



ASSESSING THE BENEFITS OF THE TRADE FACILITATION AGREEMENT FOR AGRICULTURAL TRADE

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Assessing the Benefits of the Trade Facilitation Agreement for Agricultural Trade Leadership in Public Financial Management II

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ACRONYMS

AEO Authorized Economic Operator
APEC Asia-Pacific Economic Cooperation
ASEAN Association of Southeast Asian Nations

ASW ASEAN Single Window

ASYCER Electronic Phytosanitary Certification System (UNCTAD)

ASYCUDA Automated System for Customs Data

AVA Singapore's Agri-food & Veterinary Authority

BPA Business Process Analysis

CBP Customs and Border Protection
CIO China's Inspection & Ouarantine

Codex Codex Alimentarius

DALY Disability-adjusted life year
ECS Electronic Certificate System
ECTS Electronic Cargo Tracking System

EDIFC Saudi Arabia's Executive Department of Imported Food Control

e-Certificates Electronic certificates

ePhyto Electronic Phytosanitary Certificates

e-SPS Electronic SPS

ESW Electronic Single Window

FAO Food and Agriculture Organization, United Nations

FAS U.S. Foreign Agriculture Service FDA Food and Drug Administration FSCF Food Safety Cooperation Forum

GATT General Agreement on Tariffs and Trade
GETS Government Electronic Trading Services

ICIS HM Customs Gibraltar's Integrated Customs Information System

ICT Information and Communications Technology
IPPC International Plant Protection Convention

IT Information Technology
ITC International Trade Centre

JFDA Jordan Food and Drug Administration

JIFSAN Joint Institute for Food Safety and Applied Nutrition

JISM Jordan Institute of Standards and Metrology

LAC Latin America and the Caribbean

LDC Least Developed Country
LixCap Lixia Capsia Gestionis

LLDC Landlocked Developing Countries

LPFM II USAID Leadership in Public Financial Management II project

MEC Morocco Economic Competitiveness
MRA Mutual recognition agreement

Non-tariff measures

MRLs Maximum residue levels N-S Corridor North/South Corridor

NTMs

OECD Organisation for Economic Co-operation and Development

OGAs Other government agencies

OIE World Organization for Animal Health

OIRSA Organismo Internacional Regional de Sanidad Agropecuaria

pDALY Pseudo-disability-adjusted life year
PSI Pre-Shipment Inspection Certificate
PTIN Partnership Training Institute Network
RFID Radio Frequency Identification Device

RTMA 2 USAID Regional Trade and Market Alliances 2

SAFE Framework

WCO Framework of Standards to Secure and Facilitate Global Trade

SPEED+

Supporting the Policy Environment for Economic Development

SPS Sanitary and Phytosanitary Measures
STDF Standards and Trade Development Facility

TBT Technical Barriers to Trade
TFA Trade Facilitation Agreement

TFAF TFA Facility

TIR Transports Internationaux Routiers, or International Road Transport

TIR-EPD TIR Electronic Pre-Declaration System

TRTA Trade Related Trade Assistance

UN/CEFACT UN Center for Trade Facilitation and Electronic Business
UNCITRAL United Nations Commission on International Trade Law
UNECE United Nations Economic Commission for Europe

UN/EDIFACT United Nations rules for Electronic Data Interchange for Administration,

Commerce, and Transport

UNESCAP United Nations Economic and Social Commission for Asia and the Pacific

UNCTAD United Nations Conference on Trade and Development USAID United States Agency for International Development

US-ATAARI US-APEC Technical Assistance to Advance Regional Integration project

USDA United States Department of Agriculture

WCO World Customs Organization
WHO World Health Organization
WTO World Trade Organization

SECTION I: USING THE TRADE FACILITATION AGREEMENT TO SUPPORT AGRICULTURAL TRADE

This report provides government officials with an overview of how the World Trade Organization's (WTO) Trade Facilitation Agreement (TFA) can support agricultural trade. The report is organized into eight sections covering topics pertinent to the timely movement, release, and clearance of agricultural goods at borders, including goods in transit, by addressing common procedural challenges and ways in which the TFA can expedite agricultural trade. The sections of this report provide summarized analysis of trade facilitation measures, including examples, with some sections delving into recommendations, resources, and best practices.

TFA BACKGROUND

After more than 10 years of negotiations on the simplification of trade procedures among WTO Members, the TFA was formalized in 2013 and entered into force in February 2017, when two-thirds of WTO Members ratified the Agreement. The TFA provides measures for expediting the movement and release of goods by expanding some of the provisions of the General Agreement on Tariffs and Trade (GATT) with regard to publication of the regulations, fees, and formalities imposed on trade. The TFA also builds on the World Customs Organization's (WCO) International Convention on the Simplification and Harmonization of Customs Procedures (Kyoto Convention) by including enforcement and appeal measures. Additionally, the TFA reinforces some of the commitments made under the WTO Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement) and the WTO Agreement on Technical Barriers to Trade (TBT Agreement) regarding transparency, documentation requirements, and goods in transit.

The TFA contains 36 trade facilitation measures organized under 12 articles that focus on expediting the movement of goods at the border. It also contains a provision on special and differential treatment, which allows developing Member countries to designate the trade facilitation measures that they are capable of complying with unilaterally and those measures for which they will need technical assistance from donor organizations and multilateral institutions to be able to implement. (See Section 3 for an overview of the notification process and an analysis of the most common TFA articles that require technical assistance to implement.)

THE COST OF TRADING ACROSS BORDERS

It is in the interest of all WTO Members to implement the TFA. By achieving full implementation of all I2 Articles by I64 countries, the cost of trading agricultural goods could be reduced by I0.4 percent, according to the WTO's 2015 World Trade Report. For perishable goods in particular, the cost reduction is estimated to be even higher. Perishable goods have an ad valorem tariff equivalent of 43

Ad valorem equivalent (AVE): defined by the WTO as a tariff estimated as a percentage of the price. In other words, a rate of tariff or tax that equals the amount payable if good was taxed on the basis of its value.

percent in trade costs mostly derived from transportation costs and temperature controls maintained throughout the export and import process. By implementing the TFA, the cost of trading perishables could be reduced by more than 18 percent given the sensitivity of perishable goods to timely release to avoid spoilage.² See Section 5 for more on how the TFA can support perishable goods.

Trade costs include the direct and indirect costs of getting a good to the final user.³ Direct costs relate to transportation, tariffs, fees for documentation, other fees, and charges by Customs and other government agencies. Indirect costs consist of time spent preparing documentation and time spent awaiting the release of goods.

While the TFA limits the fees charged in connection with the release of imports and exports so that they cannot exceed the cost of the service rendered (TFA Article 6.2), the majority of the Agreement targets indirect costs by committing Members to adopt time-saving, efficiency measures. Simply implementing all of the measures that include automation could reduce import times by an estimated 30 percent. This includes implementing a risk-management system (TFA Article 7.4) and a national single window for foreign trade (TFA Article 10.4).

The TFA also benefits exports. For example, a national single window can reduce the amount of time an exporter spends preparing and presenting documentation in anticipation of goods being cleared for loading. A 2010 study on the effects of time delays found that a 10 percent increase in time spent at the border results in a 3.5 percent reduction in exports of agricultural perishable goods.⁵

THE IMPORTANCE OF AGRICULTURAL TRADE

To contextualize the importance of facilitating agricultural trade across borders, it is important to understand the demand for global food production. The United Nations' Food and Agriculture Organization (FAO) reports that global trade in food has tripled over the last decade and is expected to continue to grow. By 2050, the world's population is estimated to grow by more than 30 percent, with nearly all of the growth expected to be in developing countries. To feed this population and their increased demand for more and varied foods, food production will need to increase by 70 percent. This increasing demand emphasizes the need for safe and efficient trade of agricultural goods.

The SPS Agreement goes to the core of food safety measures and animal or plant health issues, while the TBT Agreement addresses, among other things, food quality standards and regulations. Through these agreements, WTO Members commit to using international standards to protect public health and

² World Trade Organization (WTO), "World Trade Report: Speeding up trade: benefits and challenges of implementing the WTO Trade Facilitation Agreement," Geneva: Switzerland, 2015. https://www.wto.org/english/res_e/booksp_e/world_trade_report15_e.pdf

³ WTO, "World Trade Report," 2015.

⁴ WTO, "World Trade Report," 2015.

⁵ Simeon Djankov, Caroline Freund, and Cong S. Pham, "Trading on Time," Review of Economics and Statistics 92, no. 1 (2010). https://www.mitpressjournals.org/doi/10.1162/rest.2009.11498

⁶ United Nations. Food and Agriculture Organization (FAO), "How to Feed the World in 2050," Rome: Italy, 2009. http://www.fao.org/fileadmin/templates/wsfs/docs/expert_paper/How_to_Feed_the_World_in_2050.pdf

reduce unnecessary barriers to trade, and to implementing transparency measures. Both agreements focus on the development of science-based.

Regulations intended to support the safe trade of agricultural goods can end up contributing to non-tariff barriers if not implemented effectively and efficiently. The implementation of SPS and TBT measures is challenging and requires capacity to ensure that measures are justifiably based on science, are transparent, do not require excessive documentation requirements, and do not result in excessive fees to the trader or long waiting times at the border. The WTO's Standards and Trade Development Facility (STDF) notes that SPS measures are sometimes implemented in a way that offers insufficient health protection, while being more costly than necessary to ensure safety.

Once goods arrive at the border as imports, or as goods in transit, the TFA dictates the procedural efficiencies for verifying SPS and regulatory compliance so goods can be cleared as fast as possible. This process includes simplified and more efficient requirements regarding risk-based document verifications, physical inspections, and laboratory testing. See Section 6 on Risk-Based Inspections and Section 7 for Approaches to Inspecting and Testing.

As covered in Section 2, the main procedural issues delaying clearance due to SPS and TBT controls are duplicative documentation requirements, inspections, and laboratory testing. Additionally, Section 8 includes the most common issues affecting goods in transit, including food assistance shipments along trade corridors, such as permits, physical inspection, and rejection of goods. Each of these sections includes TFA measures that address the specific procedural issues. For the treatment of perishable goods in particular, see Section 5, which summarizes the key TFA measures that support timely release as well as the role of cold chains in facilitating the trade of perishable goods.

Often the underlying reason why border officials require additional data or conduct unnecessary inspections and testing is that they want to verify the validity of export certificates to ensure that goods meet regulatory requirements. Electronic certificates (e-certificates) transmitted directly between government officials of the exporting and importing countries help to address validity concerns. Ecertificates ensure that all relevant data are received before goods arrive in country, and they help to reduce fraud and counterfeits and aid in lowering rejection rates. See Section 9 for an overview of how e-certificates can be integrated into information systems.

Studies highlighted in the WTO's 2015 World Trade Report show that trade facilitation measures potentially have greater impact in developing countries that have a comparative advantage in agriculture and perishable goods. Implementation of the TFA could lead to an annual increase of 3.5 percent growth in exports for developing countries. For least developed countries, the volume of traditional export

WTO. Standards and Trade Development Facility (STDF), "Implementing SPS Measures to Facilitate Safe Trade: Principles and Practice in Cambodia, Lao PDR, Philippines and Thailand," report prepared by Kees van der Meer, Geneva: Switzerland, 2014. http://www.standardsfacility.org/sites/default/files/Implementing_SPS_Measures_to_Facilitate_Safe_Trade_SE_Asia_Aug-2014.pdf

⁸ WTO, "World Trade Report," 2015.

products to existing markets could increase between 13 and 36 percent. These growth figures are of particular importance to small traders who depend on regional food trade, most of whom are women. The potential growth is also important for cross-border trade of food staples and food assistance.

By expediting the import and export of goods, especially goods in transit, countries would ensure reliable options to source food from external markets when needed. Most countries in Africa are net food importing countries due to several factors such as conflict, poor soils, and lack of quality inputs. Food insecurity can be reduced by eliminating burdensome trade procedures and improving transparency. Through TFA implementation, intra-African trade can be strengthened, addressing some of the challenges around access to food and provision of necessary imports. This is particularly notable for Landlocked Developing Countries (LLDCs). See Section 8 on the importance of trade corridors for food assistance.

Developed countries also expect to reap benefits from the TFA by reaching export markets more efficiently. High-income countries are the largest suppliers of high-value food, such as fruits, vegetables, meat, seafood, and dairy. The demand for high-value agricultural and food products is growing as worldwide incomes rise. The United States is the second largest exporter of agricultural goods (after the European Union), and the demand from middle income countries in South Asia and Sub-Saharan Africa has become the primary source of growth for U.S. agricultural exports. In Implementing the TFA ensures that high-value perishable goods are able to move across borders to reach their final destination.

Finally, facilitating agricultural trade can consequently impact the movement of all goods. In countries where agricultural trade comprises a large share of all imports and exports, any delays in clearing agricultural products at the border can result in slower clearance for all other products due to physical congestion of vehicles and agricultural cargo. For example, in Sierra Leone, food exports account for 73.3 percent of all exported merchandise and 32.6 percent of imports. ¹⁴ Congestion may be particularly acute in other countries where there is only one major port of entry or where a port serves as the gateway port for neighboring landlocked countries. When agricultural products account for much of the traffic at borders and ports, it is crucial to implement facilitation measures that address the common procedural delays associated with verifying, handling, inspecting, and testing agricultural goods.

farmers_march 17.pdf

⁹ WTO, "World Trade Report," 2015.

¹⁰ WTO. STDF, "Looking Beyond the Single Window for ICT Solutions to SPS Management," presentation prepared by John C. Keyser, World Bank and STDF Working Group, Geneva: Switzerland, 2018. http://www.standardsfacility.org/sites/default/files/John_Keyser_WGMar18.pdf

International Centre for Trade and Sustainable Development, "Enhancing Food Security in Africa Through Implementing the Trade Facilitation Agreement," 2017. https://www.ictsd.org/bridges-news/bridges-africa/news/enhancing-food-security-in-africa-through-implementing-the-trade

¹² Andrea Durkin, "Growing Markets, Growing Incomes: Leveraging Trade Facilitation for Farmers," *Chicago Council on Global Affairs*, March 2017. https://www.thechicagocouncil.org/sites/default/files/leveraging_trade_facilitation_

¹³ Ibid.

¹⁴ World Bank, DataBank, World Development Indicators. <u>http://databank.worldbank.org/data/home.aspx</u>

RELEVANT TFA COMMITMENTS FOR AGRICULTURAL TRADE

Many of the TFA provisions require Customs and other border agencies, such as departments or ministries of agriculture (regulating both plants and animals), health, and individual country's standard setting agencies to implement procedural reforms. This report focuses on the provisions that require a collaborative effort between Customs and other border agencies to facilitate agricultural trade.

This report categorizes TFA articles relevant to agricultural trade into three main groups (see Section 3 for more discussion of these categorizations):

- **Direct impact:** Provisions that have a direct impact on the expedited clearance of agricultural trade and have measures that require implementation by the agriculture, health, or standard setting authorities (such as the measures on laboratory testing and perishable goods).
- General benefit: Provisions that provide a general benefit to agricultural trade with regard to transparency and border management practices, but do not have expediting measures or do not have new implications for the agriculture, health, or standard setting authorities (such as Customs cooperation for verification purposes).
- Minor impact: Provisions that have a minor impact on agricultural trade either because they do not contain any expediting measures or because they are not pertinent to agricultural trade.

Of the 36 provisions in the TFA, 30 fall under one of these three categories. TFA articles that have similar commitments in the SPS and TBT Agreements (for example, publication of information, provisions on fees and charges, and appeal and review procedures) are categorized as providing a general benefit given that the SPS and TBT Agreements provide similar and more specific obligations affecting agricultural trade. (For a detailed analysis of why the Articles are considered relevant and how the SPS and TBT Agreements reinforce similar commitments, see Annex 1.1.)

TECHNICAL ASSISTANCE AND INTERNATIONAL STANDARDS

Section 3 provides an overview of the relevant TFA articles that developing countries have implemented to date and the most common articles that require technical assistance to achieve implementation, which, in descending order, are single windows (Article 10.4), laboratory testing (Article 5.3), authorized operators (Article 7.7), and risk management (Article 7.4). The technical assistance required for these articles varies between training human resources from the agencies that need to be involved in implementing measures, modifying the regulatory framework and institutional procedures, and assisting in the adaptation or adoption of information and communication technologies (ICTs), infrastructure, and equipment.

Developing country Members requests for technical assistance may include help in conducting needs assessments or raising awareness of TFA-specific reforms among public and private stakeholders. For example, in 2016, Ghana requested assistance from USAID to develop a TFA implementation road map based on its self-assessment. The road map focused on the country's readiness to implement TFA provisions with an implementation schedule based on the country's priorities. One of the priorities was to evaluate whether Ghana's risk-management practices aligned with the TFA risk-management specifications under Article 7.4. USAID looked at the risk management tools that Customs and other government agencies (OGAs) used to determine which imports, exports, or transit transactions should be subject to control and the scale and type of control to be applied. The evaluation found that Ghana should improve its system by using intelligence and a trader's historical records of compliance and that all risk assumptions should be based on data and continuously updated. USAID followed up with a fiveday training workshop for Customs administrations and OGAs on a holistic risk assessment process and how to improve risk profiling. See Section 6 for more on risk management best practices.

In addition to technical assistance, several guides and resources are available to help countries to navigate implementation of reforms by building on lessons learned and adopting international standards (Box 1.1). Adoption of international standards is a commitment across the three WTO Agreements: SPS, TBT, and TFA. Under the SPS Agreement, WTO Members agree to base their SPS measures on international standards. In the TBT Agreement, WTO Members must use international standards as a basis for technical regulations and ensure that conformity assessments follow the recommendations developed by international standard setting bodies.

Under TFA Article 10.3, WTO Members are encouraged to use relevant international standards for import, export, and transit formalities and procedures. The United Nations Centre for Trade Facilitation and E-Business has compiled internationally agreed upon standards, technical specifications, and recommendations for trade. 15 Perhaps some of the most important standards for

Box I.I — Asia-Pacific **Economic Cooperation** (APEC) Efforts to Facilitate Trade and Ensure Food Safety

To improve food safety in the region, APEC created the Food Safety Cooperation Forum (FSCF) in 2007 and the Partnership Training Institute Network (PTIN) in 2008. Through these initiatives, APEC has developed manuals and brochures and held workshops focused on streamlining export certification requirements to facilitate trade and improve food safety by advancing science-based international standards. See Section 4 for a list of resources.

trade facilitation and paperless trade are the standards for the electronic interchange of data between independent information systems, called UN/EDIFACT (the United Nations rules for Electronic Data Interchange for Administration, Commerce, and Transport). 16 Without electronic data interchange, other TFA measures, such as pre-arrival processing of import documentation (Article 7.1) and single windows (Article 10.4), become extremely challenging to implement.

For a discussion of best practices and resources for implementing the most common provisions that require technical assistance, see Section 6 on risk management, Section 7 on approaches to laboratory testing, and Section 9 on how single windows can support electronic certificates. In addition to single windows, several initiatives are under way to streamline the certification process for SPS and TBT measures. See Section 4 for a summary of those technical assistance activities. This report does not

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For more information, visit the United Nations Centre for Trade Facilitation and E-Business site: https://www.unece.org/cefact/

¹⁶ For more information, visit the United Nations rules for Electronic Data Interchange for Administration, Commerce and Transport site: https://www.unece.org/cefact/edifact/welcome.html

include a section on authorized operators.¹⁷ Therefore, a brief overview of how this TFA measure can help to expedite agricultural trade is provided below.

TRADE FACILITATION MEASURES FOR AUTHORIZED OPERATORS

Article 7.7 commits WTO Members to establish an authorized operator program that offers at least three trade facilitation measures and commits countries to exploring the possibility of negotiating mutual recognition agreements (MRAs) with trading partners. Trade facilitation measures can include the following: low documentation and data requirements; low rate of physical inspections and examinations; rapid release time; deferred payment of duties and fees; use of guarantees; use of a single Customs declaration; and clearance of goods at the premises of the authorized operator or another place authorized by Customs.

Once a country has a fully operational authorized operator program, it should consider negotiating MRAs with its key trading partners (Box I.2). MRAs establish reciprocal benefits among the trading partners for operators that are authorized by one Customs administration. Under an MRA, if Country A authorizes an operator, Country B must rely on the vetting standards of Country A and extend trade facilitation benefits to that operator importing or transiting through its territory. This requires Customs administrations to agree on risk management standards and coordinate closely on monitoring operators and sharing

Box 1.2 — Establishing and Promoting Authorized Operator Programs to Support Regional Trade

Central America's Northern Triangle—El Salvador, Guatemala, Honduras—has more than US\$32 billion of cargo in transit that is transported by road each year. Guatemala has an active authorized operator program, while El Salvador has a small pilot program with only one company, and Honduras requires assistance in developing its program. Developing and promoting these programs for traders and transporters and eventually establishing a regional MRA will have a direct impact on improving clearance times for key value chains in the region, such as those available for trade in coffee, sugar, bananas, palm oil, fresh vegetables, shrimp, and meat.

intelligence. The WCO's Mutual Recognition Strategy Guide can be used to orient border management agencies through the implementation process. ¹⁸ For help with designing and developing an authorized operator program, USAID's 2010 Customs Modernization Handbook on Authorized Economic Operators (AEO) provides an 11-step guide. ¹⁹ USAID is also working on a 2018 edition that will build off of the AEO handbook and focus on the validation process as well as provide more information on MRAs.

¹⁷ The WCO defines an authorized operators as "a party involved in the international movement of goods in whatever function that has been approved by or on behalf of a national Customs administration as complying with WCO or equivalent supply chain security standards. Authorized Economic Operators include inter alia manufacturers, importers, exporters, brokers, carriers, consolidators, intermediaries, ports, airports, terminal operators, integrated operators, warehouses and distributors". For more information, see the World Customs Organization AEO implementation Guidance:

 $[\]underline{http://www.wcoomd.org/en/topics/facilitation/instrument-and-tools/cools/\sim/media/4448CE5B00DB422FA89A29AA447A4F22.ashx}$

World Customs Organization (WCO.) "AEO Mutual Recognition Strategy Guide," Brussels: Belgium, 2018. https://www.wcoomd.org/_// [wedia/wco/public/global/pdf/topics/facilitation/instruments-and-tools/tools/safe-package/strategy-guide-for-aeo-mutual-recognition.pdf?la=en

¹⁹ USAID, "Customs Modernization Handbook — Authorized Economic Operator Programs," handbook prepared USAID Worldwide Support for Trade Capacity Building project (TCBoost) and Nathan Associates Inc. Arlington, VA: U.S., 2010. https://www.nathaninc.com/insight/authorized-economic-operator-programs/

TFA Article 7.7 commits Members to establishing these authorized operator programs. Agricultural and health and food safety agencies should buy into the program and work collaboratively with Customs to have an impact on agricultural trade. Establishing an authorized operator program alone will not impact agricultural trade if the program is well established on paper but does not offer enough benefits to make it worth an operator's cost and effort to undergo the authorization process. Becoming an authorized operator is a voluntary process, but it usually implies compliance costs associated with record management, financial solvency, and security protocols. Authorized operator programs must effectively simplify processes for operators in a manner that results in tangible savings: either time savings, lower rejection rates during clearance, or lower inventory costs.

Article 7.7 is the only TFA provision that identifies trade-facilitation measures for a selective group (that is, a business that complies with the requirements). All other TFA provisions are expected to be implemented and applied universally to all goods entering the country. This TFA measure has the potential to affect the clearance of agricultural goods directly if operators along the agricultural value chain are able to and interested in becoming authorized operators and if programs are well designed to provide enough benefits to offset the cost of compliance. It is crucial for agriculture and health and food safety agencies to participate in designing the program to ensure that the compliance requirements put forward by these agencies do not nullify the advantages offered by Customs' simplified and expedited procedures. This was the case in Jordan, where the Customs authority committed to reducing examinations to approximately 10 percent of goods entering the country and were only able to reduce inspections to 95 percent because the other control agencies continued requiring 100 percent inspection of goods under their mandate.²⁰

The World Bank studied the impact of trade volumes when countries had authorized-operator programs, entered into MRAs, and implemented single windows.²¹ The study was conducted by examining trade data from 2011 and 2012 for 72 countries. It found that authorized-operator programs and single windows positively impact trade flows; however, MRAs do not necessarily improve a country's trade performance. It is important to note that this study was conducted before the TFA went into effect and at a time when MRAs for authorized operators was a relatively new concept with less than 20 signed agreements. There are now 60 MRAs signed and approximately 30 others being negotiated.²²

It is also important to distinguish an MRA for authorized operators from an MRA for conformity assessments. MRAs for conformity assessments are encouraged in the TBT Agreement and have been used over the last two decades to facilitate mutual market access by eliminating duplicative testing and

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²⁰ The Customs Administration Modernization Program (CAMP), a project funded through the Millennium Challenge Corporation (MCC) Threshold Country Program and administered by USAID.

World Bank Group, "The Impacts of Trade Facilitation Measures on International Trade Flows," Policy Research Working Paper 7367 prepared by the Research Support Team, Paulo C.de Sá Porto, Otaviano Canuto, and Cristiano Morini, Washington, DC: U.S., 2015. http://documents.worldbank.org/curated/en/515651467997566625/ pdf/WPS7367.pdf

WCO, "Compendium of Authorized Economic Operator Programmes, 2018 Edition," Brussels: Belgium, 2018. http://www.wcoomd.org/-/media/wco/public/global/pdf/topics/facilitation/instruments-and-tools/tools/safe-package/aeo-compendium.pdf

certification or inspection. To date, there are approximately 130 MRAs in place for conformity assessments among WTO Members. ²³ MRAs for authorized operators, however, are broader and encompass cooperation between national customs administrations to reduce customs-specific security controls or duplicative customs procedures.

THE COST OF IMPLEMENTING THE TFA

Section 3 of this report discusses the cost required to implement the top four TFA articles that require technical assistance. Measures that only require modifying procedures or the legal framework without requiring to set up an ICT component or equipment tend to be more economical and on average range between US\$10,000 and US\$250,000. Measures that entail automation and ICT procurements can cost more than US\$10 million to implement.²⁴

When evaluating a country's capacity to implement a TFA reform, needs assessments are critical to (I) understanding the TFA commitment and its implications, (2) conducting a gap analysis that helps to formulate a realistic road map; and (3) estimating the time and effort required to implement. To estimate the time and cost of implementing trade facilitation reforms, the WTO found eight types of interrelated implementation costs for countries to consider:

- 1. Diagnostic Resources required to identify current status and capacities and prepare an implementation strategy
- 2. Regulatory Drafting of new legislation and regulations
- 3. Institutional Recruitment and relocation of human capital, definition or redefinition of roles and responsibilities
- 4. Training Establishment of trainings through personnel exchanges, on-the-job training programs, or training centers
- 5. Equipment and infrastructure Procurements of software and hardware
- 6. Awareness-raising Change management and public-private dialogue
- 7. Political Securing of political will, national ownership, and stakeholder participation to avoid resistance to reforms
- 8. Operational Remuneration of human capital, maintenance, and replacement of equipment

From the top four measures requiring technical assistance (see Section 3), TFA Article 5.3, which commits WTO Members to providing traders the opportunity to have a second laboratory test conducted if the test results of a sampled good are adverse, is the most economical measure to

²³ Correia de Brito, A., C. Kauffmann and J. Pelkmans (2016), "The contribution of mutual recognition to international regulatory co-operation", OECD Regulatory Policy Working Papers, No. 2, OECD Publishing, Paris. http://dx.doi.org/10.1787/5jm56fqsfxmx-en

²⁴ World Bank, "The Impacts of Trade Facilitation Measures on International Trade Flows," 2015.

implement. This measure is simply an administrative procedure that may require regulatory reform; it does not require Members to invest in laboratory infrastructure. The second most economical measure is Article 7.7 — the establishment of an authorized operator program. Although the costs for this measure can vary depending on interagency coordination, the need for automation, and whether trade facilitation measures (for example, Customs guarantee system, or rapid release) are already in place or need to be developed. Costs should also include activities related to promotional items to inform the private sector of the benefits of the program. Article 7.4 on risk-management systems should be supported through a robust ICT system to ensure automated selectivity and integration with the Customs' management system. The cost can vary greatly depending on existing systems and the need for network development. Last is the implementation of a single window (Article 10.4), which is considered to be one of the most costly measures in the TFA, entailing hardware and software costs to integrate all participating agencies' information technology systems. Single window implementation usually also requires regulatory, institutional, and infrastructural reform, human-resource training, and a marketing and promotion plan.

Implementation costs will vary across countries, and there are still insufficient data to quantify inception costs. Even less information is available on the operational costs to maintain these trade-facilitation measures and to distinguish between capital expenses and recurring costs, such as salaries. From the few studies that have been conducted on the cost of trade facilitation measures, it is estimated that operational costs are, on average, up to 52 percent less than their respective inception costs.²⁵ The inception costs will depend on the state of trade-facilitation measures in place and a country's specific needs and priorities, and they typically require significant resources dedicated to training and change management. For some measures, such as single windows, operational costs are sometimes passed directly to the trader or operator through the payment of user fees.

BALANCING BETWEEN TRADE FACILITATION AND SECURITY CONTROLS

At the core of trade facilitation is a robust risk-management system and a partnership with the private sector — traders, transporters and related services, terminals and other facilities. This effort requires an integrated government approach.

Customs administrations have, for years, utilized risk management techniques to assess and treat risk associated with a broad range of imported goods in order to examine imports based on the inherent likelihood and potential consequences of damage to the economy or public well-being. When faced with SPS and similar specialized risks, Customs administrations typically rely on the agency primarily involved with those risks. This is often accomplished by notifying the relevant agency of the goods' arrival and placing a "hold" (withholding release from Customs custody) until that agency has separately examined the goods and authorized Customs to grant release.

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²⁵ Moïsé, E. (2013), "The Costs and Challenges of Implementing Trade Facilitation Measures", OECD Trade Policy Papers, No. 157, OECD Publishing, Paris. http://dx.doi.org/10.1787/5k46hzqxt8jh-en

Customs administrations have been the beneficiaries of widespread, major modernization efforts, dating back to the 1970s, when the Convention on the Simplification and Harmonization of Customs Procedures, commonly referred to as the Kyoto Convention, was enacted. The purpose of the Convention was to promote transparency and predictability of Customs actions; standardize and simplify the goods declaration and supporting documents; simplify procedures for authorized persons; maximize the use of information technology; minimize necessary Customs control to ensure compliance with regulations; promote the use of risk management and audit-based controls; coordinate interventions with other border agencies; and establish partnerships with industry.

In the intervening 40+ years, international organizations have provided technical assistance, training, and resources to Customs authorities around the world. The WCO revised the Convention in 2006 to emphasize new capabilities offered by ICT tools. The Convention is advisory in some respects. WCO Members commit and are expected to comply, but there is no appeal or enforcement process. The TFA is in many respects similar to the Revised Kyoto Convention but, importantly, it adds appeal and enforcement authority.

