is Indonesia's fifth largest trading partner while Indonesia is the 31st global trading partner for the EU and the fifth EU partner in AESAN in 2020.³⁷

As Australia's closest neighbor, Indonesia presents unlimited potential as an emerging economic powerhouse with a growing middle class. Indonesia and Australia have signed the Indonesia-Australia Comprehensive Economic Partnership Agreement (IA-CEPA), which came into force in July 2020.³⁸ The IA-CEPA's structure is founded on five guiding principles: improving economic and development partnerships, fostering intercultural understanding through social, artistic, and cultural exchanges, developing maritime cooperation, and promoting the stability and prosperity of the Indo-Pacific region. Additionally, Australian businesses can benefit from majority ownership of enterprises in certain industries in Indonesia, such as telecommunications, construction services, wastewater management, and tourism, thanks to the agreement's expanded market access for services and investments.³⁹

³⁴ World Trade Organization (2022). Indonesia and the WTO. https://www.wto.org/english/thewto_e/countries_e/indonesia_e.htm

³⁵ Britannica. Indonesia Trade. <https://www.britannica.com/place/Indonesia/Economy>

³⁶ ASEAN Secretariat 2016. ASEAN Food Safety Policy. <https://asean.org/wp-content/uploads/2021/01/ASEAN-Food-Safety-Policy-1.pdf>

³⁷ European Commission (2021). Indonesia - EU trade relations with Indonesia. Facts, figures and latest developments. https://policy.trade.ec.europa.eu/eu-trade-relationships-country-and-region/countries-and-regions/indonesia_en

³⁸ Australian Government (2020). Indonesia - Australia Comprehensive Economic Partnership Agreement. <https://www.dfat.gov.au/trade/agreements/in-force/iacepa/indonesia-australia-comprehensive-economic-partnership-agreement>

³⁹ Australian Government. Indonesia-Australia Comprehensive Economic Partnership Agreement: Outcomes. <https://www.dfat.gov.au/trade/agreements/not-yet-in-force/iacepa/ia-cepa-key-outcomes-for-australia>

In its current Master Plan for the Acceleration and Expansion of Indonesia's Economic Development (MP3EI), the government vowed to streamline the investment and regulatory environment for sectors, such as agribusiness, mining, health, education, and information and communications technology. This would open up a range of opportunities for Australian businesses. Currently, Australia's annual two-way-trade with Indonesia is a mere USD 14.8B, which means that only 2.2% of Australia's total trade is with Indonesia.⁴⁰ Finally, the European Free Trade Association (EFTA) States of Iceland, Liechtenstein, Norway, and Switzerland signed a Comprehensive Economic Partnership Agreement (CEPA) with Indonesia on 16 December 2018. The EFTA-Indonesia CEPA entered into force on 1 November 2021 after the ratification of all parties.⁴¹



⁴⁰ Asialink Business (2020). Indonesia's Trade Agreements. <https://asialinkbusiness.com.au/indonesia/conducting-business-in-indonesia/indonesias-trade-agreements?doNothing=1>

⁴¹ European Free Trade Association (2021). Indonesia Free Trade Agreement. <https://www.efta.int/free-trade/Free-Trade-Agreement/Indonesia>

STANDARDS COMPLIANCE ANALYSIS



A. COMPLIANCE WITH REGULATIONS IN AGRI-FOOD TRADE

Rapid growth of international trade has resulted in the development of product and service standardization in all industrial sectors in Indonesia. Some safety, quality, and performance standards are voluntary, but serve as valuable product differentiators; while other standards are cited in technical regulations as mandatory minimum requirements for market access. In Indonesia, food safety is regulated in several primary and secondary legislations, such as **Act 18/2012** on Food, which mandates that food must meet some criteria or requirements. This Act was then translated into delegated legislations, namely government regulation 86 of 2019 on food safety. Every step in the food chain must comply with food safety regulations in order for that food to be considered safe to consume. Food safety is legally defined in Indonesia as pertaining to the conditions and efforts being made to ensure that food is safe, hygienic, high quality, nutritious, aligned with religious beliefs and cultural needs, and free from biological, chemical, and other contaminants that can interfere with, harm, and endanger human health (Article 67).⁴²

One of the most alarming food safety issues is food adulteration as harmful additives are used to artificially modify the appearance, enhance the taste, texture, and the storage life of food products.⁴³ **Regulation No 33/2012** on food additives specifically stipulates the permitted types of additives and the amount of the substances that can be added. Other regulations pertaining to food safety include **Law No 8/1999** on Consumer Protection, with which businesses that distribute food in Indonesia need to comply; government **Regulation No 28/2004** on food safety, quality, and nutrition; **Regulation No 69/1999** on Food Labeling and Advertisement; and **Law No 7/2014** on trade, which may impose mandatory national quality standards on food products and on the way they are produced, etc.⁴⁴ To thoroughly assure food safety in Indonesia, the government formed a state agency called National Agency for Drug and Food Control (NADFC). NADFC is responsible for supervising and controlling the food chain from production to distribution, and then to consumption. While collaborating with the Ministry of Health, the agency is also partly in charge of developing food safety standards, pre-market certification, and post-market supervision.

⁴² Aprilianti, I. Amanta, F. (2020). Promoting Food Safety in Indonesia's Online Food Delivery Services, Policy Paper, No. 28. Center for Indonesian Policy Studies (CIPS). <https://www.econstor.eu/bitstream/10419/249408/1/CIPS-PP28.pdf>

⁴³ Wahlqvist, M. (2011). Food & Nutrition: Food and Health Systems in Australia and New Zealand. Allen & Unwin.

⁴⁴ Asia Pacific Food Law Guide (2020). Indonesia - Food product and safety regulation. <https://resourcehub.bakermckenzie.com/en/resources/asia-pacific-food-law-guide/asia-pacific/indonesia/topics/food-product-and-safety-regulation>

The National Quality Infrastructure (NQI) is the institutional framework that establishes and implements standardization including conformity assessment services, metrology, and accreditation. In Indonesia, standardization and conformity assessment fall under **Act No 20/2014**. The Act represents the highest national policy containing a provision on the formulation and implementation of the Indonesia National Standard (SNI), conformity assessment activities, accreditation of Conformity Assessment Bodies (CABs), national measurement standards, principles of Good Regulatory Practices (GRP), etc. Thus, this Act serves as the legal umbrella for the arrangement of NQI in Indonesia. The National Standardization Agency (BSN) is mandated by the law to formulate the National Policy on Standardization and Conformity Assessment providing national reference to the respective stakeholders in the implementation of National Regulation **No 34/2018** on the National Standardization and Conformity Assessment System. The provisions of Law No 20/2014 and National Regulation No 34/2018 provide the necessary legal pillars which effectively buttress NQI in Indonesia. In addition to BSN, other organisms include the National Accreditation Agency (KAN), the National Metrology Institute, and the National Measurement Standards Laboratory (SNSU).

At the end of 2020, the new National Measurement Standards Laboratory of BSN (NMI building) became operational, equipped with the necessary measurement standards and supporting equipment to meet national requirements. This facility plays an essential role, particularly in providing traceability for biological testing and calibrating medical instruments. Currently, it is in the initial stages of establishing traceability for biological testing, with a specific focus on halal food testing and food microbiology. Every institution conducting mandatory and voluntary conformity assessment services in accordance with SNI must obtain accreditation from KAN. However, some laboratories, certification bodies, and inspection bodies that provide domestic conformity assessment services either lack accreditation or operate outside the scope covered by their accreditation. Conformity Assessment Institutions (referred to as LPK in Indonesia) must demonstrate competence in meeting the requirements set by BSN and obtain accreditation from KAN. LPKs accredited by KAN are authorized to issue certificates within the boundaries of their accreditation scope.

By the end of 2017, there were a total of 1,815 LPKs⁴⁵ accredited by KAN, comprising 1,162 testing laboratories, 249 calibration laboratories, 55 medical laboratories, 80 inspection institutions, 13 proficiency test organizers, and 256 certification bodies. Within the fisheries sector, there were 17 BKIPM Fish Quarantine and Inspection Agencies (BKIPM/FQIA) of MMAF and 85 KAN - ISO 17025 accredited testing laboratories. Remarkably, all 47 laboratories operating under the MMAF umbrella successfully obtained accreditation in accordance with ISO 17025. By June 2023, there were a total of 560 KAN accredited inspection and certification

⁴⁵ United Nations Industrial Development Organization. (2021). Global Quality and Standards Programme. Indonesia. https://hub.unido.org/sites/default/files/publications/Fact%20Sheet%20GQSP%20Indonesia_Jan%202021.pdf

bodies in Indonesia comprising 137 inspection bodies and 423 certification and verification bodies accredited in various schemes, including environmental management systems, products, processes and services, quality management systems, HACCP systems, Occupational Health and Safety Management Systems, Indonesian Sustainable Palm Oil (ISPO), and the Special Hajj and Umrah Certification, among others. On 6 June 2023, KAN received a Mutual Recognition Arrangement (MRA) certificate from the Asia Pacific Accreditation Cooperation Incorporated (APAC) recognizing its conformity assessment services and results in several new scopes and sub-scopes including the Validation and Verification Greenhouse Gas under ISO 14065:2013, the Environmental Information (ISO 14065:2020), the Food Safety System Certification 22000 FSSC 22000 (ISO/TS 22003 / ISO 22000), and the Anti-Bribery Management Systems ABMS (ISO 37001).

The Quality Infrastructure for Sustainable Development (QI4SD) Index, developed by UNIDO, provides a framework of indicators that summarizes the overall state of development of a country's and/or region's Quality Infrastructure (QI) readiness to support the Sustainable Development Goals (SDGs). Countries are organized into GDP groups and within these groups, countries are ranked based on their QI readiness to implement the SDGs. It is important to note that the majority of the ranking information relates to ranks within these groups and that even within the same GDP groups, countries vary considerably in size and other growth indicators. The data from the INetQI (International Network on Quality Infrastructure) organizations was collected from February to June 2021. However, the data year might differ from the year of collection as these organizations have different timeframes for updating their own information.

QI4SD is a multidimensional concept and is decomposed into the following five dimensions that are captured with 36 indicators from combined data sources: Metrology, Standardization, Conformity assessment, Accreditation, and Policy. Indonesia has a QI4SD Index score of **56.0**, ranking it **34th** out of the 137 assessed countries. With regard to the five dimensions, Indonesia has a value of 35.4 for Metrology, 54.4 for Standardization, 13.1 for Conformity Assessment, 82.7 for Accreditation, and 94.5 for Policy.

Quality Infrastructure for Sustainable Development Index:

Indonesia has done well in the following areas:

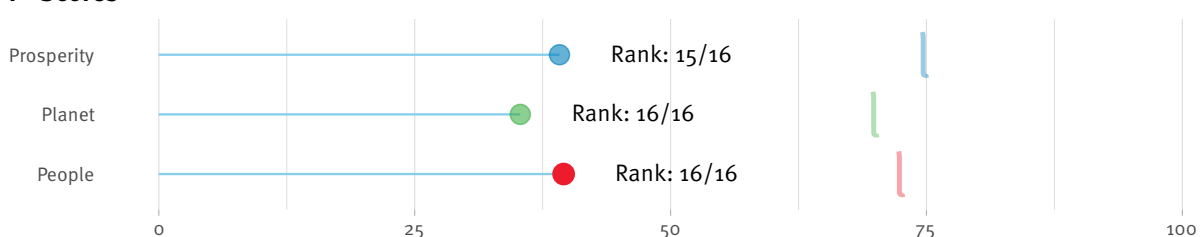
Strengths	Dimension	Rank	Value	Unit
Adopted ISO standards	Standards	17	16	Number
Membership of IQNet	Conformity	25	4	Composite score
Number of recognised certificates (ISO)	Conformity	29	8,810	Number

The report identified the following weaknesses which Indonesia should focus on improving:

Weaknesses	Dimension	Rank	Value	Unit
Participation in IEC technical committees	Standards	48	78	Number
Number of recognised certificates (IQNet)	Conformity	52	367	Number
Membership of ITU	Standards	53	3	Composite score

Within its GDP group, Indonesia ranked on the three pillars of sustainable development (people, prosperity, and planet) as follows:

P-Scores



Vertical lines represent in-group median scores. Ranks are within GDP group (XL)
More details about the QI4SD Index can be found at <https://hub.unido.org/qi4sd/>



B. REJECTION ANALYSIS

Sanitary and phytosanitary (SPS) measures are aimed at protecting the safety and health of consumers and complying with them applies to both domestic products as well as exports. When food and feed products get rejected at the borders, the consequences can be extremely dire and costly. The total cost of these rejections includes the loss of the export products (as they are usually destroyed by the importing country), transportation costs, freight and insurance, and related expenses. In addition to the loss of earnings, rejections damage the exporting country's reputation and the importing country may lose trust in the quality and safety of products coming from the exporting nation, thereby reducing the country's export competitiveness in the long term. Exporters may need to sell rejected products at a discount to account for the risk and risk joining the list of producers facing reinforced checks (as in the case of exports to the EU).⁴⁶ As the data set of border rejections currently spans the period of 2010 to 2020, the effects of the COVID-19 pandemic which started in early 2020 will not be seen yet and therefore are not discussed in this report.

⁴⁶ Kareem, F. O., Brümmer, T. L., & Martinez-Zarzoso, I. (2015). Food safety standards, compliance and European Union's rejection of African exports: The role of domestic factors. *GlobalFood Discussion Papers*, 74. <https://www.econstor.eu/bitstream/10419/121845/1/837623928.pdf>

Aggregate rejection rate:

The Aggregate Rejection Rate (ARR) is the simple sum of the annual number of rejections over the study period. Increases in the number of rejections can reflect both increases in the volume of exports and in the rate of non-compliance to product quality and safety standards and regulations. While the ARR is used to compare how well Indonesian food exports are performing in the various markets, it is important to note that each country can apply different approaches to inspection. For instance, the US rejection data excludes meat, poultry, and their products. Additionally, not all importing countries included in the data set track the volume, size, and value of the consignments in their rejection data. Consequently, a more in-depth sub-analysis is necessary to facilitate the comparison of the number of rejections of a specific country's food and feed exports with the volume of food and feed products exported by that country to a particular market.

Although analyzing border rejection data proves quite useful in determining some of the causes of non-compliance to food safety standards, it is important to use caution and keep in mind that it is not the only indicator of non-compliance. For instance, if a certain food and feed product cannot get exported due to an inability to access a certain market for non-compliance reasons, it will not be included in the border rejections data set that is being analyzed (as no exports mean no rejections). Accordingly, this analysis should be used hand-in-hand with other sets of data and indicators to get a broader picture of the short-term and long-term issues plaguing the quality infrastructure landscape of a specific country.

TABLE 2: AGGREGATE NUMBER OF REJECTIONS OF INDONESIAN FOOD AND FEED (HS 1-23) EXPORTS DURING 2010–2020

Markets	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total	%
Australia	28	48	24	28	18	14	9	33	44	20	51	317	12%
China	30	30	23	35	41	34	182	85	14	27	41	542	20%
EU-28	23	19	33	19	28	21	36	22	23	9	7	240	9%
Japan	44	19	23	25	17	17	20	17	11	9	7	209	8%
United States	313	231	174	108	70	97	95	58	73	129	86	1,434	52%
Total	438	347	277	215	174	183	342	215	165	194	192	2,742	100%

Table 2 and **Figures 2** and **3** show that the US market accounted for more than half of the total share of rejections (52%) while China accounted for a fifth of them (20%) during the period of 2010 to 2020. The other three markets have a similar share of rejections (between 8 and 12%). The aggregate number of rejections for food and feed among Indonesian exports for the five markets has decreased by 56% from 438 to 192 during the period of 2010 to 2020. This is remarkable effort that deserves to be acknowledged and commended. This decrease in the number of rejections is not as a result of a decrease in exports, as exports have increased during the same period.