For many years, trade facilitation assistance was focused primarily on Customs administrations and did not pay broader attention to other regulatory and inspection agencies. Today those other agencies can benefit from improvements made and lessons learned by adapting existing procedures and capabilities to their own needs. Most Customs administrations today employ risk based, cargo selectivity systems to facilitate and expedite the movement of goods across their nation's border(s). TFA Article 7.4 broadens the focus on risk-based selectivity by encouraging each Member country to concentrate not only Customs controls but also, to the extent possible, other relevant border controls on high-risk consignments in order to expedite the release of low-risk consignments.

While Customs may be the primary or lead agency with the release and clearance of goods, agricultural, health, and standards setting agencies play a key role. Several measures in TFA Article 7 (those marked with an asterisk below) directly address these agencies' involvement by either requiring them to adhere to the standard or encouraging them to do so.

- 7.1 Pre-arrival processing*
- 7.2 Electronic payment
- 7.3 Separation of release from the actual collection of duties, taxes, and fees
- 7.4 Risk management*
- 7.5 Post-clearance audit*
- 7.6 Establishment and publication of average release times*
- 7.7 Trade facilitation measures for authorized operators *
- 7.8 Expedited shipments
- 7.9 Perishable goods*

When Customs and other border control agencies are able to improve security measures and standardize the treatment of goods, traders will become more confident in the systems established and become more willing to invest in a collaborative relationship and initiatives such as an authorized operator program. Simultaneously, border control agencies will have better intelligence to foster a

trusting relationship with the trading community and be able to focus their efforts on traders deemed to be high risk. The building of a partnership between border agencies and the private sector has to be an ongoing effort.

The private sector desires predictability — knowing that border procedures will be applied consistently and uniformly and that intervention, when needed, will be based on risk. They want to know the costs of trade up-front and to know what services are provided for fees incurred, while minimizing the cost of compliance. Finally, integrity, ethical behavior, and transparency from government officials are crucial. No matter how forward-thinking new regulations and procedures may be, corrupt or unethical officials who will not conscientiously apply them can bring meaningful improvement to a standstill.

On the other side of this partnership is Customs and other border control agencies that want to target illicit or harmful trade while facilitating legitimate trade with minimal intervention, especially when resources are limited. Risk management allows border control agencies to strengthen their ability to detect and respond to attempts to circumvent Customs and related laws, while also encouraging voluntary and informed compliance.

Solid risk-management systems are the foundation of trade facilitation and will directly affect other important TFA commitments, particularly pre-arrival processing (Article 7.1), post-clearance audit (Article 7.5), authorized operator programs (Article 7.7), and border agency cooperation (Article 8). See Section 6 of this report for an overview of best practices for risk-based inspections.

THE IMPORTANCE OF INFRASTRUCTURE AND LOGISTICS SERVICES TO SUPPORT **AGRICULTURAL TRADE**

The International Trade Centre (ITC), the joint agency of the United Nations and the WTO, notes three interdependent factors that are key to a country's ability to trade efficiently: (1) quality of traderelated infrastructure (ports, roads, rail networks, and ICT penetration); (2) trade-related border procedures; and (3) quality of private-sector services responsible for the movement of goods (logistics services). 26 Most of the Sections covered in this report focus on improving border procedures by implementing the practices and standards laid out in the TFA. The importance of infrastructure and logistics-related services is analyzed briefly in Sections 5 and 8.

Section 5 reviews the maintenance of cold chains, highlighting that Customs and other border control agencies are not often featured as actors in cold chains, but need to be, as they play a crucial part in handling time- and temperature-sensitive goods. Section 5 also includes a case study on a cold storage facility in Tangier, Morocco, highlighting how reforming Customs processing played a key role in helping a local food processor to use a cold storage facility for just-in-time inventory management.

International Trade Centre (2017). "Reforming logistics services for effective trade facilitation". ITC, Geneva. http://www.intracen.org/uploadedFiles/intracenorg/Content/Publications/Executive_summaries/Logistics%20and%20trade%20facilitationFinal_Lowres%20with%20cover.pdf

Section 8 reviews infrastructure and logistics services with respect to transit corridors (that is, routes and nodes), through which traded goods travel as they make their way to their final destination. Hard infrastructure, transport and logistics services, institutions (primarily Customs), laws, regulations, and procedures need to function efficiently for transit corridors to be effective and not result in significant extra costs when trading across borders. One example of this is creating physically separate infrastructure (such as traffic lanes) for the sole purpose of expediting the movement of transit cargo (as stipulated in Article 11.5). For perishable goods and food aid, these separate lanes are critical timesaving measures. Within trade in agricultural and food products, food aid is extremely reliant on and vulnerable to infrastructure challenges affecting transit in goods. To this end, Section 8 also includes further discussion on the importance of the TFA to timely delivery of life-saving food aid.

CONCLUSION

This report addresses how the TFA can support agricultural trade. The following sections highlight the importance all border control agencies play in facilitating agricultural trade, specifically when it entails goods that are subject to SPS-, TBT-, and conformity-assessment measures:

Section 2: TFA Linkages to SPS and TBT Procedures that Prevent or Delay Agricultural **Trade:** an analysis of SPS and TBT-related procedures that prevent or delay agricultural exports. It includes recommendations to facilitate agricultural trade by addressing procedural deficiencies through the implementation of the TFA.

Section 3: Analysis of Developing Countries TFA Commitments Related to Agriculture: a summary of developing countries TFA commitments by category (A, B, and C) with a list of how developing countries have notified commitments under each agriculture-related article. It includes an analysis of the average cost and time for implementing the most notified articles under Category C (i.e., commitments requirement technical assistance).

Section 4: Summary of Activities to Streamline Certification and Other Formalities for SPS Measures: a list of international and regional activities that focus on streamlining export certification and other SPS-related certifications for specific products.

Section 5: Supporting Trade of Perishable Goods through Cold Chain and Trade

Facilitation: the TFA measures for handling perishable goods to keep the cold chain intact and avoid spoilage. It includes a case study on how trade facilitation helped provide refrigerated warehousing in Tangier, Morocco.

Section 6: Best Practices for Risk Based Inspections: a summary of best practices in risk based import inspections to prioritize shipments that need a physical inspection.

Section 7: Approaches to Inspecting and Testing Agricultural Products: a review of inspection and testing practices, and the rationale behind establishing risk-based import controls for SPS agencies.

Section 8: TFA, Transit Corridors, and Agriculture: a discussion on the importance of the transit regime and corridors for trade and food aid.

Section 9: Integrating SPS Certificates into Information Technology Systems - E-

certification: a summary of the challenges and recommendations for implementing e-certification and working towards a single-window platform.

ANNEX I.I: TFA PROVISIONS RELATED TO AGRICULTURAL TRADE

The TFA has 12 Articles containing a total of 36 provisions aimed at simplifying and expediting trade.²⁷ To help identify which provisions are most important to expediting agricultural trade specifically, provisions have been categorized into three main groups:

- 1) Provisions that directly impact the expedited clearance of agricultural trade and have measures that require implementation by the agriculture, health, or standard-setting authorities (such as the measures on laboratory testing and perishable goods);
- 2) Provisions that provide a general benefit to agricultural trade with regard to transparency and border management practices, but do not have expediting measures or do not have new implications for agriculture, health, or standard-setting authorities (for example, commitments already made under the SPS and TBT Agreements, such as provisions on fees and charges and appeal and review procedures); and
- 3) Provisions that have minor impact on agricultural trade.

Several commitments made under the SPS and TBT Agreements are reinforced in the TFA. Supporting SPS and TBT commitments are noted where relevant under the TFA provision. All TFA provisions are listed below according to their categorization, with an explanation of how the provision either directly impacts, provides a general benefit for, or has a minor impact on agricultural trade.

PROVISIONS WITH A DIRECT IMPACT ON AGRICULTURAL TRADE

Publication and Availability of Information

I.2 Information Available Through the Internet: Members shall make available, and update to the extent possible, the following through the Internet: description of its procedures, practical steps, forms, and documents needed for importation, exportation, and transit.

Reason: Most countries have specific sanitary or health licenses, permits, and certificates needed for agricultural trade; and in some countries, goods must be inspected by the agriculture, health, or standard setting authorities during the import and export process. Having this information available via the Internet is a new commitment that helps to expedite goods once they arrive at the border.

SPS Agreement (Annex B, Articles I and 5) —

Agreement imposes transparency measures, and although it does not have specifics on Internet publication, it does require Members to publish changes on SPS requirements promptly and to allow time between publication and before entry into force so that trading countries are aware of the new rules (B.I). (The Internet was not commonly used at the time this agreement was finalized. Most countries today are posting requirements via the Internet.) Additionally, when measures do not follow international standards or if a measure will have significant effects on trade, Members are required to publish a notice in a

²⁷ Article 11 counts as one provision and is organized into 17 paragraphs. Paragraphs are categorized under direct impact or general benefit.

manner that allows other Members to become informed (B.5)

TBT Agreement (Article 2.11 and 2.12) — Does not have specifics on Internet publication, but states that Members shall ensure that all technical regulations adopted are published promptly (2.11) and allow for reasonable time between the publication of the technical regulation and its entry into force (2.12). (The Internet was not commonly used at the time this agreement was finalized. Most countries today are posting regulations via the Internet.)

5 Impartiality, Non-discrimination, and Transparency

5.1 Notifications for Enhanced Controls or Inspections:

Members may adopt notifications systems or guidance for concerned authorities to enhance the controls and inspections on imported goods, particularly food products, beverages, and feedstuff, including uniformly applying the measures to the relevant ports of entry, terminating or suspending a notification or guidance when no longer necessary, and publishing announcements or informing the trader.

Reason: Article specifically notes the importance of a notification system for products mandated under the SPS Agreement. Notification systems are important to ensure transparency while also providing a predictable trading system, whereby trading Members have a good understanding of the compliance requirements prior to goods arriving at the border.

SPS Agreement (Article 5.8) — Not applicable

TBT Agreement (Article 2.3) — Technical regulations shall not apply if the reason for adoption no longer exists.

5.2 Detention: When a border agency detains imported goods for inspection, it must inform the carrier, the importer, or his agent.

Reason: Agriculture and health authorities clear goods by conducting a document or physical inspection of the good to protect against risks. Detention notifications contribute to transparency by allowing the trader to know the status of the goods awaiting clearance.

SPS Agreement (Annex C-IB) — The competent body promptly examines the completeness of the documentation and informs the applicant in a precise and complete manner of all deficiencies.

TBT Agreement (Article 5.2.2) — With regard to conformity assessments, the competent body must proceed as far as practicable with the assessment; the applicant is informed of the stage of the procedure, and any delay is explained.

5.3 Test Procedures: When test results on a sample good taken on arrival are adverse to the trader, Members must grant the trader a second test and inform the trader where confirmatory tests can be conducted. Member countries must accept the results of the second test.

Reason: Food, beverages, and feedstuff are subject to lab testing for conformity of standards. Accepting results of a second test allows traders to mitigate delay and detention risks associated with testing errors and false positives. Conducting a second conformity test through a different laboratory may allow for more specialized equipment and more precise results and may allow a trader to obtain test results in a timelier manner.

SPS Agreement (Article 5.2) — Not applicable

TBT Agreement (Articles 5.2.6 and 8) — The siting of facilities used in conformity assessments and the selection of samples should not cause unnecessary inconvenience (5.2.6). Nongovernmental bodies conducting conformity assessments must also not cause unnecessary inconvenience (8).

7 Release and Clearance of Goods

7.1 Pre-arrival Processing: Traders should be permitted to submit all import documentation and information in electronic format

Reason: Agriculture and health authorities require specific import documentation to support the declaration of goods. Paperless trade should be supported by all border agencies that require import information and documentation, as it allows agencies to review and cross-

prior to arrival to expedite the release of goods.	check information (with other agencies or risk management system) more easily and can contribute to releasing goods faster.		
	SPS Agreement — Not applicable		
	TBT Agreement — Not applicable		
7.2 Electronic Payments: Member countries should allow for electronic payments for all duties, fees, and charges.	Reason: Some Members' agriculture and health authorities impose fees and charges for services (import permits, inspections, certifications). If epayment infrastructure and regulatory framework are in place to support payments to one government agency, this mechanism should be extended to all border agencies to lower trade costs and time.		
	SPS Agreement — Not applicable		
	TBT Agreement — Not applicable		
7.3 Separation of Release from Final Determination of Customs Duties, Taxes, Fees, and Charges (separating release from clearance): Members shall	Reason: This article is implemented by Customs. However, its implementation has a direct benefit to expediting agricultural trade that may be delayed as final fees are assessed, which directly lowers the costs associated with warehousing and maintaining refrigerated cargo at the ports of entry. It also reduces transport costs and wastage.		
allow importers to obtain release of their goods, under a guarantee prior	SPS Agreement — Not applicable		
to the final determination and	TBT Agreement — Not applicable		
payment of customs duties, taxes, fees, and charges where the final determination cannot be done prior to arrival or rapidly after arrival.			
7.4 Risk Management: Members will adopt or maintain a risk management system for Customs control that avoids arbitrary or	Reason: Article extends risk management to all border agencies (to the extent possible) by stating that the focus of control should be on high-risk consignments (versus mandatory inspection of all goods) and risk should be assessed through appropriate selectivity criteria.		
unjustifiable discrimination or a disguised restriction on international trade. Customs and, to the extent possible, other relevant border	SPS Agreement (Article 5) — Assessment of Risk and Determination of the Appropriate Level of SPS Protection.		
agencies should focus control on high-risk consignments and expedite the release of low-risk consignments.	TBT Agreement (Article 2) — Technical regulations shall not be more trade-restrictive than necessary to fulfill a legitimate objective, taking account of the risks that nonfulfillment would create.		
7.5 Post-clearance Audit: Members shall adopt post-clearance audits based on risk, conduct audits in a transparent manner, and inform the trader being audited of the results.	Reason: Post-clearance audits serve as compliance checks and contribute to timely release of goods by verifying technical matters such as origin, tariff classification, and valuation after goods have been released rather than holding goods at the border to determine the correct classification, valuation, and so forth. In practice, most audits should be done on the trader (based on historical information) versus an individual declaration.		
	SPS Agreement — Not applicable		
	TBT Agreement — Not applicable		
7.7 Trade Facilitation Measures for Authorized Operators: Members shall provide additional trade facilitation measures related to import, export, or transit formalities and procedures to compliant operators. Trade facilitation measures include at least three of the following measures: low	Reason: A country's implementation of an authorized operator program may have a direct impact on the clearance of agricultural goods if the operator is authorized operator certified in the exporting country or, in the case of imports and goods in transit, if mutual recognition is established between the trading partners. The SPS and TBT Agreements have specific commitments on mutual recognition for SPS measures and conformity assessments, while the TFA focuses on the procedural aspects of clearance. For authorized operator programs, agriculture and health authorities should play a role in determining an operator's eligibility and		

three of the following measures: low

authorities should play a role in determining an operator's eligibility and

documentary and data requirements; low rate of physical inspections and examinations; rapid release time; deferred payment of duties and fees; use of guarantees and a single Customs declaration; and clearance of goods at the premises of the authorized operator or another place authorized by Customs. Members shall also provide other Members with the possibility of negotiating mutual recognition of authorized operator schemes.

compliance level.

SPS Agreement (Article 4.2) — Members shall, upon request, enter into consultations with the aim of achieving bilateral and multilateral agreements on recognition of the equivalence of specified SPS measures.

TBT Agreement (Article 6.3) — Members are encouraged to enter into mutual recognition agreements for conformity assessments.

7.9 Perishable Goods: Member countries shall release perishable goods in the shortest time possible, including giving priority to such goods when scheduling examinations.

Reason: Perishable goods comprise much of what is traded in terms of agriculture, food, beverages, and feedstuff. Perishable goods are timesensitive goods. Any delay in release may result in damaged cargo that must either be shipped back to the country of origin or be destroyed at the port of entry, which results in significant financial losses. Risk of damage is particularly high if temperature controls are not maintained or if there is not adequate coverage from sun or inclement weather while goods are inspected or at the terminal awaiting release.

SPS Agreement — Not applicable

TBT Agreement (Article 5.2.1) — Conformity-assessment procedures are undertaken and completed as expeditiously as possible and not less favorably than domestic products.

8 Border Agency Cooperation

8 Members shall, to facilitate trade, ensure that their border control agencies cooperate and coordinate with one another as well as with their counterparts from Member countries with which they share a border.

Reason: The need for cooperation among agriculture, health and Customs as well as other agencies present at the border is critical to being able to facilitate trade, particularly for conducting joint inspections, monitoring compliance, and sharing risk information.

SPS Agreement (Article 12.2) — Administration of the agreement includes promoting coordination and integration between international and national systems and approaches for approving the use of food additives or for establishing tolerance levels for contaminants in foods, beverages, or feedstuff.

TBT Agreement — Not applicable

9 Movement Under Customs Control (Inland Clearance)

9 Members shall, to the extent practicable and provided all regulatory requirements are met, allow goods to be moved under a simplified procedure to the inland Customs office and permit the importer to clear them at the destination rather than at the port of arrival.

Reason: Allowing food, beverages, and feedstuff to transit from port of entry to an inland Customs office may result in speedier release, particularly during seasonal peaks. An inland Customs office has the same controls and border management agencies present as a port of entry (seaport, airport, or border crossing).

SPS Agreement (Articles 5.3 and 5.4) — Members must take into account relevant economic factors of allowing entry and the relative cost-effectiveness of alternative approaches to limiting risks (5.3) and take into account the objective of minimizing negative trade effects (5.4).

TBT Agreement — Not applicable.

10 Import, Export, and Transit Formalities

10.1 Formalities and Documentation Requirements (Simplified Procedures):

Members must periodically review formalities and documentation requirements with the objective of simplifying, reducing, or eliminating them and adopting less traderestrictive measures, particularly for perishable goods.

Reason: A very common delay of perishable goods at the border is due to cumbersome conformity documentation and questions arising from the information presented on certificates. Additionally, it is common for the trader to have to notify the agricultural or sanitary agency that a good under its mandate requires inspection because information received by Customs is not automatically shared with the other border agencies. These additional procedural steps are burdensome and contribute to time and costs.

SPS Agreement (Article 5.4) — Members should take into account the objective of minimizing trade effects when determining the appropriate level of SPS protection.

TBT Agreement (Articles 2.2 and 2.3) — Technical regulations shall not be more trade restrictive than necessary to fulfill a legitimate objective, taking account of the risks that nonfulfillment would create (2.2). Technical regulations shall not be maintained if the circumstances or objectives giving rise to their adoption no longer exist or if the changed circumstances or objectives can be addressed in a less trade-restrictive manner (2.3).

10.2 Acceptance of Copies:

Members must endeavor to accept paper or electronic copies of supporting documents required for import, export, or transit formalities, and not require an original or copy of export declarations during importation.

Reason: Border authorities may accept submission of copies for certain documents, such as sanitary certificates, permits, invoices, etc., but the decision on which documents may be presented in copy and which documents must be original is up to the authorities. Requiring original documents may contribute to increasing the cost and time of trade and the possibility of conducting pre-arrival processing.

SPS Agreement — Not applicable.

TBT Agreement — Not applicable.

10.3 Use of International Standards: Members are encouraged to use relevant international standards for import, export, and transit formalities and procedures.

Reason: This Article applies to agriculture and health authorities when developing procedures related to licenses, permits, inspections, and certificates (for example, when adopting electronic-certificates).

SPS Agreement (Articles 3.1 and 3.3) — To harmonize SPS measures, Members shall base their SPS measures on international standards (3.1). Members may introduce more stringent SPS measures than international standards when there is scientific justification to do so (3.3).

TBT Agreement (Articles 2.4, 2.6, 5.4) — Members shall use existing international standards as a basis for technical regulations (2.4). Members shall participate in the preparation of international standards for products that have adopted technical regulations (2.6). Members shall ensure that conformity assessments follow recommendations developed by international standards bodies (5.4).

10.4 Single Window (One-time Submission): Members shall establish or maintain a single window, enabling traders to submit to the participating authorities or agencies documentation, data requirements, or both for importation, exportation, or transit of goods through a single entry point. In cases where documentation or data requirements have already been received through the single

Reason: Improving the handling of documents, whether it is prior to trading (licenses and permits) or during release or clearance for certificates and relevant SPS and conformity assessment documentation, a one-time electronic submission of documents will directly impact agricultural trade by reducing the time and costs associated with providing hard copies of relevant information to the various agencies involved in clearing goods at the border.

SPS Agreement — Not applicable

TBT Agreement — Not applicable

window, the same documentation or data requirements shall not be requested again except in urgent circumstances.

10.7 Common Border Procedures and Uniform Documentation Requirements:

Members shall apply uniform documentation requirements and uniform release and clearance procedures at all of its ports of entry.

Reason: Traders choose ports of entry based on efficient logistics in and around the port. Border agencies must offer uniform procedures at all ports of entry to provide reliability. It is important to note that the article outlines a commitment for uniform requirements, but also that a Member may differentiate its procedures and documentation requirements in a manner consistent with the SPS Agreement. In other words, differentiation must be based on scientific evidence.

SPS Agreement (Article 5.5) — With the objective of achieving consistency in the application of appropriate SPS protection, each Member shall avoid arbitrary or unjustifiable distinctions in the levels it considers to be appropriate in different situations, if such distinctions result in discrimination or a disguised restriction on international trade.

TBT Agreement — Not applicable

10.8 Rejected Goods: The importer shall have the right to return goods that have been rejected by competent authorities due to failure to comply with SPS regulations or technical regulations in the originating country.

Reason: The agreement notes that a trader's right to return goods is a specific trade facilitation measure for goods subject to SPS and technical regulations. This potentially saves the trader from having to destroy goods they wish to re-export or from risking the damage of goods while clearance is pending. It also may allow the trader to salvage part of the shipment by segregating what may be in compliance from the noncompliant.

SPS Agreement — Not applicable

TBT Agreement — Not applicable

11 Freedom of Transit

P11.1–11.3 Regulations and Formalities: Regulations and formalities on transit shall be eliminated if they are not required or if there is a less trade-restrictive solution. Fees and charges should be limited to transit administrative procedures and to the cost of the service.

Reason: In many developing countries, agriculture and health authorities are exceeding the formalities on transit varying from inspections to certifications without objective risk assessments and, in some cases, are charging for these services. Eliminating formalities supports nondiscrimination (Paragraph 4).

SPS Agreement (Articles 5.1, 5.2, and 5.7) — Members shall ensure that SPS measures are based on risk assessments (5.1) and available scientific evidence (5.2). In cases where relevant scientific evidence is insufficient, a Member may provisionally adopt SPS based on available pertinent information, including SPS measures adopted by other Members or information from relevant international organizations.

TBT Agreement — Not applicable

P11.4 Nondiscrimination:

Members shall not treat goods that will pass through their territory in transit less favorably than goods shipped directly from origin to destination.

Reason: Some Members have import restrictions on food, beverages, and feedstuff from specific Member countries that have been extended to transit trade. Goods in transit should not be treated with the same formalities or restrictions required for imports.

SPS Agreement (Articles 2.3 and 5.5) — Members shall ensure that their SPS measures do not arbitrarily or unjustifiably discriminate between Members where identical or similar conditions prevail (2.3). Members shall avoid arbitrary or unjustifiable distinctions in the SPS protective levels it considers appropriate in different situations, if such distinctions result in discrimination or a disguised restriction on international trade (5.5).

TBT Agreement — Not applicable

P11.5 –11.10 Procedures and Controls: When controlling and processing transit movements, Members shall allow pre-arrival declaration and not apply formalities (documentation, controls, Customs charges, and inspections) other than those needed to identify the goods. Members shall not apply technical regulations and conformity-assessment procedures on goods in transit.

Reason: Similar to formalities under Article 11.1, some Member countries are requiring inspections and certifications without objective risk assessments, a practice that delays the movement of goods in transit.

SPS Agreement (Articles 5.1, 5.2, and 5.7) — Members shall ensure that SPS measures are based on risk assessments (5.1) and available scientific evidence (5.2). In cases where relevant scientific evidence is insufficient, a Member may provisionally adopt SPS on the basis of available pertinent information, including SPS measures adopted by other Members or information from relevant international organizations (5.7).

TBT Agreement — Not applicable

PROVISIONS THAT PROVIDE A GENERAL BENEFIT FOR AGRICULTURAL TRADE

Publication and Availability of Information

1.1 Publication: Members shall publish the general trade-related information (trade procedures, duties, taxes, fees, penalties, valuation, tariff classification, origin rules, appeal procedures, and tariff quotas) in an easily accessible manner.

Reason: Publication of information is also a requirement of the SPS and TBT Agreements. The general trade-related information required under the TFA provides a general benefit for agricultural goods, while the SPS and TBT Agreements require more specific information impacting agricultural trade.

SPS Agreement (Article 7 and Annex B.I) — Members shall publish all SPS regulations promptly (B.I), notify changes in their SPS measures (7), and allow for reasonable time between the publication of the measure and its entry into force (B.I).

TBT Agreement (Articles 2.11 and 2.12) — Members shall ensure that all technical regulations adopted are published promptly (2.11) and allow for reasonable time between the publication of the technical regulation and its entry into force (2.12).

1.3 Enquiry Points: Members shall establish or maintain one or more enquiry points to answer reasonable enquiries on general trade-related information (listed under Article 1.1) and provide necessary forms and documents.

Reason: Enquiry points for general trade-related information are beneficial for traders seeking trade opportunities and help to improve compliance. Enquiry points are also mandated under the SPS and TBT Agreements for specifics on sanitary and technical regulations and standards.

SPS Agreement (Annex B, Articles 3–4) — Members shall ensure that they have an enquiry point to provide answers related to SPS regulation, inspection and risk assessment procedures, and production and quarantine treatment and provide copies of documents.

TBT Agreement (Article 10) — Members shall ensure that they have an enquiry point to answer enquiries related to any technical regulations, standards, and conformity-assessment procedures adopted or proposed and provide relevant documents. If a Member has more than one enquiry point for legal or administrative reasons, the Member shall provide complete and unambiguous information on the scope of responsibility for each enquiry point.

2 Comment and Consultation

2 Members must allow traders and other interested parties reasonable time to comment on new or proposed laws and regulations related to the movement, release, and clearance of goods, including

Reason: Commenting on new laws and regulations allows agricultural traders to provide border agencies with improved procedures and may also contribute to improving compliance. The direct implications of public consultation for SPS measures, technical regulations, standards, and conformity assessments are covered specifically under the SPS and TBT Agreements.

goods in transit.

SPS Agreement (Annex B) — When an international standard does not exist and the SPS regulation may have a significant effect on trade, Members shall publish a notice of the proposed measure at an early stage (B5A) and, without discrimination, allow reasonable time for other Members to make comments in writing (B5D). Additionally, when there is an urgent need to implement a measure for the protection of health, Members shall issue a notification and allow other Members to provide written comments (B6A, B6D).

TBT Agreement (Articles 2, 5, and 7) — When an international standard does not exist and if the technical regulation will have a significant effect on trade, Members shall notify other Members at an early stage when amendments can still be introduced and comments taken into account (2.9.2) and, without discrimination, allow reasonable time for other Members to make comments in writing (2.9.4). When a technical regulation is adopted out of urgency, Members shall allow other Members to present their comments in writing (2.10.3). The same commitments apply to proposed and adopted standards (5.6.2, 5.6.4, and 5.7.3) and conformity assessments (7.3)

3 Advance Rulings

3 Members must issue binding rulings on tariff classification and origin and are also encouraged to issue rulings on valuation method and criteria, relief and exemption from Customs duties, quotas, and any additional matters that a Member considers appropriate for issuing an advance ruling.

Reason: Advance rulings allow traders to know how Customs will treat their goods prior to importation. Rulings contribute to eliminating subjective discretions or delays from lack of technical expertise, which provides a general positive benefit to agricultural trade. The TFA does not require Members to issue advance rulings on specific agriculture or sanitary measures; however, an advance ruling on any matter can contribute to transparency and expedited release.

SPS Agreement — Not applicable

TBT Agreement — Not applicable

4 Procedures for Appeal or Review

4 Members shall provide traders the right to appeal or review an administrative decision issued by Customs.

Reason: The TFA includes an appeal or review mechanism for customs decisions. The SPS and TBT Agreements specify a review procedure for SPS measures and technical regulations and standards.

SPS Agreement (Annex C-I) — With regard to SPS controls, inspections, and approval procedures, Members shall ensure that a procedure exists to review complaints concerning the operation of such procedures and to take corrective action when a complaint is justified.

TBT Agreement (Article 5.2.8) — In cases where a positive assurance of conformity with technical regulations or standards is required, Members shall ensure that a procedure exists to review complaints concerning the operation of a conformity-assessment procedure and to take corrective action when a complaint is justified.

6 Disciplines on Fees and Charges

6.1 General Disciplines on Fees and Charges Imposed on or in Connection with Importation and Exportation: Fees or charges imposed on imports or exports must be consistent with the GATT Article VIII restrictions, must be published before entering into force, and must be reviewed periodically with the

Reason: This provision supports transparency and an effort to reduce fees, which applies to all fees imposed on imports and exports (sanitary inspections, certifications), providing a general benefit to agricultural trade.

SPS Agreement — Not applicable

TBT Agreement — Not applicable

intention of reducing fees.

6.2 Specific Disciplines on Fees and Charges for Customs Processing Imposed on or in **Connection with Importation** and Exportation: Members shall limit Customs fees to the approximate cost of the service rendered and should be closely connected to the Customs processing of the goods.

Reason: The TFA specifically mentions Customs fees; the SPS and TBT have similar existing obligations for SPS and conformity assessmentrelated fees.

SPS Agreement (Annex C-IF) — Any fees imposed for the procedures on imported products have to be equitable in relation to any fees charged on like domestic products and should be no higher than the actual cost of the service.

TBT Agreement (Article 5.2.5) — Any fees imposed for assessing the conformity of products originating in another Member's territory must be equitable to goods originating in country.

Release and Clearance of Goods

7.6 Establishment and **Publication of Average Release**

Times: Members are encouraged to measure and publish their average release time of goods periodically and in a consistent manner.

Reason: Agriculture and health authorities contribute to release and clearance times. Often Customs cannot release a good until other relevant agencies have provided consent. Published time release measures contribute to transparency and allow agencies to have a reference for measuring performance and identifying bottlenecks.

SPS Agreement (Annex C-IB) — The Agreement not address release times, but it does include the commitment to publish the standard processing period of each procedure involved with controls, inspections, and approvals.

TBT Agreement (Article 5.2.2) — The Agreement does not address release times, but it does include the commitment to publish the standard processing period of each conformity assessment procedure.

Ш Freedom of Transit

PII.16-II.17 Cooperation:

Members shall make an effort to cooperate and coordinate with one another to enhance freedom of transit. This cooperation may include coordination on charges, formalities, and practical operations for transit. Members will also appoint a national transit coordinator.

Reason: Interagency coordination and cooperation across Member counterparts contributes to improved information sharing and can lead to more efficient operations when crossing the border. The effort to cooperate serves as a general benefit to agricultural trade, while Article II's sub-articles on formalities, nondiscrimination, and controls provide direct impact to agricultural trade in transit.

SPS Agreement — Not applicable

TBT Agreement — Not applicable

12 **Customs Cooperation**

Members shall exchange information for the purpose of verifying an import or export declaration where there are reasonable grounds to doubt the truth or accuracy of the declaration. Reason: The article aims to improve coordination among Members, specifically Customs, for the purpose of managing risk and validating import declaration data with the exporting country and potentially aiding release times. This coordination is of particular interest to Customs agencies when verifying valuation and declaration prices.