FIGURE 2: EVOLUTION OF THE GLOBAL NUMBER OF REJECTIONS FOR INDONESIA FOR THE 5 MARKETS, 2010-2020

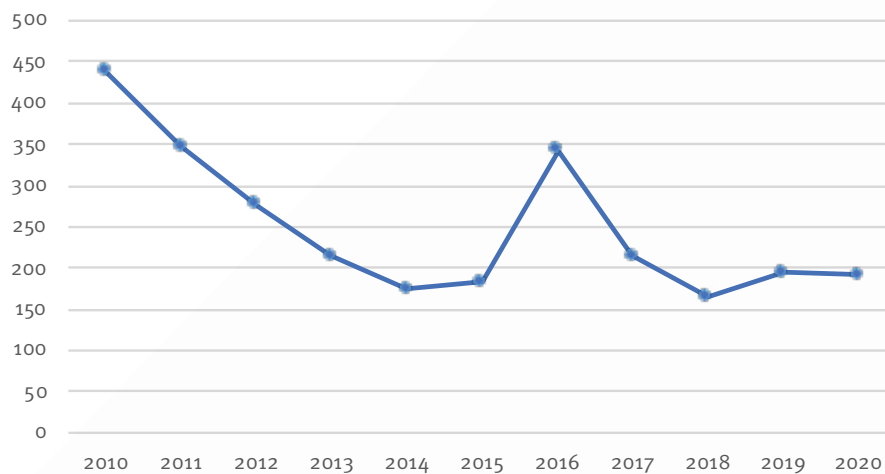


FIGURE 3: SHARE OF REJECTIONS BY MARKET, 2010-2020

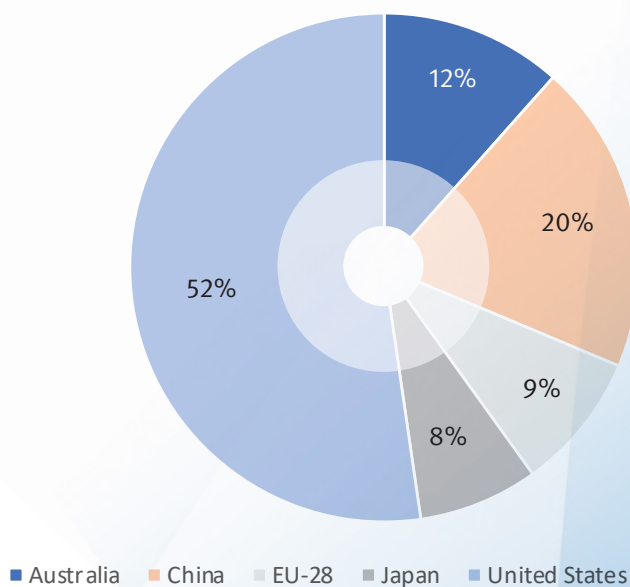


Table 2 and **Figures 3** and **4** demonstrate that the number of rejections for the European market has been low and stable. For the Australian market, it has been low but unstable as it suffered from a slight increase during 2017–2018. In contrast, the Japanese and US markets have seen a significant decrease in rejections going from 44 in 2010 to 7 in 2020 for the Japanese market (an 84% decrease) and 313 in 2010 to 86 in 2020 for the American one (a 73% decrease). This stresses the fact that Indonesia has made incredible efforts in reducing the number of rejections in the American and Japanese markets. For the Chinese market, the number of rejections has been overall stable. However, it experienced a significant spike in 2016 with 182 rejections as opposed to 34 rejections recorded the previous year.

FIGURE 4: EVOLUTION OF ARR BY MARKET, 2010-2020

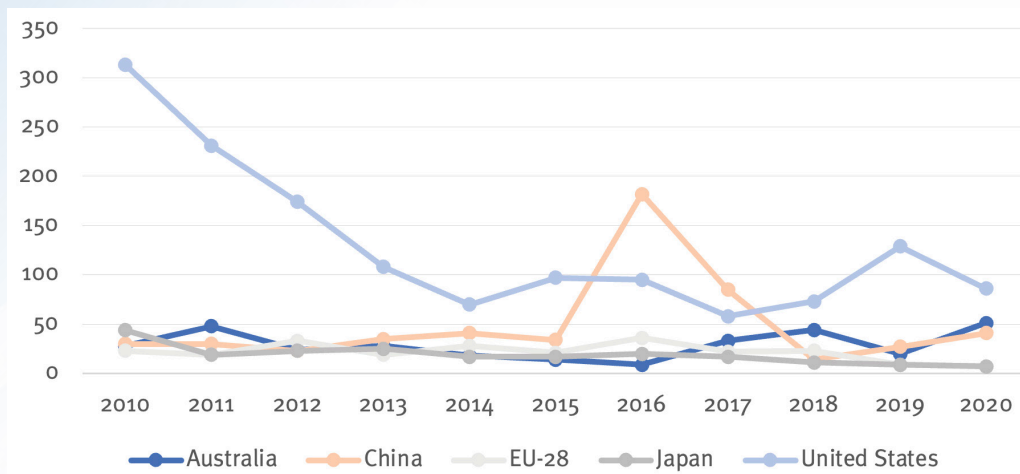


FIGURE 5: GLOBAL NUMBER OF REJECTIONS FOR ALL MARKETS, 2010-2020

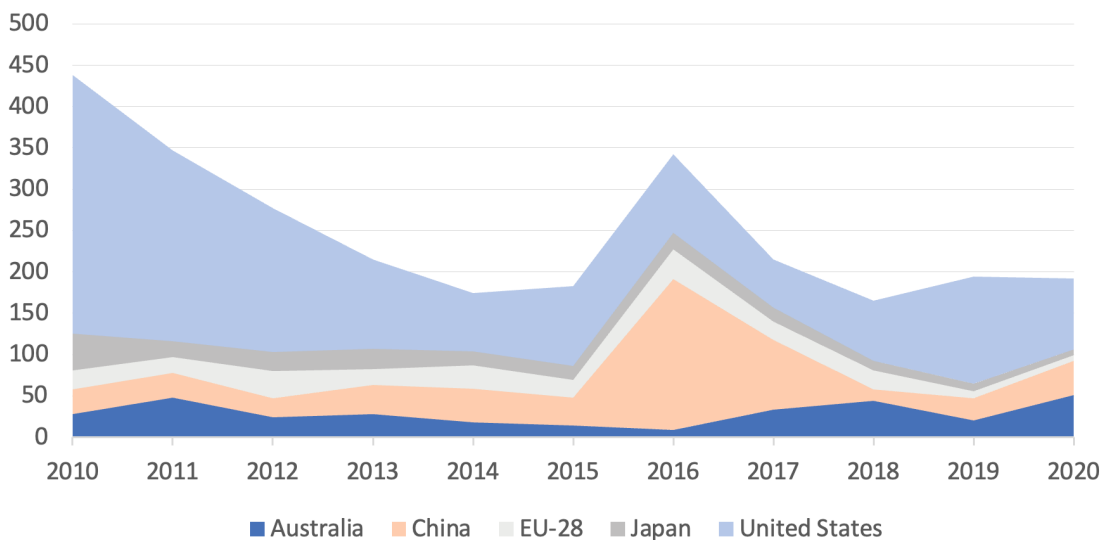
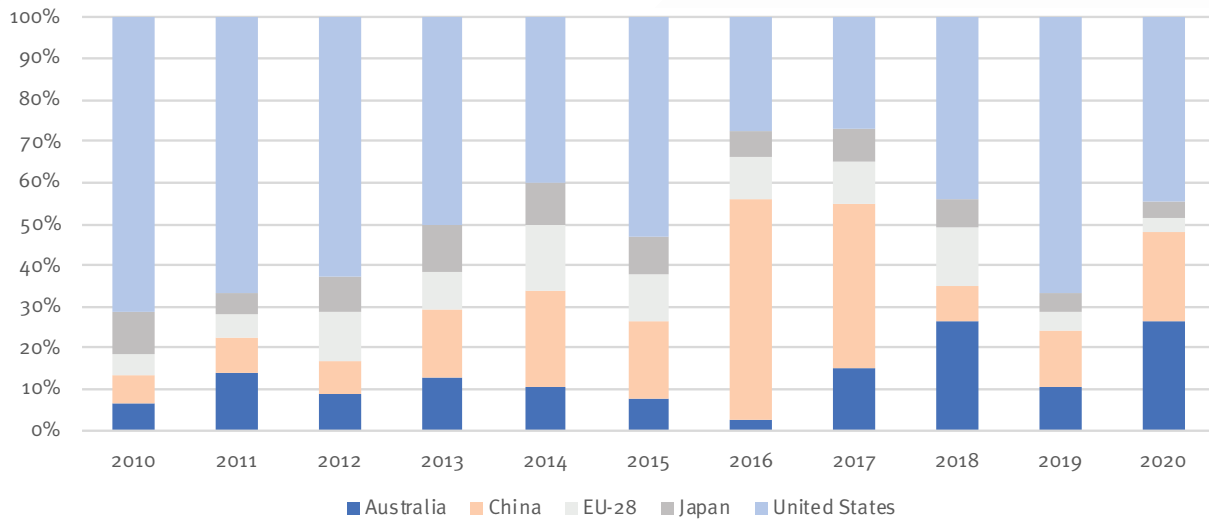


Table 2 and **Figures 4-6** show that the share of Chinese rejections has fluctuated significantly during the recorded decade (7% in 2010, 53% in 2016, and 8% in 2018). However overall, they have not declined. As the Chinese market is one of Indonesia's primary export markets, it is important for Indonesia to focus on reducing rejections there. For the Australian market, its share of total rejections has significantly increased from 6% in 2010 to 27% in 2020. This phenomenon should be further investigated to assess if it is related to an increase of exports or to an increase in non-compliance. Conversely, rejections from the EU-28 market have been relatively stable and have decreased from 23 in 2010 to 7 in 2020 (a decrease of 70%). In the following sections, other indicators will be examined to better our understanding of these fluctuations.

FIGURE 6: SHARE OF REJECTIONS FOR INDONESIAN FOOD AND FEED EXPORTS BY MARKET, 2010-2020

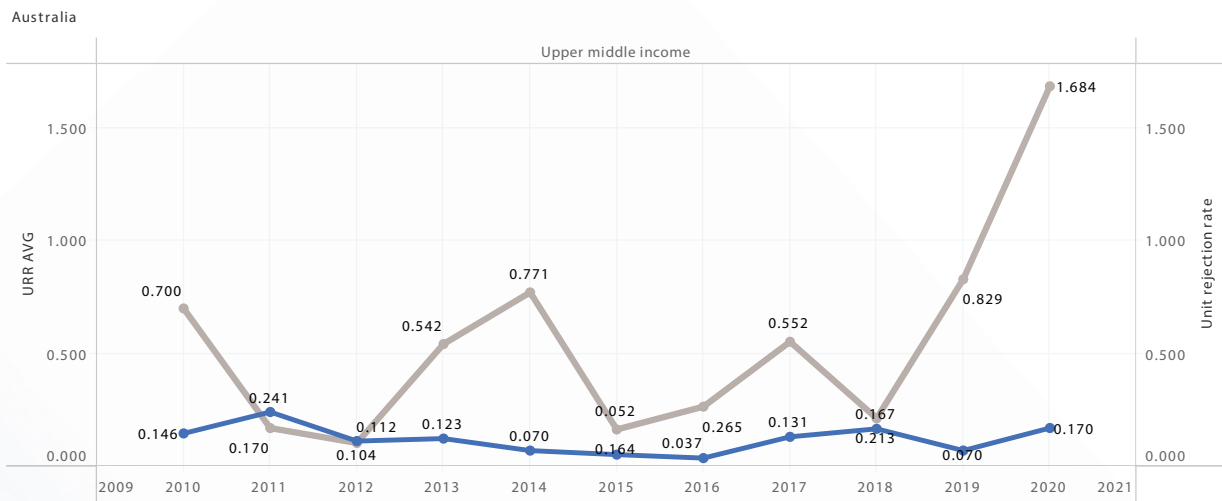


Unit rejection rate:

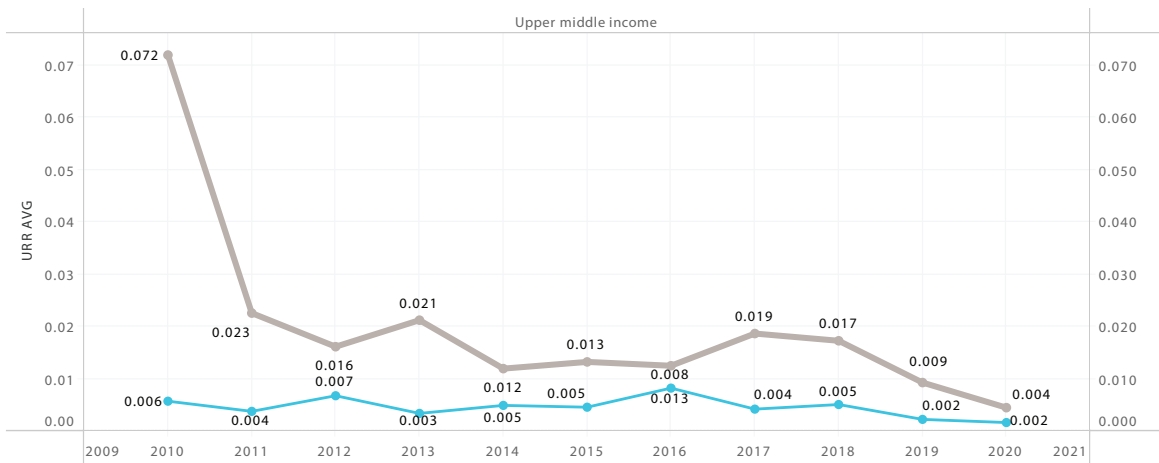
The Unit Rejection Rate (URR) is defined as the number of rejections per USD 1 million of imports. The colored charts represent the URR for Indonesian food and feed (HS 1-23) products for a specific market during the period of 2010 to 2020. Indonesia's URR (the colored line) is being compared with the average URR for the

World Bank income bracket to which Indonesia belongs, which is the upper middle income level in 2020 (the grey line). The URR indicator accounts for changes in the volume of exports such that it provides a direct measure of the rate of non-compliance. A higher URR shows a higher rate of non-compliance of Indonesia with regard to food safety and quality regulations.

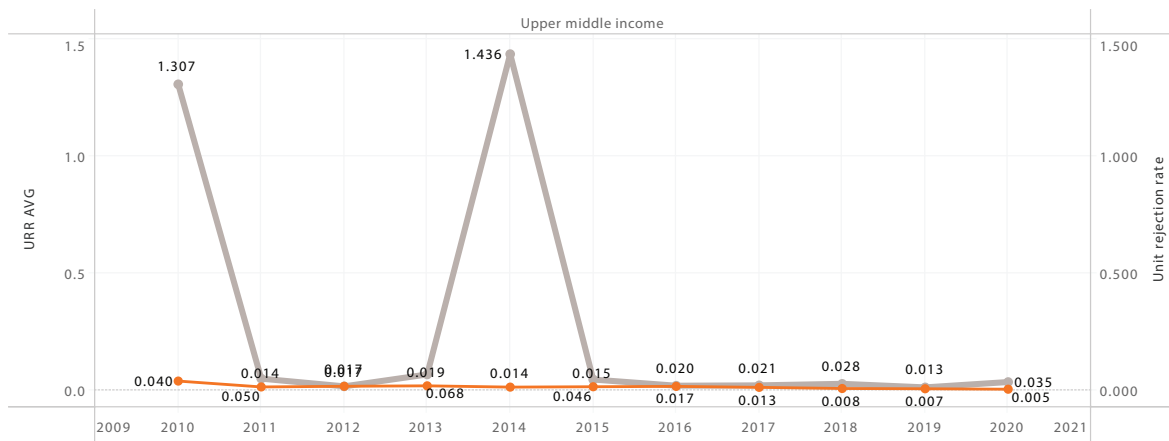
FIGURE 7: URR FOR INDONESIAN FOOD AND FEED (HS 1-23) EXPORTS TO THE 5 MARKETS, 2010–2020



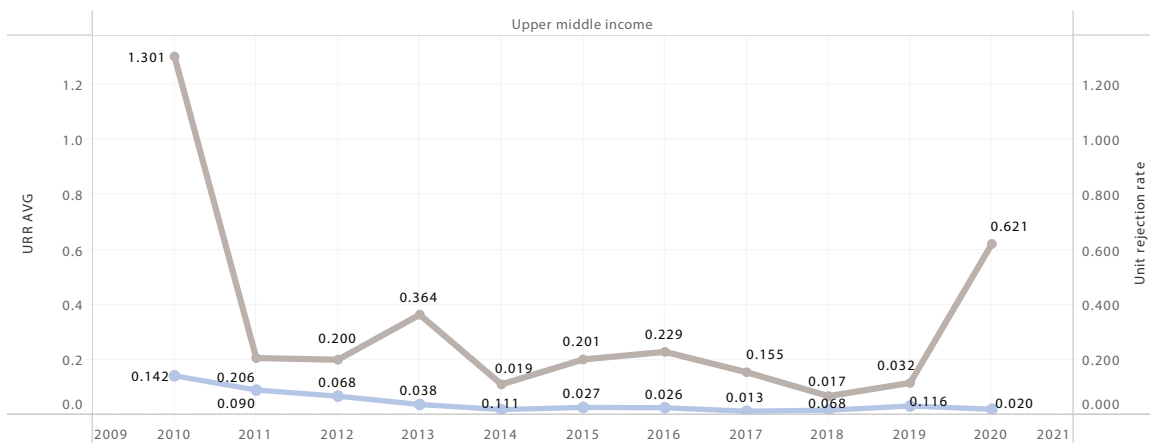
EU-28



Japan



United States



According to **Figure 7**, Indonesia's URR in the Australian market for food and feed products has been about 0.1 during the period of 2010–2020, which means that for every USD 10 million of imports from Indonesia to Australia, there is about one rejection. For the EU-28 market, the URR has been stable and very low between

0.002 and 0.007 and lower than the average URR of all upper middle income countries as classified by the World Bank. A similar situation can be noted for the other three markets, in particular for the American market in which the URR has steadily decreased from 0.14 in 2010 to 0.02 in 2020.

Relative rejection rate indicator:

The bar charts in **Figure 8** display the distribution of the Relative Rejection Rate (log ratio) across markets for Indonesian food and feed (HS 1-23) exports in 2020. The Relative Rejection Rate (RRR) shown (log ratio) is the natural logarithm of the ratio of Indonesia's share of total rejections to share of total imports. The indicator provides a convenient measure of the performance of countries relative to one another in a year or over a period of time. A higher RRR (log ratio) for Indonesia implies poorer performance with regard to compliance with food safety and quality regulations in that market relative to the other markets.



FIGURE 8: RRR FOR INDONESIAN FOOD AND FEED (HS 1-23) EXPORTS IN 2020

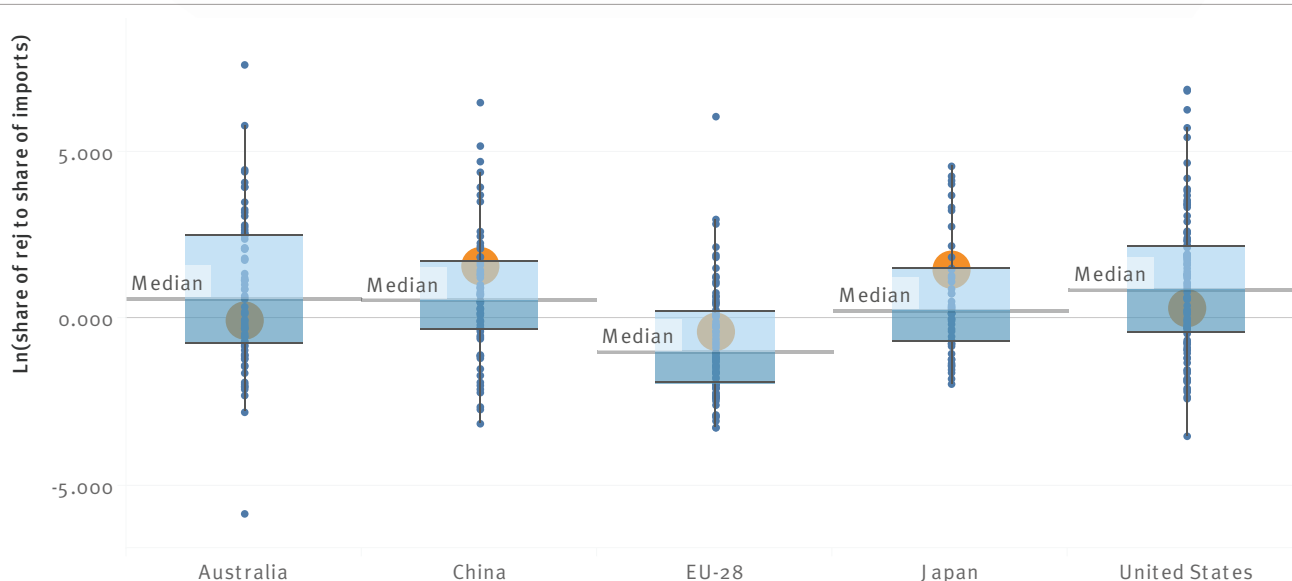


TABLE 3: RRR FOR INDONESIAN FOOD AND FEED (HS 1-23) EXPORTS IN 2020

Australia		China		EU-28		Japan		United States	
Median	Indonesia	Median	Indonesia	Median	Indonesia	Median	Indonesia	Median	Indonesia
0.598	0.224	0.541	-0.543	-1.031	-2.297	0.223	-0.644	0.858	-0.202

The RRR as shown in **Figure 8** and **Table 3** is lower for Indonesia in all five markets compared to the median RRR of all the other markets. Indonesia's best performance was in China (median = 0.541 and Indonesia's RRR = -0.543) and in the EU market (median = -1.031 and Indonesia's RRR = -2.297). This means that Indonesia performed much better on average than other

exporting countries in terms of food safety in those two markets. Similarly, Indonesia performed well and above average in the American and Japanese markets. However, Indonesia's RRR in the Australian market is lower than the median RRR and thus could be improved. This entails ameliorating its compliance with food safety regulations in the Australian market.



C. REASONS FOR REJECTION

Frequency of reasons for rejection:

The frequency of reasons for rejections is the total counts of consignments rejected at the border of entry for a particular reason. Examples of possible reasons for rejection include labeling, hygienic condition, adulteration, missing document, additive, bacterial contamination, pesticide residues, veterinary drugs residues, mycotoxins, heavy metal, and packaging. The “aggregate frequency of reasons for rejection” can be different from the “aggregate number of rejections” as a single consignment can be rejected on multiple grounds. To analyze the reasons for border rejections, we need to select a specific year. The “aggregate frequency of reasons for rejection” will simply be referred to as the “frequency of reasons for rejection” for simplicity.

General reasons for rejection:

TABLE 4: FREQUENCY OF REASONS FOR REJECTION (NUMBER & %) OF INDONESIAN FOOD & FEED (HS 1-23) EXPORTS TO THE 5 MARKETS IN 2020

Indonesia	Australia		China		EU-28		Japan		US		Total	
	Numbers	%	Numbers	%	Numbers	%	Numbers	%	Numbers	%	Numbers	%
Additive	2	0%	169	30%	6	2%	15	7%	175	6%	367	8%
Adulteration / missing document	31	8%	58	10%	12	5%	1	0%	169	6%	271	6%
Bacterial contamination	82	20%	125	22%	32	13%	108	52%	935	31%	1,282	29%
Heavy metal	0	0%	16	3%	51	21%	2	1%	1	0%	70	2%
Hygienic condition / controls	0	0%	49	9%	21	9%	31	15%	1,369	45%	1,470	33%
Labeling	191	48%	59	11%	2	1%	0	0%	124	4%	376	8%
Mycotoxin	30	7%	1	0%	68	28%	21	10%	24	1%	144	3%
Other contaminants	59	15%	3	1%	20	8%	17	8%	128	4%	227	5%
Other microbiological contaminants	0	0%	21	4%	14	6%	0	0%	0	0%	35	1%
Others	0	0%	36	6%	15	6%	2	1%	4	0%	57	1%
Packaging	0	0%	19	3%	2	1%	0	0%	0	0%	21	0%
Pesticide residues	0	0%	2	0%	2	0%	11	5%	1	0%	16	0%
Veterinary drugs residues	7	2%	2	1%	1	0%	1	1%	106	3%	117	3%
Total	402	100%	560	100%	246	100%	209	100%	3,036	100%	4,453	100%

FIGURE 9: FREQUENCY OF REASONS FOR REJECTION (%) OF INDONESIAN FOOD & FEED (HS 1-23) EXPORTS TO THE 5 MARKETS IN 2020

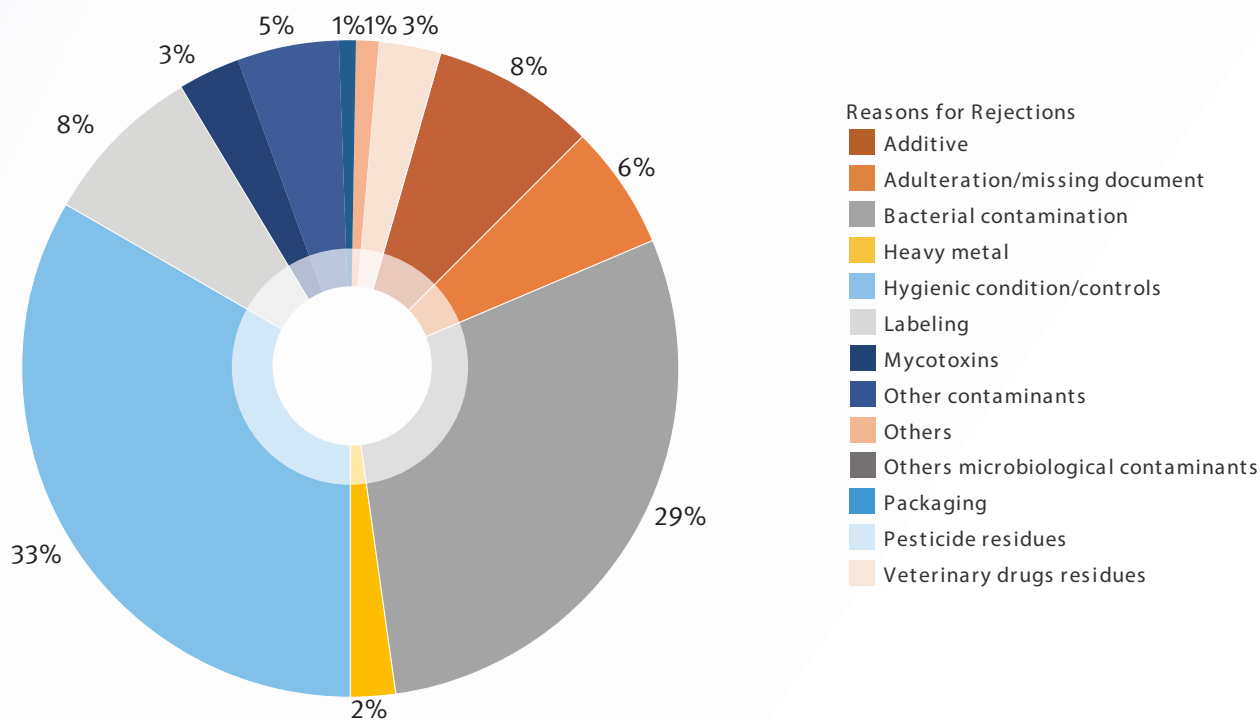


Table 4 and **Figure 9** present the aggregate frequency of reasons for rejection of food and feed products exported from Indonesia into the five markets in 2020. The year 2020 was selected as it represents the most recent data available in the data set. The frequency of reasons for rejection indicates the total count of consignments rejected at the border of entry due to specific reasons. This indicator plays a crucial role in assisting exporting countries in identifying areas for capacity building, particularly in addressing key reasons for rejection in order to achieve or enhance compliance with international trade standards. The primary causes of rejections for Indonesia, accounting for 62% of all rejections, were hygienic conditions/controls (33%) and bacterial contamination (29%) in 2020. Additional reasons included additives (8%) and labeling (8%). Indonesia could focus its efforts to reduce

its two primary causes of rejections, which collectively account for nearly two-thirds of all rejections: bacterial contamination (represented by the gray color in Figure 9) and hygienic conditions/controls (blue color). Notably, these findings align with the analysis conducted by MoA.

Reasons for rejection by market:

Figure 10 illustrates the frequency of reasons for rejection of Indonesian food and feed products in each of the main markets.

FIGURE 10: FREQUENCY OF REASONS FOR REJECTION OF INDONESIAN FOOD & FEED (HS 1-23) EXPORTS BY MARKET IN 2020

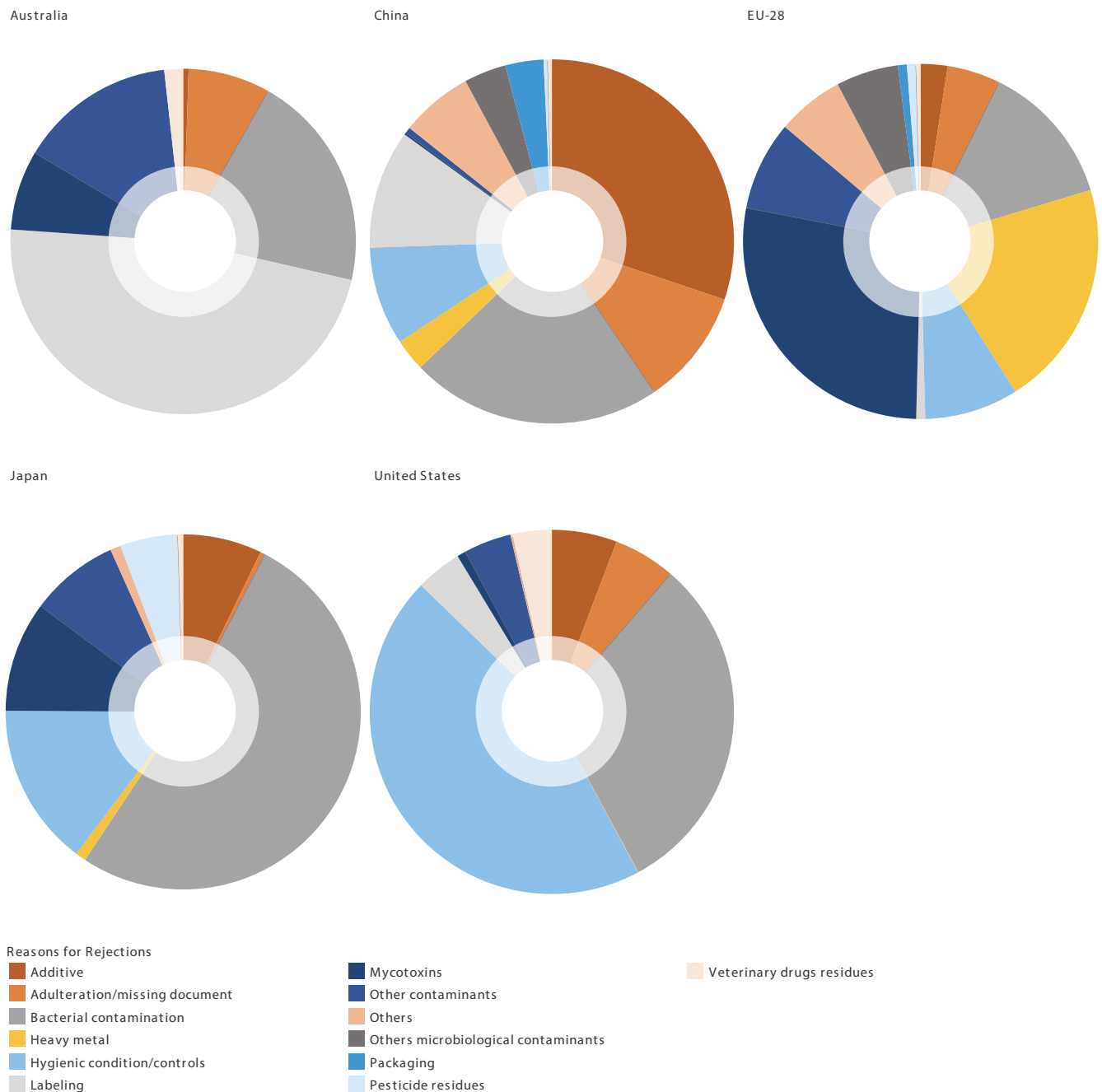


Table 4 and Figure 10 demonstrate that in the American market (52% of all rejections) hygienic condition/controls was the most common reason for rejection (45%) followed by bacterial contamination (31%). As these two reasons represented more than three quarters of the total rejections in this market, efforts must be made to attempt to reduce these issues. The reasons for rejection in the Chinese market (20% of all rejections) were additive (30%), bacterial contamination (22%), labeling (11%), and adulteration/missing document (10%). In the EU-28 market, the most common reasons

for rejection in 2020 were mycotoxin (28%), heavy metal (21%), and bacterial contamination (13%). In the Japanese market, the most frequent reasons for rejection were bacterial contamination which accounted for more than half of the reasons for rejection at 52%, hygienic condition/controls (15%), and mycotoxins (10%). Finally, in the Australian market, the most common reasons for rejection of food and feed Indonesian exports in 2020 were labeling (48%), bacterial contamination (20%), and others contaminants (15%). The rest of the reasons were less frequent with small shares of the pie chart.