SPS Agreement — Not applicable

TBT Agreement — Not applicable

PROVISIONS THAT HAVE MINOR IMPACT ON AGRICULTURAL TRADE

Publication and Availability of Information

1.4 Notification: Members must provide the WTO Trade Facilitation Committee with the names of official publications and websites containing forms and documents needed for importation, exportation, and transit (Article 1.1); information on general trade procedures (Article 1.2); and contact information for the enquiry point (Article 1.3).

Reason: Article I formalizes the communication to and from Member countries and the WTO. The requirement reinforces the other commitments made under Article I, without including any additional expediting measures.

SPS Agreement (Annex B, 5b) — Members must notify other Members, through the Secretariat, of the products to be covered by the regulation together with a brief indication of the objective and rationale of the proposed regulation.

TBT Agreement (Articles 2, 3, and 5) — Members must notify the Secretariat of the preparation and adoption of technical regulations and conformity assessments.

6 Disciplines on Fees and Charges

6.3 Penalty Disciplines:

Members must adopt the following disciplines when imposing penalties for a breach of a Customs law, regulation, or procedure: penalize only the person responsible for the violation, penalize proportionate to the severity of the violation, avoid conflicts of interest, provide the person responsible with a written explanation, and consider a "prior disclosure" as a potential factor to mitigate the penalty amount.

Reason: The article establishes reasonable and fair practices for administering penalties for violations; it does not affect release and clearance times.

SPS Agreement — Not applicable

TBT Agreement — Not applicable

7 Release and Clearance of Goods

7.8 Expedited Shipments:

Members shall adopt an expedited shipment regime to allow for the expedited release of goods entering through air cargo facilities by an express courier service. The expedited shipment regime must minimize documentation required for the release of shipment, should not have any weight and value restrictions, must not be taxed by value-added or excise taxes, and should establish a de minimis value for shipments not subject to duties and taxes. If a Member establishes qualifying criteria for express couriers, that criteria must be published.

Reason: The commitment establishes the expedited shipment regime for express courier service, which provides door-to-door delivery. Although the commitment eliminates restrictions on weight and value, the express courier model typically serves low-weight, high-value shipments, the majority being documents, merchandise goods, electronic components, designer fashion, and pharmaceutical products. Agricultural goods can be shipped through an express courier. However, the bulk of agricultural trade, which is low value per volume, is done under a sea or air freight cargo regime. Therefore, the article is considered to have minor impact on agricultural trade.

SPS Agreement — Not applicable

TBT Agreement — Not applicable

10 Import, Export, and Transit Formalities

10.5 Pre-shipment Inspection (PSI): Members shall not require the use of pre-shipment inspections in relation to tariff classification and

Reason: The TFA specifically states that this article does not preclude pre-shipment inspections for sanitary and phytosanitary purposes. Therefore, this article does not introduce any new measures that impact the clearance of agricultural goods.

Customs valuation and are encouraged not to introduce or apply new requirements regarding their use.	SPS Agreement (Annex C) — Inspection procedures are undertaken and completed without undue delay and in no less favorable manner for imported products than for like domestic products. Nothing in the agreement shall prevent Members from carrying out reasonable inspection within their own territories.	
	TBT Agreement — Not applicable	
10.6 Use of Customs Brokers: Members must not make the use of Customs brokers a mandatory requirement. Measures on the use of	Reason: Eliminating the required use of brokers is a measure to simplify trade requirements and potentially reduce the cost of trade by allowing traders to manage the clearance process directly and save on brokerage fees.	
Customs brokers must be published, and broker licensing rules must be transparent and objective.	SPS Agreement — Not applicable	
	TBT Agreement — Not applicable	
10.9 Temporary Admission of Goods and Inward and Outward Processing: Members shall adopt Customs procedures for the temporary admission, inward processing, and outward processing	Reason: Manufacturers use inward and outward processing for goods that have been returned to them for repair or to send goods for repair or other processing. Temporary admission allows goods to be imported for a limited period for defined purposes, such as for trade exhibitions, testing, or replacement parts in manufacturing operations. This article does not impact the clearance of agricultural goods.	
of goods.	SPS Agreement — Not applicable	
	TBT Agreement — Not applicable	

SECTION 2: TFA LINKAGES TO SPS AND TBT PROCEDURES THAT PREVENT OR DELAY AGRICULTURAL TRADE

This section examines relevant TFA provisions that intersect and/or address SPS and TBT border clearance procedures that prevent or delay agricultural trade. Multilateral organizations²⁸ have identified common types of procedural challenges related to SPS and TBT controls, including more inspections and controls than necessary; longer than necessary wait times at borders; limited transparency on requirements, forms, and fees; and uncertainty, arbitrariness, and unpredictability.²⁹ These procedural barriers will be explored in further detail below, with analysis on how the TFA's core tenants of simplification, modernization, and harmonization of import and export processes can also address these barriers. Finally, this section will conclude with a discussion of future activities to facilitate agricultural trade in alignment with the implementation of WTO Member TFA commitments.

BACKGROUND

With the establishment of the WTO, tariffs and other trade barriers affecting agriculture have been reduced. Nonetheless, there is concern in many countries that as tariff measures restricting trade continue to decline, there will be an increase in non-tariff measures. SPS measures, which address food safety and animal or plant health issues, and TBT measures, which include technical or quality requirements such as standards and labeling, present the

Box 2.1 — TFA Provisions that complement SPS and TBT Agreement Obligations

- Publish a wide range of information related to import/export requirements and procedures (TFA Article 1)
- Provide advance rulings besides tariff classification and origin (TFA Article 3)
- Inform on detention of goods and facilitate test procedures (TFA Article 5)
- Review and publish fees and charges (TFA Article 6)
- Allow pre-arrival processing and Publish average release times (TFA Article 7)
- Border Agency Cooperation (TFA Article 8)
- Review and reduce import/export transit formalities (TFA Article 10)
 Freedom of transit: Limit formalities and documentation requirements (TFA Article 11)

most common barriers to trade for agricultural products. Procedural delays, particularly for agricultural goods, can increase the cost and time of doing business. These delays may lead to catastrophic results for some traders, especially when perishable items are delayed indefinitely at the border, causing the entire shipment to no longer be viable due to spoilage or expiration.

²⁸ FAO, World Organization for Animal Health (OIE), World Bank Group, World Health Organization (WHO), and WTO.

²⁹ WTO. Standards and Trade Development Facility. "Facilitating safe trade: protecting health, reducing SPS trade costs," Geneva: Switzerland. http://www.standardsfacility.org/sites/default/files/Briefing_Facilitating_safe_trade.pdf

Non-tariff measures, as defined by UNCTAD, are "policy measures — other than ordinary customs tariffs — that can potentially have an economic effect on international trade in goods, changing quantities traded, or prices or both." https://unctad.org/en/Pages/DITC/Trade-Analysis/Non-Tariff-Measures/NTMs-Classification.aspx

Regarding SPS and TBT procedures, TFA Article 24 Paragraph 6 states that nothing in the Agreement shall be construed as diminishing the rights and obligations of Members under the existing WTO TBT and SPS Agreements. The TFA provisions noted in the above text box look to complement existing obligations under the TBT and SPS Agreements.

LINKS TO SPS AND TBT PROCEDURES

A number of SPS and TBT border controls (that is, requirements or procedures) can present barriers to trade of agricultural goods. The three points below explain how the TFA addresses SPS and TBT clearance-related barriers by requiring or encouraging WTO Members to take specific actions. Relevant TFA articles that address common SPS- and TBT-related clearance issues for agricultural exports are identified and discussed, with clear examples of how the TFA may apply.

DUPLICATIVE DATA REQUIREMENTS

Regulatory agencies with SPS functions (such as agriculture, environment, or health ministries) may have multiple levels of controls, which may lead to multiple requests for data and result in delays well beyond the targets for cargo clearance times set by Customs authorities. These requirements by agriculture, health, and standard setting agencies may be considered excessive if they result in trade disruptions or additional transaction costs to achieve an appropriate level of protection.³¹

Duplicative documentation requirements by the importing or exporting countries and overlapping jurisdictions between government agencies tend to result in multiple document reviews or contradictory requirements. For example, there are currently I I government agencies conducting inspections (document reviews and physical inspections) of goods on the border in Viet Nam. Food and agriculture products are inspected by no less than five ministries apart from the Customs Department—Science and Technology (quality), Health (hygiene and safety), Industry and Trade (manufacture, sale, and circulation), Agriculture and Rural Development (SPS, temporary export/import), and Natural Resources and Environment (environmental protection). Each has its own requirements for food shipments, even though many of the documents serve similar or the same purposes, and any of the ministries can initiate an inspection regarding food products.

Box 2.2 — TFA Article 10.1 Formality and Documentation Requirements states that:

"Each Member shall review such formalities and documentation requirements and, based on the results of the review, ensure, as appropriate, that such formalities and documentation requirements are:

- a) adopted and/or applied with a view to a rapid release and clearance of goods, particularly perishable goods;
- adopted and/or applied in a manner that aims at reducing the time and cost of compliance for traders and operators;
- the least trade restrictive measure chosen where two or more alternative measures are reasonably available for fulfilling the policy objective or objectives in question; and
- d) not maintained, including parts thereof, if no longer required."

³¹ Article 8 and Annex C of the SPS Agreement provide guidance to SPS agencies regarding the appropriate levels of control, and recommends that agencies avoid unnecessary procedures and delays.

The TFA addresses these duplicative requirements and procedures through multiple mechanisms, including pre-arrival processing (Article 7.1). This encourages countries to allow import documentation to be filed electronically prior to the arrival of the goods, such as through the use of an electronic single window (ESW) (Article 10) to expedite release when the shipments arrive. Pre-arrival processing further enables authorities to conduct risk assessments, calling on SPS agencies to focus on high risk consignments to expedite the release of low risk goods and by tracking and publishing cargo release times. Further, the TFA calls for the development of Authorized Operator Programs (Article 7.7), whereby authorities identify high volume, compliant traders as "low risk" or "trusted," allowing them to take advantage of simplified procedures related to documentary and data requirements, among other things.

To comply with its TFA commitments, Viet Nam is harmonizing over 73 legal documents (decrees, laws, and regulations) to reduce the number of overlapping inspections and accompanying documentary requirements through joint inspections and by removing a Ministry's mandate to inspect certain classes of goods. In this example, Viet Nam's efforts to reduce ministerial overlap complies with TFA Article 8.1, which calls for WTO Members to ensure that agencies with border procedures (that is, inspections) cooperate with one another to facilitate trade.

Perishable agricultural commodities need to be handled expediently because of high transport costs associated with the use of refrigerated trucks or other specialized vehicles. Undue delays resulting from excessive controls and multiple requests for data may discourage traders from importing or exporting these goods due to increased costs and uncertainty of getting the goods through in a timely manner, which can negatively affect entire supply chains. In addition, a reduction in food flows from one country to another can cause food insecurity on the consumer level and can increase prices, thereby lowering the demand for certain products and discouraging future production.

INSPECTIONS

Inspections at the border may cause longer than necessary wait times. Given food safety and public health concerns, border procedures such as document checks, visual inspections, sampling and testing, quarantine, and detention may also increase the time and costs to trade. Additionally, inspections for compliance to TBT requirements, such as reviewing packaging and labels, conducting conformity assessments, and verifying certification procedures, can also increase border delays.

In one example from September 2018, 600 containers of rice from Pakistan were held at the Port of Mombasa for several weeks while Kenyan officials conducted inspections.³² Delays in completing the inspections were due to a backlog of phytosanitary checks taking place in Nairobi, which has the only laboratory for conducting heavy metal tests, while the physical characteristics of the rice (that is, the percentage of broken grains, which is a TBT issue of quality) were being tested in Mombasa. Lack of

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³² Salman Abduhu, "600 Pak rice containers stuck up at Kenyan ports," The Nation (Lahore, Pakistan), September 8, 2018. https://nation.com.pk/08-Sep-2018/600-pak-rice-containers-stuck-up-at-kenyan-ports; "Stringent inspections threaten Pakistan rice export to Kenya," The News (Lahore, Pakistan), September 8, 2018. https://www.thenews.com.pk/print/365314-stringent-inspections-threaten-pakistan-rice-export-to-kenya

sufficient infrastructure in Kenya to expedite these SPS and TBT inspections compounded the delays. The Chairman of the Pakistan Rice Association affirmed that all Customs documents, including the required Certificate of Conformity, and tariff duties, had been processed, and that the heightened inspection requirements (seemingly without reason) delayed delivery and added high demurrage costs for the Pakistani rice company.

Because many agricultural goods are perishable and thus are sensitive to time and temperature, time-consuming inspections at border crossings can compromise the quality and safety of products. Many countries lack the proper infrastructure and sufficient personnel to adequately staff their clearance offices during normal hours of operation, which increases the amount of time needed to get highly perishable products across borders. This tends to force importers to pay inspectors overtime, officially or otherwise, which can quickly become a significant integrity issue and add unnecessary costs to traders.

The TFA aims to reduce the costs associated with clearance delays by streamlining procedures and targeting high risk goods. TFA Article 7.4 indicates that Members will adopt and maintain a risk management system that focuses control on high risk consignments and expedites the release of low risk consignments. It also commits agriculture, health, and standard setting agencies to control for SPS-and TBT-related risks based on selectivity criteria.

TFA Article 10 aims to cut red tape broadly and discusses the formalities for import, export, and transit, with the intention of, "minimizing the incidence and complexity of import, export, and transit formalities and to decrease and simplify import, export, and transit documentation."

Article 10 also encourages WTO Members to establish or maintain a single window with the goal of streamlining the processing of documentation requirements and the sharing of information between other border control agencies (Article 10.4), and it requests that Members align their procedures and formalities with international standards (Article 10.7).

Additionally, Article 11 of the TFA has provisions governing the transit of goods, including treating products in transit favorably; simplifying Customs procedures; removing unnecessary regulations or formalities, such as inspections; and allowing advance filing in order to process the goods before arrival (pre-arrival processing).

In Central America, USAID's Regional Trade and Market Alliances program successfully convened officials from relevant countries to begin harmonization and streamlining of SPS-related procedures. The program also successfully introduced a Radio Frequency Identification Device (RFID) system that, when fully implemented, will allow goods to transit between the countries freely without need for additional formalities (such as documentation or inspections). Through this system, the program is assisting Central American WTO Members to adopt international standards for border procedures in line with TFA Article 10.3, and to apply these uniformly across all border crossings as stipulated by TFA Article 10.7.

TESTING PROCEDURES AND CONTROLS

The uncertainty over how long it will take to move goods through a border crossing due to arbitrary testing procedures and controls creates unpredictability and adds costs that are eventually passed to

consumers in countries least able to afford them. Uncertainty in agricultural supply chains adds costs to potential business investors, who rely on efficient supply chains to minimize inventory costs. Many agricultural commodities such as wheat, corn, and oilseeds are shipped in bulk with shipments as large as 50,000 metric tons at a time. Demurrage costs (known as the rent charged for use of a container) on shipments that large can be very expensive if the delays last several days.

As noted, delays in getting high-value agricultural products across borders can result in spoilage, loss in quality, and food safety problems if cold storage facilities are poorly equipped or non-existent. This uncertainty can be reduced if WTO Members properly implement commitments under TFA Article 5.1, which requires that, when Members provide guidance for enhanced levels of inspections at the border for agricultural goods, they do so based on risk, and apply the enhanced controls uniformly only to the border crossings where the specific SPS risk applies and to end enhanced controls when no longer necessary.

In many cases, agencies justify requirements or procedures based on local circumstances of a perceived risk, despite internationally accepted best practices or a scientific basis. In these cases, many traders face rejection of goods at the border for unclear or unjustified reasons. For example, in the Republic of Korea authorities no longer accept photocopies of certificates related to poultry imports from the United States and now require two original or duplicate copies. These certificates must now also include multiple, pre-printed attestations. This may be considered an arbitrary requirement that TFA Article 10.2 on "Acceptance of Copies" addresses. Under this Article, WTO Members must endeavor to accept paper or electronic copies of supporting documents.³³

Unclear TBT requirements may also lead to unnecessary procedures at the border. For example, the WTO TBT Committee is working with Indonesia and its trading partners (notably the United States) on Indonesia's Regulation 30/2013, which requires sugar, salt, and fat content information on labels for prepackaged and fast foods. Full implementation of the regulation has been delayed over concerns regarding the lack of open public consultations, the need for further technical clarification and implementing guidance on the acceptable methods of performing the required nutrient conformity tests, and whether these tests need to be performed by Indonesian laboratories. The United States expressed that, without these clarifications, Indonesia's testing procedure "will allow de minimis variations between batches and could lead to unnecessary shipment-by-shipment inspections for label conformity." If Indonesia should proceed with implementation without sufficient clarification on testing to ensure label conformity, the country will need to grant traders an opportunity for a second test (TFA Article 5.3). Under its commitments to TFA Article 2.1, Indonesia must continue to give interested parties (traders and other Members) adequate information, opportunity, and reasonable time to comment before a new

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³³ USDA Foreign Agricultural Service, "Food and Agricultural Import Regulations and Standards Narrative: FAIRS Country Report," GAIN Report No. KS1803 prepared by Seung Ah Chung and Peter J. Olson, January 2018.

 $[\]underline{https:}//gain.fas.usda.gov/Recent\%20GAIN\%20Publications/Food\%20And\%20Agricultural\%20Import\%20Regulations\%20and\%20Standards\%20-publications/Food\%20Agricultural\%20Import\%20Regulations\%20Agricultural\%20Import\%20Regulations\%20Agricultural\%20Agric$ %20Narrative_Seoul_Korea%20-%20Republic%20of_I-26-2018.pdf

³⁴ International Trade Administration, "Indonesia, Foreign Trade Barriers 2018," https://www.trade.gov/td/standards/toolkits/nte_indonesia.pdf.

trade-related measure comes into force. Ultimately, delays may be avoided if the discussion around the TBT requirement is resolved prior to its enforcement.

In some countries, every shipment of agricultural commodities will be subjected to additional laboratory testing without sound scientific reasons, or to multiple inspections/procedures by several agencies operating at the border that overlap in scope or reasoning. Authorities often cite protecting public health and other SPS reasons for inspecting each shipment. However, these controls can cause the most severe delays due to the time it takes to inspect a shipment and procure samples for laboratory testing. In many cases, laboratories are not located at or near the border or are backlogged with hundreds of samples.

Delays due to inspections are common, especially for the East African Community (EAC). Nonetheless, in line with TFA Article 12 on improving Customs Cooperation between trading partners, USAID's East Africa Trade Hub and the Eastern Africa Grain Council announced in May 2018 an effort to facilitate a review of nine products to standardize sampling and testing for substances such as aflatoxin and pesticide residues among the EAC Members.³⁵ This effort is expected to improve the movement of goods such as grains throughout the region and is also in line with TFA Article 7.9, which mandates that Members shall provide perishable goods with appropriate, priority inspections and allow such goods to be properly stored at borders.

In another example, in August 2017, Serbia announced controls on all Croatian fruits and vegetables based on SPS reasons, although reports suggest that the controls were arbitrary and imposed for political reasons.³⁶ Prior to the announcement, Serbian authorities conducted random checks on all food entering from Croatia. Serbian border officials now inspect and test every imported food product from Croatia and send these samples for laboratory testing, which can take up to 30 days. As these fruits and vegetables are not allowed into Serbia until laboratory testing is finished, these measures cause unnecessary delays at the border and spoilage of perishable goods.

In addition to delays in receiving laboratory results, sampling and testing methods can also be problematic. A USDA report in August 2018 identified differences in inspection protocols for aflatoxin, a toxin produced by fungi present in crops such as corn and peanuts, between the United States and lapan.³⁷ The differences in sampling techniques and re-testing protocols require U.S. exporters to take added precautions in verifying their product quality to avoid disparate test results. As a result, exporters

³⁵ Diane Mushimiyimana, "EAC standards harmonisation 'to boost intra-regional grain trade,'" The New Times (Rwanda), May 2, 2018. https://www.newtimes.co.rw/business/eac-standards-harmonisation-boost-intra-regional-grain-trade; USAID. "USAID Works with EAGC to Improve Cross-border Trade in Staple Foods in East Africa," USAID East Africa Trade + Investment Hub blog, August 16, 2018. https://www.eatradehub.org/usaid_works_with_eagc_to_ improve cross border trade in staple foods in east africa

³⁶ USDA Foreign Agricultural Service, "Serbia Prepares Counter Measures to Croatian Non-Trade Barriers," GAIN Report No. RB1702 prepared by Tatjana Maslac, Belgrade: Serbia, August 2017.

 $[\]underline{https://gain.fas.usda.gov/Recent\%20GAIN\%20Publications/Serbia\%20Prepares\%20Counter\%20Measures\%20to\%20Croatian\%20Non-theorem (a.g., a.g., a.g$ Trade%20Barriers Belgrade Serbia 9-5-2017.pdf

³⁷_USDA Foreign Agricultural Service, "Japan's Aflatoxin Testing Protocol," GAIN Report No. JA8061 prepared by Tomohiro Kurai, Tokyo:Japan, August 2018. https://gain.fas.usda.gov/Recent%20GAlN%20Publications/Japan%E2%80%99s%20Aflatoxin%20Testing%20Protocol%20_Tokyo_Japan_8-21-2018.pdf

must also be prepared for additional tests at Japanese ports that may delay deliveries, affecting shipment schedules or increasing logistics costs.

In any of the cases above, if Customs authorities were to issue an administrative decision that may be considered arbitrary, TFA Article 4 mandates that WTO Members put procedures for appeal or review in place. This requirement provides an additional layer of administrative or judicial scrutiny to decisions by Customs agencies. TFA Article 4 expands the provisions on appeal or review procedures beyond those already contained in GATT Article X, which are primarily aimed at decisions by Customs authorities. However, WTO Members are encouraged to extend the GATT provision to decisions by other relevant border agencies. When a trader considers that it has been directly impacted by a decision or omission of Customs, Customs needs to provide upon request an explanation of the reason for the decision or omission, and offer the trader the right to appeal to a competent authority. The purpose of the right to appeal is to protect traders against decisions or omissions of Customs that may not comply fully with the laws and regulations that Customs is responsible for administering and enforcing. The TFA encourages other border agencies to adopt similar practices to GATT Article X, with an expanded reasoning of protecting traders from decisions that are based on unclear or unscientific reasons, and that may be against these agencies' own regulations. For agricultural trade, this would enable traders to challenge the decisions by Customs or other agencies that may result in the rejection of agriculture commodities or undue delays of perishable goods.

IMPORTANCE OF CLARITY ON PROCEDURES

The WTO calls for transparency to provide enhanced clarity for exporters and thus improved market access. To avoid trade disruptions, exporters need to research the particular food safety and procedural requirements in each foreign market. The benefit of the TFA is that it makes border activities predictable and reduces the excessive time and costs associated with trading. This is especially important in cases of trading highly perishable goods, in which lengthy delays in countries lacking refrigerated facilities at the border can reduce the quality and safety of the food products and mishandling of goods can result in both food waste and income loss.

For many countries, the SPS regulatory framework is incomplete. The lack of a mature regulatory infrastructure results in limited transparency, including challenges associated with limited public information on actual requirements, excess documentation requirements, and no complaint or appeal procedures concerning arbitrariness and unpredictability associated with the importing process.

SPS regulations can be complex. For example, pesticide maximum residue limits (MRLs) can involve hundreds of crops, hundreds of active ingredients, and more than 100 different markets. Farmers and exporters need to be confident that they know what MRLs are being enforced before they grow and ship crops that are subject to MRL regulations in other markets.

Limited transparency, for example not knowing the country-specific SPS regulations on a particular agriculture product or the country-specific forms and fees, is an obstacle for agricultural exports. Publishing SPS regulations online provides access and supports good governance. Sixty percent of firms responding to an Aid for Trade survey cited border delays as the main trade problem when dealing with developing country agro-food suppliers, and more than 30 percent of developing country suppliers cited border paperwork and delays as obstacles to connecting to value chains.³⁸

A study by the World Bank³⁹ found that, for low-income and middle-income countries, regulatory burdens, particularly for smaller exporters, can be very high, thereby suppressing investments in marketing and storage capacity. Delays in obtaining the necessary export documents translates into reduced export volumes and lower value of shipments when time-sensitive agricultural products are subject to conditions that cause damage or deterioration.

The TFA requires WTO Members to review documentation requirements and associated formalities to reduce the time and cost of compliance for traders, to accept documents electronically, and to eliminate delays caused by the demand for document originals (Article 10 and 11). It also strives to significantly reduce the lack of information and transparency through the publication of specific information by all governmental agencies involved in border processing and by establishing national enquiry points (Article 1).

CONCLUSION

Inefficient, arbitrary, or non-transparent border procedures add costs that are felt by traders and ultimately the consumers. Provisions set forth in the TFA can have a positive and significant impact on agricultural trade. A key provision of TFA Article 7.1, Pre-arrival Processing, streamlines many procedures and can significantly improve efficiency at border crossings, and reduce delays and unnecessary costs. In addition, TFA Article 5.1 on import alerts further addresses concerns about making border crossing procedures more efficient through notifications regarding enhanced controls for foods. Article 5.2 calls for importers/carriers to be notified promptly if goods are detained, and Article 6 sets out guidance related to the publication of fees and formalities. There has been a move to electronic processing with a single window and electronic payments, which reduce the paperwork burden on border staff. Article 5.3 allows for a second test of the safety of products, and Article 7.6 focuses on monitoring and publishing the average release times to get products across the border. These Articles improve transparency, reduce unnecessary costs due to shipment rejections, and should expedite product flow.

³⁸ Olivier Cattaneo, "Aid for Trade and Value Chains in Agrifood," OECD/WTO, 2013. https://www.wto.org/english/tratop_e/devel_e/a4t_e/global_review13prog_e/agrifood_47.pdf

³⁹ World Bank Group, "Enabling the Business of Agriculture 2017," prepared under leadership of Preeti S. Ahuja and Federica Saliola, Washington, DC: U.S., 2017. http://eba.worldbank.org/~/media/WBG/AgriBusiness/Documents/ Reports/2017/EBA2017-Report17.pdf

USAID is implementing several trade facilitation programs worldwide, which presents opportunities for USDA to leverage the programs and work with implementers to provide targeted technical assistance on training or capacity building under the relevant TFA Articles for partner countries. This assistance could focus, for example, on specific issues related to trade in agricultural goods and specific linkages to the TFA to ensure the inclusion of best practices and international standards on TBT and SPS issues. Examples include the following:

- USAID is currently implementing the USAID Trade Facilitation Program⁴⁰ in Viet Nam. The program
 aims to improve inter-ministerial efforts to streamline, harmonize, and apply risk based approaches
 to multiple inspections and streamline border clearance procedures, which have an impact on trade
 in agriculture products.
- USAID also recently launched the Central America Regional Trade Facilitation and Border
 Management project (mid-2018) that will address regional integration and trade facilitation
 challenges by increasing operational efficiency and harmonizing procedures at the borders,
 strengthening legal frameworks, and boosting border management. The project builds on the
 successes of the Regional Trade and Market Alliances 2 (RTMA 2) project and the innovative RFID
 system currently in place.
- USAID is also actively supporting several developing countries that need additional assistance with ecommunications, infrastructure, technical capacity, or human and financial resources for effective
 ESW implementation. USDA's involvement in the FAO and IPPC global ePhyto Hub,⁴¹ (Electronic
 phytosanitary certificate hub), led by the Animal and Plant Health Inspection Service's Plant
 Protection and Quarantine Program, would be the ideal platform to connect all these ESWs and
 streamline SPS requirements with the United States and other countries.

Together, USAID and USDA could collaborate on potential activities in line with on-going efforts to streamline border clearance processes, with a specific focus on factors that influence trade in agricultural and food products.

USDA could investigate working with developing country officials to monitor and publish average release times for U.S. agricultural commodities in foreign markets, to improve transparency and assist traders in developing or managing their supply chains. Currently, several USAID projects are working on measuring the time and cost to trade along specific transport corridors, such as the Supporting the Policy Environment for Economic Development (SPEED+) project in Mozambique. This work can be extended to measure clearance times at the border, such as the work done under USAID's RTMA 2 project in Central America, and to focus specifically on agricultural commodities.

⁴⁰ For more information please visit https://www.usaid.gov/sites/default/files/documents/1861/FS_TradeFacilitationProgram_Aug2018_Eng.pdf

For more on the ePhyto Hub, see Section 9.

SECTION 3: ANALYSIS OF DEVELOPING COUNTRIES TFA COMMITMENTS RELATED TO AGRICULTURE

The WTO TFA requires each developing country Member to notify the WTO of its commitment to implement specific provisions contained in the Articles of the Agreement, including those related to the release, clearance, and in-transit movement of agricultural goods. These notifications identify the Members' TFA implementation status and classify them into three categories:

- Category A: Provisions that will be in effect by the time the Agreement enters into force within the country and within one additional year for Least Developed Countries (LDCs); WTO Members will implement these provisions directly without the need for technical assistance.
- Category B: Provisions that will be implemented during a transitional period set by the country without the need for technical assistance.
- Category C: Provisions that can only be implemented with the help of technical assistance and capacity building.

This section summarizes the notifications submitted by 114 developing Member countries regarding their TFA commitments that affect the release of agricultural goods, and it provides an analysis of the most notified articles under Category C with respect to the cost and time estimates that implementation may require. The section does not focus on Category A, as developing countries have specified that they do not need support to implement these provisions.

BACKGROUND

The TFA was an outcome of extensive negotiations between developing and developed countries during the WTO's Ninth Ministerial Conference as part of the "Bali Package" designed to boost developing countries' trade by reducing the time and cost to trade across borders, especially for LDC Members. Since the WTO Doha Round was launched in 2001, developing Member countries have advocated for more assistance from developed countries to improve their trade prospects and to benefit from increasing global trade. The TFA is the first Agreement of its kind that allows WTO Members to determine their own implementation schedules based on their capabilities.

Through the categorized notification system (A, B, and C), developing and least-developed WTO Member countries are afforded "Special and Differential Treatment," allowing them to designate the TFA provisions that they are able to implement unilaterally, and the provisions that require support from donor organizations and multilateral institutions for compliance. Further, the WTO set up the Trade Facilitation Agreement Facility (TFAF)⁴² to assist developing countries in the preparation of notifications, and to provide a resource of related materials and information to ensure WTO Members

⁴² See http://www.tfafacility.org

fully understand the Agreement. Finally, the TFAF supports WTO Members in accessing available implementation assistance from donors and other organizations.

NOTIFICATION PROCESS

Prior to delivering their notifications to the WTO, developing and LDC Members are encouraged to establish a National Trade Facilitation Committee (NTFC) to act as the main interagency governmental body to oversee the country's TFA commitments. Further, countries may seek and receive technical assistance (for example, from the WCO or donor agencies) to conduct a self-assessment/gap analysis prior to and during the categorization of TFA commitments. After formal notification to the WTO, developing and LDC Members may seek additional technical assistance and develop strategic action plans to implement their Category B and C commitments.