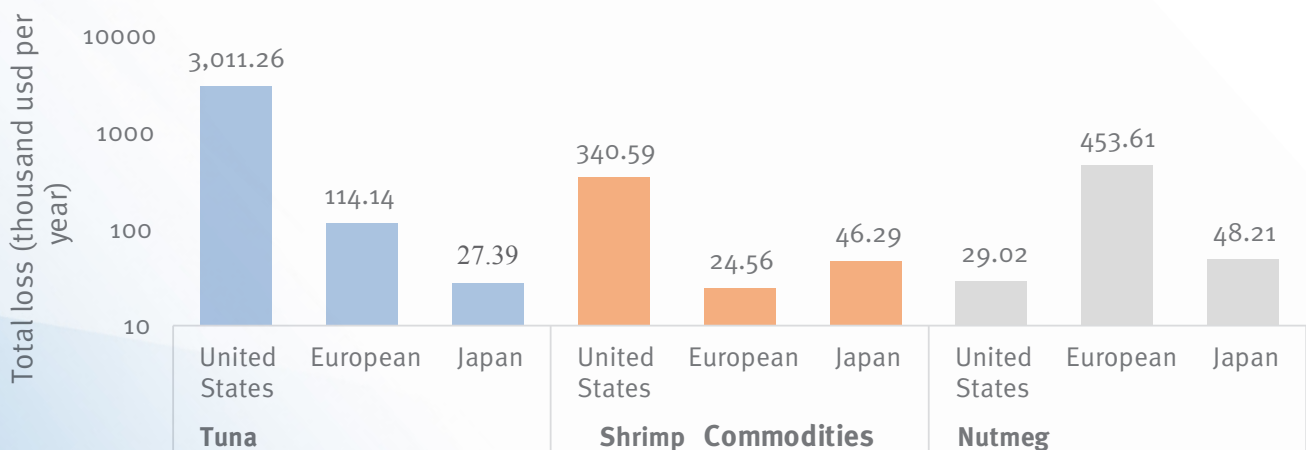
Reasons for rejection for fish, crustaceans, molluscs and other aquatic invertebrates (HS 03) by market:

As export rejections are more likely to occur for fishery products than for other products such as agricultural or processed food, it is worthwhile estimating the economic impact of these rejections as well as delving into the main reasons for rejections of this commodity.

Export rejections have a strong negative economic impact by raising transaction costs, reducing revenues, and damaging the credibility and reputation of exporters. Economic losses can be estimated by adding the cost of export failure, communication costs, laboratory testing costs, transportation costs, and execution costs. Between 2014 to 2016, the biggest economic losses were due to rejections of tuna commodities and amounted to USD 3M per year as can be seen in **Figure 11**. The overall losses mostly come from transportation cost (59% or USD 2.4M per year).⁴⁷ Furthermore, it is

worrisome to note that rejection of exports of Indonesian fishery products which were recorded as re-import in terms of value rose dramatically by 332% from USD 6.2M to USD 26.6M or the equivalent of Rp. 390B with an average price of Rp. 42,239 per kg in 2021. In terms of volume, cases of export refusal in terms of volume increased drastically by 534% from 1,459 tons to 9,254 tons or around 462 40-foot containers (assuming 20 tons per container). In addition, cases of export refusal by the US Food and Drug Administration (FDA) jumped 205% from 76 cases in 2020 to 232 cases in 2021 based on the entry number (shipment id). As the US market represents the largest export market for Indonesian fishery products, this constitutes a huge economic loss. The main reason for rejection was salmonella (88%) while the other less recurrent reasons were histamine, labelling, and listeria.⁴⁸

FIGURE 11: TOTAL ECONOMIC LOSSES DUE TO THE REJECTION OF INDONESIAN FOOD EXPORTS TO THE US, EU-28 AND JAPAN OF TUNA, SHRIMP AND NUTMEG COMMODITIES DURING 2014–2016



⁴⁷ Rahayu, W. P., Prasetyawati, C., Arizona, Y., & Adhi, W. (2020). Economic Losses Estimation Due to Rejection of Indonesian Exported Food. *Estimasi Kerugian Ekonomi Akibat Penolakan Pangan Ekspor Asal Indonesia*. <https://journal.itltrisakti.ac.id/index.php/jmtranslog/article/view/368>

⁴⁸ Indrotristanto, N., Andarwulan, N., Fardiaz, D., & Dewanti-Hariyadi, R. (2022). Prioritization of food – pathogen pairs in export refusals of fishery commodities from Indonesia. *Food Control*, 131. <https://www.sciencedirect.com/science/article/pii/S0956713521006149>

TABLE 5: FREQUENCY OF REASONS FOR REJECTION (NUMBER & %) OF INDONESIAN FISH AND CRUSTACEANS, MOLLUSCS AND OTHER AQUATIC INVERTEBRATES (HS 03) EXPORTS TO THE 5 MARKETS IN 2020

Indonesia HS-03	Australia		China		EU-28		Japan		US		Total	
	Numbers	%	Numbers	%	Numbers	%	Numbers	%	Numbers	%	Numbers	%
Additive	0	0%	16	25%	4	4%	6	14%	133	5%	159	5%
Adulteration / missing document	1	2%	20	31%	17	18%	35	80%	12	0%	85	3%
Bacterial contamination	11	21%	2	3%	0	0%	0	0%	913	34%	926	32%
Heavy metal	0	0%	5	8%	42	44%	0	0%	0	0%	47	2%
Hygienic condition / controls	0	0%	11	17%	20	21%	0	0%	1,296	49%	1,327	46%
Labeling	7	13%	2	3%	1	1%	0	0%	60	2%	70	2%
Mycotoxin	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Other contaminants	26	50%	0	0%	9	9%	1	2%	128	5%	164	6%
Other microbiological contaminants	0	0%	3	5%	0	0%	0	0%	0	0%	3	0%
Others	0	0%	2	3%	2	2%	2	5%	3	0%	9	0%
Packaging	0	0%	1	2%	0	0%	0	0%	0	0%	1	0%
Pesticide residues	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Veterinary drugs residues	7	13%	2	3%	1	1%	0	0%	106	4%	116	4%
Total	52	100%	64	100%	96	100%	44	100%	2.651	100%	2,907	100%

FIGURE 12: FREQUENCY OF REASONS FOR REJECTION (%) OF INDONESIAN FISH AND CRUSTACEANS, MOLLUSCS & OTHER AQUATIC INVERTEBRATES (HS-03) EXPORTS TO THE 5 MARKETS IN 2020

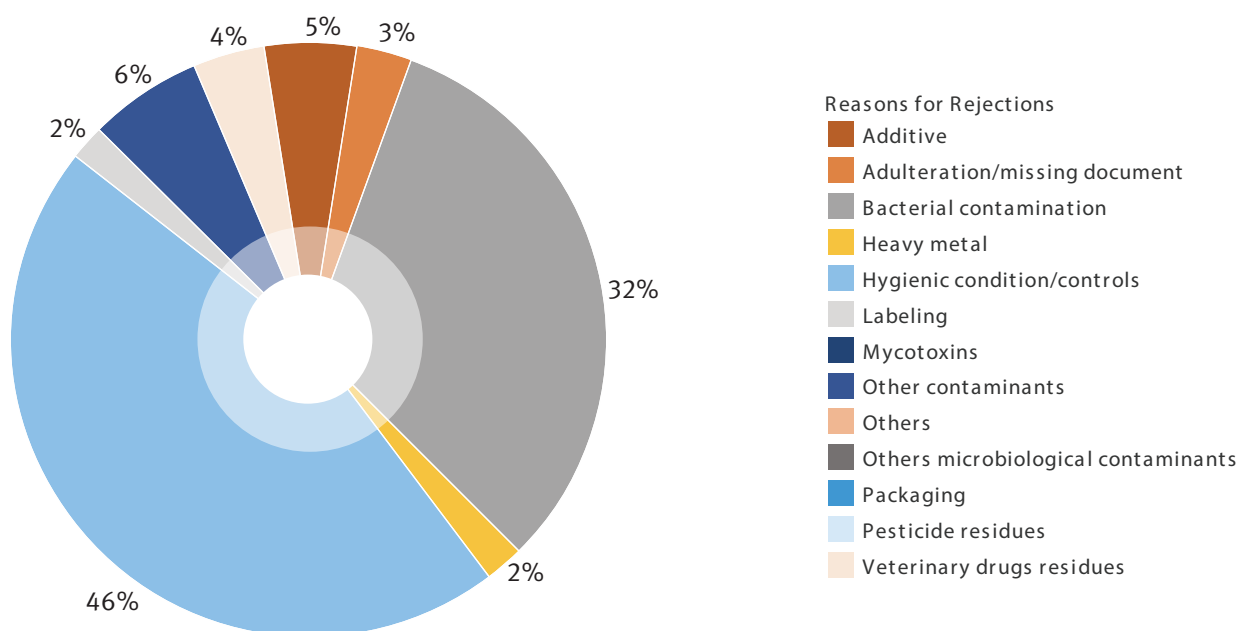


Figure 12 and **Table 5** show the aggregate frequency of reasons for rejection of fishery products exported from Indonesia to the five markets in 2020. The main causes for rejection for Indonesia, which represent over three quarters of all rejections, are hygienic condition/controls (46%) and bacterial contamination (32%). According to MMAF (BKIPM/FQIA), information on border rejections of fishery products (HS 03) can be obtained from several export destination countries, with which Indonesia already has mutual recognition agreements (MRAs) and are recorded by the Indonesia Rapid Alert System for Food and Feed (INRASFF), which

was developed by BPOM. However, there is a possibility that not all rejections of fishery products are being recorded as some rejected products can get destroyed when entering the destination country and whose rejections may not be recorded or can be re-processed and re-exported to other countries.

Figure 13 illustrates the reasons for rejection of Indonesian fish, crustaceans, molluscs, and other aquatic invertebrates (HS 03) exports in each of the main markets.

FIGURE 13: FREQUENCY OF REASONS FOR REJECTION OF INDONESIAN FISH AND CRUSTACEANS, MOLLUSCS & OTHER AQUATIC INVERTEBRATES (HS 03) EXPORTS BY MARKET IN 2020

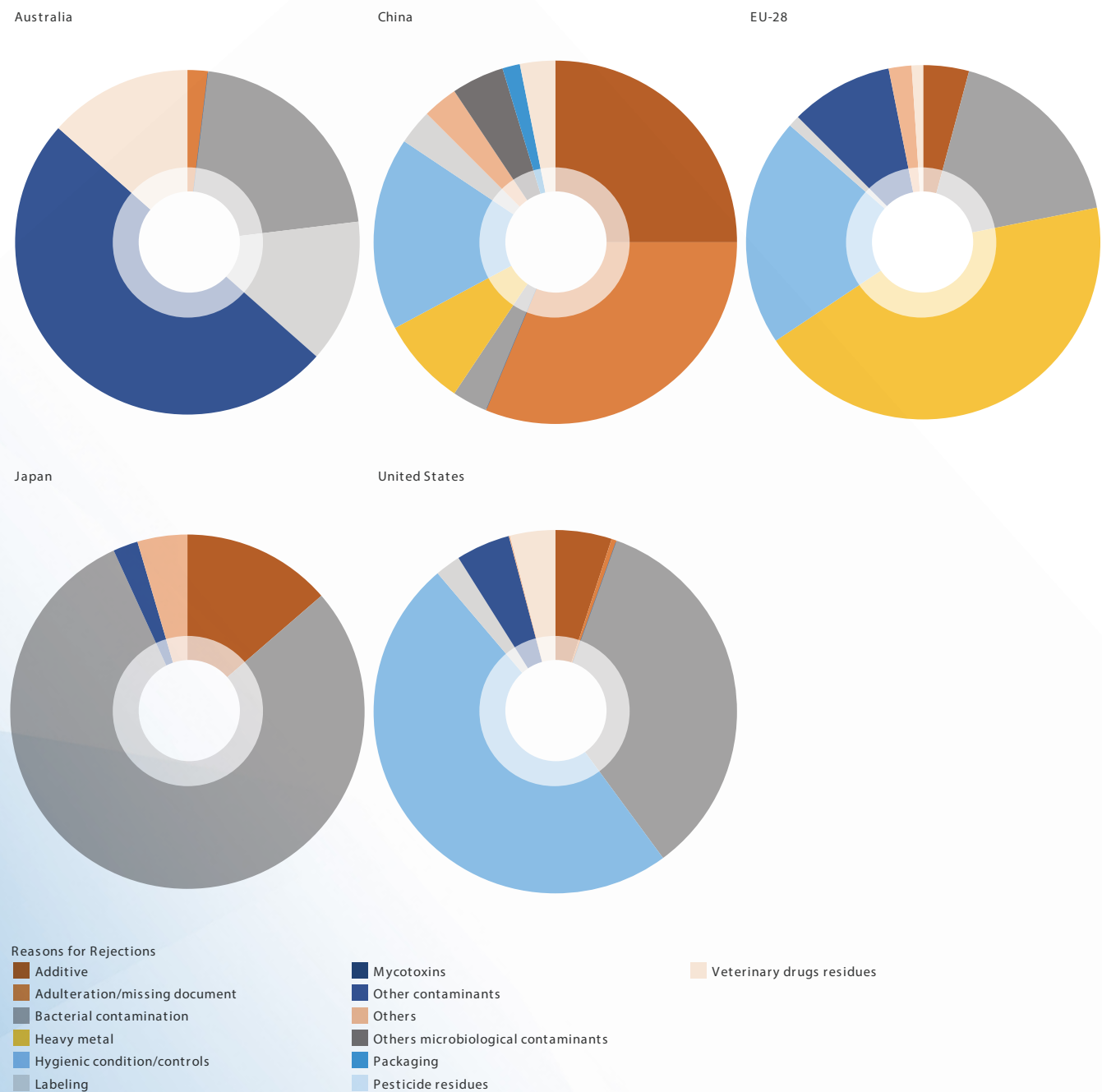


Figure 13 and **Table 5** demonstrate that hygienic condition/controls were the most common reason for rejection followed by bacterial contamination (34%) in the US market. The reasons for rejection in the Chinese market were adulteration/missing document (31%), additive (25%), hygienic condition/controls (17%), and heavy metal (8%). In the EU-28 market, the most common reasons for rejection in 2020 were heavy metal (44%), hygienic condition/controls (21%), and adulteration/missing document (18%). In the Japanese market, the most frequent reasons for rejection were adulteration/missing document, which accounted for the majority of the reasons for rejection at 80% followed to a much lesser degree by additive (14%). Lastly, in the Australian market, the most common reasons for rejection of Indonesian fishery exports in 2020 were other contaminants (50%), bacterial contamination (21%), and labeling (14%). The rest of the reasons were less frequent with small shares of the pie chart.



D. COMPARATIVE ANALYSIS

Country comparison:

TABLE 6: MAIN INDICATORS OF THE 3 COUNTRIES - INDONESIA, VIETNAM AND MALAYSIA

	Indonesia	Vietnam	Malaysia
GDP in billion USD – 2021	1.19 (trillion)	366.1	372.9
Total population in million – 2021	273.7	97.46	33.57
GDP per capita in USD – 2021	4,332	3,756	11,109
Value added by Agriculture, Forestry and Fishery – 2021	13.3%	12.6%	9.6%
Human Development Index – 2020	0.705	0.703	0.803
3 Year Average of Food Production (2015 – 2017; unit: \$1 per capita)	161	199	310
Logistics Performance Index (Overall) – 2023	3	3.3	3.6
Food Safety Index – 2017	100	93	N/A
Percentage of population employed in agriculture – 2019	29%	37%	10%
Main exporting agricultural products – 2020	Soybeans, dairy products, wheat, cotton	Cotton, soybeans, dairy products, tree nuts	Palm oil, rubber, cocoa, wood
Main trading partners – 2020	Japan, China, Singapore, South Korea	USA, China, Japan, South Korea	China, USA, Hong Kong, Japan

Indonesia's economy has shown incredible resilience by growing by 5.3% in 2022. It is further expected to grow by 5.2% in 2023 as domestic demand continues to recover, according to a report by the Asian Development Bank (ADB) released on April 2022. Higher prices for Indonesia's commodity exports, however, should offset lower export volumes, keep a balanced current account and produce some revenue gains. It is therefore

interesting to compare Indonesia's performance in the global market with the performance of other ASEAN countries, some of the most successful of which are Vietnam and Malaysia. These countries have experienced a remarkable industrial development and enjoy a privileged commercial and financial relationship with China, which remains the most important economic partner of all three nations.

Aggregate rejection rate:

The Aggregate Rejection Rate is shown for Indonesia, Vietnam, and Malaysia in **Table 7**.

TABLE 7: AGGREGATE NUMBER OF REJECTIONS OF FOOD AND FEED (HS 1-23) EXPORTS DURING 2010 – 2020

INDONESIA

Markets	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total	%
Australia	28	48	24	28	18	14	9	33	44	20	51	317	12%
China	30	30	23	35	41	34	182	85	14	27	41	541	20%
EU-28	23	19	33	19	28	21	36	22	23	9	7	240	9%
Japan	44	19	23	25	17	17	20	17	11	9	7	209	8%
United States	313	231	174	108	70	97	95	58	73	129	86	1,434	52%
Total	438	347	277	215	174	183	342	215	165	194	192	2,742	100%

VIETNAM

Markets	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total	%
Australia	46	36	38	36	42	47	27	62	62	15	72	483	9%
China	63	63	48	36	104	73	71	113	80	119	236	1,006	18%
EU-28	70	107	67	75	120	80	63	69	55	49	38	793	14%
Japan	115	157	122	68	55	67	59	62	54	59	65	883	16%
United States	338	227	215	174	236	150	217	183	169	283	126	2,318	42%
Total	632	590	490	389	557	417	437	489	420	525	537	5,483	100%

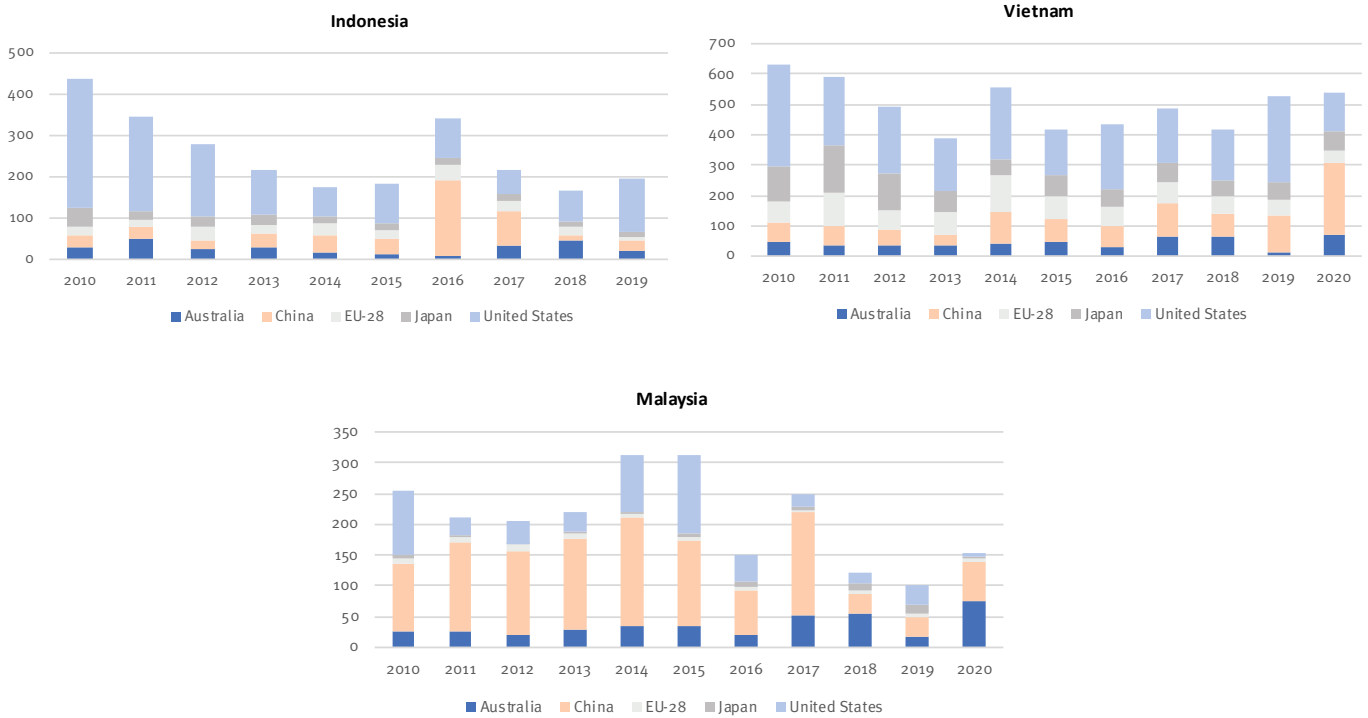
MALAYSIA

Markets	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total	%
Australia	26	25	20	28	34	36	21	51	55	18	75	389	17%
China	110	146	137	148	177	138	72	168	32	30	63	1,221	53%
EU-28	9	8	10	10	6	6	6	5	6	7	6	79	3%
Japan	5	4	2	2	3	6	8	5	10	13	4	62	3%
United States	105	29	36	33	91	127	43	19	18	32	5	538	24%
Total	255	212	205	221	311	313	150	248	121	100	153	2,289	100%

Table 7 and **Figure 14** illustrate that the US border rejections have the highest share of all rejections in the five markets during 2010–2020 for Indonesian and Vietnamese exports at 52% and 42% respectively. For Malaysia, the majority of rejections came from the Chinese market (53%). For the other countries, border rejections for goods entering the Chinese market

represent 1/5th at most of total rejections during 2010 to 2020 (20% for Indonesia and 18% for Vietnam). We can therefore conclude that Indonesia and Vietnam should first focus on reducing border rejections of food and feed exports by the American authorities. Malaysia on the other hand must make a targeted effort on the Chinese market.

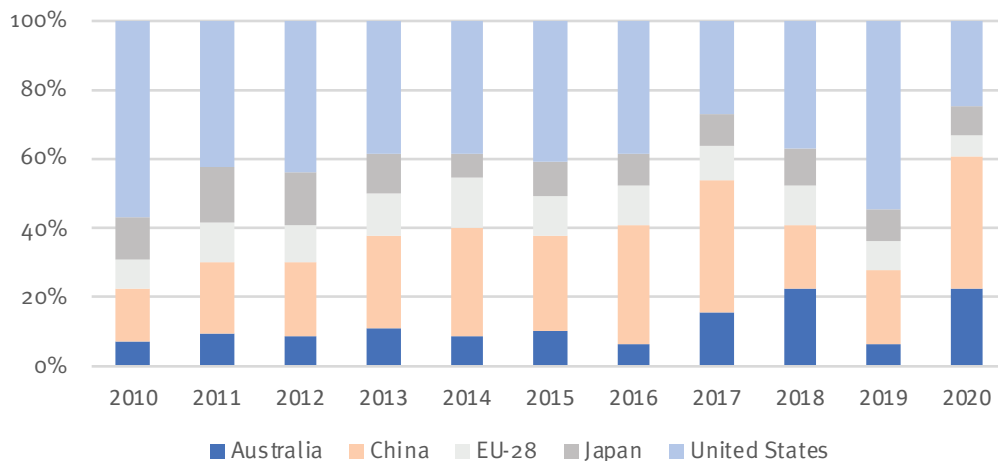
FIGURE 14: SHARE OF REJECTIONS OF FOOD AND FEED (HS 1-23) EXPORTS BY MARKET, 2010-2020



Based on **Figure 15**, the share of US rejections compared to other markets was quite high for Vietnamese and Indonesian exports in 2010. Then, these figures decreased for all three countries over the following decade. Indeed, both Indonesia and Vietnam have effectively managed to significantly reduce their US border rejections. This noteworthy performance has also been achieved by Malaysia, which has successfully reduced rejections in the US market from 105 in 2010 to merely five in 2020, representing a significant decline from 51% of the total number of rejections in 2010 to 3% in 2020. Conversely, the share of rejections from the Australian market has witnessed an increase for

all three countries' exports, particularly for Malaysian exports rising from 10% in 2010 to a striking 49% in 2020. Finally, while the share of rejections in the Chinese market has increased for Vietnam, rising from 10% in 2010 to 44% in 2020, it has decreased for both Indonesian and Malaysian exports over the studied period. In the next section, another indicator, known as the Unit Rejection Rate, will be presented. This metric allows for a true measure of non-compliance of products from a specific country in a particular market, regardless of whether the number of exports into that market has increased or decreased.

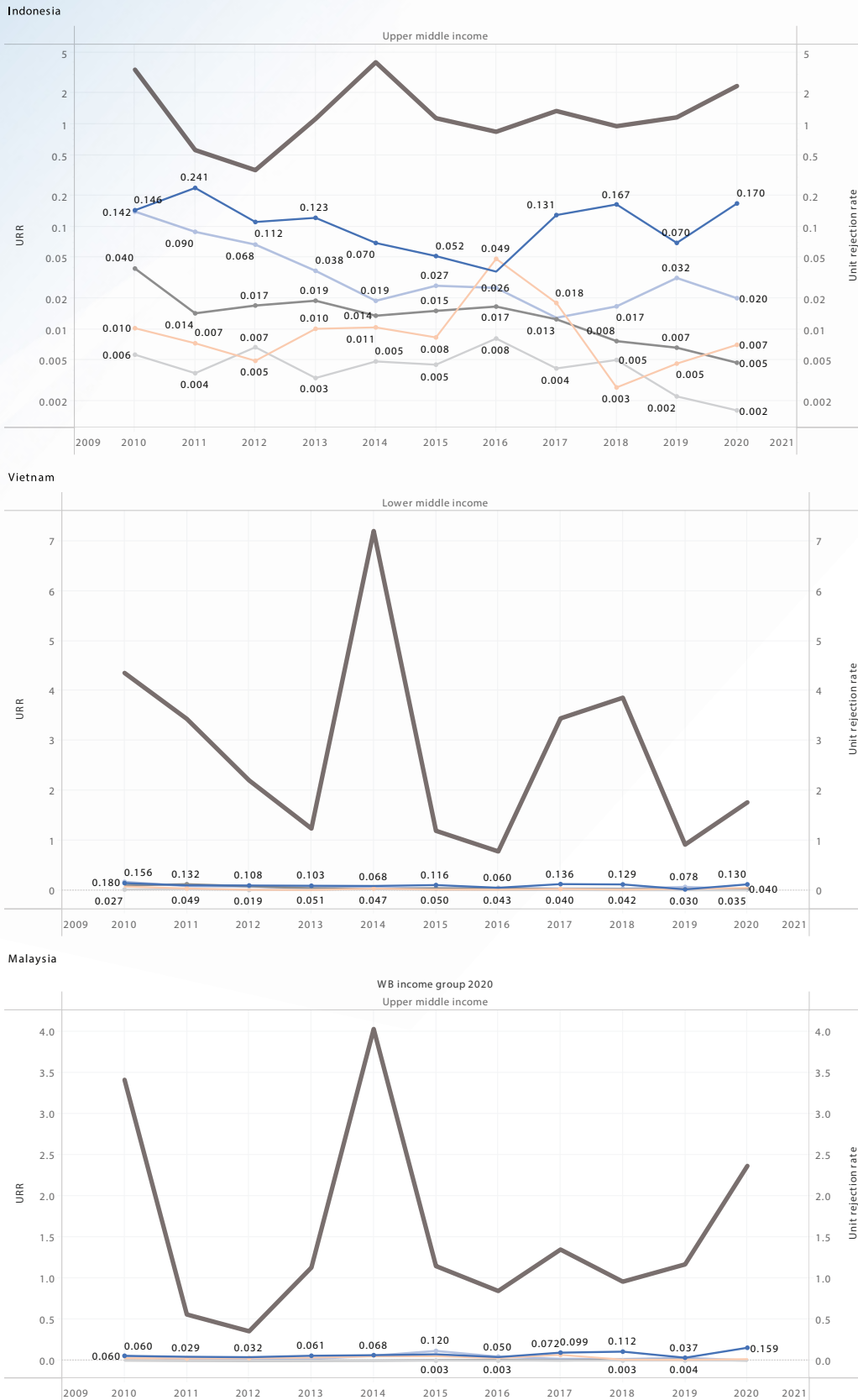
FIGURE 15: SHARE OF REJECTIONS OF THE EXPORTS OF THE 3 COUNTRIES BY MARKET, 2010-2020



Unit Rejection Rate:

The Unit Rejection Rate (URR) is defined as the number of rejections per USD 1 million of imports. The URR indicator accounts for changes in the volume of exports such that it provides a direct measure of the rate of non-compliance. The URR is shown for Indonesia, Vietnam, and Malaysia in **Figure 16**.