Developed countries made the commitment to apply substantive portions of the TFA when the Agreement entered into force in 2017. Developing and LDC WTO Members followed a separate notification process and timeline; they had until February 2018 to submit Category A, B, and C commitments for all 36 TFA provisions; one year after the Agreement's entry into force.

Box 3.1 — Most Common Types of Technical Assistance Requested by Developing Countries

- Human resources and training
- Legislative and regulatory framework
- Information and communication technologies
- Institutional procedures
- Infrastructure and equipment
- Diagnostics and needs assessments
- Awareness-raising

WTO TFA Facility, "Category C Analysis," 2018. https://www.tfadatabase.org/ notifications/category-c

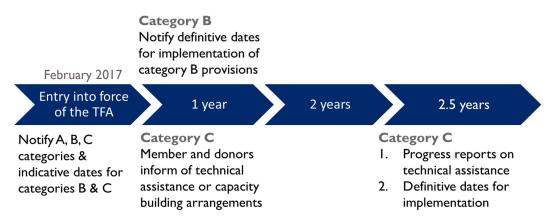
For Category B and C implementation, developing and LDC Members can set their own "indicative" and "definitive" dates of implementation (see Figures 3.1 and 3.2 below). Developing WTO Members must have notified their indicative dates by February 22, 2017, and definitive dates by February 22, 2018, for both Category B and C commitments. Although LDCs may have notified their indicative dates by February 22, 2018, they must notify definitive dates by February 22, 2020, for Category B. LDCs have until February 22, 2021, to notify the indicative dates ⁴³ for Category C and definitive dates for these commitments by February 22, 2022.

Nevertheless, as of August 2018, 11 countries still had not submitted notifications for *any* TFA provisions for Categories A, B, or C,⁴⁴ while 35 countries had only notified some provisions (mostly Category A). Additionally, not all countries had provided expected implementation dates for articles notified under Category B. Annex 3.1 lists the developing countries included in this analysis, and Annex 3.2 provides a summary of key U.S. trading partners.

⁴³ See TFAF timelines: <u>https://www.tfadatabase.org/notifications/implementation-dates</u>

⁴⁴ The following countries have not presented any notifications to the WTO and are not included in the analysis: Benin, Cabo Verde, Djibouti, Guinea, Guinea-Bissau, Haiti, Liberia, Maldives, Mauritania, Venezuela, and Yemen.

Figure 3.1: Notification Timeline for Developing Countries



Source: WTO, "WTO Trade Facilitation Agreement Facility," <u>Presented by Xiaobing Tang</u>, 2015. 45

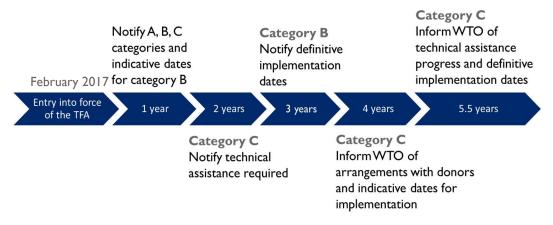


Figure 3.2: Notification Timeline for Least Developed Countries

Source: WTO, "WTO Trade Facilitation Agreement Facility," <u>Presentation</u>, 2015. https://www.unescap.org/sites/default/files/02-Overview%20of%20the%20WTO%20Trade%20Facilitation%20 Agreement%20Facility%20%28TFAF%29-Xiaobing%20Tang.pdf

Assessments can help developing countries identify their domestic capacities and technical assistance needs for each TFA provision. While some countries received assistance to conduct self-assessments prior to notification, not all countries have conducted such assessments. For countries in Latin America and the Caribbean (LAC), Asia, and Africa that received USAID support for assessments, field

⁴⁵ For more information, see: https://www.unescap.org/sites/default/files/02-Overview%20of%20the%20WTO%20 Trade%20Facilitation%20Agreement%20Facility%20(TFAF)-Xiaobing%20Tang.pdf

experience demonstrated that beneficiary countries often need assistance to understand the implications of the various commitments before submitting notifications. For example, some countries need technical assistance to better grasp the regulatory and procedural implications of a commitment, such as separating procedures for release and clearance (Article 7.3) when a country's regulations only allow for clearance (for example, Colombia), or forgoing formalities on goods in transit (Article 11.6) when established procedures dictate inspections and document reviews (for example, Ghana). In other cases, weak coordination between the Ministry of Trade, responsible for issuing the notifications, and border-management agencies, responsible for implementing the measures, results in the absence of a critical analysis to support the identification of necessary reforms and realistic timelines.

Some members, such as the Northern Triangle countries (El Salvador, Guatemala, Honduras), that previously notified articles under Category A, would like to reissue notifications under Category B or C to better align national capabilities with implementation deadlines or the need for technical assistance. However, these notifications are expected to remain final, further demonstrating the importance of government coordination and understanding when submitting notifications to the WTO.

SUMMARY OF DEVELOPING COUNTRY TFA NOTIFICATIONS

All of the commitments established in the TFA positively impact trade. However, some commitments specifically benefit agricultural trade more than others. To help identify the most beneficial articles, they have been categorized into three main groups: (I) Articles that directly affect the expedited clearance of agricultural trade and have measures that require implementation by the agriculture, health, or food-

safety authorities; (2) Articles that may not have specific implications for the agriculture, health, or food safety authorities but provide a general benefit to agricultural trade in terms of transparency and border management standards and practices; and (3) Articles considered to have a minor impact on the timely clearance of agricultural goods (Table 3.1 below). Annex 1.1 provides a full analysis of the relevant articles and explanation of the categorizations.

This analysis includes the 11 countries that still have outstanding notifications (that is, "no notification"), as well as those that have only partially notified for specific articles. Partial notifications can entail, for example, a country notifying A and B for a specific TFA article, indicating that they will be able to partially comply with a

Box 3.2 — TFA Notifications

Full Notification: All subsections under a TFA article have been categorized and the Member has notified the WTO

Partial Notification: The Member has not categorized or notified all the subsections of a TFA article

No Notification: The WTO has not been informed of the categorization of a TFA article or subsection

specific commitment within the article, but will need additional time to fully comply with the entire article. For example, Guatemala notified Article I (Publication and Availability of Information) under Categories A, B, and C, indicating that it is already compliant with some subsections of the article; however, it needs more time to publish the rules for the classification and valuation of products, and it needs technical assistance to publish import, export, and transit restrictions.

Importantly, the data in Tables 3.2 and 3.3 reveal the articles most notified under each category. Articles with high Category B and C notifications, and even partial or outstanding notifications, will be implemented by countries and may require technical assistance. Understanding these reform timelines may help the international community and donor agencies to coordinate technical assistance. In addition,

U.S. farmers and agribusinesses may use this information to help forecast market and investment decisions with other countries.

Table 3 L TFA Articles Considered Relevant to Agricultural Trade

Direct Impact	General Benefit	Minor Impact
(20 articles or provisions) ⁴⁶	(11 articles or provisions)	(6 articles or provisions)
Art 1.2 Information Available through Internet	Art 1.1 Publication and Availability of Information	Art 1.4 Notifications
Art 5.1 Notifications for Enhanced Controls or Inspections	Art 1.3 Enquiry Points	Art 6.3 Penalty Disciplines
Art 5.2 Detention	Art 2.1 Opportunity to Comment and Information Before Entry into Force	Art 7.8 Expedited Shipments
Art 5.3 Test Procedures	Art 2.2 Consultations	Art 10.5 Pre-shipment Inspection
Art 7.1 Pre-arrival Processing	Art 3 Advance Rulings	Art 10.6 Use of Customs Broker
Art 7.2 Electronic Payment	Art 4 Procedures for Appeal or Review	Art 10.9 Temporary Admission of Goods and Inward and Outward Processing
Art 7.3 Separation of Release	Art 6.1 General Discipline on Fees and Charges Imposed on or in connection with Importation and Exportation	
Art 7.4 Risk Management	Art 6.2 Specific Discipline on Fees and Charges for Customs Processing on or in connection with Importation and Exportation	
Art 7.5 Post Clearance Audit	Art 7.6 Establishment and Publication of Average Release Times	
Art 7.7 Trade Facilitation Measures for Authorized Operators	Art II Freedom of Transit Paragraphs II.16-II.17	
Art 7.9 Perishable Goods	Art 12 Customs Cooperation	
Art 8 Border Agency Cooperation		
Art 9 Movement of goods intended for import under customs control		
Art 10.1 Formalities and Documentation Requirements		
Art. 10.2 Acceptance of Copies		
Art 10.3 Use of International Standards		
Art 10.4 Single Window		
Art 10.7 Common Border Procedures and Uniform Documentation Requirements		
Art 10.8 Rejected Goods		
Art 11 of Freedom transit Paragraphs		

⁴⁶ Article 11 has 17 paragraphs containing provisions. Paragraphs have been categorized under Directly Impacting and Generally Beneficial.

ARTICLES THAT DIRECTLY IMPACT THE EXPEDITED CLEARANCE OF AGRICULTURAL TRADE

Table 3.2 provides a visual breakdown of notified commitments that will directly contribute to the timely clearance of agricultural goods.

Table 3.2. Number of developing countries notifying articles that directly impact agricultural trade

Article No.	Title	Category A	Category B	Category C	Partial Notification	No Notification
1.2	Information through Internet	34	Ш	24	0	44
5.1	Notifications for Enhanced Controls	44	16	19	I	33
5.2	Detention	76	10	6	0	21
5.3	Test Procedures	33	Ш	33	0	36
7.1	Pre-arrival Processing	47	10	18	5	33
7.2	Electronic Payment	44	10	19	0	40
7.3	Separation of Release	59	П	10	3	30
7.4	Risk Management	36	7	29	4	37
7.5	Post Clearance Audit	47	5	22	I	38
7.7	Trade Facilitation Measures for Authorized Operators	24	10	31	3	45
7.9	Perishable Goods	48	13	13	6	33
8	Border Agency Cooperation	29	П	22	10	41
9	Inland Clearance	81	7	5	0	20
10.1	Formalities and Documentary Requirements	46	13	14	2	38
10.2	Acceptance of Copies	43	16	П	9	34
10.3	Use of Int'l Standards	54	7	20	I	31
10.4	Single Window	14	6	44	I	48
10.7	Common Border Procedures	74	8	5	3	23
10.8	Rejected Goods	71	10	3	5	24
П	Freedom of Transit	38	7	7	35	26

(Data as of October 2018)

Least Notified Most Notified *Key=

The most notified Articles for Category B and C (in descending order) include the following:

Largest Number of TFA Notifications						
Ca	tegory B	Category C				
•	Notification for Enhanced Controls (5.1)	•	Single Window (10.4)			
•	Acceptance of Copies (10.2)	•	Laboratory Testing Procedures (5.3)			
•	Perishable Goods (7.9)	•	Authorized Operators (7.7)			
•	Formalities and Documentation Requirements (10.1)	•	Risk Management (7.4)			

Articles with a large number of partial notifications and outstanding notifications are likely to be implemented over several years. Articles with outstanding notifications may require technical assistance to determine an implementation timeline and further technical assistance needs. Articles with the most partial notifications and those with the most outstanding notifications (in descending order) include the following:

Pa	rtial Notifications	Outstanding Notifications
•	Freedom of Transit (11) Border Agency Cooperation (8) Acceptance of copies (10.2)	 Single Window (10.4) Authorized Operators (7.7) Information through Internet (1.2)

Articles may receive a high number of Category C notifications while at the same time may remain an outstanding notification for many other countries, which is indicative of the degree of complexity of the reform and even of assessment of the reform. For example, Article 10.4 (Single Window) was notified under Category C by 44 countries, yet it remains to be notified by 49 countries. Similarly, 31 countries notified Article 7.7 Authorized Operators under Category C, and another 45 countries still need to notify Article 7.7 commitments. For Article 10.4, some Members with outstanding notifications have already launched national single-window platforms, such as El Salvador, Ghana, and Viet Nam. However, these platforms may not meet the level of functionality required under the TFA; accordingly, these Members will likely notify the article under Category B or C. For an authorized operator program, countries may need to assess what types of Customs-focused trade facilitation measures currently exist for operators before notifying the category for this article. It is likely most of the pending notifications will result as Category C. While some countries may have national, trusted trader programs for exporters, expanding programs to include import and transit regimes — as is required by the TFA can be more complex and require the adoption of international best practices.

ARTICLES THAT ARE GENERALLY BENEFICIAL TO AGRICULTURAL TRADE

Table 3.3 includes data on the number of country notifications for articles that provide a general benefit to agricultural trade but may not affect release times directly, such as public consultations and cooperation on transit.

Table 3.3. Number of developing countries notifying articles that provide a general benefit to agricultural trade

Article No.	Title	Category A	Category B	Category C	Partial Notification	No Notification
1.1	Publication	36	20	15	0	42
1.3	Enquiry Points	29	15	21	6	42
2.1	Comments and Information Before Entry into Force	47	21	13	2	0
2.2	Public Consultations	46	20	9	0	39
3	Advanced Rulings	29	14	23	4	43
4	Procedures for Appeal/Review	51	16	8	9	29
6.1	General Discipline on Fees and Charges	42	18	П	3	39
6.2	Specific Disciplines	55	13	9	0	36
7.6	Establishment and Publication of Average Release Times	31	10	28	I	43
12	Customs Cooperation	59	12	12	9	21

(Data as of October 2018)

*Key= Least Notified Most Notified

Again, the focus is on the most notified articles for Category B and C as well as those that have the most partial notifications and outstanding notifications, as these are all commitments that still need to be implemented over a period of time.

Lai	Largest Number of TFA Notifications						
Ca	tegory B	Category C					
•	Publication & Availability of Information (1.1)	•	Publish Release Times (7.6)				
•	Public Consultations (2.0)	•	Advance Rulings (3.0)				
•	Fees & Charges, General Disciplines (6.1)	•	Enquiry Points (1.3)				

Pa	rtial Notifications	Οι	Outstanding Notifications				
•	Appeal/Review (4.0)	•	Advance Rulings (3.0)				
•	Customs Cooperation (12)	•	Publish Release Times (7.6)				
•	Enquiry Points (1.3)	•	Publication (1.1)				
		•	Enquiry Points (1.3)				

Similar to the articles that directly impact agricultural trade, the most notified articles under Category C — publishing release times, advance rulings — are also the articles with the most outstanding notifications. If countries are able to conduct time-release studies and only need to make the results public, it is possible for this article to have more Category B notifications. However, it is common for countries to need assistance establishing a reliable methodology for conducting these studies consistently. For advance rulings, the outstanding notifications are likely to result as Category C notifications, since this requires establishing regulations and procedures for issuing rulings and accepting them as supporting documentation during the import process. As an example, Colombia established an

advance-ruling program with the assistance of USAID. It took two years of technical assistance to implement and required modifying the Customs code, developing an ICT tool and system for requesting and issuing rulings, and training for the public and private sectors at the national and local levels.

TIME AND COST OF IMPLEMENTING SELECT CATEGORY C ARTICLES

This section reviews the time and cost of implementing the top four notified Category C articles that have a direct impact on agricultural trade and lists each article's perceived implementation challenges. 47

The cost and time needed to implement trade facilitation measures will vary by country depending on its needs and ability to dedicate resources. In general, the time and cost of implementation is calculated across the following interrelated phases: (1) diagnostic, (2) regulatory, (3) institutional, (4) training, (5) equipment and infrastructure, (6) awareness-raising, (7) political, and (8) operational.⁴⁸ (See Section 1 for a discussion of implementation needs.)

A country's cost and time estimates to implement certain obligations will also vary, based on perceived challenges. 49 However, perceived challenges may not always align with common bottlenecks encountered by countries during implementation. For example, ICT and infrastructure issues are often cited as a key challenge, but often the procedural and operational aspects of implementation, such as harmonizing data requirements and establishing interagency cooperation, are underestimated.

TOP FOUR ARTICLES REQUIRING TECHNICAL ASSISTANCE

The articles with the most countries requesting technical assistance for implementation, in descending order, are as follows: Single Window (10.4), Laboratory Testing Procedures (5.3), Authorized Operators (7.7), and Risk Management (7.4).

SINGLE WINDOW (10.4)

The TFA indicates that Member countries must establish and maintain a single window, which is a single entry point for submitting all trade documents and data to the border agencies. Single windows reduce the time and costs of trading across borders by eliminating hard copies of relevant information and documents required by the various agencies involved in clearing goods (such as Customs, agriculture, health, plant protection, and standard setting agencies).

Article 10.4 is the most notified article under Category C, with the majority coming from Sub-Saharan Africa (15 Members) and LAC (10 Members). However, it is important to note that 49 of the 114 Members in the analysis have yet to categorize and notify the article.

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⁴⁷ The estimated time and cost of implementation and perceived implementation challenges were taken from: UNCTAD, "The New Frontier of Competitiveness in Developing Countries: Implementing Trade Facilitation," Transport and Trade Facilitation Series No. 5, Geneva: Switzerland, 2013. http://unctad.org/en/PublicationsLibrary/dtltlb2013d2_en.pdf, and b) WTO, "World Trade Report," 2015.

⁴⁸ WTO, "World Trade Report," 2015.

⁴⁹ United Nations Conference on Trade and Development surveyed 26 countries, comprising Least Developed Countries (LDCs), middle income developing countries. landlocked countries and small island economies in Africa. Asia, the Caribbean and Latin America, UNCTAD, 2013.

Perceived Implementation Challenges include the existing legal framework, lack of resources, 50 and the lack of interagency cooperation.

Implementation Time and Cost: The design and implementation of a single window may be one of the lengthiest commitments to implement in the TFA. Business processes must be streamlined prior to their automation, requiring significant time to process mapping, data harmonization, and obtaining buy-in from multiple agencies to reform a process. For example, a trader will request licenses, permits, or certificates from multiple authorities (e.g., the Ministres of Trade and Agriculture) through a single submission of relevant documents or data. Time estimates should also account for any changes to the legal framework that may be required to operationalize a single window, such as allowing for electronic signatures. Minimally, a country should allow a timeline of two years to design and implement a single window.

Of all TFA commitments, single windows are often cited as one of the most costly to implement. Costs depend on the degree of functionality and a country's decision to build its own single window or purchase an existing platform. Implementing a single window in a developing country is estimated to cost between US\$450,000-\$10 million,⁵¹ with a median cost of about US\$5 million.⁵²

LABORATORY TESTING PROCEDURES (5.3)

Article 5.3 indicates that, if test results taken on a sample good upon arrival are adverse to the trader, Members must grant the trader a second test. This would allow food, beverages, and feedstuffs to undergo an additional conformity test rather than be rejected solely on the results of the first test. The results of the second test must be accepted by the control agencies, thereby reducing the possibility that consignments are rejected due to potential false positives from testing technical errors. Second testing may be done by a private, accredited laboratory. WTO Members must publish the name and address of any laboratory where the test can be carried out (TFA Article 5.3.2).

Thirty-three developing countries have notified this article under Category C, with the majority of notifications coming from WTO Members in Sub-Saharan Africa (13) and Latin America and the Caribbean (11).

Perceived Implementation Challenges include existing legal frameworks, lack of resources, and the lack of adequate ICT/infrastructure.

Implementation Time and Cost: The time required to establish an administrative procedure for second testing could depend on the time required to modify a Customs code and/or relevant regulations, and/or issue administrative directives. Some WTO Members estimate this could take approximately three years to implement. This lengthy estimate is often due to misinterpreting the article and the perceived need to upgrade laboratories to undertake second testing.

The term "resources" encompasses financial, technological, institutional, and human resources or the necessary equipment or facilities.

⁵¹ UNCTAD, 2013

⁵² WTO. 2015.

This TFA measure addresses an administrative procedure only, in which the results of a second laboratory test are accepted. The article does not include laboratory requirements. Therefore, the perceived challenges of resources and adequate ICT/infrastructure are most likely not the main implementation challenges. However, establishing procedures and regulations for accepting second tests may require a modified legal framework.

Many members believe that establishing testing procedures in accordance with the TFA is one of the costlier articles to implement, with an average estimated cost of US\$2.4 million.⁵³ This figure often includes estimates of testing equipment and facilities costs, which are mistakenly taken as requirements for adherence.

AUTHORIZED OPERATORS (7.7)

The TFA commits all WTO Members to establish an authorized operators program that facilitates trade under an import, export, and transit regime. Programs must be designed to provide operators with at least three of the following measures:

- low documentation and data requirements
- low rates of physical inspections and examinations
- · rapid release time
- deferred payment of duties, taxes, fees, and charges
- use of comprehensive guarantees or reduced guarantees
- a single Customs declaration for all imports or exports in a given period
- clearance of goods at the authorized operator's location or another site authorized by Customs officials

Programs must also clearly establish the criteria for becoming an authorized operator and specify the requirements in the country's laws, regulations, and procedures. Once programs are established, WTO Members should offer trading partners the possibility to negotiate the mutual recognition of each other's authorized operators.

In practice, this means that if Country A and Country B have a mutual recognition agreement (MRA), an exporter from Country A is treated as a trusted importer in Country B and is automatically granted trade facilitation measures during the clearance process. MRAs can also be negotiated regionally, as was recently done by the Pacific Alliance Members in July 2018.⁵⁴ Regional MRAs contribute to strengthening global supply chain security while facilitating trade among regional trading partners. They also result in standardizing authorized operator programs and harmonizing program criteria.

⁵³ UNCTAD, 2013.

⁵⁴ The Pacific Alliance is a trade bloc formed by Chile, Colombia, Mexico, and Peru.

From the 31 developing country members that notified Article 7.7 under Category C, the majority are in Africa (13) and Asia (6 in East Asia and 5 in South Asia). From the 43 countries that have yet to notify this article, the majority are also in Africa (23), followed by LAC (9) and the Middle East and North Africa (7).

Perceived Implementation Challenges: These include a lack of understanding or knowledge of the measure, existing legal frameworks, and a lack of resources.

Implementation Time and Cost: The cost and time to implement an authorized operator program, not accounting for the time needed to negotiate an MRA, varies, depending on several factors. These include the trade-facilitation measures that will be granted to operators and whether the measures are in place or in need of development; the existing risk-management system; interagency coordination; and establishing the regulatory framework to support the program.

Although an authorized operator program does not require an automated system, having the program connected to a robust risk management system is key for effectiveness. For this reason, many programs are managed by their Customs' risk management divisions. Customs must coordinate with other control agencies, such as sanitary, agricultural, and standards, to ensure they play a role in determining an operator's eligibility and compliance level. Interagency coordination is also needed to simplify and harmonize procedures that support trade facilitation. Implementing an authorized operator program can be one of the most challenging and demanding in terms of the required levels of interagency cooperation and the legal/regulatory framework. 55 From the legal perspective, all benefits provided to operators must be supported by the national Customs code, and all eligibility requirements, such as recordkeeping obligations, must be clearly established.

Implementing an authorized operator program can take from two to four years, with an additional two years needed to negotiate a bilateral or regional MRA. For example, Jordan negotiated an MRA with the United States over the course of two years, and the Pacific Alliance also took two years from the signing of a negotiation action plan to the signing of the MRA.

The cost to implement this article, approximately US\$170,000-\$300,000, is relatively low compared to other TFA measures.56

RISK MANAGEMENT (7.4)

Article 7.4 indicates that members will adopt and maintain a risk-management system for Customs control that avoids arbitrary or unjustifiable discrimination, or a disguised restriction on international trade. WTO Members should focus their control on high-risk consignments and expedite the release of low-risk consignments. In addition to risks controlled by Customs (for example, contraband, origin),

⁵⁵ WTO, "World Trade Report," 2015.

⁵⁶ WTO, "World Trade Report," 2015.

agriculture, health, plant protection and standard setting agencies should control for SPS- and TBTrelated risks (for example, public health risks) based on selectivity criteria.

From the 29 countries that notified this article under Category C, most are in Sub-Saharan Africa (13) and East Asia and Pacific (7).

Perceived Implementation Challenges: These include existing legal frameworks and a lack of resources.

Implementation Time and Cost: The time and cost of implementation will depend on whether there is a rules-based risk-management system in place, the robustness of the information technology (IT) systems supporting the risk module, the level of interagency coordination, and a high-level of commitment from the agencies. Having Customs and other agencies (such as health and agriculture) work together on cargo selectivity requires buy-in at the management level; it also requires each participating agency to dedicate resources and possibly funding. Interagency coordination can often be the most challenging step when establishing a collaborative risk-management system that effectively targets high-risk consignments. Developing country members surveyed on implementation times estimated that a risk-management system could take two years to implement.⁵⁷

The average cost for implementing a risk-management system among some developing country members has been estimated at US\$200,000.58 However, an extensive literature review conducted by the WTO found estimates ranging closer to US\$1 million.⁵⁹ Similar to single windows, a country must decide whether to design its own risk-management system or adopt an existing platform, based on available resources.

CONCLUSION

As of October 28, 2018, the WTO considered the TFA to be implemented by approximately 49 percent of developing countries. This implementation rate includes all Category A, B, and C notifications for countries that expected to implement provisions by July 2018. This leaves 11 percent of the Category B measures to be implemented sometime before 2038, and 15 percent of the Category C measures requiring technical assistance to complete implementation. About 25 percent of TFA measures still need to be notified by developing country members. It is important to note that these figures are based only on notifications and not the real time/actual status of implemented articles.⁶⁰

From these notifications, it is clear that developing country members (including LDCs) may need the most help in understanding commitment implications and/or need assistance in meeting obligations for:

58 Ibid.

⁶⁰ The TFA database maintains a dashboard on the rate of implementation of commitments but as noted above, the information is based solely on notifications. See: https://www.tfadatabase.org/implementation

- Article 5: Notifications for Enhanced Controls, particularly notification for enhanced controls and laboratory testing.
- Article 7: Release and Clearance of Goods with regards to risk management, the release of perishable goods, and authorized operator programs.
- Article 10: Formalities Connected with Importation, Exportation, and Transit specifically single windows, formalities and documentation requirements, and the accepting copies of supporting trade documents.

These three articles contain measures that developing countries considered some of the most costly to implement. As noted, while a single window and a robust risk-management system can certainly be more expensive than other TFA articles (due to IT components and business process analysis), complying with the commitment in Article 5.3 to grant traders a second laboratory test when the first test results are adverse should not be costly to implement. Efforts to improve WTO Members understanding of the technical measures and estimated implementation time and costs — as well as address common challenges that may arise during implementation — should be ongoing as countries continue to work on establishing implementation dates and requesting technical assistance.

ANNEX 3.1: LIST OF DEVELOPING COUNTRIES INCLUDED IN ANALYSIS

Afghanistan Guinea-Bissau Saint Kitts and Nevis

Albania Guyana Saint Lucia

Angola Haiti Saint Vincent and the Grenadines

Antigua and Barbuda Honduras Samoa

Armenia India Saudi Arabia, Kingdom of

Bahrain, Kingdom of Indonesia Senegal Bangladesh lamaica Seychelles **Barbados** Jordan Sierra Leone Belize Solomon Islands Kazakhstan South Africa Benin Kenya **Bolivia** Kuwait, the State of Sri Lanka

Brazil Lao People's Democratic Republic Swaziland
Brunei Darussalam Lesotho Tajikistan

Kyrgyz Republic

Brunei Darussalam Lesotho Tajikistan
Burkina Faso Liberia Tanzania
Burundi Madagascar Thailand

Cabo Verde Malawi The former Yugoslav Republic of

Suriname

Zimbabwe

CambodiaMalaysiaMacedoniaCameroonMaldivesTogoCentral African RepublicMaliTonga

Chad Mauritania Trinidad and Tobago

China Mauritius Tunisia
Colombia Mexico Uganda
Congo Moldova, Republic of Ukraine

Costa Rica Mongolia Vanuatu

Côte d'IvoireMontenegroVenezuela, Bolivarian Republic ofCubaMoroccoViet NamDemocratic Republic of the CongoMozambiqueYemenDjiboutiMyanmarZambia

Panama

Dominica Namibia

Dominican Republic Nepal

Ecuador Nicaragua

Egypt Niger

El Salvador Nigeria

Fiji Oman

Gabon Pakistan

Georgia Papua New Guinea

Ghana Paraguay
Grenada Peru
Guatemala Philippines
Guinea Rwanda

Gambia, The

Botswana

ANNEX 3.2: NOTIFICATIONS OF SELECT U.S. TRADING PARTNERS

For a narrower look at notifications, a select number of important U.S. trading partners and developing country WTO Members are examined, including Brazil: Hong Kong, China: Colombia: El Salvador; Ghana; Guatemala; Honduras; Mexico; the Philippines; Turkey; and Viet Nam. Table 3.4 summarizes those trading partners' notifications of Articles directly benefiting agricultural trade. It includes only Category B and C notifications, including the expected year of implementation, if made publicly available.

TABLE 3.4 KEY U.S. TRADING PARTNERS - CATEGORY B AND C NOTIFICATIONS

	Brazil	Hong Kong	Colombia	El Salvador	Ghana	Guatemala	Honduras	Mexico	Philippines	Turkey	Viet Nam
I.2 Internet Publication					Cat C	Cat C 2020					Cat B
5.1 Notification Disciplines					Cat C	Cat B 2020	Cat C 2023		Cat B 2020		Cat B
5.2. Detention Notification					Cat B	Cat B 2020	Cat C 2023				Cat B
5.3 Lab Testing			Cat B 2022		Cat C	Cat B 2020	Cat C 2025				Cat C 2023
7.1 Pre- arrival Processing	Cat B 2019				Cat B	Cat C 2020					Cat C 2021- 2023
7.2 E- payments					Cat C						Cat A
7.3 Release & Clearance					Cat B		Cat C 2026				Cat B 2021
7.4 Risk Management					Cat C	7.4.3 Cat C 2020					Cat C 2023
7.5 Post Clearance Audit											Cat B 2021
7.7 Authorized Operators											Cat B 2023
7.9 Perishable Goods			Cat B 2022		Cat C	7.9.3 Cat C 2022	7.9.3 Cat C 2025				Cat B 2021
8. Border Agency Cooperation				Partial notification	Cat C	Cat B & C 2020-2024	8.2 Cat B 2023		Cat B 2020		Cat B 2023
9. Inland Clearance											Cat A

10.1 Simplified Procedures				Cat C	Cat B & C 2020			Cat A
10.2 Acceptance of Copies				Cat B	10.2.3 Cat B 2020	Cat C 2024		Cat A
10.3 Use of International Standards				Cat B				Cat B 2020- 2021
10.4 Single Window		Cat A 2018- 2023					Cat C 2020	Cat C 2020
10.7 Uniform Requirements								Cat A
10.8 Rejected Goods							Cat B 2019	Cat B 2021
II.I -II.3 Formalities				Cat C				Cat A
II.4 Non- discrimination				Cat C				Cat A
II.5-II.I0 Procedures & Controls	11.9 Cat B 2019			Cat C	12.2 & 12.13 Cat C 2020			Cat B 2023

SECTION 4: SUMMARY OF ACTIVITIES TO STREAMLINE CERTIFICATION AND OTHER FORMALITIES FOR SPS MEASURES

Numerous multilateral organizations are implementing activities to assist developing countries in complying with and benefiting from the provisions of the WTO TFA. In line with the TFA's focus on reducing barriers to trade, these activities feature the streamlining of requirements and import procedures. As discussed in earlier sections of this report, food and agricultural products are particularly vulnerable to excessive requirements or additional procedures due to health concerns, most notably, the need for certification. Certification is a tool used by an importing country to ensure that the food or agricultural products entering its markets meet the necessary quality and safety standards set forth by the government's regulatory agencies. However, some countries impose overly burdensome certification requirements, which may not be in line with international standards or have a scientific rationale. Consequently, this approach increases the cost of trade and causes delays at the border and detention or rejection of shipments. Section 4 provides a summary of international and regional activities that focus on streamlining export certification and other SPS-related certifications for specific products.

BACKGROUND

Agricultural exports must conform to the importing country's specific requirements. Animal and plant health export certificates (that is, veterinary, sanitary/health, or phytosanitary certificates) are commonly used for livestock and meat products, fresh fruits and vegetables, and live plants. The certificates attest compliance with the SPS standards that were established by the importing country to protect against diseases, pests, toxins, and other contaminants.

Export certificates for meat and plant products, and live animals, in particular, are commonly negotiated between governments. Certificates are also increasingly included in broader regional and multilateral free trade agreements (in an SPS chapter) and are principally based on the internationally established guidelines set forth by Codex Alimentarius (Codex), the International Plant Protection Convention (IPPC), and the World Organization for Animal Health (OIE), among others.

An importing country can have SPS-related import requirements that may be stricter than an international standard if it can demonstrate a scientific rationale through risk assessments. The WTO recognizes the right to maintain domestic standards for public safety, it also recommends that stricter standards be justified by science or by a nondiscriminatory lower level of acceptable risk that does not discriminate against imports.61

Common challenges with export certification can include requirements for additional certifications, such as certificates of origin and quality (many export certificates often already include this information);

⁶¹ WTO, "Understanding the WTO Agreement on Sanitary and Phytosanitary Measures," Geneva: Switzerland, 1998. https://www.wto.org/english/tratop_e/sps_e/spsund_e.htm

requirements that certificates be completed by an independent third party; or discriminatory or nontransparent risk criteria to block certain imports.⁶²

The WTO TFA includes provisions to ease the flow of agricultural imports and exports between countries, which would apply to SPS/TBT procedures that hinder trade (see Section 2 of this compendium for additional details). For example, TFA Article I requires the publication of trade-related requirements on the internet, and TFA Article 10. 4 calls for electronic certification through the use of a "single window." As countries implement the TFA, border-management agencies, including sanitary agencies, will need to assess current policies and processes for export certificates and other formalities to ensure compliance. Various regional and international bodies are conducting technical assistance, research, and other initiatives to help countries better understand and adopt international standards established for certifications and other formalities. For example, the Asia-Pacific Economic Cooperation (APEC) forum, the previously-established STDF, 63 and the World Bank have activities to assist developing countries in meeting export certification requirements.

APEC SPS CERTIFICATE ACTIVITIES

In response to increased priority of food safety in the region, APEC created the Food Safety Cooperation Forum (FSCF) in 2007 and the Partnership Training Institute Network (PTIN) in 2008. Through this body (FSCF PTIN), APEC developed manuals and brochures and held workshops focused on streamlining export certification requirements to facilitate trade and improve food safety by advancing science-based international standards (see Table 4.1).

For example, APEC produced a dictionary of export certificate terms frequently used in the food trade in order to provide a common understanding of the terms used as food products move along the supply chain. In 2009, APEC economies completed a survey that included a list of all required certificates for imported food. In addition, APEC published a review of publicly available information of the main food safety regulatory changes that APEC economies undertook between 2009 and 2017.

In 2013, FSCF PTIN developed two roadmaps for improving regulatory cooperation in export certificates and establishing pesticide MRLs, another common non-tariff barrier for exports of food products. In 2015, an independent review of the FSCF PTIN found the body was effective in improving policy, implementation, and harmonization on food safety issues, but it recommended improving publication of policy changes among Members and strengthening outreach opportunities.⁶⁴

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⁶² For additional information on barriers and ongoing disputes between the U.S. and trading partners, see U.S. Trade Representative (USTR), "2018 National Trade Estimate Report on Foreign Trade Barriers," report prepared by Ambassador Robert E. Lighthizer, Washington, DC:U.S., 2018. https://ustr.gov/about-us/policyoffices/press-office/reports-and-publications/2018/2018-national-trade-estimate

⁶³ The STDF is a global alliance of multilateral and donor organizations, governments, and other institutions with the aim of tackling SPS gaps. It was founded by the FAO, World Organization for Animal Health (OIE), World Bank Group, WHO, and WTO.

⁶⁴ US-APEC Technical Assistance to Advance Regional Integration (US-ATAARI), "Independent Review of APEC FSCF PTIN Food Safety Capacity Building Initiative," 2016. http://fscf-ptin.apec.org/docs/2016/Independent Review of APEC_Food_Safety_Capacity_Building_Initiative.pdf

Table 4.1 - APEC SPS Certificate Activities

Publications								
TITLE	TYPE	DATE	NOTES & URL					
Summary of Responses to Export Certificate Survey	Survey	2009	http://fscf-ptin.apec.org/docs/events/2017/export-certificate-workshop/APEC-Survey-Summary-FINAL.pdf					
APEC FSCF Export Certificate Roadmap	Brief	2013	http://fscf-ptin.apec.org/docs/events/fscf-roadmaps-for-regulatory-cooperation/Final_APEC_Export_Certificate_Roadmap.pdf					
FSCF Action Plan to Implement APEC MRLs Roadmap	Action Plan	Sept. 2013	http://fscf-ptin.apec.org/docs/events/fscf-roadmaps-for-regulatory-cooperation/APEC%20_MRL%20_Roadmap_V5_16_September_2013.pdf					
Export Certificate Requirements by APEC Economies	Compendium	Sept. 2014	http://fscf-ptin.apec.org/docs/events/2017/export-certificate-workshop/Draft-APEC-Export-Certificate-Compendium-9-3-14.xlsx					
Dictionary of Export Certificate Terms	Dictionary	2017	http://fscf-ptin.apec.org/docs/events/2017/export-certificate-workshop/Export-Dictionary-2.24.17.xlsx					
APEC Food Safety Regulatory Changes from 2008-2016	Brief	March 2017	http://fscf-ptin.apec.org/docs/events/2017/export-certificate-workshop/APEC-Regulatory-Changes-From-2008-to-2016-3.28.17.pdf					
Streamlining Export Certificate Requirements for Food Products in the APEC Region	Manual	May 2017	https://www.apec.org/Publications/2017/05/Streamlining- Export-Certificate-Requirements-for-Food-Products-in-the- APEC-Region					
	,	W orkshop	os and Roundtables ⁶⁵					
TITLE	LOCATION	DATE	NOTES & URL					
Export Certification Roundtable	Queens-land, Australia	Feb. 25- 26, 2010	This Roundtable was held immediately preceding the Eighteenth Session of the Codex Committee on Food Import and Export Inspection and Certification Systems. The event attracted over 70 experts from across the APEC region; 70 percent represented APEC Member Economies and 30 percent represented food manufactures or associations. http://fscf-ptin.apec.org/events/export-certification-roundtable/					
Export Certificate Workshop	Greenbelt, Maryland, U.S.	April 24-25, 2012	This workshop built on outcomes from the Export Certification Roundtable in February 2010 in Australia and identified best practices for the appropriate use of export certificates. The working group discussed Codex guidance and use of Codex model certificates, criteria for determining when a food or agricultural certificate should be required, appropriate use of export certificate attestations, and encouraged use of electronic certificates. http://fscf-ptin.apec.org/events/export-certificate-workshop/					

⁶⁵ A list of future APEC FSCF PTIN events may be found at http://fscf-ptin.apec.org/events/

APEC Wine Regulators Forum: "Risk Management & Certification in Wine Trade: Public-Private Dialogue"	Auckland, New Zealand	Nov. 5- 10, 2012	The key themes of the meeting were risk management and certification in the APEC wine trade. https://www.apec.org/Publications/2013/05/APEC-Wine-Regulatory-Forum-2012
FSCF PTIN Export Certificate Workshop & Meeting on Dairy Export Certificates	Hanoi, Viet Nam	May 9- 10, 2017	An Export Certificate brochure was prepared to distribute to participants: Streamlining Export Certificate Requirements for Food Products in the APEC Region (see above). http://fscf-ptin.apec.org/events/export-certificate-workshop-2017/
Workshop on Trade Facilitation Through the Recognition of Food Safety Systems	Lima, Peru	June 21- 22, 2018	This workshop shared best practices and policy recommendations among APEC economies regarding recognition of the food safety systems equivalence approach to improve food safety and trade. https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx!lD=2132
Export Certificate Workshop	Brisbane, Australia	Oct. 18- 19, 2018	This workshop focused on eliminating unnecessary and duplicative requirements and discussed the legitimate basis for establishing new export certificate requirements and the use of good regulatory practices and relevant trade obligations under the WTO Agreement on the Application of Sanitary and Phytosanitary Measures (SPS) and the Agreement on Technical Barriers to Trade (TBT). https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx!ID=2176
Workshop on Dairy Export Certification	Brisbane, Australia	Oct. 20, 2018	The workshop promoted an exchange of views among regulators, policymakers and the business community on dairy certification requirements and explored a sector-specific approach to FSCF work on export certificates, with development of a model dairy certificate as a test case. https://aimp2.apec.org/sites/PDB/Lists/Proposals/DispForm.aspx!ID=2091

STDF SPS CERTIFICATE ACTIVITIES

The STDF has held seminars to raise awareness on electronic SPS certificates and how paperless trade can reduce time and costs. Most recently, in 2016, the organization held the Seminar on Electronic SPS Certificates at the WTO. Lessons learned were summarized as follows:⁶⁶

- "Electronic SPS certification can contribute significantly to facilitating safe trade, leading to increased participation in the WTO's TFA.
- Electronic SPS certification can be a driver for reform (for example, streamlining import-export business processes, promoting regulatory reform and inter-institutional collaboration).
- A key part of automation would be to start by conducting a Business Process Analysis (BPA), followed by a cost-benefit analysis:

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⁶⁶ Lessons learned listed in the Organisation for Economic Cooperation and Development case study can be found at: https://www.oecd.org/aidfortrade/casestories/casestori

- Include a pilot phase, a transition phase, and a fallback plan
- Establish a sustainable cost recovery mechanism
- Conduct stakeholder consultations (for example, determine acceptance by smallholder family farmers, real gains versus what may change)
- Provide targeted guidance and support to developing countries."

The STDF has completed several preparatory grants and full projects that include an export certification element and have other ongoing projects, as listed in Table 4.2.

Table 4.2 - STDF SPS Certificate Projects

TVDE	TIT! F	DENEELGIABY	CT A TI IO	NOTES & LIDI
TYPE	TITLE	BENEFICIARY	STATUS	NOTES & URL
Preparatory Projects	Digitalizing Pest Surveillance, Reporting, and Seed Certification	Nigeria	Completed Jan. 3 – Aug. 31, 2018	In Nigeria, national efforts to promote agricultural exports are constrained by challenges related to pest surveillance, pest reporting, seed certification, and traceability. This Preparatory Project Grant facilitated consultations and elaborated a project proposal, which would seek to develop a digital system to address such challenges, strengthen compliance with international standards, and support key public entities responsible for phytosanitary controls. http://www.standardsfacility.org/PPG-626
Prepa	Harmonizing Aquaculture Certification	Association of Southeast Asian Nations (ASEAN) Member States	Completed Jan. 6, 2014 – Feb. 28, 2015	Joint project with the FAO to pilot test its conformity evaluation framework and develop a project proposal to support the development and implementation of public aquaculture certification systems with the objective of contributing to intra-regional free trade. http://www.standardsfacility.org/PPG-453
	Improving Veterinary Legislation	Belize, Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Nicaragua, Panama	Completed Jan 5, 2013 – Oct. 31, 2015	Joint Project with Organismo Internacional Regional de Sanidad Agropecuaria (OIRSA) to strengthen the Official Veterinary Services of OIRSA Member countries through the development of control and eradication programs for bovine brucellosis, bovine tuberculosis, and Newcastle disease, and to incorporate into domestic legislation technical provisions that allow for the application of scientific criteria recognized internationally by the World Organization for Animal Health. http://www.standardsfacility.org/PG-358
Full Projects	Building Trade Capacity of Small-Scale Shrimp and Prawn Farmers	Bangladesh	Completed Jan. 4, 2012 – Jun. 30, 2016	Project to improve Bangladeshi small-scale shrimp producers' compliance with international SPS measures to increase market access. The project aimed to strengthen good aquaculture practices and better management practices in shrimp aquaculture, and establish cluster management to accomplish responsible and sustainable farming. The project also sought to enhance the capacity of value chain actors for attaining third-party certifications and ensuring better pricing for farmers and greater SPS safety. http://www.standardsfacility.org/PG-321
	ePhyto: Enhancing Safe Trade in Plants and Plant Products	Developing countries	Ongoing Dec. 15, 2016 – Dec, 14, 2019	This project provides developing countries with a generic system for the production, sending, and receipt of electronic phytosanitary certificates (ePhyto) and the establishment of a harmonized tool to facilitate the exchange of electronic certificates as an alternative to the current practice of exchanging paper certificates. The

countries developing individual systems for electronic data exchange and the necessity to negotiate exchange protocols on a country-by-country basis. 67 http://www.standardsfacility.org/PG-504		exchange and the necessity to negotiate exchange protocols on a country-by-country basis. ⁶⁷
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WORLD BANK SPS CERTIFICATE ACTIVITIES

The World Bank continues to conduct several projects on export certification, as described in Table 4.3. For example, an Afghanistan agricultural input project was approved in 2013 for US\$74.7 million.⁶⁸ The World Bank also addressed export certification processes in the Cambodia Trade Development Support Program that ran from 2009 to 2016. In 2017, as Samoa became a Member of the WTO, the IPPC and the World Bank began working on an ePhyto solution. In 2015, a working paper was published on Nepal's trade of agriculture and food products, with SPS-related issues and proposed solutions.⁶⁹ Also, a toolkit was written in 2012 for streamlining non-tariff measures for policymakers.

Table 4.3 - World Bank SPS Certificate Projects

Projects			
TITLE	BENEFICIARY	STATUS	NOTES & URL
Agricultural Inputs Project	Afghanistan	Ongoing Jun. 17, 2013 – Jun. 30, 2019	This project seeks to strengthen institutional capacity for safety and reliability of agricultural inputs and sustainable production of certified wheat seed. It is supported by the Afghanistan Reconstruction Trust Fund. http://projects.worldbank.org/P120397/improving-agricultural-inputs-delivery-system-iids?lang=en
Trade Development Support Program	Cambodia	Complet-ed Jan. 7, 2009 – Aug. 14, 2016	This project aimed to improve product quality and safety in line with international standards requiring SPS compliance. The project was able to streamline the SPS certification procedures, a step toward automation. The SPS coverage increased by developing standards for key products based on international standards. http://projects.worldbank.org/P109648/cambodia-trade-development-support-program-retf093573?lang=en&tab=details

 $^{^{67}}$ For more information on ePhyto, see Section 9.

 $^{^{\}rm 68}$ As of October 31, 2018, no additional funding details were available.

⁶⁹ Referenced at the end of Table 4.3: World Bank, "Nepal Trade & Competitiveness: Nepal's Trade of Agriculture and Food Products: SPS-Related Issues and Proposed Solutions," Working Paper Report No: AUS7462, Prepared by Kees van der Meer, Washington, DC:U.S., January 2015,. http://documents.worldbank.org/curated/en/

^{783671506608802603/}pdf/Nepal-Trade-and-SPS-and-Customs-laboratories-VanderMeer-January-2015.pdf

Publications			
TITLE	TYPE	DATE	NOTES & URL
Workshop on ePhyto and TFA in Samoa	Workshop	May 23, 2017	The IPPC Secretariat's ePhyto Project Manager and World Bank Group representatives participated in a series of technical discussions with government ministries in Samoa on the implementation of the TFA. https://www.ippc.int/fr/news/the-ippc-and-the-world-bank-working-together-to-assist-samoa-in-the-implementation-of-ephyto-for-trade-facilitation/
Streamlining Non-Tariff Measures: A Toolkit for Policy Makers	Toolkit	2012	This toolkit was designed to help policymakers and analysts navigate through the maze of issues to consider when engaged in trade competitiveness and business regulatory improvement agendas. It offers a novel approach to addressing non-tariff measures (NTMs) by recognizing the complexity and variety of NTMs. https://openknowledge.worldbank.org/handle/10986/6019
Nepal's Trade of Agriculture and Food Products: SPS-Related Issues and Proposed Solutions	Working Paper	January 2015	The Nepal-India Regional Trade and Transport Project works to decrease transport time and logistics costs for bilateral trade between Nepal and India, including laboratories for Customs and sanitary and phytosanitary testing for food safety, plant quarantine, and animal quarantine. Working Paper Report No. AUS7462. http://documents.worldbank.org/curated/en/783671506608802603/Nepal-s-trade-of-agriculture-and-food-products-SPS-related-issues-and-proposed-solutions

OTHER ORGANIZATIONS AND SPS CERTIFICATE ACTIVITIES

Other international and regional organizations are addressing issues related to improving trade in agricultural goods, particularly in relation to automating efforts. For a summary, see Table 4.4.

Table 4.4 – STDF SPS Certificate Projects

ORGANIZATION	TITLE	BENEFICIARY	STATUS	NOTES & URL
ASEAN + UN Economic and Social Commission for Asia and the Pacific (UNESCAP)	Electronic SPS (e-SPS) programs/ workshops	ASEAN Member states	Preparatory stages	ASEAN is currently developing the ASEAN Single Window (ASW), which aims to connect the National Single Windows of all ASEAN Member states. As part of the development of the ASW, ASEAN, with support from UNESCAP and STDF, is exploring the possibility of using electronic SPS certificates to streamline cross-border food/agriculture trade. The ASW began limited operations in early 2018 and does not yet have a module for

		e-SPS. UNESCAP presentation on the prospect of e-SPS in ASEAN: https://www.unescap.org/sites/default/files/2.1 %20Prospects%20and%20challenges%20imple menting%20automated%20systems%20and%20 e-SPS%20systems%20for%20 cross-border%20agrifood%20trade_F.%20 Lopez.pdf More information on e-SPS certificates: http://www.standardsfacility.org/sites/default/files/SPS_Ecert_Backgroundpaper.pdf
UNCTAD		Spin off Automated System for Customs Data (ASYCUDA) module called Electronic Phytosanitary Certification (ASYCER), which allows the processing of ePhyto for both national use and cross-border exchanges of certificate information.

CONCLUSION

These projects and tools will help developing countries apply export certification and other required measures in a transparent, predictable, and non-discriminatory manner. As international agricultural trade continues to grow, countries and their agricultural producers seek to reduce the application of requirements that have no scientific rationale for holding up trade.

Future activities may include an increasing emphasis on e-certification to expedite and harmonize trade processes, corresponding to the broader trend to exchange international trade data electronically. The ePhyto initiatives currently being piloted by the STDF, IPPC, and others could yield improved security, information flows, and clearance times for developing countries that adopt the system.

However, the underlying objectives of many certification activities remain centered in the promotion of good regulatory practices and the elimination of unnecessary and duplicative export certificate requirements. A transparent and streamlined regulatory environment rooted in best practice enables increasing trade between developing countries and their partners.

SECTION 5: SUPPORTING TRADE OF PERISHABLE GOODS THROUGH COLD CHAIN AND TRADE FACILITATION

An unbroken *cold chain* (that is, a supply chain of refrigerated or frozen product) is critical in agricultural trade. To maintain an intact cold chain, government authorities, terminal operators, shipping line carriers, transporters, and warehouses all play a key role in ensuring perishable goods are kept at the right temperature and humidity as they make their way from origin to destination (Figure 5.1). This section focuses on the role that government authorities — Customs and other government agencies (OGAs) — have in safeguarding perishable goods through policymaking and optimizing operations during the import and export process. Customs holds goods in what is called "Customs custody" until all relevant border agencies, such as agriculture, health, plant protection, and veterinary, approve the release of the goods. The TFA includes measures for handling perishable goods while under Customs custody to help keep the cold chain intact and avoid spoilage.

BACKGROUND

It is important to distinguish between border agencies' responsibility to release goods and the actors responsible for temperature maintenance while goods await release. Government authorities have a direct operational role in (I) managing cold chains through terminal operations, (2) handling perishable goods during the release process, and (3) ensuring a country's infrastructure provides a reliable power supply and the efficient transportation of goods.

Nearly all major airport and seaport terminals offer cold and frozen storage through a refrigerated terminal. The terminal operator (either a private concessionaire or government port authority) is in charge of maintaining and managing the terminal. The terminal operator must ensure that there are sufficient power connections to plug in refrigerated containers (also known as "reefer boxes" or simply "reefers") as well as adequate coverage from the sun or inclement weather. Typically, government authorities provide regulatory oversight (for example, operating licenses) over the refrigerated terminal to ensure temperature requirements are met. However, a country's power supply — the electrical grid or access to alternative energy sources — directly affects the terminal's operational capacity. Without sufficient and continuous energy flow, terminals may not be able to guarantee the temperature controls needed for all reefers awaiting release.

The maintenance of the reefer box is the responsibility of the owner, that is, the shipping line carrier. Carriers must ensure that reefer boxes meet the particular cargo's temperature requirements at all times. Carriers must also conduct or pay for reefer monitoring while the container is within the

terminal awaiting release. Carriers charge traders for the use of the reefer box in the form of rent (known as demurrage).

Carriers are interested in moving reefer boxes from origin to destination while minimizing idle time that result in opportunity costs. Significant contributors to idle time include delays in Customs release and hinterland transport. A carrier will charge traders demurrage for the use of the reefer boxes once the free period has ended. Free periods cover the use of the reefer boxes

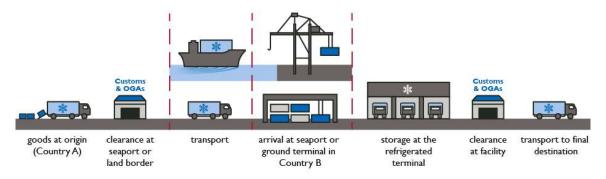
Box 5.1 — Container Rent

In Colombia, carriers offer about 5 rent-free days for reefer boxes. At the Port of Cartagena, on average, it takes 8 hours for customs and other border agencies to clear goods not subject to inspections, 3 days when goods require a document review, and 8 days when physically inspected, so demurrage is often incurred.

during shipping from origin to destination, plus additional days in-country to strip the container; rentfree periods can vary across countries and shipping lines. Free periods are intended to give traders sufficient time to clear Customs and return the reefer boxes to a depot or terminal without incurring demurrage. However, if clearance is a lengthy process over a series of days, and intermodal transport is weak or road infrastructure is poor, traders can easily use up the reefer boxes' free period and begin incurring demurrage.

More significant than demurrage, idle times can result in loss of sales for traders if goods are damaged from lack of proper storage facilities within the terminal. Government agencies — Customs, agriculture/health, and port authorities — can play a significant role in reducing idle times by having efficient border management operations that prioritize perishable goods.

Figure 5.1 Example of a Cold Chain



PRESERVING THE COLD CHAIN WHILE PERISHABLE GOODS ARE AT THE BORDER

The WTO TFA has measures to reduce costs associated with the movement of goods and to help Customs and OGAs clear goods more quickly and effectively. TFA Article 7.9 on Perishable Goods requires Member countries to: (I) prioritize the release of perishable goods, and (2) provide suitable storage facilities or allow the importer to arrange for cold storage in order for goods to be released at those facilities in the shortest time possible. The TFA also has four additional articles that support perishable goods directly with regard to sampling and testing, inspections, and transparency measures to mitigate the risk of goods spoiling at the border. (See Table 5.1 for the relevant TFA measures.)

Guaranteeing a cold chain's continuous temperature control can be put in jeopardy if the smooth transition from the carrier to the terminal, or from the terminal to the hinterland, is compromised. The transition also can be hindered by lack of terminal capacity and burdensome release procedures. If the refrigerated terminal is not able to accommodate a shipment due to congestion or a lack of adequate power supply, or cannot guarantee the required temperature settings, the TFA indicates that traders must have the option to arrange for cold storage directly while the perishable goods are still maintained under Customs control. This can include a trader opting to send goods to a bonded cold storage facility outside of the port's premises.

To prioritize the release of goods, the TFA also establishes that Customs and other relevant border agencies (for example, agriculture, health, plant protection) must determine the consignment's risk, and conduct document reviews and inspections of perishable goods before other types of goods. It also entails timely and effective sampling and testing of goods. These duties may require border agencies to work beyond normal business hours — a commitment made explicit in the TFA.

The TFA contains technical and transparency measures that can be adopted as best practices while Customs holds the consignment to mitigate the risk of goods spoiling at the border until all relevant border agencies determine whether the goods can be released or cleared. Table 5.1 provides a summary of the TFA measures for the handling and release of perishable goods, specifically, related training topics to help countries adopt best practices and examples of common, non-tariff barriers that contextualize the agreement's provisions. Trainings should be undertaken at the local ports of entry and at the national level and be directed to all border management agencies and private sector actors (terminal operators, transporters, warehouse operators, Customs brokers and freight forwarders, and traders) to promote dialogue and ensure that supporting regulations and processes are established effectively.

Table 5.1: Key TFA Measures for Timely Release of Perishable Goods

TFA Article	Technical Measure/Best Practices	Training Topics	Examples of non-tariff barriers addressed by TFA ⁷⁰
5.1 Notifications for Enhanced Controls or Inspections	Issue an alert by food safety authority based on risk. The border office acting on the alert will detain all subsequent shipments of the same goods of the same origin for examination or testing until the authority determines the threat has been resolved. ⁷¹ Develop standard operating procedures for sampling, analysis, and documentation requirements and uniformly apply them at the required ports of entry.	Using electronic platforms (such as E Ping) to access information on new and changing export requirements related to SPS and TBT measures introduced by trading partners Establishing notification requirements	A U.S. soybean shipper was subject to increased testing resulting from of a maximum residue-level violation. Japan announced an end of increased testing after 5 months. Egypt tested 100 percent of U.S. beef liver shipments for dioxin. Authorities later issued a directive to reduce testing based on risk. Peru did not have existing sanitary requirements for powdered cooked chicken, leading to detention of a shipment. Peru then developed a national protocol to allow for these imports. In Ghana, goods in transit may undergo inspection or other formalities (for example, document reviews, sampling) depending on the port of entry.
5.2 Detention	Promptly notify the trader or carrier if goods have been detained for inspection.	Determining the risk and need for document review or physical inspection	Romanian authorities detained a shipment of bovine colostrum powder that had transshipped through Germany because it was
5.2 D	Conduct joint inspections (custom and other government agencies)	Procedures for conducting joint inspections (Customs and other	not inspected at the first point of entry into the European Union. The shipment was returned to

⁷⁰ Examples are compiled from GAIN Reports and USAID Technical Reports, which can be found at: https://gain.fas.usda.gov/Pages/Default.aspx and https://www.usaid.gov/who-we-are/resource-portal

⁷¹ International Trade Centre, "SMEs and the WTO Trade Facilitation Agreement: A Training Manual," report prepared by ITC in collaboration with UNECE, UNCTAD, and ICC, Geneva: Switzerland, 2015. www.tfafacility.org/ sites/default/files/case-studies/cs g itc smes and the wto tfa a training manual december 2015 e.pdf

TFA Article	Technical Measure/Best Practices	Training Topics	Examples of non-tariff barriers addressed by TFA ⁷⁰
	through shared facilities and processes to minimize the movement of cargo and the number of times a container must be opened for examination.	government agencies) Establishing notification systems (detention memos, online systems)	Germany for inspection and then imported into Romania. In the Northern Triangle (El Salvador, Honduras, Guatemala) Customs and the agriculture/health agency conduct examinations separately. Additionally, fumigation done at one border crossing is not always recognized at another border crossing when goods are in transit. Goods may be fumigated and quarantined multiple times along a transit corridor.
5.3 Test Procedures	Share results, methodology, and procedures used under the first test with the trader. Grant and accept results of a second laboratory test when the results of the first test show adverse results.	False positives due to technical errors (sensitivity of equipment, test methods or procedures used, human error, sample sizes) Codex guidelines on competency for testing food imports/exports Establishing appeal procedures for food safety authority decisions Establishing rules/procedures for requesting a second test Establishing rules for accepting second test results when there is a discrepancy with the first test	U.S. exports of tree nuts were detained by the European Union because the consignment exceeded maximum residue levels. Conducting a second laboratory test demonstrated a false positive of the first test. Colombian MRLs for numerous veterinary drugs did not match Codex recommended levels. Eventually, Colombia aligned MRLs for 41 veterinary drugs with Codex.
7.9 Perishable Goods	Provide a suitable storage facility or allow the importer to arrange for cold storage. Allow for the release of goods at the importer's facility. Release perishable goods within the shortest possible time and in exceptional cases outside of official business hours. Prioritize the inspection of perishable goods when scheduling daily inspections. Provide a written record to the trader if there are any release delays.	Defining procedures for expedited release Establishing terms and conditions for immediate delivery and blanket authorizations to allow goods to be released at an importer's premises Establishing Customs surety bonds Establishing policies for overtime services Separating release from clearance	A container of apples was held at a port in the Dominican Republic and stored under direct sun exposure. The trader had to work with authorities to release goods as quickly as possible to prevent rotting. In Colombia, goods flagged for inspection are not prioritized according to the type of good. Perishables may be inspected after non-perishable consignments.

TFA Article	Technical Measure/Best Practices	Training Topics	Examples of non-tariff barriers addressed by TFA ⁷⁰
10.8 Rejected Goods	Allow the importer to return rejected goods to the exporter when there is a lack of compliance with SPS measures or technical regulations. Allow for non-conforming goods to be reconditioned (for example, labeling) under supervision. Allow the importer to segregate conforming goods from non-conforming goods rather than rejecting the entire shipment.	Establishing rejection notification procedures Establishing procedures and conditions for re-exporting rejected goods (for example, time limits, use of guarantees, identifying international standards)	Five containers of beef were denied entry into Chile due to non-compliance with Chilean labeling laws. Authorities worked with the trader to remedy the issue and eventually release the containers. A shipment of nearly 3,200 dairy and beef breeding cattle were detained in Turkey because 900 animals did not have proper import documentation. The shipment was later released and animals denied import were redirected to another country.

BEYOND THE BORDER

While the measures explained above focus on clearance, keeping a cold chain intact requires effective policymaking from post-harvest handling to transportation, storage, and retail. This, in effect, means government authorities must understand a cold chain's refrigeration maintenance requirements from the design process to the building of required infrastructure.