FIGURE 16: URR FOR FOOD AND FEED (HS 1-23) EXPORTS TO THE 5 MARKETS, 2010–2020



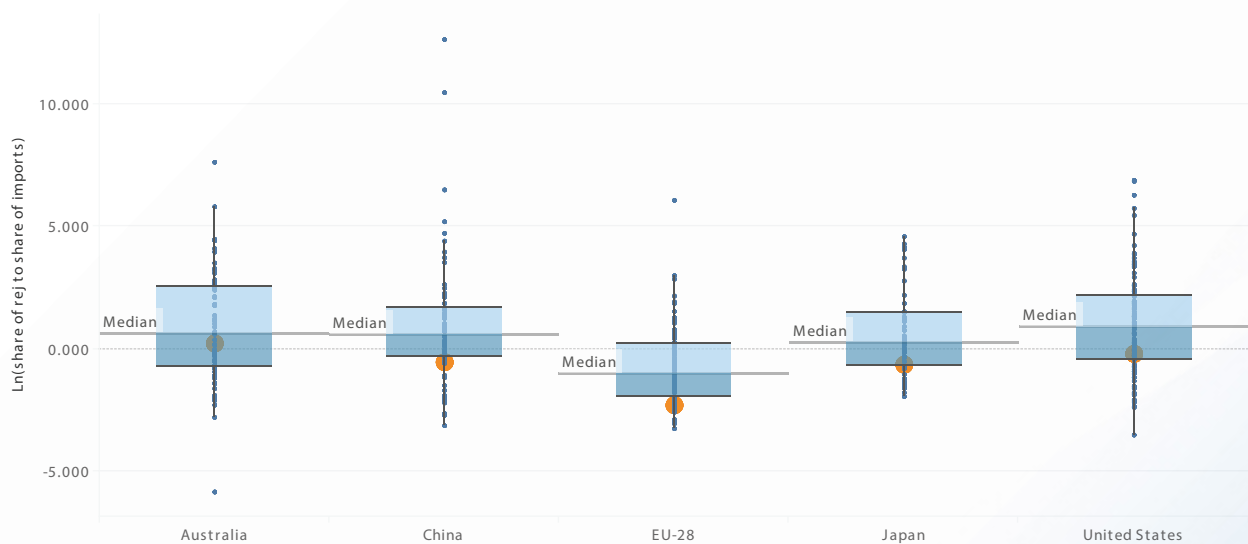
According to **Figure 16**, all three countries have URR well below the average URR for their respective World Bank income group across the five markets. The Indonesian URR for the five markets ranged from 0.02 to 0.2, which is similar to Malaysia's performance. Vietnam has achieved a comparable performance as the other two countries, while belonging to a different income group (lower middle income). It is important to note that Indonesia's URR curves fluctuated during the 2010–2020 decade, whereas the URR curves for Vietnam and Malaysia were much more stable throughout the same period.

Relative Rejection Rate Indicator:

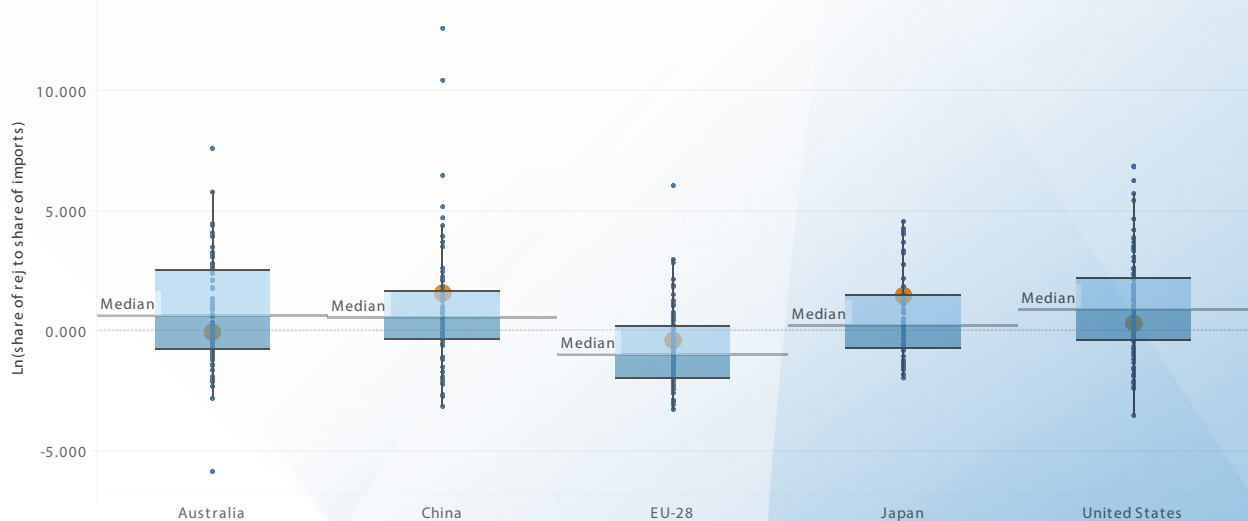
The bar charts in **Figure 17** display the distribution of the Relative Rejection Rate (log ratio) across markets for the exporting countries (Indonesia, Vietnam, and Malaysia) for food and feed (HS 1-23) exports in 2020. The Relative Rejection Rate (RRR) shown (log ratio) is the natural logarithm of the ratio of a country's share of total rejections to share of total imports. The indicator provides a convenient measure of the performance of countries relative to one another in a year or over a period. A higher RRR (log ratio) for a country implies poorer performance with regards to food safety and quality standards in that market relative to the other markets.

FIGURE 17: RRR FOR FOOD AND FEED (HS 1-23) EXPORTS FOR INDONESIA, VIETNAM, AND MALAYSIA IN 2020

INDONESIA



VIETNAM



MALAYSIA

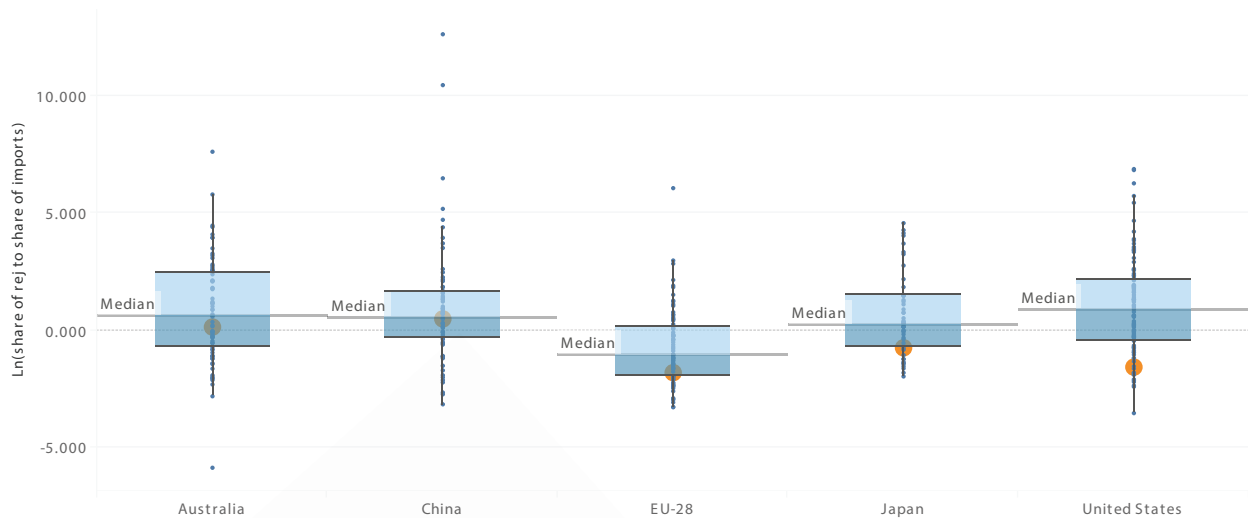


Figure 17 show that in all five markets the Indonesian RRR is lower than the median RRR in each market, which means that Indonesia is performing on average better than other countries. However, in the Australian market, both Vietnam and Malaysia performed better than Indonesia. In the European market, Indonesia performed the best out of the three countries based on its RRR of -2.297. Similarly, in the Chinese market, Indonesia outperformed Vietnam and Malaysia with an RRR of -0.543. In the Japanese market, Indonesia and Malaysia have a similar performance, while Vietnam performed poorly (RRR = 1.482) compared to other countries in that market (median RRR = 0.223). Finally, in the American market, Indonesia performed well but could aim to improve and reach Malaysia's admirable performance (RRR = -1.552). In conclusion, Indonesia could improve its compliance rate in the Australian market as its performance was close to the median performance of other countries, albeit slightly better.

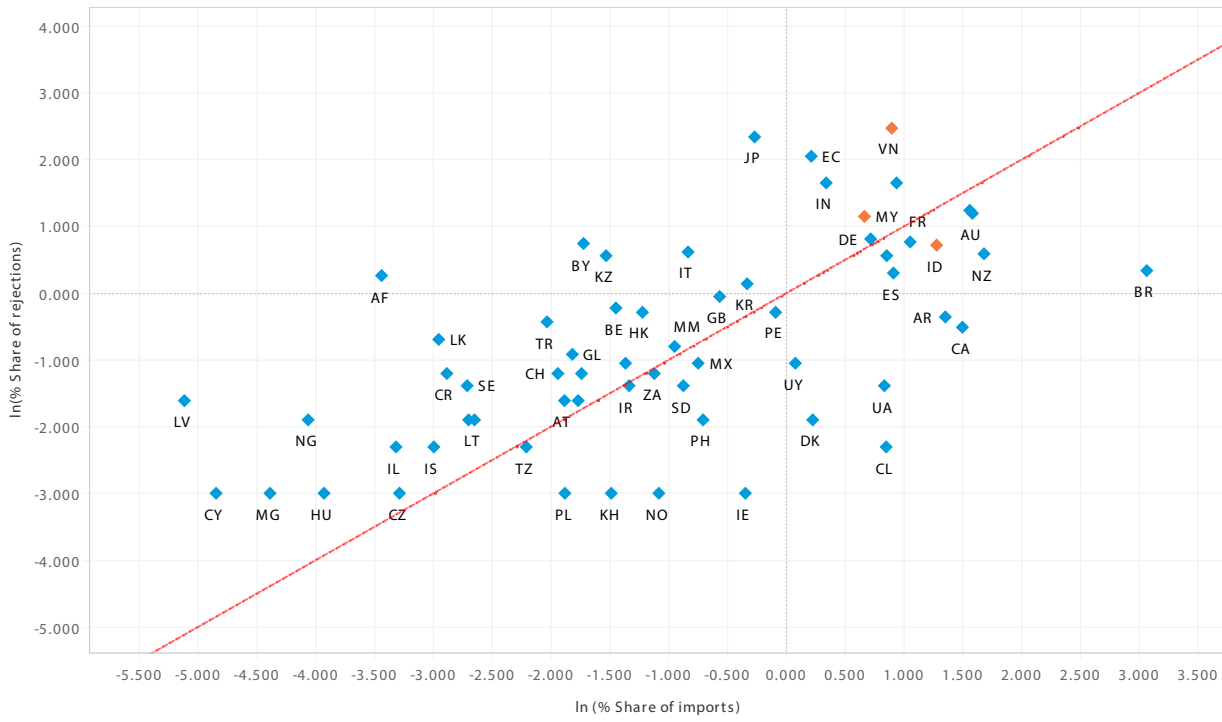
Relationship between the natural logarithm of share of rejections to the natural logarithm of share of imports

The scatterplot in **Figure 18** presents the relationship between the natural logarithm of share of rejections to the natural logarithm of share of imports for the food and feed (HS 1-23) products for 2020 for a given market. In the scatterplot, exporting countries are identified using ISO two-letter abbreviation codes. In addition, the countries above the 45-degree line are considered worse performers {i.e. $\ln(\text{share of rejections})$ is greater than $\ln(\text{share of imports})$ } than those below the line, as their $\ln(\text{share of rejections})$ is less than $\ln(\text{share of imports})$.



FIGURE 18: RELATIONSHIP BETWEEN THE NATURAL LOGARITHM OF SHARE OF REJECTIONS TO THE NATURAL LOGARITHM OF SHARE OF IMPORTS FOR HS 1-23 FOOD AND FEED EXPORTS IN 2020

CHINESE MARKET



JAPANESE MARKET

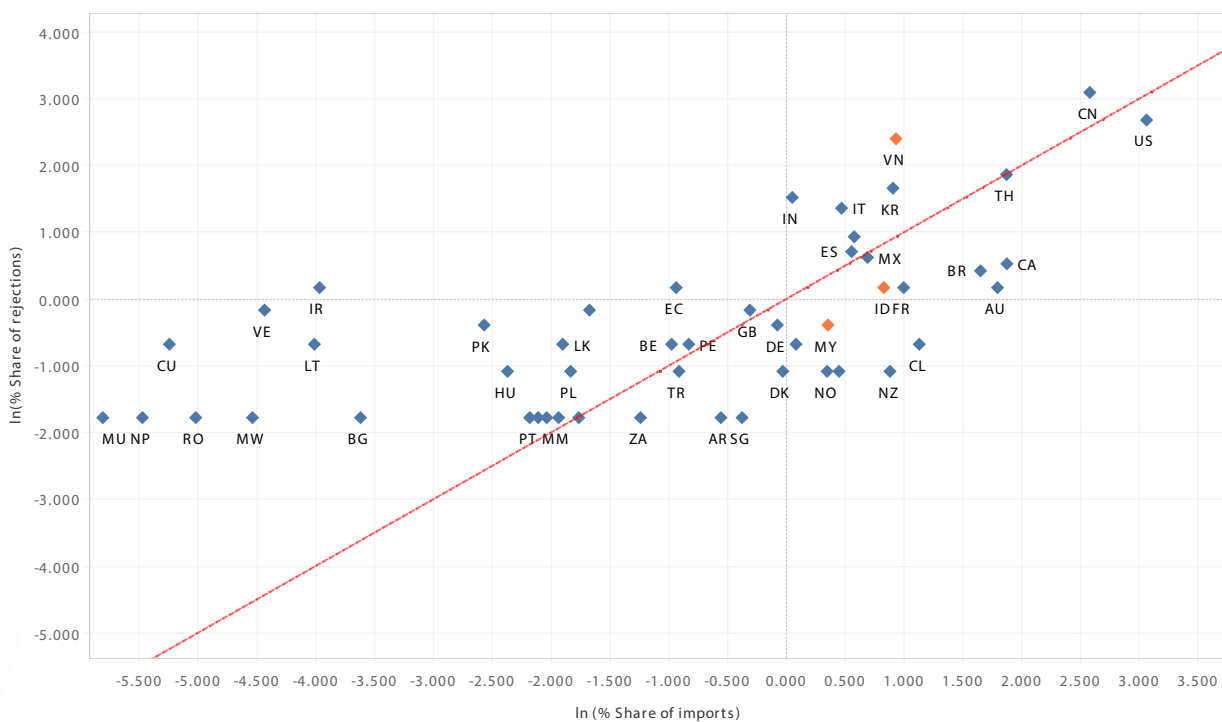


Figure 18 demonstrates that Indonesia performed better on average than the other two countries in the Japanese market and poorly in the Australian market, as it is positioned above the 45-degree line. This performance contrasts with that of Vietnam, as the country performed poorly in the Japanese and American markets. In the EU market, all three countries performed well, with Indonesia performing the best. In the US market,

Malaysia performed better than Indonesia. Finally, in the Chinese market, Indonesia can be commended for its good performance. Once again, the country outperformed Vietnam and Malaysia, both of which were situated above the 45-degree line as their $\ln(\text{share of rejections})$ was greater than $\ln(\text{share of imports})$ in 2020.