Helpful training topics and actions for policymakers include:

- Consolidating or harmonizing relevant food safety laws and regulations for temperature-controlled products
- Standardization and conformity assessments (testing and calibration facilities, and product and system certification)
- Creating a logistics hub with cold storage at key ports of entry/exit weighing the benefits of storing at the port versus loading trucks
- Identifying the operational expertise needed for facility design and operation (for example, location of facilities, internationally recognized standards [International Organization for Standardization, ISO, hazard analysis and critical control points, HACCP])
- Identifying and implementing alternative energy sources for cold storage facilities
- Understanding the benefits of outsourced specialist providers versus private facilities owned by single producers
- Adopting handling standards for perishable goods
- Understanding import/export seasonality
- Supporting efficient multimodal transport (for example, shifting from trucked bulk refrigerated transport to containerized reefer transport)

Investing in road infrastructure/highway networks

CONCLUSION

Goods that rely on cold chain maintenance are time-sensitive. Any delays along the chain that put the temperature-controlled requirements at risk need to be evaluated from policy and procedural perspectives. As perishable goods cross borders, Customs and other border agencies play a critical role in preserving the cold chain through its handling, testing, and inspecting. Government agencies working to ensure public health, and licit trade must also adopt trade facilitation measures that minimize economic losses and risks from potential spoilage.

A case study on the importance of cold chain facilities and trade facilitation is included in Annex 5.1.

ANNEX 5.1: SUPPORTING COLD CHAINS THROUGH TRADE **FACILITATION: FRIOPUERTO - TANGER MED CASE STUDY**

Morocco, with more than US\$2.7 billion in perishable goods traded per year, needs additional temperature-controlled logistics capacity. 72 One recent investment in the cold chain inventory is the temperature-controlled warehousing and cross-docking facility Friopuerto located in the Port of Tanger Med's free trade zone. Med Hub.

Having one of the lowest cold storage capacities in Northern Africa (about 1.7 million cubic meters) and trading more than 2 million tons of perishable goods per year, makes the Moroccan refrigerated logistics sector an attractive investment opportunity. 73 Friopuerto, operational since 2016, added about 10,000 cubic meters to the country's cold storage capacity. Despite the market demand for cold storage, Friopuerto has faced numerous challenges to be a viable business — notably, customs border management.

Friopuerto is unique, as it is the result of private sector efforts supported by donor assistance. Through USAID's Morocco Economic Competitiveness (MEC) Project, technical assistance was provided to promote potential cold chain investment opportunities in the country between 2011 and 2013. MEC, in partnership with the World Food Logistics Organization, and the investment advisory firm Lixia Capsia Gestionis (LixCap), worked over the course of two years to identify investment opportunities in the cold chain. This led to a US\$7 million credit guarantee from USAID's Development Credit Authority that allowed the initiative to secure an additional US\$8 million in credit from a commercial bank. Friopuerto eventually became a US\$15 million investment⁷⁴ through a blended finance model consisting of an international strategic investor, Friopuerto Invest SA, a Moroccan family office, and LixCap.

Friopuerto now offers temperature-controlled storage, packaging, processing, labeling, and handling services for imports and exports in Tanger Med's free trade zone. In early 2018, two years after it was launched, the facility reached its full storage capacity and the investment became cash flow positive. The losses incurred during the first two years were due mainly to issues around Customs processing imports and exports.

For imports, some traders wanted to clear their consignments upon arrival and use Friopuerto as a warehouse facility to store perishable inventory. Rather than clearing one consignment at a time, however, Customs treated each warehouse retrieval as an individual import declaration and charged Customs processing fees for each declaration. For example, a Moroccan food processing company wanted to use the facility for supply chain management. The Moroccan company would import a single shipment of 40 tons of butter under one consignment. Friopuerto then stored the butter, pulling 3-5

⁷² FAO, FAOSTAT Statistics Database, 2018. http://www.fao.org/faostat/en/

⁷³ FAO, "Developing the Cold Chain for Agriculture in the Near East and North Africa (NENA) Policy Brief," report prepared by Elhadi Yahia Kazuz and Jennifer Smolak, Rome: Italy, 2015. http://www.fao.org/3/a-ax746e.pdf

⁷⁴ Global Cold Chain Alliance, "Global Cold Chain Alliance Member Invests in Moroccan Cold Storage." Global Cold Chain Alliance Blog, Arlington, VA:U.S., $\underline{https://www.gcca.org/resources/global-cold-chain-alliance-member-invests-moroccan-cold-storage}$

tons of butter from its inventory on demand for delivery. In addition to the Customs processing fee that had to be paid with each retrieval, the company had to account for the time spent clearing the inventory through Customs. In a tight margin food processing business, this additional Customs burden rendered the transaction a financial loss.

When clearing exports, Customs officials in Tanger inspected every consignment and treated all goods the same, irrespective of time-sensitive goods. The lack of a risk management system to identify high risk consignments from low risk ones resulted in perishable goods sitting at the border awaiting Customs inspection without proper temperature controls. Traders would often opt to export from other ports to avoid the risk of spoilage due to lengthy clearance times.

Most of Morocco's perishable foodstuffs are produced seasonally. The rate of production during these periods is higher than the local markets' demands, which means excess supply must be preserved to prevent wastage and loss of earnings by producers. This is particularly true for individual farmers and small and medium agricultural enterprises that do not have their own refrigerated facilities. For example, the second harvest of strawberries is not suitable for fresh export, but through a freezing method known as Individually Quick Frozen (IQF), it can be stored at volume. This allows for an entire season's production of harvested strawberries to have a market. Friopuerto supports those producers by providing a temperature-controlled processing facility and storage, allowing them to serve higher-value export markets, particularly Europe.

In 2017, Morocco changed its regulations to prioritize the clearance of perishable goods and to differentiate Customs processing between free trade zone goods and imported goods stored in a free trade zone. This allowed Friopuerto to become a viable facility for all perishable goods needing refrigerated storage in the country.

To complement the success of Friopuerto, Morocco will be able to continue supporting its traders with additional trade facilitation measures as it implements the TFA. Specifically, Morocco will benefit from the implementation of a risk management system that focuses its control on high risk consignments and expedites the release of low risk consignments (Article 7.4), and the provision (Article 7.9) that supports the preservation of cold chains by:

- Providing suitable storage facilities at ports of entry or allowing importers to arrange for cold storage directly
- Allowing goods to be released by Customs at the importer's facility
- Releasing perishable goods from Customs' control within the shortest possible time, and in exceptional cases outside official business hours
- Prioritizing the inspection of perishable goods when scheduling daily inspections by Customs and agriculture/health/plant protection agencies.

Having the capacity to preserve perishable goods is the key to providing markets with safe foodstuffs. The most obvious necessity to keeping a cold chain intact is capital-intensive infrastructure; having effective and efficient border management also proves to be crucial. The adoption of trade facilitation measures positions Customs and other border agencies to play a key role in supporting a country's trade-led growth.

SECTION 6: BEST PRACTICES FOR RISK BASED INSPECTIONS

Section 6 briefly explains best practices in risk based import inspections. These practices can be used to develop or suggest training modules for developing countries to help them prioritize which shipments need physical inspection and which can be released without inspection.

BACKGROUND

Article 7 of the WTO TFA sets forth standards designed to facilitate and expedite the movement of goods across borders. It includes the use of risk management to avoid arbitrary or unjustifiable discrimination, or a disguised restriction on international trade. It also seeks to concentrate Customs control and, to the extent possible, other relevant border controls, on high risk consignments and to expedite the release of low risk consignments.

It is not entirely accurate, although not uncommon, to narrowly interpret the term "Customs control" to be Customs-specific, and not applicable to SPS or other agencies. Customs control broadly refers to the process of imported goods being held under government control until all applicable governmental requirements relating to those goods have been satisfied. For example, Customs may quickly determine that a shipment of foodstuffs presents no threat to revenue and is not being used to conceal undeclared or prohibited/restricted goods, but is still subject to phytosanitary requirements. In such a case, Customs maintains control over those goods but it is the phytosanitary agency that actually determines whether a "hold" is necessary. Customs will grant final release only when other regulatory agencies requirements have been met. The TFA makes it clear that risk, and therefore risk management, must be considered from a broader, multi-agency perspective instead of from Customs alone.

Many countries have experienced an exponential increase in imports of unprocessed food commodities and processed food. However, country authorities have either experienced a significant decrease in the resources (monetary and personnel) to carry out inspection and surveillance activities, or experienced increases in workloads while resources have remained stagnant. This situation requires countries to optimize and focus their inspection resources on food products and establishments representing the highest health and/or safety risks. Similarly, private industry needs to focus its monitoring and verification activities on the hazards, providers, and food products that pose the highest risk.

RATIONALE FOR RISK BASED EXAMINATIONS

The modern risk management approach to border release, generally referred to as cargo selectivity, aims for fast, fair, predictable, and transparent processing and clearance of import, export, and transit goods and is characterized by:

- Intervention by exception: inspections/examinations are carried out only when there is a legitimate need to do so based on an identified risk. In addition, the intensity of the intervention is tailored to the specific circumstances surrounding the transaction in question.
- **Focus on information**: the more that is known about a transaction, the better the risk involved can be judged. This includes not only the risk associated with a particular commodity but information on the parties involved in its exportation, transportation, and/or importation.

- Focus on compliance and noncompliance: while traditional border release processes focused on identifying and defeating instances of noncompliance, modern processes focus on working with all elements of the supply chain to increase measured compliance levels.
- Strong incentives for compliance: traders who achieve high levels of compliance are rewarded with simplified and expedited procedures.
- Flexible solutions for different clients: not all traders present the same risks or the same capabilities, and do not need to be processed the same way. Processes are tailored to the risk presented by and the capabilities of the individual importer (or class of importers). A prime example of how parties are differentiated is the Authorized Economic Operators (AEO) initiative.⁷⁵
- Extensive use of information and communications technology (ICT): current ICT technology and modernized practices such as ESWs, risk based cargo selectivity systems, and paperless processing, allow risk assessments to be made prior to a consignment's arrival.
- Constructive partnership with trade: replacing an all-too-often adversarial relationship between border inspection agencies and their private industry counterparts with collaborative working relations is key to establishing simplified processes, reducing delays and associated costs, and increasing measured compliance levels.
- Collaboration between agencies: simplifying and consolidating the documentation and control requirements of the various border inspection agencies allows for a "one-stop" approach to border cargo processing, and reduces delays and costs for the relevant government agencies and their private sector counterparts.
- Extensive cross-border cooperation: border formalities should be coordinated across the border authorities in both the export and import countries. Therefore, cross-border cooperation of government activities is vitally important for the free, smooth, and unhindered flow of international trade.76
- Clear measures of performance: in current economies, it is no longer sufficient to measure performance in terms of work units, but rather by productivity. For example, out of every 100 examinations conducted, how many resulted in a tangible result? Establishing performance measurement guidelines and procedures is vital to ensuring that government resources are properly deployed and are accomplishing their desired results.
- Client compliance and audit focus: this results in improved processes, oversight, and controls on the part of the exporter/importer. To be attractive, costs associated with a trader's compliance programs need to be offset through a reduction in examinations as well as expedited processing. Post-clearance audits of relevant business records and processes verify that a given trader is meeting compliance expectations.

BEST PRACTICES IN RISK BASED IMPORT EXAMINATIONS

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⁷⁵ WCO "Framework of Standards to Secure and Facilitate Global Trade (SAFE Framework) 2018 Edition," Brussels: Belgium, 2018. $\underline{\text{http://www.wcoomd.org/en/topics/facilitation/instrument-and-tools/frameworks-of-standards/safe_package.aspx}$

⁷⁶ As described in the United Nations Economic Commission for Europe (UNECE) Trade Facilitation Implementation Guide: http://tfig.unece.org/contents/crossborder-management-customs.htm

Best practices have evolved over time. While it is not possible to list every best practice, the key components to an efficient, productive risk management approach include:

- Deploying an automated cargo processing system with risk management/selectivity capabilities
- Deploying a properly trained and equipped risk analysis/risk management team
- Adopting a collaborative/cooperative approach to interacting with traders and other government agencies
- Recognizing that not all imports and importers are the same, thus they can be handled selectively and therefore differently
- Transitioning from a discrepancy-based to compliance-based approach
- Measuring results

AUTOMATED CARGO SELECTIVITY SYSTEMS

To understand how SPS agencies can readily implement risk based examination regimes, it is necessary to understand how decisions are made and implemented for selective cargo examinations. Cargo Selectivity is a risk based approach to targeting those shipments most likely to be noncompliant and directing available resources accordingly. It provides different treatments at varying levels of intensity based on specific risk indicators, allowing low risk shipments to be released without any intervention other than an automated vetting process, but ensuring that higher risk shipments are processed in the manner that is most likely to identify instances of noncompliance.

Cargo Selectivity is made possible by automated declaration processing systems that have the capability to cause certain shipments to be selected on the basis of specific criteria, and to then direct those shipments for a variety of types and levels of treatment, such as:

- Automated Screening (Vetting): this is performed by an automated selectivity module; it compares data elements in the declaration against the system criteria. This type of examination is completely transparent and eliminates the requirement that all declarations be subjected to a routine document review.
- **Document Review**: based on the selectivity screening, the automated system may direct an officer to verify that certain documents are included as part of the declaration (for example, a phytosanitary certificate for produce). The system will also randomly designate a small percentage of declarations for document review.
- Physical Inspection: depending upon the risk profile, shipments are examined at a level of intensity commensurate with the level of risk. Enforcement priorities and limited resources dictate that a labor-intensive, 100 percent examination is the choice of last resort.
- Random Compliance Inspection: random document reviews and physical examinations can be conducted on a statistically determined small percentage of declarations in order to verify continued compliance on the part of all importers, no matter how low risk they may be considered.

Post-Clearance Audit: designated declarations are referred to a special team for audit of the trader's or broker's records to be conducted after the merchandise has been released. This is typically utilized to expedite the release of goods imported by approved compliant traders (authorized operators) or as part of a random compliance check program.⁷⁷

Automated selectivity systems rely on examination criteria developed by risk management specialists,

usually a team, and which are entered into a system. TFA Article 7.4, sub-section 4 advises that selectivity criteria may include the tariff code, nature and description of the goods, the country of origin, the country from which the goods were shipped, the value of the goods, the compliance record of traders, and the type of means of transport. Most automated selectivity systems will accept additional criteria.

In most countries, a risk management automated cargo processing system will already be employed by the Customs authority. ASYCUDA, the most widely used system in developing countries, is designed to be fully capable of handling multi-agency risk management efforts by allowing other agency specialists to develop, input, and monitor selectivity criteria specifically targeting their specialized concerns.

Box 6.1 — Case Study: Integrated, Multi-agency Risk Management, Gibraltar

HM Customs Gibraltar's Integrated Customs Information System (ICIS) uses a functional and technical platform, based on the ASYCUDA system, which allows the integration of all ICIS e-documents with one another (such as cargo manifests, passenger declarations, transit declarations, import declarations, export declarations, licenses, authorizations, and certificates, as well as reference data). ICIS allows HM Customs Gibraltar to set up its own selectivity/risk management/profiling parameters and provides other control agencies (for example, health, food & veterinary, and environmental) with a secure/confidential environment to set up their own specific selectivity/risk management criteria that can be applied automatically to all Customs operations.

Source: https://www.hmcustoms.gov.gi/portal/interagency.jsf

TRAINING AND DEPLOYING RISK ANALYSTS

SPS and related agencies can contribute to expediting low risk consignments and focusing on high risk shipments by training designated specialists on risk ranking tools. In doing so, countries can identify their priorities in terms of animal and plant health as well as food safety (biological and chemical), and develop risk based inspection and surveillance activities. For high risk consignments in which only minimal data are available, such a process may also help to identify national food safety issues for which a risk assessment may be needed.

Bringing SPS and related agencies into compliance with Article 7.4 sub-section 3 can be accomplished by training designated specialists on risk management practices and granting them access to the cargo selectivity module. This can be done either by acquiring remote access to the selectivity module from Customs, or by collocating agency risk management specialists (for example, assigning an SPS specialist

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TUSAID, "Customs Modernization Handbook: Establishing Risk Management/Caro Selectivity Capability," prepared by Robert Holler for Booz Allen Hamilton, July 2004. https://pdf.usaid.gov/pdf_docs/Pnadi201.pdf

to work within the Customs risk management office). Training on traditional risk management practices and their application to the cargo process context is readily available through a range of technical assistance providers. That training can be supplemented by experienced Customs risk analysts, who can also provide training on their specific selectivity module.

Whichever interagency approach is taken, SPS and similar agency risk management specialists can develop specific risk profiles, determine the most minimally invasive approach to ensuring compliance, write specific instructions to the examining officers to help focus the inspection while minimizing any potential damage to the goods, monitor the results of those interventions, and adjust the risk profiles accordingly.

COLLABORATIVE APPROACH

Effective border management reform is best accomplished through a collaborative approach that includes all governmental agency and private sector stakeholders. Top management-level agency agreements are needed for Customs and other regulatory agencies to work together on cargo selectivity, and requires each participating agency to dedicate resources and possibly funding for additional terminals.

A collaborative, shared risk management approach in clearance procedures can contribute significantly to improved targeting and decision-making, transparency, post-clearance audits, and interagency cooperation within governments. Similarly, it can contribute to better risk prevention consciousness and proactive action in the private sector.

The private sector plays a major role in border management reform as stakeholders, partners, and service providers. In particular, private sector involvement can benefit border agencies through:

- **Consultation:** Border management agencies can develop tools and mechanisms to consult with private sector stakeholders about reform needs and initiatives, such as a client service charter that meets regularly.
- Collaboration: Border management agencies can partner with the private sector to encourage
 compliance with trade controls and procedures through collaborative arrangements that motivate
 traders to internalize and take responsibility for meeting border control objectives.⁷⁸

Trader feedback resulting from effective communications and collaboration is vital to identifying both problems and opportunities as SPS agencies begin to use risk based selective inspections.



⁷⁸ World Bank and The International Bank for Reconstruction and Development, "Border Management Modernization" Handbook, prepared by Gerard McLinden, Chapter 10 "The Role of the Private Sector in Border Management Reform," prepared by Andrew Grainger, Washington, DC:U.S., 2011. http://documents.worldbank.org/curated/en/986291468192549495/pdf/588450PUB0Bord101public10BOX353816B.pdf

From the SPS perspective, physical checks may require inspection of a consignment's condition. This may range from visually checking the condition of the goods, to taking the temperature of some contents or taking a sample for a rapid spot check in situ, to sending a sample to a laboratory for more detailed testing.

Integrity checks and physical checks should not be applied to all consignments; only some consignments should be checked according to a risk assessment. 79 The risk analyst determines the appropriate treatment, which is communicated to the examining officer through the selectivity criteria.

New SPS risk analysts can learn to incorporate staffing and logistical limitations into their analyses by statistically identifying compliance levels by importer or commodity, so as to not overburden examining officers. As a result, they will be able to develop compliance improvement strategies. Improving compliance reduces risks, which means fewer interventions, whether document reviews or physical examinations, that can contribute to delays and higher costs.

COMPLIANCE ORIENTATION

Food inspection based on risk analysis is a major component of risk based food control systems and needs to be applied to both domestically produced and imported foods. This is necessary to ensure that food is properly handled, stored, manufactured, processed, transported, prepared, served, and sold according to national laws in order to protect consumers. The inspection and verification process is also important to promote confidence in the system. 80 Risk based inspection requires documentation of the verification processes that occur during primary production, processing, and transport stages, prior to the goods arriving at the port of entry.

MEASUREMENT

Most automated systems currently in use can readily provide statistical data to measure compliance levels but are less capable in measuring processing times and delay-causing factors. The establishment and publication of average release times as called for in TFA Article 7.6 is one of the key measurement components necessary to gauge the effectiveness of a developing, risk based selective examination approach.

CONCLUSION AND RECOMMENDATIONS

The WTO utilized well-tested and proven international practices to guide TFA Article 7 standards regarding the use of risk management as a tool to concentrate regulatory agency border controls on high risk consignments and expedite the release of low risk consignments. Additionally, the WCO's

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⁷⁹ UNIDO. Trade Related Trade Assistance (TRTA II) Programme, "Concept paper: Development of Risk-Based Integrated SPS Border Controls for Pakistan." http://trtapakistan.org/wp-content/uploads/ 2014/08/Concept-paper-SPS-Border-Controls.pdf

⁸⁰ The FAO has produced a risk based inspections manual, which is being updated by the Pan American Health Organization.

International Convention on the Simplification and Harmonization of Customs Procedures (passed in the early 1970s) continues to promote the application of risk management processes within the cargo inspection environment as well as the coordination of imports inspections with other border agencies. Significant technical assistance worldwide by a wide variety of donors over the years has also enhanced practices.

Currently, most Customs administrations employ automated risk based systems and knowledgeable risk management teams to facilitate and expedite the movement of goods across their borders. Many, and probably most, of these national risk based cargo processing systems can readily accommodate other regulatory agency risk factors and selective inspection instructions.

Rather than developing complex new systems and processes, border regulatory agencies should first look into cooperative arrangements with their own Customs administrations to build an inclusive multiagency collaborative approach to adapting and applying existing risk based selectivity processes and automated systems to meet their specific needs and concerns. Many expert resources are available to support the reform, training, and implementation of cargo selectivity best practices, including donor agencies, other technical assistance providers, and experienced Customs risk management specialists.

SECTION 7: APPROACHES TO INSPECTING AND TESTING AGRICULTURAL PRODUCTS

Agricultural and food products are among the most traded commodities internationally. Given the inherent importance of these products and disparate national laws and regulations, there are several agreements that aim to harmonize and govern food trade. This section discusses approaches to testing agricultural products and associated challenges, the provisions of the TFA relevant to testing (including when to test products,) and the rationale behind establishing risk based import controls for SPS agencies.

BACKGROUND

Every country tests food imports differently, guided by different regulatory frameworks that govern a combination of methodologies, capabilities, standards and requirements, and rationales. The TFA advocates for a consistent and speedy framework that strikes a cautious balance between food safety and logistical efficiency.

Border agencies have diverse options of inspection and testing regimes they can employ: inspect every product in a shipment (a costly endeavor), inspect specific types of products, test a certain amount of each type of product, do not inspect products, or allow inspection prior to receiving the product at the border. Most, if not all, countries take a mixed approach to these strategies when determining how and when to test agricultural goods.

As recommended in Section 6, a risk based approach to trade facilitation utilizes a strategic combination of these inspection approaches in order to promote the swift and safe movement of agricultural goods and foodstuffs across borders. A risk based approach to food inspections conforms to TFA stipulations by (1) focusing on points of the food chain or processes that pose the highest risk, (2) minimizing costs to food operators by reducing unnecessary inspection and testing costs, (3) promoting preventive approaches rather than corrective actions, (4) optimizing the efficiency of food control and use of inspection resources, (5) placing the responsibility of producing safe food on various stakeholders (producers/processors) rather than solely on government authorities, (6) fostering partnerships between inspectors and processors for the purpose of improving food safety, (7) using limited resources more effectively, and (8) investigating and applying enforcement actions proportionate to risk, and (9) providing advice and information to food industry workers and management.

Many developing countries, however, have not yet moved to using risk based inspection processes for imported agricultural products. Often, agriculture and health and food safety agencies neither have risk management systems nor are they integrated into the Customs management system; they must depend on the trader or Customs authorities to notify the agency that a good requires their inspection or approval for release. Some may have nascent systems in place but are not yet able to conduct risk based inspections efficiently or in line with international best practices. Notwithstanding this, developing countries have extensive systems of import controls for food and agricultural products.

Upon requests from Members, the FAO developed global guidance for risk based imported food controls in 2006. The FAO guide⁸¹ aims to support competent authorities in selecting the available options and in shaping their customized plan of action, based on a preliminary analysis of their specific country's situation. The guide provides concrete illustrations of how Codex guidelines can be implemented in different ways, and how different options for control measures can be selected and combined to best fit the needs of each country.

TESTING AGRICULTURAL PRODUCTS AND THE TFA

The use of scientific analysis to identify problems with agricultural products is vital to facilitating trade, keeping food markets safe, and building trust. The process of inspection enables countries and the private sector to evaluate whether an agricultural product meets specified safety requirements and standards. As discussed in Section 2, the SPS and TBT Agreements are the primary international accords that govern food safety and technical regulations to trade. WTO Members are encouraged to harmonize their national control measures (such as testing and certification) with international standards,

Box 7.1 — Common Forms of Food Import Controls		
Pre-Border Controls	Importers: Register as a trader or be listed Obtain licenses Submit import applications Obtain country import documentation	
Border Controls	 Custom review of documentations Customs inspection of food and feedstuff Physical inspection may also be done by other agencies (Agricultural agency, Food Safety agency) 	
Sampling and Testing Practices	 Risk based identification of "high risk" foods Evaluation of inherent food risk Evaluation of importer history Product information from other countries At most inspection locations, high risk foods require additional sampling and testing 	
Post-Border Controls	 Quarantine or controlled storage until testing and approval process is completed In-country food surveillance systems Traceback, emergency response capability 	
Source: ERG, "Food and Feed Import Practices of Foreign Governments to Improve Food Safety," report presented to FDA by Eastern Research Group, Inc. and Independent Consultants, 2011, revised 2013. https://www.fda.gov/		

downloads/food/internationalinteragencycoordination/ucm344753.pdf

including, but not limited to, those stipulated under the SPS and TBT Agreements. Even when conforming to those standards, though, countries' food import control frameworks can vary widely.

Both the TBT and SPS Agreements align with TFA stipulations in many areas: The SPS Agreement encourages the use of risk based approaches based on health reasons to evaluate the entrance or rejection of agricultural goods into a WTO Member's market. The TBT Agreement aims to ensure that regulations, standards, testing, and certification procedures do not create unnecessary obstacles to trade, and it encourages countries to recognize one another's procedures.

FAO, "Food Safety Risk Analysis: A Guide for National Food Safety Authorities," Food and Nutrition Paper 87, Rome: Italy, 2006. http://www.fao.org/3/a-a0822e.pdf

Several TFA articles⁸² complement the SPS and TBT Agreements in an effort to expedite agriculture-related trade. Article 10.5 in particular specifically states that this Article does not impede pre-shipment inspections for SPS purposes. However, if interpretations of the SPS, TBT, and Trade Facilitation Agreements conflict, the TFA does not preclude a Member from meeting its TBT and SPS Agreement obligations. The TFA's final provision, Article 24, Paragraph 6, states this explicitly: "nothing in this Agreement shall be construed as diminishing the rights and obligations of Members under the Agreement on Technical Barriers to Trade and the Agreement on the Application of Sanitary and Phytosanitary Measures."

APPROACHES TO INSPECTION

Countries have varying practices for inspecting agricultural goods and deciding whether and when they will take samples for testing. These approaches may be based on their product risk categorization, the previous compliance history of the product, or if the product has never been imported into a country. Customs officials may refer products requiring testing to food safety authorities, and those officials may take samples for laboratory analysis. In general, countries perform laboratory tests for chemicals (pesticide residues, animal drug residues, additives, and other contaminants), micro- and macro-contaminants (heavy metals, marine toxins, mycotoxins, and other pollutants), and microbiological pathogens. Below are some common approaches to food and agricultural inspections undertaken around the world:

• Inspecting every single product or consignment in a given shipment Inspecting every single product within a given shipment of agricultural goods or foodstuffs is both costly and labor-intensive. While some countries feel this approach may be necessary to ensure high-quality shipments of certain products, most often, the costs are too burdensome to all parties involved (inspectors, shippers, and traders); accordingly, very few use this approach today.

• Pre-shipment inspection

Increasingly, countries may require samples and laboratory reports for certain products in addition to facility certifications that verify that the product was produced according to standard. For example, Singapore's Agri-Food & Veterinary Authority (AVA) requires pre-testing reports for microbiological and chemical traces of specific chemicals and bacterium prior to import for each and every consignment of a shipment of commercial food imports with stricter controls for meat, egg, fish, fresh fruit and vegetables and certain processed foods such as coconut milk, pasteurized liquid milk, and mooncakes. These reports do not ensure, however, that the AVA will not elect to re-test a consignment upon its arrival at the border.⁸⁴ Senegal also requires U.S. shipments greater than

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For more on Articles 5.1, 5.2, 5.3, 7.4, 7.9, 10.1, and 10.8s, see Section 1, Annex 1.1: TFA Provisions Related to Agricultural Trade.

⁸³ Shipments are composed of *consignments* (the individual, packaged units that make up a single shipment) and may contain multiple varieties of the same product or multiple different products. Shipments may come in *bulk or bulkbreak* form, where they are not shipped in standard containers. Rather, the product's packaging (for example, a sack of flour) serves as the consignment. In other cases, products may be individually wrapped, boxed, and wrapped again in larger units (for example, a crate of boxes of individual bags of chips). For packaged products, inspectors will often inspect whether the seal is secure and unbroken. If an inspector feels the need to test the product for chemical, biological, or other standards, often they must break the seal, rendering that product unsellable.

⁸⁴ AVA. "Import Requirements of Specific Food Products," Singapore, 2016. https://www.ava.gov.sg/docs/default-source/default-document-library/import-requirements-of-specific-food-products.pdf?sfvrsn=0

US\$6,000 to obtain a Pre-Shipment Inspection (PSI) Certificate from U.S.-based pre-shipment inspection companies, although exceptions are made for some products such as live animals and perishable goods that are neither frozen nor deep frozen (such as frozen meat, fish, fruit or vegetables).85

Inspecting specific types of products

Countries often treat different types of agricultural products with varied levels of scrutiny. For example, the Philippines classifies agricultural products into two categories. Category I goods (bakery related products, coffee, tea, condiments, prepared meat and poultry products, noodles and oils, and so on) may not be inspected at the border but may be subject to random examination within the country. Meanwhile, all Category II goods (alcoholic beverages, food supplements, food for infants, and special dietary foods) are inspected at the border.⁸⁶

Limited to no inspection

It is becoming more and more common for countries to provide traders with exemptions from inspection. The rationale for such exemptions could be that the product is from a trusted importer, that the product has already been tested within a designated amount of time, that the product falls under a lower category of risk, or the product is transiting through a country to its final destination (see Section 8 for more on transiting goods). For example, Kenya's food importing system entails separate routes, where "Route A" is used for regular inspections, while "Route B" is considered the fast-tracked service. In Kenya's Route B, "shipments of registered products are exempted from mandatory testing and certification may be based on physical inspection only. However, random testing of registered products is still required subject to a minimum frequency of testing once every 3 months to ensure product conformity throughout the registration period."87 Some goods are precluded from participating in fast-tracked service, however, including fresh horticultural produce, dairy products, sugar, and rice and grains.

Testing a certain amount of each type of product in a shipment

Shipments may contain multiple types of products (for example, tomato juice, tomato sauce, tomato paste). Rather than test every single item within a given shipment, countries may select a set or fixed number of units per type to test, selecting them randomly from the shipment. In Senegal, the government-sanctioned Laboratory of the Directorate of Domestic Trade conducts testing on

https://gain.fas.usda.gov/Recent%20GAIN%20Publications/Food%20And%20Agricultural%20Import%20Regulations%20and%20Standards%20-included and the control of t%20Narrative_Dakar_Senegal_9-28-2009.pdf

⁸⁵ USDA U.S. Foreign Agriculture Service (FAS), "Senegal Food and Agricultural Import Regulations and Standards – Narrative: FAIRS Country Report," GAIN Report No. SG9013 prepared by Fana Sylla, Senegal, September 2009.

⁸⁶ USDA FAS, "Philippines Food and Agricultural Import Regulations and Standards - Narrative: FAIRS Country Report," prepared by Pia A. Ang, Philippines. https://gain.fas.usda.gov/Recent%20GAIN%20Publications /Food%20and%20Agricultural%20Import%20Regulations%20and%20Standards%20-%20Narrative_Manila_Philippines

Kenya Bureau of Standards, "Pre-Export Verification of Conformity to Standards: Exporter and Importer Guidelines," prepared by Intertek, Nairobi: Kenya, 2015. http://www.intertek.com/uploadedFiles/Intertek/Divisions/

Oil_Chemical_and_Agri/Media/pdfs/Kenya%20Importer%20and%20Exporter%20Guidelines.pdf.

foodstuffs being imported into the country. After clearing all paperwork and Customs documentation, "tests are conducted on 4 samples selected randomly from the shipment."88

Non-Harmonized Testing

Countries may also approach product testing differently in terms of the requirements of different agencies within the government. Several agencies or ministries may have an interest in different attributes of an import. For example, in Jordan, bovine meat is inspected by at least four different agencies at the border (Ministry of Agriculture, Jordan Institute of Standards and Metrology (JISM), Jordan Food and Drug Administration (JFDA), and the Customs Administration). Reasons include Customs valuation, conformity to Islamic traditions, food quality and food safety, and Jordanian standards on the use of hormones. Each of these agencies has different approaches to testing based on their respective mandates. For example, the JFDA conducts random sampling and has the authority to do so at the border, at retail establishments, and wholesale distribution channels. Meanwhile, the IISM inspects label standards of each product at the border together with or independent of Customs and the Ministry of Agriculture. These agencies may or may not cooperate in all circumstances, leaving the burden of compliance on traders.

How agencies, departments, and ministries coordinate with each other within the government can strongly impact the country's import market. For example, Saudi Arabia's Executive Department of Imported Food Control (EDIFC) physically inspects all consignments, and conducts random sampling on products, "...if the inspector has reasons to believe that a laboratory test is needed to take a final decision about the consignment."89 The EDIFC inspects most agricultural and food imports with little or no overlap from other ministries, in an effort to not overburden imports. The Ministry of Health inspects herbal supplements and the Ministry of Environment, Water, and Agriculture inspects plants, grains, and live animals.

DECIDING WHETHER TO TEST A SHIPMENT AND WHAT APPROACH TO USE

Both traders and governments alike benefit from a consistent and efficient framework to reduce the complexity of varied approaches and authorities at the border. When deciding whether to test a shipment and what approach to use, numerous models or frameworks are available, including the WCO SAFE Framework of Standards of Customs and the FAO's Codex for SPS agencies. Both feature a risk based approach as a central tenet in facilitating trade. Using a risk based approach to inspection provides governments with the flexibility to scrutinize high risk imports carefully while allowing low risk imports to flow smoothly into the economy, which is in line with the TFA's provision on risk management (Article 7.4).

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⁸⁸ USDA FAS, "Senegal Food and Agricultural Import Regulations and Standards," 2009.

⁸⁹ USDA FAS, "Saudi Arabia Exporter Guide 2017," GAIN Report No. SA1710 prepared by Hussein Mousa, Riyadh: Saudi Arabia, December 2017. https://www.susta.org/downloads/files/REPORTSgains/Exporter%20Guide Riyadh Saudi%20Arabia 12-11-2017.pdf

⁹⁰ WCO. "SAFE Framework of Standards to Secure and Facilitate Global Trade (SAFE Framework) – 2018 Edition," Brussels: Belgium, originally adopted 2005. $\underline{\text{http://www.wcoomd.org/en/topics/facilitation/instrument-and-tools/frameworks-of-standards/safe_package.aspx}$

FAO. WHO, "Codex Alimentarius," Rome: Italy, 1961. http://www.fao.org/fao-who-codexalimentarius/en/

As discussed in Section 6, best practices in a risk management system include transparency and clear documentation, such as developing a written inspection and sampling plan that identifies required inspection and analysis. The system would also contain clear procedures and communication as to who will be responsible for sampling (for example, government inspectors, third-party service providers, importers, and accredited laboratories), which tests are required, and how the results will be communicated. It is important that the traders or carriers be notified if the goods will be detained, as stipulated in the TFA (Article 5.2).

Unfortunately, developing countries, in particular, tend to struggle with the administrative burden of organizing transparent and cooperative frameworks and systems for importing goods. Based on their 2006 guide, the FAO developed a Risk based Inspection
Manual in 2008⁹² that focuses on primary production and processing to help orient food inspection to a risk based approach. It assists countries in developing their own risk based approaches and helps them answer the most pivotal question: when and whether a shipment should be tested? The U.S.
National Research Council also provides a set of attributes of a risk based food safety system that could be useful guidance for developing countries.

Box 7.2 — Countries may choose to impose regulatory frameworks that restrict trade based on an array of reasons, such as:

- If the restriction is already mandated by existing regulations
- If importing facilities or countries have a history of trade and health problems
- If commodities or agents are deemed high risk
- If commodities or agents have received a high level of negative publicity or consumer complaints
- If commodities or agents have not previously been regulated (new regulatory areas)
- If commodities have always been inspected (for any reason and without a clear basis)

WHEN: PRIORITIZING PERISHABLES

Keeping in mind that risk management can be applied to all levels of border controls, from initial Customs inspections to secondary or supplemental SPS-agency inspections, TFA Article 7.9 requires that Members give perishable goods priority when conducting inspections (also called examinations). Priority in this sense refers to both timeliness and attention: perishable goods should categorically be addressed before non-perishable goods. If a shipment, for example, contains both fresh peas and canned peas, the inspection process for fresh peas must be more expedient or the fresh peas must be examined before the canned peas. This guidance on *when* to inspect a shipment is meant to be the overarching rule that promotes efficiency and stymies waste.

⁹² FAO. "Risk-based Food Inspection Manual," FAO Food and Nutrition Paper 89, Rome: Italy, 2008. http://www.fao.org/docrep/010/i0096e/i0096e00.htm

WHETHER: USE RISK MANAGEMENT SYSTEMS/APPROACHES

Under a risk management approach, countries can tailor the nature and frequency of inspections, sampling, and testing to the importer, the good, and the current state of global health. The frequency of inspection and sampling may be increased for products from sources for which compliance is either unknown or there is a history of poor compliance. As discussed above, in some cases, every item (that is, 100 percent of a shipment) may be subject to inspection or sampling until it and its trader are found to be compliant. Food imports with poor compliance history may be held up at the border, until the importer provides evidence that the food complies with country requirements.

When a shipment has to be inspected, in order to ascertain what constitutes a reasonable inspection, a risk based approach to agricultural imports uses a process called *Risk Ranking*, which compares the relative risk of multiple hazards in an effort to aid countries to establish their risk management priorities, control the allocation of their resources, and identify critical data and research needs.

There are multiple methods of risk ranking. Several public health risk-ranking models have been produced over the past decade; they differ in their degree of complexity, level of quantification, and approach to model construction (see Annex 7.1 for examples). Most methods are based on the concept of

Box 7.3 — Risk Ranking

In Risk Ranking, a product's establishment profile (the history of compliance by the trader and producer) is taken into consideration. This is compared with the product's level of foodborne risk factors it presents (that is, inherent microbiological, chemical, and marine toxin risks) as well as the product's marketing characteristics (such as whether it is sold in large volumes reaching all populations, is destined for children or infants, or is a specialty product to niche markets).



Foods commonly considered high risk are meat, dairy, poultry, and seafood.

risk as a function of the likelihood of the hazard and severity of its impact on human health. The method chosen may depend on the data available and the approach a government has chosen.⁹³

Often, controls are put into place for foods deemed as high risk by a country. These controls include how a product should be inspected and tested, and whether those measures should occur prior to export, upon entry to the importing country, or both. For certain products, food consignments might need to clear Customs' documentation checks and be moved into controlled storage facilities before the food safety authorities take charge. This enables control of the products until the food safety authority makes decisions to inspect, sample, or test the shipments. Foods characterized as presenting a higher

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⁹³ Some public health risk-ranking tools include the U.S. FDA's i-Risk, a web-based comparative risk assessment tool that assesses public health impacts for chemicals and pathogens, and compares food risks at any stage throughout the food supply system. The tool has many built-in features and is available free at the University of Maryland's Joint Institute for Food Safety and Applied Nutrition (JIFSAN) Foodrisk.org website, https://irisk.foodrisk.org/. The development of this tool was mandated by the U.S. Food Safety Modernization Act (FSMA) that the United States, Canada, and a number of other countries and the private sector are starting to use. If resources and data are available, countries can also develop more quantitative approaches to measure the public health impact for chemical and microbial hazards.

risk to human health may require health certificates and usually undergo increased inspection or sampling. Annex 7.2 provides a flowchart of some main steps that country border officials typically consider leading to the decision to inspect or release a product.

ACCEPTANCE OF TEST RESULTS

A major hurdle for international food trade is the lack of uniform acceptance of test results on a shipment.

The rationale to reject test results can stem from a variety of issues including:

- The results of the laboratories at origin are not being honored or recognized.
- Standards that are more stringent than the Codex, which sets the currently agreed-upon international standards, are imposed.
- The methods of testing between importing and exporting countries are not harmonized.

In the case of stricter standards, many developed countries have accepted the Codex standards as part of their national regulations; some countries, however, such as European Union Members, still impose more stringent requirements, especially in areas related to pesticide residues.⁹⁴ Another example of a stricter standard is Nicaragua's enforcement of a regional regulation requiring the complete absence of salmonella in raw poultry (2016). Soon after enforcing this regulation, Nicaragua rejected a container of poultry due to a positive salmonella finding.⁹⁵

TFA Article 5.3 stipulates that WTO Members must grant traders/transporters the opportunity for a second test if the first test results of a goods sample does not meet the importing country's requirements. For example, the importing country or laboratory may not have the tools or equipment needed to test a sample accurately; in the case of strict maximum residue limits, a small deviation in accuracy can lead to the rejection of a shipment. Other reasons for false positives include, improper utilization of particular test methods or procedures, human error, or even a problem in the size of the sample. For example, a World Bank analysis confirmed that India's 4 national and 79 state food safety laboratories had neither the equipment nor the personnel to properly collect and analyze food samples. ⁹⁶ Further, Article 5.3 mandates that Members transparently and accessibly publish the name and address of any laboratory that is able to conduct the second test, and that countries must consider the results of the second test for the release or clearance of the good.

⁹⁴ For more information, see the European Commission's Maximum Residue Level regulations at https://ec.europa.eu/ food/plant/pesticides/max_residue_levels/eu_rules_en

USDA GAIN Reports (various years) can be found at https://gain.fas.usda.gov/Pages/Default.aspx

⁹⁶ World Bank, "Guide for Assessing Investment Needs in Laboratory Capacities for Managing Food Safety, Plant Health, and Animal Health," Working Paper 55006, Washington, DC:U.S., 2009. http://documents.worldbank.org/curated/en/304111468341069908/Guide-for-assessing-investment-needs-in-laboratory-capacities-formanaging-food-safety-plant-health-and-animal-health

If authorities including Customs, SPS, and TBT-related agencies reject a shipment, TFA Article 10.8 states that WTO Members must allow the importer/trader to re-export or return the goods to the country of export/origin. In case the importer is unable to re-export the good within a reasonable period, the authorities are allowed to take alternative courses of actions they deem appropriate to deal with the goods.

CONCLUSION

In light of increasing agricultural trade, the decision to inspect a shipment, and the approach to take when taking samples for testing, should be based on risk and grounded in international best practices as stipulated under the TFA, and SPS and TBT Agreements. With proper oversight, and scientific risk based approaches to inspection, governments can dramatically reduce the costs associated with inspections.

As both the FAO and WCO provide comprehensive guidelines on how to test food and agricultural products, countries have model frameworks to improve upon their practices and approaches. For example, there is an emerging international movement to conduct pre-shipment inspection, also known as pre-testing or pre-approval, to further expedite the clearance of food and agricultural products. While that approach is not yet widely utilized in the developing world, trade hubs such as Senegal and Singapore are experimenting with its use.

Developing countries are also shifting away from the predisposition to inspect and test each shipment that crosses its border. Rather, risk based approaches allow governments to strategically allocate their resources where the greatest hazards lie. Countries are also increasingly looking at the possibility of outsourcing regulatory compliance to third parties in the private sector with "third party accreditation," which reduces the administrative burden on the government and can encourage a greater flow of trade through the opening of new channels.

The United States and many countries are moving toward preventative controls using risk based approaches that are more effective than inspecting products at the border (end-product inspection). While that shift is still in progress, U.S. agencies, including USDA, USAID, Food and Drug Administration (FDA), and Customs and Border Protection (CBP), are providing capacity building to trading partners, from which developing countries can greatly benefit (see Annex 7.3 on Training Guides and Resources).

ANNEX 7.1: SEMI-QUANTITATIVE FOOD SAFETY RISK-RANKING METHODS FROM NAS REPORT

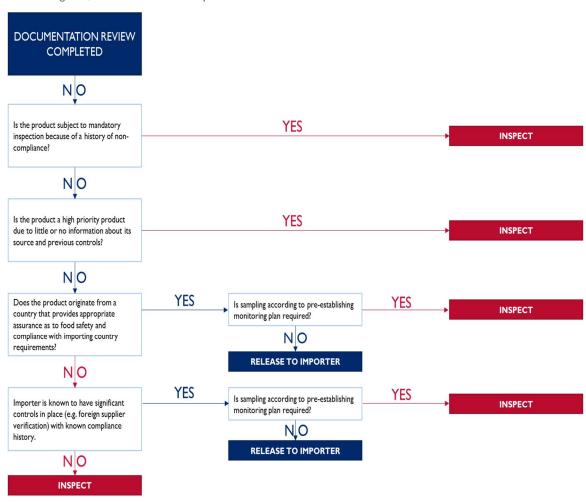
Source: Foodrisk.org meta database 97

Method	Brief Description	Metrics and design	Originator(s)
Foodborne Illness	A science-based tool for prioritization of	Ranks on five measures of social	US Food Safety
Risk-Ranking Model	resources in food safety. Consists of three	burden. Analytical design with	Research Consortium
	modules: (1) disease incidence, (2)	user-friendly interface.	
	valuation of health outcomes, and (3)		
	attribution.		
FDA-iRISK	Semi quantitatively compares risks of	Disability adjusted life years	Institute of Food
	hazard-commodity pairs. Allows for	(DALY) calculation for	Technologists, Risk
	comparison of microbial and chemical	comparative ranking purposes.	Sciences International,
	hazards. Closest to the standard risk	Analytical platform with web-	JIFSAN, and the US
	assessment paradigm. Considers (1)	based user interface.	FDA
	exposure assessment (populations,		
	consumption), (2) hazard characterization		
	(dose-response), (3) process information		
	(effect on prevalence and level of		
	contaminant through stages in continuum),		
	and (4) public health metric pseudo-		
	disability adjusted life years (pDALY).		
Risk Ranger	Determines relative risks from different	Excel-based mathematical model	Australian Food Safety
	product-pathogen-processing	converts answers to numerical	Center of Excellence.
	combinations. Based on 11 questions	values; values combined to	
	posed to the user, which deal with (1)	produce a risk-ranking score	
	susceptibility and severity, (2) probability	scaled logarithmically between 0	
	of exposure, and (3) probability of the	and I00.	
	food containing an infectious dose.		
Food Safety Universe	Systematic ranking of food safety risks in	Risk score calculated	Ontario Ministry of
Database	three dimensions: food, hazard, and	multiplicatively as a product of	Agriculture and Food.
	location in chain. Establishes two "axes"	six subscores.	
	upon which are determined (I) probability		
	(consumption, contamination, exposure)		
	and (2) impact (P [illness], severity,		
	difficulty of limiting impact).		

 $^{^{97}}$ See also https://www.ncbi.nlm.nih.gov/books/NBK220395/table/ttt00011/?report=objectonly

ANNEX 7.2: MAIN STEPS LEADING TO THE DECISION TO INSPECT OR RELEASE

Source: Page 61, FAO's "Risk-Based Imported Food Control Manual"



ANNEX 7.3: TRAINING GUIDE AND RESOURCES

The FAO has developed guidance for the use of risk-based imported food controls and risk-based inspections, including:

- The "Risk Based Food Inspection Manual," 2008, available at http://www.fao.org/3/a-i0096e.pdf.
- The "Risk Based Imported Food Control Manual," 2016, available at http://www.fao.org/3/ai5381e.pdf.

Additional training programs and resources for testing agricultural products include:

- The FAO Codex e-learning course provides training on developing national Codex structures and activities in order to enhance effectiveness of all Codex Members. (http://www.fao.org/food/foodsafety-quality/capacity-development/participation -codex/codex-course/en/)
- Risk Analysis Training programs that currently include modules on risk ranking and risk-based inspection in their risk analysis training activities are available at the Joint Institute for Food Safety and Applied Nutrition (JIFSAN), University of Maryland (https://risk.jifsan.umd.edu/) and the (https://www.cahfs.umn.edu/risk-analysis-service-unit/what-risk-analysis).
- The Food Safety Risk Analysis Consortium (https://www.paho.org/panaftosa/index.php? option=com_content&view=article&id=1771:food-safety-risk-analysis-consortium-fsrisk&Itemid=0)98 is an international strategic alliance to foster the development and integration of risk analysis in Latin America and the Caribbean region, and has prioritized the development of risk-based inspection training materials for deployment in the Americas. Some initial work is funded through JIFSAN, Pan American Health Organization, and USDA to develop training materials for risk-based inspection. IFSAN and the University of Minnesota are currently developing training materials and will be conducting a risk-based inspection training in Jan 2019. Texas Tech University and the University of Minnesota will be further be developing this training material and conducting a training for Colombia, also in 2019.
- The FDA Center for Food Safety and Applied Nutrition (https://www.fda.gov/aboutfda/ centersoffices/officeoffoods/cfsan/), JIFSAN, and Risk Sciences International have developed training material and tutorials on the FDA-iRisk tool (https://irisk.foodrisk.org/), and offer a two-day training program for interested professionals.
- Although geared more toward chemical analysis for tariff classification and the control of chemicals such as pesticides, the WCO provides technical assistance and training for <u>Customs laboratories</u> (http://www.wcoomd.org/en/topics/key-issues/customs-laboratories/activities-and-

⁹⁸ Consortium members include: University of Minnesota, Texas Tech University, University of Maryland, University of Nebraska-Lincoln, Universidad para la Cooperación Internacional, Université Laval, Inter-American Institute for Cooperation on Ágriculture, Organismo Ínternacional Regional de Sanidad Agropecuaria (OIRSA), Pan-American Foot-and-Mouth Disease Center-Veterinary Public Health, Pan American Health Organization (PANAFTOSA-PAHO/WHO), and the FAO.

- programmes/technical-assistance-and-training.aspx), including expert assessments, training courses, workshops, and seminars.
- U.S. Customs and Border Protection may deploy advisors to developing country partners under its Advisory Program. The program is focused more towards custom agencies' law enforcement function but CBP advisors also offer training on faster movement of trade and travelers.

SECTION 8: TFA, TRANSIT CORRIDORS, AND AGRICULTURE

Section 8 covers transit corridors for agricultural trade and food aid. It reviews the most common issues pertaining to efficient transit of these goods across borders and the relevant TFA provisions on improving transit corridors and their functionality.

BACKGROUND

Most international trade occurs along *trade corridors* — routes connecting centers of economic activity, along which goods are transported via land, water, or air. These routes consist of a network of links and nodes:

- Links are connectors, including roads, railways, inland waterways, and maritime shipping facilities where freight moves.
- Nodes are points at the origin, destination, or along the corridor where freight is handled or
 processed, where costs are incurred, or where time is spent along the route. Nodes can include
 transport and trade infrastructure (for example, ports, inland container depots, rail depots, border
 posts, weighbridges, and checkpoints), and areas of economic activity (for example, regions,
 countries, cities, industrial areas, farms, and warehouses).

As many trade corridors begin or end with a seaport, the trade corridors of landlocked countries often transit through other countries to access gateway ports. A *transit corridor* refers to the sections of a trade corridor that pass through other countries to reach their final destinations. They are systems of transport links and nodes used to trade goods through territories of origin, interim territories, and final destination countries, while subject to multiple jurisdictions or levels of Customs and other border agency control.

International best practice for transiting goods suggests that as long as the necessary documentation for the cargo is in place, Customs administrations should not intervene in the passage of that cargo along transit corridors, for example, by opening sealed containers. Transit procedures should be efficient and kept to a minimum in order to avoid unnecessary delays or costs.

However, with varying levels of capacity; differences in regulations; SPS issues, or security concerns between originating, transit, and destination countries, goods in transit are exposed to

Box 8.1 — Transit Systems and Transit Regimes

A transit system is a general term for the links and nodes that support transit corridors: hard infrastructure, transport and logistics services, and Customs and other border agencies, as well as the laws, regulations, and procedures specific to trade corridors. In order for transit corridors to function efficiently, all of these components need to work seamlessly and effectively.

Transit regimes govern transit systems, and refer to a set of procedures that typically allow transiting goods to pass through border posts more efficiently compared to goods meant for importation.

several issues that may cause burdensome and costly delays. For example, countries may deem it necessary to open transiting shipments due to security concerns such as weapons smuggling, narcotics, or human trafficking. In other cases, countries may inspect transiting shipments due to SPS concerns, such as the presence of pests or diseases that may be unknowingly distributed by a transiting shipment along a trade corridor. For agricultural food aid, these delays may lead to spoilage, higher costs to traders, or food insecurity. In humanitarian emergencies, delays in the transit of food aid may lead to violence, conflict, or loss of life.

Landlocked Developing Countries (LLDCs) are particularly vulnerable to transit inefficiencies as they are usually dependent on their neighbors' markets, infrastructure and institutions for global trade integration. LLDCs exhibit lower per capita income compared to their transit neighbors and they remain on the periphery of major markets. The UN Office of the High Representative for the Least Developed Countries (UN-OHRLLS) estimates that the volume of international trade of an LLDC is only 60 percent of the trade volume of a comparable coastal country. ⁹⁹ The UN-OHRLLS also estimates that on average, LLDCs are 20 percent less developed than would they would be, if they were not landlocked. ¹⁰⁰ Lower costs of transit can translate to lower food costs and enhanced food security for the 32 LLDCs, ¹⁰¹ and lead to economic growth through improved global integration. LLDCs could benefit significantly from the successful implementation of TFA Article II on the freedom of transit.

Although countries are afforded the right to develop policies and regulations to maintain an appropriate level of protection, in the case of transiting goods, "...as a general rule, no inspection of the goods is required [along a transit corridor]. With this in mind, the WTO TFA contains provisions that serve as guiding principles on the development of transit corridors, systems, and regimes at national and regional levels.

THE TFA AND AGRICULTURE TRANSIT ISSUES

Transiting commercial agricultural goods and food aid present unique challenges to Customs in the country of transit, which typically serve as the lead agency in enforcing transit rules. These issues include the means of how agricultural goods are transported, the high costs of transporting perishables (for example, using refrigerated containers), and the risks of pilferage or selling of goods in the country of transit. The TFA has two Articles of particular importance to address these issues: Article 10 – Formalities connected with importation, exportation and transit; and Article 11- Freedom of transit.

Under Article 10.1, the TFA stipulates that WTO Members must develop their import, export, and transit formalities, as well as documentation requirements, with the aim of minimizing procedures, simplifying documentation, and following international best practices. Essentially, this would mean developing transit regimes that have formalities or documentation with the following characteristics under TFA Article 10.1:

(a) They are adopted and/or applied with a view to a rapid release and clearance of goods, particularly perishable goods.

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World Bank, "Improving Trade and Transport for Developing Countries: A Ten-Year Review," prepared by World Bank's Trade and Competitiveness Global Practice Department and UN-OHRLLS, November 2014. http://documents.worldbank.org/curated/en/988231468126267145/pdf/95447-REPLACEMENT-Improving-Trade-and-Transport-for-Landlocked-Developing-Countries.pdf

World Bank, "Border Management Modernization," 2010, p. 284

- (b) They are adopted and/or applied in a manner that aims at reducing the time and cost of compliance for traders and operators.
- (c) They are the least trade restrictive measure chosen where two or more alternative measures are reasonably available for fulfilling the policy objective or objectives in question.
- (d) They are not maintained, including parts thereof, if no longer required.

TFA Article 10.1(a) is very clear that transit regimes must ensure the rapid release/clearance of perishable goods. Article 11 expands upon this further and includes 17 provisions specific to the rules and regulations for transiting goods, 5 of which directly benefit agricultural goods or food aid in transit. For example, Article 11.7 makes it clear that these inspections and controls must only be conducted at the "point of origination in a Member's territory," that is, the first point of entry into transit country. Once authorized to transit through a country, the shipment must not be subject to unnecessary delays or restrictions until it reaches its destination.

For agricultural goods in transit, conducting inspections only at the point of origination also reduces the risk of exposure to pests or other contaminants along the transit corridor. Article 11.6 reiterates Article 10.1, and requires Members to implement formalities, documentation requirements, and Customs controls in connection with traffic in transit that are "not [to] be more burdensome than necessary to (a) identify the goods and (b) ensure fulfilment of transit requirements." The TFA further addresses some of the most common issues with agriculture and transit as discussed below.

PERISHABILITY OF GOODS AND HIGHER TRANSPORT COSTS

Certain highly perishable goods require transport in refrigerated containers, or reefers. Transport costs are much higher for reefers than for dry containers due to the cost of keeping them powered (through generator sets) and other factors, which may include lack of availability of reefers, generators, or electrical outlets. For example, reefers that transport goods from Chisinau, Moldova to Baltimore, Maryland via Ukrainian ports cost 72 percent more than a dry container along the same route, because of increased inland haulage, terminal handling charges at both ports, and shipping costs. Due to issues such as the high costs of reefers, the risk of spoilage, perishable agricultural goods must transit through to their final destination as quickly and efficiently as possible. For agricultural commodities such as canned goods or grains that can be shipped in standard, dry containers, the costs and risk of spoilage are lower, but in cases where these goods are used in food aid, expediency in shipment is critically important to ensure food security.

CHALLENGES OF TRANSPORTING AGRICULTURAL COMMODITIES IN BULK/BREAKBULK FORM

Many agricultural imports into developing countries, including food aid and general imports such as rice, wheat, and grains, as well as agricultural inputs such as fertilizer, are transported in bulk or breakbulk form, meaning they are not containerized. In some instances, transporting goods by bulk may be more cost effective since a truck can carry more goods without the additional weight of a container. However, bulk goods present complications in terms of both transport time and transit procedures. While containers are typically sealed at the initial border crossing in order to transit through a country, bulk goods, by definition, are not. There are few ways to make bulk shipments secure in transit, but they often present challenges. Typically, fruits may be packaged in boxes, or grains in sacks, which presents opportunities for pilferage (especially if a truck or railcar is stopped for days waiting at a border) or

corruption where the transporter sells some product in the domestic market while transiting. This means that Customs authorities in transit countries tend to be more vigilant in ensuring that none of these goods ends up in the domestic market being uninspected and untaxed. In many developing countries, Customs agencies use escorts, weighbridges, or police checks to ensure that the same amount/weight of goods that entered the country also exit at the final border crossing.

For example, Mozambican authorities often assign escorts to goods transiting through Mozambique from Zimbabwe, Malawi, or Zambia. These escorts incur fees and can delay transport because the shippers usually need to wait for an escort or other vehicles to form a convoy. As a result, perishable goods may be held up unnecessarily at the point of origination or throughout the journey.

TFA Article 11.15¹⁰³ articulates that Member countries may use Customs escorts or convoys only in high risk circumstances or if Customs laws and regulations cannot be ensured through the use of a transit guarantees system. With proper risk management systems in place (see Section 6 for a more detailed discussion on risk management), escorts may not be needed for low risk bulk shipments of agricultural goods due to the availability of alternative, more cost effective and expedient techniques such as timely weighing or scanning at the final exit point, GPS tracking, or transit bonds/guarantees as stipulated under TFA Article 11.11 to 11.15). 104

CONTAMINATION OF AGRICULTURAL GOODS IN TRANSIT

For SPS concerns, transporting agricultural commodities in bulk or even in sealed containers may expose these goods to contamination at ports or border crossing if they are unnecessarily delayed, or if other goods such as fertilizer, coal, or other contaminants are not properly kept separate. Contamination may also occur while in transit if agricultural goods are not properly packed and protected from the elements, pests, or pollution.

For example, tobacco from Zimbabwe is shipped to overseas markets by transiting the African North/South (N-S) Corridor via Durban, South Africa. Due to delays at the port of Durban, as well as issues related to organized crime and hijacking of tobacco in transit along the N-S Corridor, Zimbabwean traders are considering exporting via the Port of Beira in Mozambique using the Beira Corridor. However, tobacco from Malawi predominantly transits through the Beira Corridor, which exposes Zimbabwean tobacco to the risk of contracting Malawian beetles, which are not found in Zimbabwe. Any shipment of Zimbabwean tobacco transiting on the Beira Corridor may be contaminated at any node where Malawian tobacco is simultaneously present. Since tobacco is fumigated in Zimbabwe and placed in sealed containers prior to shipping, it is important not to delay the movement of the cargo while transiting through Mozambique or opened by Mozambican Customs or

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¹⁰³ The TFA mirrors the Revised Kyoto Convention on the use of escorts as stated in Specific Annex E, Standard 15 as "only when they consider such a measure to be indispensable shall the Customs: (a) require goods to follow a prescribed itinerary; or (b) require goods to be transported under Customs escort.'

For more information about transit bonds/guarantees see: http://www.wcoomd.org/-/media/wco/public/global/pdf/topics/facilitation/instruments-andtools/tools/transit/transit-guidelines.pdf?la=fr

other parties while in transit. Any prolonged delays or broken seals may necessitate re-fumigation of the entire shipment at Beira port, which can take several more days and adds cost.

In this case, Zimbabwean traders and their Mozambican shipping partners would benefit if a truck or railcar transited through the Beira Corridor as quickly as possible, aided by the proper implementation of TFA Article 11.9, which stipulates that Members must allow and provide for advance filing and processing of transit documentation and data prior to the arrival of goods. Enabling advance filing and processing would greatly reduce the time an agricultural shipment stays at the first point and subsequent nodes along a transit corridor. As with Customs "green channels," this would reduce both risks and costs.

To further expedite trade, TFA Article II.5 encourages Members to create physically separate infrastructure (such as lanes or berths) for the sole purpose of traffic in transit. This would entail a transit corridor with links and nodes specifically designed to facilitate the rapid travel of goods between origin and destination. Akin to Customs green channels, these lanes for transit goods would mean minimal (if any) inspection. For agricultural goods, specifically perishables and food aid, these separate lanes reduce the risk of spoilage and contamination, as well as reduce costs to traders (for example, costs associated with re-fumigation, reefer demurrage, or renting generators).