Reasons for rejection - comparative analysis:

TABLE 8: FREQUENCY OF REASONS FOR REJECTION (NUMBER & %) OF INDONESIAN FOOD & FEED (HS 1-23) EXPORTS TO THE 5 MARKETS IN 2020

Indonesia	Australia		China		EU-28		Japan		US		Total	
	Numbers	%	Numbers	%	Numbers	%	Numbers	%	Numbers	%	Numbers	%
Additive	2	0%	169	30%	6	2%	15	7%	175	6%	367	8%
Adulteration / missing document	31	8%	58	10%	12	5%	1	0%	169	6%	271	6%
Bacterial contamination	82	20%	125	22%	32	13%	108	52%	935	31%	1,282	29%
Heavy metal	0	%	16	3%	51	21%	2	1%	1	0%	70	2%
Hygienic condition / controls	0	0%	49	9%	21	9%	31	15%	1,369	45%	1,470	33%
Labeling	191	48%	59	11%	2	1%	0	0%	124	4%	376	8%
Mycotoxin	30	7%	1	0%	68	28%	21	10%	24	1%	144	3%
Other contaminants	59	15%	3	1%	20	8%	17	8%	128	4%	227	5%
Other microbiological contaminants	0	0%	21	4%	14	6%	0	0%	0	0%	35	1%
Others	0	0%	36	6%	15	6%	2	1%	4	0%	57	1%
Packaging	0	0%	19	3%	2	1%	0	0%	0	0%	21	0%
Pesticide residues	0	0%	2	0%	2	0%	11	5%	1	0%	16	0%
Veterinary drugs residues	7	2%	2	1%	1	0%	1	1%	106	3%	117	3%
Total	402	100%	560	100%	246	100%	209	100%	3036	100%	4,453	100%



TABLE 9: FREQUENCY OF REASONS FOR REJECTION (NUMBER & %) OF VIETNAMESE FOOD & FEED (HS 1-23) EXPORTS TO THE 5 MARKETS IN 2020

Vietnam	Australia		China		EU-28		Japan		US		Total	
	Numbers	%	Numbers	%	Numbers	%	Numbers	%	Numbers	%	Numbers	%
Additive	0	0%	148	14%	62	7%	67	8%	215	6%	492	7%
Adulteration / missing document	9	1%	84	8%	19	2%	27	3%	201	5%	340	5%
Bacterial contamination	133	23%	275	27%	175	21%	259	29%	744	19%	1,586	22%
Heavy metal	1	0%	29	3%	134	16%	0	0%	6	0%	170	2%
Hygienic condition / controls	0	0%	64	6%	32	4%	55	6%	1,177	30%	1,328	18%
Labeling	220	38%	167	16%	4	0%	0	0%	592	15%	983	14%
Mycotoxin	3	0%	9	1%	13	1%	9	1%	10	1%	44	1%
Other contaminants	16	3%	27	3%	40	5%	12	1%	184	5%	279	4%
Other microbiological contaminants	0	0%	128	13%	39	5%	0	0%	0	0%	167	2%
Others	5	1%	55	5%	90	11%	12	2%	8	0%	170	2%
Packaging	0	0%	15	1%	5	1%	0	0%	0	0%	20	0%
Pesticide residues	80	14%	16	2%	92	11%	97	11%	422	11%	707	10%
Veterinary drugs residues	177	20%	13	1%	130	16%	345	39%	329	8%	994	14%
Total	644	100%	1,030	100%	835	100%	883	100%	3,888	100%	7,280	100%



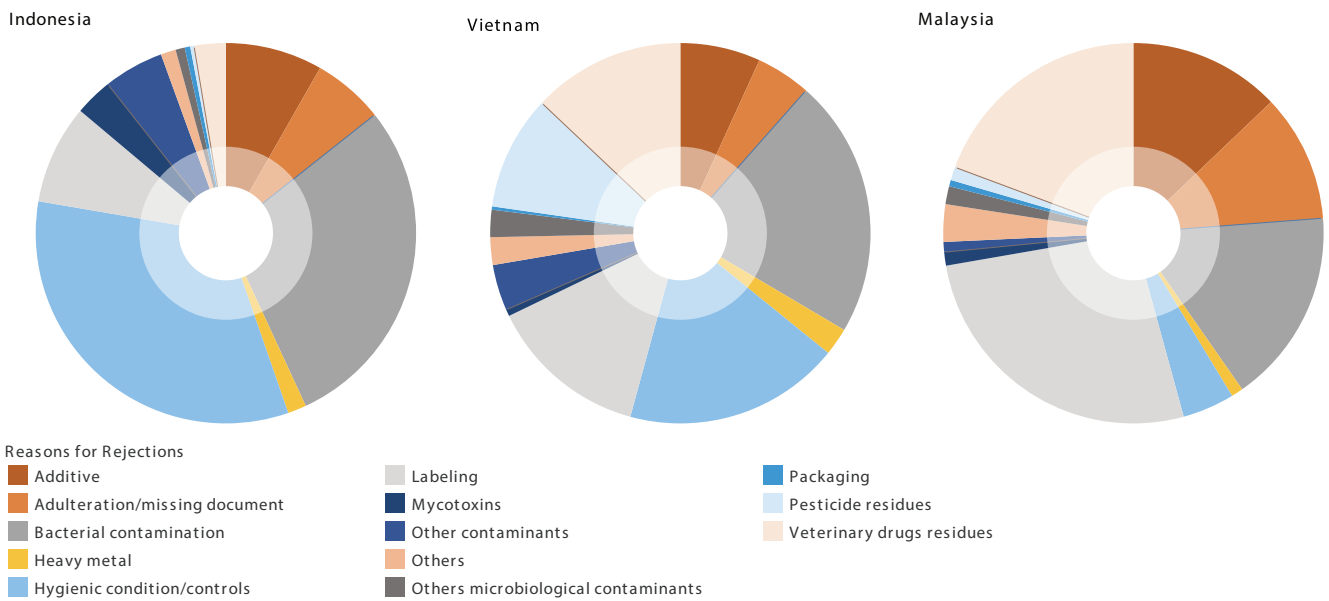
TABLE 10: FREQUENCY OF REASONS FOR REJECTION (NUMBER & %) OF MALAYSIAN FOOD & FEED (HS 1-23) EXPORTS TO THE 5 MARKETS IN 2020

Malaysia	Australia		China		EU-28		Japan		US		Total	
	Numbers	%	Numbers	%	Numbers	%	Numbers	%	Numbers	%	Numbers	%
Additive	0	0%	341	27%	16	20%	20	32%	57	4%	434	13%
Adulteration / missing document	18	4%	179	14%	4	5%	0	0%	166	11%	367	11%
Bacterial contamination	26	6%	324	26%	8	1%	29	47%	171	11%	558	17%
Heavy metal	2	0%	25	2%	7	9%	0	0%	0	0%	34	1%
Hygienic condition / controls	0	0%	48	4%	1	1%	1	2%	99	6%	149	4%
Labeling	360	82%	174	14%	0	0%	0	0%	360	24%	894	27%
Mycotoxin	20	5%	15	1%	2	2%	3	5%	0	0%	45	1%
Other contaminants	3	1%	11	1%	4	5%	4	6%	5	0%	22	1%
Other microbiological contaminants	0	0%	49	4%	3	4%	0	0%	0	0%	52	2%
Others	0	0%	78	6%	14	17%	1	2%	14	1%	107	3%
Packaging	0	0%	18	1%	0	0%	0	0%	0	0%	18	1%
Pesticide residues	10	2%	0	0%	21	26%	4	6%	4	1%	39	1%
Veterinary drugs residues	0	0%	3	0%	1	1%	0	0%	647	42%	651	19%
Total	439	100%	1,265	100%	80	100%	62	100%	1,523	100%	3,369	100%





FIGURE 19: FREQUENCY OF REASONS FOR REJECTION OF FOOD AND FEED (HS 1-23) EXPORTS FOR INDONESIA, VIETNAM, AND MALAYSIA IN 2020



According to **Tables 8-10** and **Figure 19**, the percentage of rejections due to bacterial contamination is quite high for all three countries (from 17% to 29% of the total rejections). Indonesia has the highest rate at 29%, while Vietnam and Malaysia have 22% and 17% respectively. These high figures can also be observed in the US, Chinese and Japanese markets. Similarly, the number of rejections due to hygienic condition/controls is elevated for Indonesia (33%) and for Vietnam (18%). Indonesia needs to focus on lowering the number of

rejections due to bacterial contamination and hygienic condition/controls. Whereas, Vietnam should focus on reducing rejections due to bacterial contamination, hygienic condition/controls, and veterinary drugs residues. Vietnam and Indonesia could both learn from Malaysia on how to reduce rejections due to hygienic condition/controls as it accounts for only 4% of all rejections for Malaysian exports in 2020. As for Malaysia, its most prominent issue is due to labeling followed by veterinary drugs residues.

RECOMMENDATIONS





In the light of the global pandemic and the severe effects of climate change that have been observed in the last few years, the relevance of quality and safety standards has become increasingly evident, highlighting the need for adequate infrastructure and internationally recognized conformity assessment services. It has become imperative for Indonesia to continue to improve its quality infrastructure at a national level in order to ensure that international market requirements are met and that producers can prove that their products comply with international standards and technical regulations through the entire value chain from production to packaging, conservation, transport, export procedures, etc. Based on the analysis of the border rejection data for Indonesian food and feed exports as well as consultation with national stakeholders, public and private institutions, and development agencies, several recommendations can be made:

Strengthen the Quality Infrastructure System:

- » **Establishing the National Quality Policy:** The National Quality Policy, known as JAKNAS, should be promptly established and implemented to ensure the harmonization and robust implementation of quality infrastructure (QI) in Indonesia. JAKNAS is currently undergoing finalization by BSN and is expected to be officially issued by the Indonesian authorities in the near future.
- » **Improving the services of the National Agency of Drug and Food Control:** Enhancing some of the services provided by the National Agency of Drug and Food Control (NADFC/BPOM) of Indonesia is crucial. Based on a customer satisfaction survey conducted in 2018, which garnered responses from 480 companies, the following three key service indicators could be improved: complaint handling, registration requirements, and service settlement time. To address the issues raised, NADFC must prioritize prompt and effective complaint resolution by implementing an online customer service platform featuring live chat support. Additionally, streamlining the registration process is essential to eliminate unnecessary steps and requirements, with clear promotion through print media, social media, and online channels. Proactive communication with companies regarding missing documents will expedite registration completion. Lastly, shortening the service settlement time, while maintaining the integrity of the inspection process, is vital.⁴⁹ Alongside NADFC, Indonesia also needs to strengthen its NQI led by BSN and establish competent authorities within technical ministries to provide inspection and certification services at the ministerial level.

⁴⁹ Pitaloka, E., & Tannady, H. (2020). Analysis of Citizen Satisfaction on National Agency of Drug and Food Control of Republic Indonesia (NADFC). Department of Management, Universitas Pembangunan Jaya, 62. https://www.researchgate.net/publication/341165324_Analysis_of_Citizen_Satisfaction_on_National_Agency_of_Drug_and_Food_Control_of_Republic_Indonesia_NADFC/link/5eb1dc5ea6fdcc705oad55fc/download

- » **Food Control Index:** Developing a Food Control Index using a conceptual framework that aligns with applicable regulations and guidelines set forth by the FAO/WHO. This index will encompass four essential dimensions: (1) input and resources, (2) interactions with stakeholders, (3) science/knowledge base and continuous improvements, and (4) control functions. The primary objective behind this endeavor is to establish a strong foundation for future policy interventions, specifically aimed at enhancing food security. Ultimately, this comprehensive model has the potential to greatly bolster food security and elevate the competitiveness of food products both in local and global markets.⁵⁰
- » **Enhancing traceability for fishery products:** Given the ongoing development of public and private regulations and frameworks for seafood traceability in the US, Japan, and China, it is imperative for Indonesia to diligently address the implementation of traceability requirements across its seafood value chains. This holds particular significance in relation to tuna exports from Indonesia. In 2020, the rejection of tuna by major importing countries, including the US, the EU, and Japan, amounted to the substantial value of USD 3.15 million per year, accounting for 4.26% of the total value of tuna exported from the country. This high figure underscores the importance for Indonesia to enhance its traceability processes and minimize losses resulting from the rejection of seafood by importing nations.⁵¹
- » **Addressing regulatory changes and future standards:** Apart from hygiene factors, a significant number of rejections came from regulatory changes. This does not indicate a lack of compliance as an issue but rather serves as evidence of the ever-evolving nature of trade relations. To better equip exporting countries in complying with potential new standards and regulations, UNIDO could incorporate a projection of forthcoming standard changes by harnessing the power and knowledge found using innovative digital solutions and gathering insights stemming from mining large trade data sets. For Indonesia, UNIDO could facilitate the implementation of GRP to support government institutions often overwhelmed by ongoing changes to food safety regulations. Consequently, as these institutions are responsible for issuing the regulations that agri-SMEs must comply with, this would result in better coordination between the central government and local authorities regarding food and safety regulations. It is important to note that the current analysis of the SCA tool does not encompass voluntary standards, such as sustainability and traceability standards. However, it is essential to recognize that these standards, particularly in terms of traceability and

sustainability, have the potential to evolve into future regulations. For instance, lawmakers in the European Parliament and the European Council recently reached an agreement on regulations supporting deforestation-free supply chains. The objective is to ensure that products imported to or exported from EU markets no longer contribute to global deforestation and forest degradation. The European Union Deforestation-Free Regulation (EUDR) took effect on 29 June 2023, after formal adoption by the EU Council, granting operators and traders an 18-month period to implement the new rules, with smaller enterprises receiving a longer implementation period.⁵² The regulation sets mandatory due diligence rules for all traders exporting commodities, such as palm oil, cattle, wood, coffee, cocoa, rubber, soy and certain derived products like chocolate and specific palm oil based derivatives, from the EU market.⁵³ Additionally, on 31 July 2023, the European Commission adopted the European Sustainability Reporting Standards (ESRS) for use by all companies subject to the Corporate Sustainability Reporting Directive (CSRD). As the ESRS consist of mandatory requirements and principles for companies to comply with and report on sustainability matters, covering a wide range of environmental, social, and governance (ESG) issues, it is vital for countries to start aligning their processes with these sustainability regulations. Even though the ESRS currently primarily apply to large EU-based companies, this may change in the future and directly impact agri-SMEs in Indonesia seeking to export their products to the EU market.

- » **Assessing standards harmonization:** Using the SCA tool to ascertain the main export product groups in Indonesia that have encountered a high rate of rejection can prove beneficial. This analysis aims to evaluate the degree of harmonization between the current national standards with the corresponding international standards for those product groups.
- » **Inter-ministerial coordination:** To increase export value and mitigate rejections by importing countries, it is key for the government to strengthen cooperation and synergies across relevant ministries, namely MMAF, MoT, and the Ministry of Foreign Affairs. Additionally, fostering strong collaboration between the government, the private sector, and research and development institutes is imperative.
- » **Strengthening international agreements:** It is critical to strengthen international agreements pertaining to the exchange of information concerning food safety standards, as they play a crucial role in mitigating the risks associated with food rejection by importing countries. This significance was highlighted during the 18th Session of the COFI Sub-

⁵⁰ Barinda, S., & Ayuningtyas, D. Assessing the food control system in Indonesia: A conceptual framework. ScienceDirect. <https://doi.org/10.1016/j.foodcont.2021.108687>

⁵¹ Doddema, M., Spaargaren, G., Wiryawan, B., & R. Bush, S. (2016). Responses of Indonesian tuna processing companies to enhanced public and private traceability. ScienceDirect. <https://doi.org/10.1016/j.marpol.2020.104100>

⁵² European Parliament. (2022). *Deal on new law to ensure products causing deforestation are not sold in the EU*. <https://www.europarl.europa.eu/news/en/press-room/20221205IPR60607/deal-on-new-law-to-ensure-products-causing-deforestation-are-not-sold-in-the-eu>

⁵³ European Council. (2023). Council adopts new rules to cut deforestation worldwide. <https://www.consilium.europa.eu/en/press/press-releases/2023/05/16/council-adopts-new-rules-to-cut-deforestation-worldwide/>

Committee on Fish Trade in Bali, which took place in June 2022. During the session, Indonesia lodged a complaint regarding the lack of transparency in import requirements observed in several countries, including the EU's process of issuing registration numbers (approval numbers). Consequently, the Sub-Committee proposed that the FAO compiles a comprehensive list of import requirements for fishery products across all countries. Furthermore, it was emphasized that the impact of the COVID-19 pandemic should not serve as a justification for the introduction of new regulations that may potentially act as additional barriers to trade and exports.

- » **Logistics Competitiveness Index:** Indonesia's logistics competitiveness continues to lag behind its neighboring countries. According to the Logistics Competitiveness Index (LPI) data from the World Bank, Indonesia is ranked 61st, while Malaysia holds the 26th position, Thailand the 34th, and Vietnam the 43rd. Therefore, the Indonesian government should prioritize the improvement of the National Logistics Ecosystem (NLE) to attain a higher level of competitiveness relative to other nations. To achieve this, collaborative efforts with relevant stakeholders are essential to fulfill financial obligations to the state, including the timely payment of state revenues and logistics costs as stipulated and enforced in the NLE portal. Moreover, adequate financing for infrastructure and facilities should be provided. Streamlining licensing procedures, improving cost and time efficiency and investing in human resources would increase global competitiveness.

Enhance industry compliance, competitiveness and sustainability:

- » **Reasons for rejection:** Regarding the reasons for rejection, Indonesia needs to focus its effort on reducing rejections resulting from hygienic condition/controls (33%) and bacterial contamination (29%). Other causes include additive (8%) and labeling (8%). In the US market, the main causes of rejection are hygienic condition/controls (45%) followed by bacterial contamination (31%). Conversely, in the Chinese market, rejections are primarily attributed to additives (30%), bacterial contamination (22%), and labeling (11%).
- » **Targeting key markets:** Special attention should be directed towards the US market, considering it accounts for 52% of rejections. The US stands as Indonesia's largest export market for food and feed products in 2022. It is also necessary to focus on the Chinese market, characterized by its substantial export potential and increasing compliance requirements. Over the 2010–2020 period, this market contributed to 20% of all rejections of Indonesia food and feed exports, witnessing an increase from 30 rejections in 2010 to 41 in 2020, with a notable peak of 182 rejections in 2016. This peak corresponds to the period spanning from

2014 to 2016, during which China implemented more stringent food regulations. Moreover, careful consideration should be given to rejections from the Australian market, as Indonesia's geographical proximity presents significant export opportunities. Based on the current RRR value for that market, Indonesia's adherence to Australian food safety regulations could be improved.

- » **Mitigating product rejections:** It is necessary to provide assistance to farmers, producers and agri-SMEs who have experienced product rejections in the past. This support involves conducting inspections to assess their improved procedures, tests, and other relevant factors to mitigate the risk of future rejections. To effectively address this issue, assistance should encompass offering expertise, conducting root cause analysis, providing capacity building trainings, and allocating funds to facilitate the procurement of equipment and the enhancement of facilities, among other measures. For instance, support could be directed towards conformity assessment bodies to ameliorate their ability to detect pesticide residues. By doing so, the number of rejections of Indonesian coffee exports to Japan can be reduced, as the Japanese authority enforces 100% inspection on coffee shipments from Indonesia to detect pesticide residues, specifically isoprocab, as indicated by MoT. Indonesia can continue to be supported in implementing capacity building initiatives for coffee farmers to adhere to Good Agriculture Practices (GAP) and Good Manufacturing Practices (GMP).
- » **Digital tools:** Disseminating existing trade-related digital tools and developing new ones that provide accurate information on preferential tariffs, non-tariff measures (NTMs), rules of origins, and other trade-related factors is essential. For instance, Vietnam has successfully developed the Vietnam National Trade Repository, which serves as a valuable resource for stakeholders seeking knowledge on food safety, NTMs, conformity assessment processes and bodies, regulations, standards, and more. Findings from a comprehensive business survey conducted by the International Trade Centre among Indonesian exporters indicate that 66% of the respondents encountered burdensome regulations imposed by importing countries, acting as non-tariff barriers to trade. Notably, technical requirements, including product specifications, accounted for over 55% of the identified barriers, with fumigation issues being the most frequently mentioned concern. Furthermore, conformity assessment procedures, encompassing certification, constituted 24% of the reported burdensome NTMs. The impact of these barriers has been observed across various export products including seafood, coffee and coffee substitutes, cocoa, wood, and footwear.⁵⁴
- » **Supporting agri-trade SMEs:** According to data from the Ministry for Cooperatives and Small Business,

⁵⁴ International Trade Centre (2021). *Indonesia: Tackling the invisible barriers to trade - NTM Business Survey*. <https://www.consilium.europa.eu/en/press/press-releases/2023/05/16/council-adopts-new-rules-to-cut-deforestation-worldwide/>

there were approximately 65 million small and medium-sized enterprises (SMEs) in Indonesia in 2019, half of which were involved in the agri-trade industry. It can, therefore, be estimated that there are about 30 million food businesses in Indonesia. Based on research, compliance failures in agri-food SMEs were attributed to a lack of regulatory knowledge, as well as a desire to maximize profits while minimizing costs. It has been noted that there is a lack of government resources for food safety control, as well as an absence of a registration system for street vendors. Therefore, it is imperative for increased government support to be provided to SMEs in order to strengthen their compliance with food safety regulations. This can be achieved by enhancing their knowledge and understanding of food sanitation, hygiene practices, and relevant regulations.⁵⁵

- » **Help desks:** Establishing a clearinghouse of information that details NTMs-related procedures and food safety regulations, as well as providing help desk services to support SMEs attempting to export specific products to global markets, would be highly beneficial. This initiative would assist SMEs in complying with continuously evolving regulations. Since several information centers already exist, disseminating knowledge about trade processes with foreign countries, thanks to the support of MoI, it is essential to ensure that the establishment of new centers would not overlap with the existing ones. It is worth noting that MoA has established close collaborations with quarantine agencies in China and Australia to ensure that the agricultural product regulations are effectively communicated to producers. Similar collaborations could be arranged with other importing countries.
- » **Financial incentives for farmers:** Offering increased fiscal and financial incentives to farmers, enabling them to make essential investments in order to comply with international standards. This is particularly key as a significant portion of farmers lack the necessary financial resources to upgrade their technology and enhance their facilities to meet these standards. Besides, providing financial incentives and capacity-building support to agri-SMEs in the processing industry can foster greater compliance with food safety regulations, promote sustainable agricultural practices, and encourage the employment of marginalized groups, including women and vulnerable people.
- » **Developing agri-based clusters:** To address the challenges faced by smallholders in meeting food safety standards and implementing good agricultural practices due to their economic circumstances, adopting a cluster approach through collaboration between small farmers can prove practical and cost-effective. The key challenge lies in effectively training a large number of farmers in good agricultural practices, providing them with incentives (financial and otherwise) to pursue

⁵⁵ Fajarwaty, T., & Jukes, D. (2022). Assessing food safety compliance for food SMEs in Indonesia. Department of Food and Nutritional Sciences. The University of Reading - United Kingdom. <https://doi.org/10.1088/1755-1315/1041/1/012074>

certification, and educating them on the judicious use of chemicals. Emphasizing risk management education over crisis management is critical. This comprehensive training program requires effective coordination and clear delineation of responsibilities among relevant ministries and stakeholders, including NGOs and UN agencies. Furthermore, fostering stronger connections and cooperative efforts among all actors involved in agricultural production, packaging, and distribution is essential for enhancing the competitiveness of the agricultural sector. This entails identifying clusters, developing tools to optimize commercial operations, facilitating joint verification and transport processes, launching coordinated domestic and international marketing campaigns, and prioritizing the branding of Indonesian products, among other strategies.

- » **Addressing bacterial contamination challenges:** In 2017, the US Food and Drug Administration (FDA) released new draft guidelines outlining measures for the food industry to combat contamination of Ready-to-Eat (RTE) foodstuffs with *Listeria monocytogenes*. While these measures are non-binding, it is advisable for Indonesia to take heed of them as RTE food are a prime source of listeria contamination. These guidelines incorporate industry best practices with Food Safety and Inspection Service protocols.⁵⁶ It is important for Indonesia to review its definition of RTE foodstuffs, as it may differ from that of the US. This examination is essential to ensure that Indonesian food manufacturers conduct thorough testing for products that the US considers RTE.
- » **Compliance with labeling requirements:** Labeling plays a pivotal role in conveying product information to consumers. Government-mandated labels include basic information about a product, such as the list of ingredients, net quantity, country of origin, name of manufacturer/importer, expiry date, and more. In addition, labels may also incorporate health and safety information, such as instructions for safe handling, storage conditions, and nutritional value.⁵⁷ To facilitate easy comprehension of nutritional information, it is recommended to adopt a colored logo-based nutritional labeling system which allows consumers to swiftly assess the nutritional value of food items. Notably, the European Action Plan for Food and Nutrition Policy encourages the development and implementation of clear front-of-package labelling systems. Labeling directly impacts food safety, as products with incomplete or incorrect labels risk rejection at border controls. Furthermore, challenges arise when importing countries lack clearly defined labeling requirements in their legislation, potentially

⁵⁶ Maxwell, A. (2017, March 29). *Listeria* in Ready-to-Eat Foods: FDA Draft Guidance for Producers. Thermo Fisher Scientific. <https://www.thermofisher.com/blog/food/listeria-in-ready-to-eat-foods-fda-draft-guidance-for-producers/>

⁵⁷ United Nations Economic and Social Commission for Asia and the Pacific. (2014). Facilitating Compliance to Food Safety and Quality for Cross-Border Trade. ESCAP. <https://www.unescap.org/sites/default/files/Facilitating%20Compliance%20to%20Food%20Safety%20and%20Quality%20for%20cross-border%20trade%20guide.pdf>

allowing products without specified expiry dates/ best before dates to enter their markets. Meeting diverse labeling regulations across national markets poses an additional hurdle for exporters, as it necessitates the production of varied labels incurring additional costs. Such increased costs can prevent foreign producers from competing in certain markets. The Indonesian Food and Beverage Entrepreneurs Association (GAPMMI) confirmed that Indonesian SMEs continue to face significant challenges in complying with labeling requirements.

Promote a conducive policy environment and culture for quality:

- » **Quality awareness campaigns:** In order to address the prevailing lack of awareness regarding the importance of quality and food safety among most fruit and vegetable producers, it would be useful to conduct informative campaigns focused on standards, regulations, and NQI. These awareness campaigns should target both the general public and government institutions. Indeed, government institutions also need to fully comprehend the benefits associated with fostering a culture for quality and improving NQI, as this will contribute to the increased competitiveness of Indonesian food and feed products. Furthermore, inspectors play a vital role in disseminating regulatory requirements to farmers and food businesses during their inspection visits, as they serve as the primary source of knowledge for ensuring compliance.
- » **Informational sessions for consumers and food service institutions:** In response to the growing demand for high quality food products among local consumers, one effective approach to farmers to comply with global standards is to demand that the agricultural products sold on the local markets meet the same standards as those intended for exports. Additionally, it is beneficial to organize informational sessions and promotional activities targeting consumers, as well as institutions involved in food provision across various settings such as catering companies, kindergartens, schools, nursing homes, and others.
- » **Promoting Halal food:** Indonesia's Halal Law, passed in 2014, mandates a certification process and labeling requirements for numerous products starting on October 2019 to ensure their compliance with Islamic Law that would certify that they are halal. The National Body of Halal Assurance (BPJPH) leads the halal certification process, while the Indonesian Ulema Council (MUI) establishes the halal compliance standard and issues the Halal fatwa. The BPJPH appoints Halal Inspection Institution officials to conduct audits and the halal status of products. Indonesia has the potential to become a global exporter of halal food products. Therefore, financial and logistical support to Halal food producers could be provided, enabling their participation in global agricultural fairs, which

would facilitate access to new markets and enhance the reputation of Indonesian certified Halal brands. Promotion agencies can launch advertising campaigns to promote Halal agro-food products worldwide. The budgetary cost of these incentives is significantly offset by increased economic growth, job creation, and foreign currency inflows.

- » **Consumer awareness of food safety and brand protection:** Consumer awareness of food safety is a strong driving force that pushes the advancement of safety standards. Consumers rightfully expect that every food item they purchase will adhere to stringent safety and quality measures. Their continued satisfaction and loyalty to a product is evident through repeat purchases. Consequently, food manufacturers and producers have a vested interest in safeguarding their brand reputation by consistently delivering products that meet consumers' expectations of safety and quality. This necessitates the meticulous implementation of appropriate controls that oversee the entire spectrum of food manufacturing and processing, encompassing raw ingredient utilization through to the production of finished goods.⁵⁸

⁵⁸ The Food and Agriculture Organization (2020). Consumers and food safety: A food industry perspective. FAO. <https://www.fao.org/3/v2890t/v2890t05.htm>





ANNEX:

CONTEXTUALIZING TRADE-RELATED STANDARDS

Technical regulations and standards are increasingly prevalent and continuously evolving in the international trade of food and nonfood (industrial) products. Moreover, there is evidence that many developing countries face challenges in complying with the safety and quality requirements that these regulations and standards lay down. Since 2008, UNIDO has regularly collected evidence about trade related challenges and their evolution over time, particularly in the area of compliance with requirements, such as quality, certification, and labeling, set by international markets.

In their efforts to improve compliance, the challenge for national governments and donors is to allocate scarce financial and technical resources amongst a plethora of capacity building needs. There is, therefore, a need to identify where the most acute compliance challenges are faced—in a trade context this means identifying the products and markets with the highest rates of non-compliance—thus recording rejections. In this context, the Standards Compliance Analytics (SCA) tool can be used to facilitate the use of rejection data to identify the key compliance challenges faced by exporting countries and thereby enhance targeting of investments in building relevant compliance capacities. The SCA tool supports the assessment of the overall impact of rejection on export performance of countries of origin and estimates their compliance capacity by interpreting rejection trends together with additional key development, production and trade-related indicators.

Lastly, the SCA tool allows for the comparison of countries' trade compliance performances in different markets and related to specific product groups.

Finally, information on rejection can inform policy and technical assistance to navigate and focus efforts in addressing compliance issues in a more effective and targeted manner. Deeper understanding of trade compliance challenges contributes to better preparedness of exporting countries to comply with export market requirements and eventually less rejection in the long term. As a result, the economic losses due to rejection would be avoided while reputational risks due to large scale rejections can be averted.

The SCA tool compiles data from several data sources to cover five major markets including:

- » **China:** The Chinese rejection data records for agri-food products are published by the General Administration of Customs (GAC). The data includes records of rejected consignments under HS codes 1 to 24 that do not meet Chinese regulatory requirements.
- » **United States:** The US food and feed border rejection data is obtained from the US Food and Drug Administration's (USFDA) Operational and Administrative System for Import Support (OASIS), an automated system for processing and making admissibility determinations for shipments of imported products that come under the jurisdiction



of the USFDA. The USFDA's website also contains a description of the variables in the rejection data (Import Refusal Report). The data initially contains both food, feed, and non-food rejections. However, the non-food rejections are excluded as the current focus is the analysis of food and feed rejections.

- » **Australia:** The Australian food and feed border rejection data is obtained from the Australian Department of Agriculture, Water and the Environment. The data includes label and visual rejections, among other rejections. Imported food is inspected through a program known as the Imported Food Inspection Scheme (IFIS). The scheme inspects imported food to check if it meets Australian requirements for public health and safety and if it is compliant with Australia's food standards. A risk-based approach is taken when regulating imported food. Specifically, when a consignment of imported food has been referred for inspection, the inspection will involve a visual and label assessment and may also include sampling the food for the application of analytical tests. Under the IFIS, the Minister classifies food as either risk food or surveillance food. Risk food is food that has been assessed by the Food Standards Australia New Zealand (FSANZ) as posing a medium to high risk to public health, thereby requiring stricter border controls. Surveillance food is considered to pose a low risk to human health and safety.

- » **Japan:** The Japanese food and feed border rejection data is obtained from the Japan's Ministry of Health, Labor and Welfare (MHLW). The MHLW tracks and controls import consignments that violate the Food Sanitation Law to secure the "safety of diet" of Japanese people.
- » **European Union:** The food and feed border rejection data is obtained directly from the officials responsible for the EU's Rapid Alert System for Food and Feed (RASFF). RASFF provides a platform for the exchange of information between EU Member States on measures taken in response to food and feed products that pose an immediate risk to human health, both in the EU internal market and with respect to imports from Third Countries. The data initially contains both food, feed, and non-food (food contact material) rejections. However, the non-food rejections are excluded as the current focus is the analysis of food and feed rejections.







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