If an agriculture, health, or Customs authority requires inspection of goods for transit or in transit, the TFA is clear that these agencies are not allowed to apply TBT-related procedures such as technical regulations and conformity assessments (Article I I Paragraph 8). Goods are already subject to TBT procedures at the final import destination. The TFA is explicit on prohibiting Members from conducting TBT procedures while in transit, due to additional costs and undue delays. Further, agricultural goods not intended for the country in which they are transiting should not need to conform to that country's TBT requirements at all, as the product may have been produced or exported specifically to meet the requirements of the destination country. As for SPS concerns, TFA Article I I Paragraph 8 does not reference SPS

Box 8.2 — International Road Union Real-Time SafeTIR System – Separate Green Channels

The RTS system currently covers 20 countries from the European Union, Central Asia and the Middle East. The system combines several techniques to reduce transit time including a TIR (Transports Internationaux Routiers, or International Road Transport) carnet, advanced declarations (TIR Electronic Pre-Declaration System or TIR-EPD), and electronic exchange of information between all countries. With the TIR-EPD. truckers can go through "Green Lanes" alongside AEOs, possibly without inspections. Trucks are only stopped in the Green Lane based on advanced risk assessments.

Source:

https://www.unece.org/fileadmin/DAM/ tir/seminar/dushanbe/Computerisation _TIR_Eng.pdf

measures, presumably recognizing that Members may need to apply measures to goods in transit to address pest or disease risks. ¹⁰⁵

¹⁰⁵ "The Relationship between the Trade Facilitation Agreement and the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement), Background Note, WTO 2018.

CONCLUSION

The unique challenge of spoilage for agricultural commodities requires that goods in transit reach their destination in the most expedient way possible. The TFA's specific provisions on transit mandate that Members develop transit systems and regimes to avoid unnecessary and undue delays. By their nature, development of these transit systems requires close cooperation by all countries along the corridor as well as all agencies involved such as Customs and Ministries of Health, Environment, and Transportation.

This close cooperation can be aided by the successful establishment of National Trade Facilitation Committees (Article 23.2) and cooperation agreements (Article I I.16).

TFA Article 11.16 encourages Members to cooperate and coordinate with one another to enhance freedom of transit, including an understanding on the "practical operation of transit regimes." It encourages all countries along a transit corridor to develop Customs and other interagency cooperation programs, and mutual recognition agreements that could expedite the shipment of perishable goods, food aid, and other commodities. In some landlocked countries that are the final destination or origin of agricultural goods, cooperation with neighboring states greatly improves food security and economic development. Cooperation to improve corridor performance may include:

- Seamless exchange of information
- Harmonization of documents
- Managing transport systems
- Consensus on unified transit, Customs, and transport policy
- Cooperative agreements to establish dedicated lanes for goods in transit
- Mutual recognition of controls and guarantees

Well-planned transit corridors with links and nodes designed to expedite transit can greatly benefit both traders, beneficiaries of food aid, and customers in land-locked countries, as well as all countries along the corridor.

Although not specifically mentioned in the TFA, other systems and transit regime principles can serve as areas of close cooperation between countries. For example, documents that accompany a shipment and contain key information about the contents of its sealed containers (known as *carnets*) would be used to verify the shipment's compliance with the transit regime of a country. Following the establishment of joint transit systems and the use of carnets, countries can work on establishing joint border processing to reduce SPS and TBT control measures.

Box 8.3 — Sample Tools and Systems for Information Exchange Across Borders

- The New Computerized Transit System (NCTS) is popular in Europe.
 - https://ec.europa.eu/taxation_cu stoms/sites/taxation/files/transit manual_en.pdf, section_4.1.3.
- The ECTS utilizes satellites to monitor cargo and employs tamper-proof technology for security purposes. "Draft Report: Electronic Cargo Tracking in the [Economic Community of West African States] ECOWAS Region," LPFM-II, October 2018.
- ASYCUDA++ is an iteration of the ASYCUDA system (see Section 6), which has a transit application, but the tool is not widely used. https://legacy.asycuda.org/asyversions.asp.
- HM Customs Gibraltar's ICIS is discussed further in Section 6 of this guide.

https://www.hmcustoms.gov.gi/index.jsf.

These include Transports Internationaux Routiers/International Road Transport Convention (TIR) carnets, 106 Electronic Cargo Tracking systems (ECTS), and the electronic exchange of information.

In addition, the TFA encourages several programs that may further expedite transiting shipments of agricultural goods, such as Pre-arrival Processing (Article 7.1), Authorized Operators programs (Article 7.7), and ESWs (Article 10.4). Developing country Members can also take advantage of established and emerging ICT systems for the electronic exchange of information as a key tool for regional cooperation, in an effort to greatly reduce the time and cost for goods in transit.

For agricultural goods in transit, these programs under the TFA can be pivotal in capturing the benefits of an efficient transit corridor. In particular, mutual recognition agreements (MRAs) of authorized operator programs can be a significant first step in facilitating agricultural trade and ensuring the timely delivery of food aid. As authorized operator programs are primarily Customs-centric tools, MRAs would be most beneficial if other agencies were also involved in a country's program, such as the ministries of agriculture or health. Authorized operator programs themselves are not yet prevalent across the developing world, although almost all Members of the WCO have expressed interest in establishing programs. As more developing countries design these programs, donor organizations will play a more integral role in assisting them. 107 Ideally, the development of an authorized operator program in a landlocked country can work hand-in-hand with the development of a program in a neighboring transit state, or can be developed with the goal of an MRA. By doing so, countries can maximize the benefits of their individual programs through the MRA or harmonized transit regime.

A TIR Carnet is a document issued pursuant to the TIR Convention, permitting sealed road transport shipments to traverse TIR Members' countries without undergoing customs inspection until reaching the destination country. Each TIR Carnet has a unique reference number. A TIR Carnet may have 4, 6, 14, or 20 vouchers, as one pair of vouchers is used per country; the number of vouchers indicates the number of countries that can be transited, including the countries of departure and destination, under cover of this type of Carnet (for example, a 20-voucher carnet may be used for a TIR transport through up to 10 countries). Each TIR Carnet can be used for only one TIR transport. Once the TIR transport has been terminated at the Customs office of destination of the goods, the driver is handed back the TIR Carnet duly endorsed by the customs authorities of destination. Source: Hellenic Federation of Road Transports (OFAE), "TIR Carnet," http://ofae.gr/en/tir/deltio/

As of July 2018, 169 of the 182 WCO members had signed letters of intent committing to implement the SAFE Framework of Standards for AEOs. There are now 77 AEO program in operation and another 17 under development; 57 MRAs have been concluded and 35 MRAs are being negotiated, in addition to 4 plurilateral MRAs being negotiated. See WCO AEO Compendium (2018) at http://www.wcoomd.org/en/topics/facilitation/ instrument-and-tools/tools/aeo-compendium.aspx

SECTION 9: INTEGRATING SPS CERTIFICATES INTO INFORMATION TECHNOLOGY SYSTEMS – E-CERTIFICATION

Trade initiatives designed to take advantage of modern ICT capabilities are contributing to cost and time reductions related to trading across borders. Initiatives include replacing traditional paper-based requirements and processes with ICT systems that allow for the exchange of electronic trade-related data and documents.

SPS measures are considered some of the more costly and burdensome requirements for compliance when trading agricultural goods, foods, beverages, and feedstuffs. While the cost of conforming to required technical SPS measures can vary significantly, SPS transaction costs (for example, applying, issuing, and verifying certificates) can be standardized and minimized through electronic certificates (or e-certificates). Moving goods across the border can also improve as e-certificates make border clearance more efficient if the validation of certificate data is automated.

This section discusses efforts on transitioning from requiring hard copies of SPS certificates to accepting the electronic exchange of SPS certificates with trading partners, in which certificate data are transmitted electronically directly from the sanitary agency in the exporting country to the sanitary agency in the importing country. This section also explores how SPS certificates can be integrated into ICT systems to help countries comply with the TFA.

BACKGROUND

Historically, paper-based SPS certificates are a primary reason agricultural imports are detained at the border, and they are often more problematic than adherence to technical SPS regulations. Agricultural, health, and standards agencies may base border inspections on insufficient data or data entry errors, or they may request redundant, unavailable, or unnecessary attestations.

Table 9.1 Challenges of Paper-based Certification

Most common challenges faced at the border by U.S. agricultural goods	Illustrative Examples
Validity/Authenticity of certificate	China's Inspection & Quarantine (CIQ) inspectors questioned the legitimacy of the National Oceanic and Atmospheric Administration fish meal certificates because the certificates' seals and watermarks did not match the sample certificate CIQ had on record. (2016)
	The U.S. Foreign Agriculture Service (FAS) received several requests from the Russian Federal Veterinary and Phytosanitary Surveillance Service to confirm the authenticity of veterinary certificates for shipments of chicken and pork in transit to Kazakhstan. (2015)
Cumbersome documentation	Ukraine required redundant import licenses for poultry and lard. (2011-2014) Turkey had inconsistent and excessively burdensome documentation required for imports of U.S. semen affecting bovine genetic shipments. (2014-2016)
Missing certificate information	Chile detained a shipment of beef products because of missing grading information on the sanitary certificate. (2016) Turkey detained a shipment of lactose because the health certificate was not

	signed by a veterinarian as Turkey requires. (2016)
Discrepancy in certificate information	Brazil detained a shipment of whey protein concentrate because the health certificate contained the USDA acronym before the plant number, which is different than the health certificates issued by the Agricultural Marketing Service (AMS). (2016)
	Brazil detained a shipment of cheddar cheese for five days because the health certificate contained a different address for the U.S. exporter than what was registered with Brazilian authorities for the product's label. (2016)
Expired or expiring certificate	China renews certificates of a January shipment of biotech corn and soy that expired eight days prior to arrival. (2014)
	Bosnia and Herzegovina detained a shipment of frozen hake because the health certificate was superseded with new requirements set by the Veterinary Office). (2014)

E-certificates help address these problems. With a direct transmission of SPS certification data from the export country to the import country, an exporter's paperwork receives validation early in the process (often even before a shipment arrives at its destination), and importing countries receive the data required. E-certificates also reduce the risk of fraud that is common with paper-based certificates, such as counterfeit documents or falsification of records, by verifying the authenticity of the certificate electronically. This direct transmission eliminates the trader's role in presenting hard copies of certificates and reduces the detention of goods at the border due to incomplete documentation while also improving the integrity of the data. It is important to note that e-certificates help with the common, paper-based issues, but they do not eliminate the risk of fraud or data quality issues. Online verification capabilities and platform security measures need to be developed in parallel.

CHALLENGES AND RECOMMENDATIONS

As countries adopt e-certificates and other paperless trade initiatives, such as pre-arrival processing (TFA Article 7.1), acceptance of copies of supporting documents (TFA Article 10.2), and single windows (TFA Article 10.4), they need to be aware of common challenges, as well as recommendations to help government agencies and the private sector throughout the transition from paper to e-certification. Most important, countries should design and implement the initiatives outlined below with significant attention to interagency coordination, as well as dialogue with the private sector to ensure that data are reliable, verifiable, and secure, and that systems are efficient.

BUSINESS PROCESS ANALYSIS (BPA)

A crucial first effort toward paperless trade is the simplification of processes. Countries should be cautious to rush into automation without first embarking on extensive process mapping, simplification, and data harmonization to eliminate redundant steps and information. The WTO's STDF advises that an optimal paper-based system needs to be in place to effectively transition to paperless trade. This requires mapping the production chain (product, processing, storage, packaging, transportation) and all the government authorities that intervene in inspections, sampling and testing, and market surveillance in order to process reengineer for efficiency.

The objective of harmonizing data is to simplify data requirements, eliminate redundancy of information, and improve data quality. The UNECE examined the data elements needed to export jasmine rice from

Thailand by mapping the process for requesting and issuing export permits and quality certificates. It found that across four documents, 155 data elements were required. Through an extensive BPA, the data elements were reduced to 70.

When simplifying a process and establishing the critical data elements, all government agencies involved in trade, as well as private sector actors, need to be consulted; keeping in mind that information from ecertificates can be reused in other documents, such as permits, Customs declarations, invoices, and transport documents. These data elements are also important when implementing pre-arrival processing, requiring traders to submit all import documentation and information in electronic format prior to arrival (Article 7.1).

Countries should consult existing resources on BPA to help guide the initiative, such as the UNESCAP E-Learning Series on Business Process Analysis for Trade Facilitation ¹⁰⁸ and its guide to simplify trade procedures. ¹⁰⁹

INTEGRATING INFORMATION BETWEEN CUSTOMS AND OTHER GOVERNMENT AGENCIES

To achieve information integration (for example, direct sharing of information/data electronically) among Customs, sanitary, and other government agencies, countries should use electronic messaging standards for government to government and business to government/government to business messages. Direct information sharing helps countries implement single window platforms (see below) and also meet the TFA's commitment to have border agencies cooperate and coordinate with one another to facilitate trade (Article 8).

The WCO has developed a Data Model, ¹¹⁰ which is a library of regulatory data requirements to help Customs and other cross-border regulatory agencies meet the procedural and legal needs of international trade. ¹¹¹ The WCO recommends using the Data Model when implementing e-certificates for the identification and definition of all cross-border regulatory data requirements related to pre-arrival/pre-departure formalities and procedures for import, export and transit. ¹¹²

For the implementation of paperless trade, the WCO recommends the following steps:

¹⁰⁸ UNESCAP "E-Learning Series on Business Process Analysis for Trade Facilitation" course. https://www.unescap.org/our-work/trade-investment-innovation/trade-facilitation/bpa-course

¹⁰⁹ UNESCAP, "Business Process Analysis Guide to Simplify Trade Procedures," prepared by UNESCAP's Trade Facilitation Section, updated September 2012. https://www.unescap.org/resources/business-process-analysis-guide-simplify-trade-procedures

110 The WCO Data Model tool can be found at http://www.wcoomd.org/zh-cn/topics/facilitation/instrument-and-tools/tools/data-model.aspx

 $^{^{111}} Information on the model can be found at: http://www.wcoomd.org/-/media/wco/public/global/pdf/topics/facilitation/instruments-and-tools/tools/data-model/dm_technicalbrochure_en.pdf.$

¹¹² WCO. "Use of the WCO Data Model in the Area of Electronic Certificates: Introduction to the WCO Data Model," presented by Tejo Kusuma at the STDF Seminar on the Electronic SPS Certification, Geneva: Switzerland, June 28, 2016. http://www.standardsfacility.org/sites/default/files/Ecert_Presentation_Kusuma.pdf

- Identify supporting documents that are normally required to accompany the cargo and goods declarations, and examine the need for those documents for Customs clearance with a view to eliminating them.
- Discontinue the requirement of presenting supporting documents in hard copy, if they have already been presented in electronic form.
- Process the release and clearance of cargo based only on electronic declaration and automated verification.
- Enable automated Customs clearance systems to automatically verify information contained in supporting documents (such as e-certificates) where information is accessible electronically in other government agencies' databases, single window platforms, or private repositories.

The integration of SPS data and the ability to cross-check information about the trader and its goods across all relevant government agencies allows for improved risk management, whereby border agencies are able to better identify high risk consignments and clear low risk goods faster in line with TFA Article 7.4. The WCO Data Model includes all the data requirements for Customs, food, agriculture, and SPS, and can serve as the basis for establishing a national single window for foreign trade. (See discussion on single windows below.)

CROSS-BORDER RECOGNITION OF ELECTRONIC SIGNATURES

E-certificates are a prerequisite to paperless trade. Of 120 countries surveyed for a United Nations report on the implementation of technology-driven measures in an effort to have paperless trade, only 15 had established the electronic exchange of SPS certificates. While more than 85 countries stated that they have taken steps to develop the legal and

Box 9.1 — Kenya's Electronic Certificate System (ECS)

After three years of development, Kenya launched its ECS in 2011. The system is integrated into its national single window and mostly supports direct government to business communication. Recently, it established a bilateral exchange with The Netherlands.

Successes factors:

- National Legislation for Information Communication Technology
- Political will parliamentary bills and budget allocation

Challenges:

- Costs of developing (~US\$1 million for the export module alone) and maintaining the system
- Internet connectivity

Lessons Learned:

- Establish a national legal framework to support electronic trade
- Develop national laws and regulations in line with international standards and agreements
- Don't undermine the need and effort required for inter-agency cooperation
- Prioritize data security
- Invest in harmonizing data requirements
- Develop contingency plans to deal with system outages
- Develop system to support multiple languages and time zones
- Implement in phases, allowing industry to have a transition period from paper-based to e-certificates

regulatory frameworks needed to support electronic transactions, most have not yet adopted laws recognizing electronic signatures (e-signatures) to make them legally equivalent to paper-based

¹¹³ UNESCAP, "Trade Facilitation and Paperless Trade – Global Report," Bangkok: Thailand, November 2017. https://www.unescap.org/resources/trade-facilitation-and-paperless-trade-implementation-global-reports-2017

signatures. Without e-signatures, the data exchange needed to support electronic SPS certificates cannot occur.

In establishing the legal framework, it is important to understand the difference between electronic and digital signatures. E-signatures can entail entering an email address, providing a scanned copy of a handwritten signature, or clicking a box to indicate agreement. Digital signatures involve the use of encryption and require the signer to authenticate their identity through a certificate-based digital ID. Typically, that authentication is done through an independent certificate provider.

Countries should develop a comprehensive legal framework that recognizes both digital signatures, based on cryptography and electronic signatures using other technologies. Implementing SPS ecertificates with a signature function should be done with a technology-neutral approach to avoid favoring one technology or process over another.

Some countries choose to certify SPS certificates with a digital signature and use specific digital signature technology to authenticate. Indonesia has taken this approach to increase security. However, its use of a specific certificate provider is burdensome to traders located outside of the country. In contrast, the European Union requires electronic signatures for SPS certificates, finding that e-signatures better support cross-border trade.

In determining whether e-signatures offer the level of reliability needed, countries should recognize international standards. The United Nations Commission on International Trade Law (UNCITRAL), for example, has a guide to enactment, which establishes technical reliability criteria and provides a legislative framework on the treatment of e-signatures. 114

ELECTRONIC TRANSMISSION OF DATA

To electronically transmit SPS data from the exporting country to the importing country, a data exchange framework must be established. By adopting international standards and frameworks, countries will save time and effort in establishing exchanges with multiple trading partners, versus doing so on a bilateral basis.

The UN Center for Trade Facilitation and Electronic Business (UN/CEFACT) has harmonizing requirements and exchange

Box 9.2 — Single Window Implementation Efforts

"Many countries have implemented, or are in the process of implementing, single window systems. These countries represent a broad spectrum of economic development. The degree to which single windows replace traditional paper-based systems varies. In some countries, for example, single window systems are used to process all customs documentation, including documents pertaining to other government certifications, such as SPS standards. In other countries, single windows coexist alongside paper-based systems, diminishing time and cost savings...[This] may occur where countries lack adequate information technology to fully implement an electronic single window or in countries that must first establish a supportive regulatory environment to bypass traditional paper-based systems."

Source: "An Overview of Customs Reforms to Facilitate Trade." Journal of International Commerce and Economics, August 2017.

¹¹⁴ United Nations, "UNCITRAL Model Law on Electronic Signatures with Guide to Enactment, 2001," New York, New York: U.S., 2001. http://www.uncitral.org/pdf/english/texts/electcom/ml-elecsig-e.pdf

frameworks that can be utilized to facilitate the exchange of e-certificates, called "SPS e-Cert." Codex, the World Organization for Animal Health (OIE) and the IPPC have also developed guidelines on e-certificate content, formats, and the mechanism for exchanging data.

Additionally, FAO and IPPC have been working on an "ePhyto Solution," often referred to as the ePhyto hub—a paperless, global, digital exchange for electronic phytosanitary certificates, which aims to make it easier for countries to start transmitting e-certificates based upon a single communication protocol. The ePhyto Solution offers a uniform certificate designed to be compatible with existing Customs management systems. Through the solution, an exporting country produces an ePhyto certificate that is transmitted and stored in a centralized ePhyto Hub, which in turn releases the information to the designated import

country. Countries that adopt the solution by joining the *ePhyto* hub eliminate the need to negotiate and maintain bilateral agreements required for transferring e-certificates.

The development of this solution is underway with the assistance of several countries and international standards setting bodies. The United States has been a leader in developing and rolling out the ePhyto Solution, both as a funder and a participating Member of the ePhyto Steering Group. The United States also participated in the most recent pilot of the ePhyto Hub (2017-18). Once the hub is fully implemented, it will save the United States from having to negotiate more than 100 bilateral agreements with its export markets.

Implementing this ePhyto Solution may provide a viable means to implement e-certificates for countries with limited resources. In order to participate, counties must host systems that are capable of producing and receiving ePhyto certificates. For countries who do not already have compatible systems, a Generic ePhyto National System (GeNS) is provided.

WORKING TOWARD ESTABLISHING SINGLE WINDOWS

Single windows for foreign trade are ICT platforms that allow parties involved in trade and transport to log standardized information and documents with a single entry point to fulfill all import, export, and transit-related regulatory requirements. If

Box 9.3 — Single Window of Hong Kong

Hong Kong, China's single window platform, called Government Electronic Trading Services (GETS), currently supports the electronic submission of import and export trade declarations, certificates of origin, commodity permits, and cargo manifests. The front end of the platform receives the electronic submission of data, conducts data validation, and then transmits the data to the respective government agencies' back-end systems. GETS also provides paper-to-electronic conversion services.

In 2016, Hong Kong set out to develop a new generation single window to serve as a platform for all business-to-government documents for all trade regimes and customs clearance purposes. The new single window is also expected to be interoperable with the single window of other economies.

Source: "Single Window for Trade Facilitation Regional Best Practices and Future Development." UNESCAP. 2018.

¹¹⁵ Greg Rosenthal, "Making Agricultural Trade Flow Smoother, Safer, and Cheaper," USDA, March 31, 2017. https://www.aphis.usda.gov/aphis/ourfocus/planthealth/ppq-program-overview/plant-protection-today/articles/ephyto-hub: and International Plant Protection Convention (IPPC). IPPC ePhyto Steering Group, "The Global EPhyto Solution," v1.0, March 2016. https://www.ippc.int/static/media/files/publication/en/2016/03/Global_ePhyto_solution.pdf

¹¹⁶ Greg Rosenthal, "Making Agricultural Trade Flow Smoother, Safer, and Cheaper," 2017.

information is electronic, then individual data elements should only be submitted once. 117 For example, if a trader exports rice and is required to register its product with the Ministry of Trade, and is also required to provide export certification to the Ministry of Agriculture, it should only have to enter its name, contact information, product description, and tariff classification once through the single window platform. Once information is provided through the platform, all relevant government agencies that have been integrated into the platform will have access to the relevant data elements needed to register the trader and issue certificates, lessening and often eliminating duplicative requirements. The establishment of single windows is a measure all WTO Member countries have committed to under the TFA (Article 10.4).

E-certificates can be established with or without a single window. All that is required is the establishment of a secure connection to transmit certification data from the sanitary agency of the exporting country to the sanitary agency of the importing country. With a national single window, that agency is able to share relevant data elements from the e-certificate with other government agencies (such as Customs, Ministry of Trade) seamlessly. For example, in the exporting country, the health agency issues the e-certificate for a perishable good and sends the information to its counterpart in the importing country. Should Customs — from the exporting or importing country — need to verify information from the e-certificate in order to clear the goods during export or import, it would have access to the relevant data through the single window platform, even though the e-certificate was transmitted directly between the two health and food safety agencies. This results in goods clearing both borders faster and offers critical time-savings for perishable agricultural food products with short shelf lives. If a country does not have a single window, Customs may have to request information or hard copies from the sanitary agency or the trader.

A WTO Member commitment to implement FTA Article 10.4 clearly establishes that in cases where documentation and/or data requirements have been received through the single window, the same documentation and/or data requirements should not be requested again, except in urgent circumstances.

Depending on the number of government agencies, functionalities (such as licenses, certificates, and permits) and the number of processes that are integrated, a single window can be a costly and complex endeavor. Therefore, single windows should be designed in modules (such as import, export, and transit) and through a series of implementation phases to add functionalities. A modular design will also make any data or procedural modifications easier and more economical to update. The required steps to implement a single window (process mapping, data harmonization, legal framework) are similar to those required for e-certificates, as mentioned. Thus, countries aiming to develop single windows may want to consider establishing e-certificates first with the objective of incorporating e-certificates as a module.

¹¹⁷ UN/CEFACT, "Recommendations and Guidelines on Establishing a Single Window to Enhance the efficient exchange of information between trade and government," Recommendation No. 33, New York, New York: U.S. and Geneva: Switzerland, July 2005, https://www.unece.org/fileadmin/DAM/cefact/recommendations/rec33/ rec33 trd352e.pdf

Countries may also want to have a dedicated SPS portal for the detailed information that agencies require (for example, commodity-specific declaration requirements, list of detailed pests and diseases, list of approved mitigations, registry of approved fumigators, scientific data and bibliographies). 118 The portal can also be housed within the single window platform to support e-certificate functionalities.

Countries should draw on existing resources and lessons learned for developing single windows. The Organisation for Economic Co-operation and Development (OECD) finds that much of the success behind designing a single window depends on the quality of cooperation and information exchange among the various government agencies involved. 119 This is similar to what the UN/CEFACT has listed in its guidelines for establishing a single window, noting that the most important prerequisites for establishing the platform are political will from government authorities, support from the business community, and a legal framework for the exchange of information. Key resources to help guide the process include:

- UN/CEFACT single window guidelines: covers practical steps for implementation, as well as the importance of conducting a feasibility study to determine the scope of the single window with regards to modules and functionalities, and the human and financial resources required. 120
- UN/CEFACT single window repository: provides case studies from countries that have established or are working on establishing single windows to help countries draw from lessons learned. [21]
- WCO's e-learning course on building a single window environment: designed to help policy-level decision-makers understand its implications for cross-border activities, and includes technical aspects (back-end solutions, risk management, data security) for technical implementation. 122
- UNESCAP's single window best practices: provides detailed analysis of four single windows considered best practices to benchmark other single window implementation efforts. 123

Lastly, single windows can be designed to be interoperable, which would allow for direct communication between an importing and exporting country's single window platforms without additional effort by users. Interoperability has its own set of challenges, ranging from IT to policy and legal implications at the regional and international level. It is recommended that countries design their single windows with

World Bank, "Looking beyond the Single Window for ICT solutions to SPS Management," STDF Session on Good Practice in the Implementation of the Trade Facilitation Agreement, 2018. http://www.standardsfacility.org/sites/default/files/John_Keyser_WGMar18.pdf

OECD/WTO, "Aid for Trade at a Glance 2017: Promoting Trade, Inclusiveness and Connectivity for Sustainable Development," prepared by OECD Development Assistance Committee and Trade Committee, and the WTO Committee on Trade Development, Paris:France, July 2017. http://www.oecd.org/trade/aid-for-trade-at-a-glance-22234411.htm

¹²⁰ UN/CEFACT, "Recommendations and Guidelines on Establishing a Single Window," 2005,

UNECE, "" https://www.unece.org/cefact/single_window/welcome.htm

To learn more about it, visit the WCO new e-learning course on a Single Window environment site at: http://www.wcoomd.org/en/media/newsroom/2018/august/wco-new-elearning-course-on-a-single-window-environment.aspx?stf=1

UNESCAP, UNNExT, "Single Window for Trade Facilitation: Regional Best Practices and Future Development," prepared by Sung Heun Ha and Jonathan Koh, Bangkok: Thailand, 2018, https://www.unescap.org/sites/default/files/Regional%20Best%20Practices%20of%20Single%20Windows_updated.pdf

interoperability in mind¹²⁴ and draw on lessons learned from the APEC community. ¹²⁵ Single windows not designed with interoperability are likely to face technological challenges that disrupt the flow of information. Those technological challenges can then lead to political and legal challenges, such as who is responsible for data retention, accessibility, and data archiving. These issues end up impeding access to real-time information across global supply chains and impact the time and cost of trading across borders. Although interoperability is not a specific requirement established in the TFA, it does contribute to Customs cooperation (TFA Article 12) through the direct exchange of information.

CONCLUSION

E-certificates help automate SPS controls, which reduce processing times, lower transaction costs associated with paper-based systems, improve the integrity of certificates and the quality of data, and increase transparency. Process reengineering and data harmonization are essential steps in establishing e-certificates and building single window platforms. Countries that aim to automate a process without first simplifying it will find that even with a single window, trade-related procedures can be cumbersome and repetitive. Consequently, SPS agencies may not have the information they require to issue or verify a certificate through the single window because they have limited access to the information, or because critical SPS data are mixed with non-essential product standards. 126

The implementation of e-certificates should be part of a strategy to achieve paperless trade. This requires the electronic exchange of e-certificates to be conducted in a structured format based on open and agreed-upon standards, making e-certificates equivalent to paper certification in terms of legal value. If the health/sanitary agency accepts e-certificates, but Customs requires all supporting documentation, including certificates, to be provided on paper during the import process, countries should consider how the initiative needs to be rolled out to have a meaningful impact.

International organizations (for example, Codex, STDF, OIE, and IPPC) recognize the needs for step-bystep guidance on the implementation of e-certificates, especially when it comes to the technological requirements for exchange mechanisms, data mapping, and legal and regulatory changes. Ongoing efforts are underway (such as those mentioned for BPA, e-signatures, and data exchanges) to help countries navigate the development process. Additionally, donor projects are helping countries design and build single windows, such as the USAID projects that are helping ASEAN with national single windows and the ASEAN regional single window. Efforts include capacity building on BPA, data harmonization, and drafting of the legal framework. Countries ready to embark on e-certificates and paperless trade should seek guidance from these organizations to simplify the undertaking and ensure harmonization with international standards.

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¹²⁴ UN/CEFACT, "Single Window Interoperability," Recommendation 36, New York, New York: U.S. and Geneva: Switzerland, 2017. http://www.unece.org/fileadmin/DAM/trade/Publications/ECE-TRADE-431E_Rec36.pdf

APEC, "Study on Single Window Systems' International Interoperability: Key Issues for Its Implementation," prepared by Lauro Vives, Singapore, August 2018, $\underline{https://www.apec.org/Publications/2018/08/Study-on-Single-Window-Systems-International-Interoperability}$

World Bank. "Looking beyond the Single Window for ICT solutions to SPS Management." STDF Session on Good Practice in the Implementation of the Trade Facilitation Agreement, 2018. http://www.standardsfacility.org/sites/default/files/John_Keyser_WGMar18.pdf

SECTION 10: CONCLUSION

Often the trade of agricultural goods is scrutinized from a technical standpoint to determine whether goods meet the sanitary or regulatory requirements needed to ensure food safety and public health as well as plant and animal health. It is not uncommon to disregard the need for efficient border control for the sake of public health. However, requirements and procedures not based on science and risk may not effectively protect public health. Moreover, when procedures are redundant or unnecessary, this results in unexpected costs and delays for traders and additional enforcement burdens for government officials. While the SPS and TBT Agreements have specific language to ensure that measures and regulatory requirements do not result in arbitrary decisions or discriminatory actions, the TFA goes to the core of addressing procedural issues related to the movement of goods. The TFA is specific about not undermining SPS and TBT controls in accordance with the WTO Agreements (Article 24 Final Provisions, paragraph 6), and, as noted earlier, several commitments are reinforced in all three agreements. The need to address procedural issues at the border is substantiated by the cost of trading and the impact that time-saving trade facilitation measures have on time-sensitive agricultural trade.