

Facilitating & Automating Trade in Agriculture: Challenges and emerging trends

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Content

- Introduction to Trade Facilitation for Agri-food products
- Key challenges for agricultural trade
- Emerging Trends for facilitating trade and automation in the agricultural sector

What is the agricultural value chain?

A 'value chain' in agriculture identifies the set of actors and activities that bring a basic agricultural product from the field to final consumption and add value at each stage of the production process. A value chain can be a vertical link or a network between various independent business organizations involving processing, packaging, storage, transport and distribution. The terms "value chain" and "supply chain" are often used interchangeably.

Structural transformation in consumer markets is leading to duality in agricultural systems, often within the same country and sometimes in production of the same final consumer

- Traditional" agricultural value chains are generally governed by spot market transactions involving a large number of small retailers and producers. The primary interface of the farmer in this system is with a buyer, often with monopsony power in which information asymmetry prevails. Traditional agricultural value chains are not static and ICT systems in particular are catalyzing change in buying relationships.
- "Modern" value chains are characterized by vertical coordination or consolidation of the supply base, agro-industrial processing and the use of standards throughout the chain. Initially driven by export sector opportunities, modern value chains are becoming more prevalent in the domestic markets of developing countries as incomes rise, urban populations grow and retail structures change. Both "traditional" and "modern" systems may include smallholders.

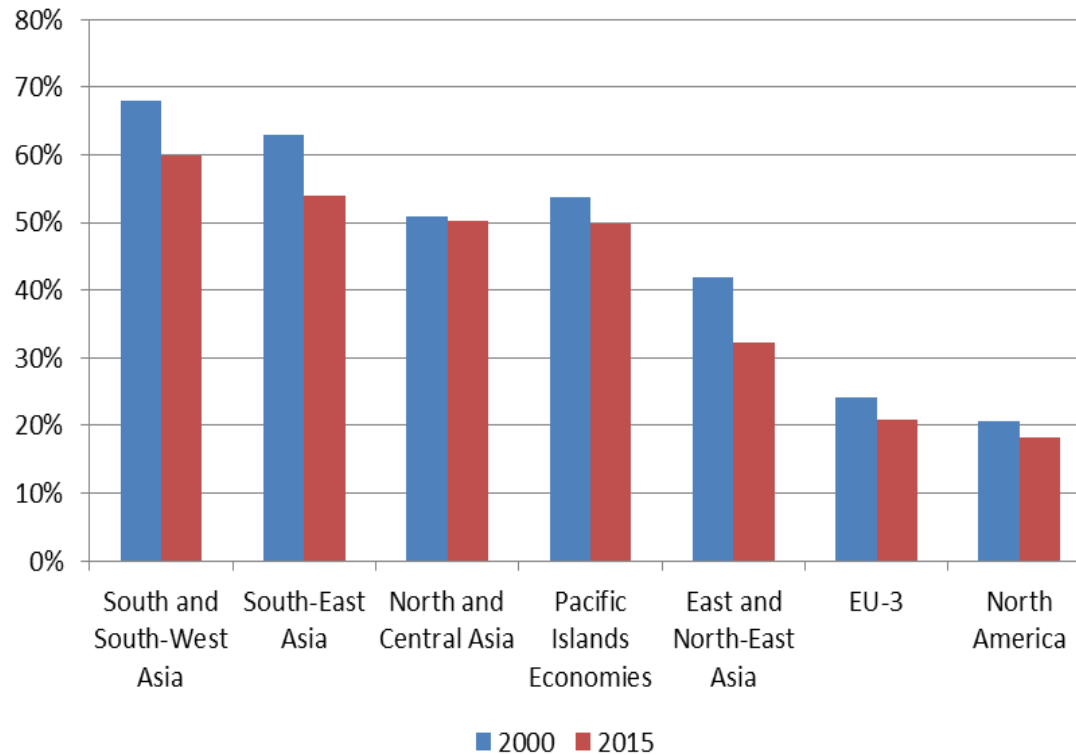
Agriculture Trade Facilitation can be defined as:

the simplification and harmonization of procedures (activities, practices and formalities) involved in the import and export of agricultural and food products, including but not limited to collecting and processing data and documents required for the cross-border movement of these products



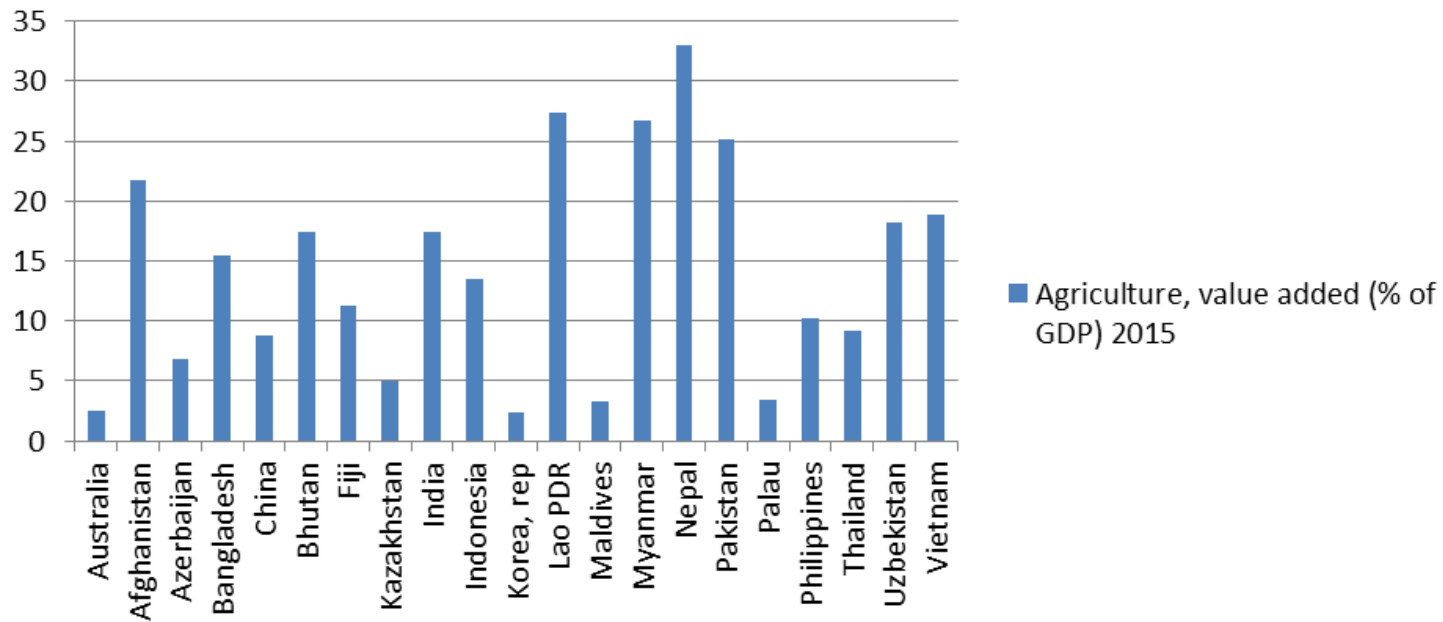
Why facilitate trade in the agri-food sector?

Population in rural area as a percentage of total population in 2015



Source: Data retrieved from the World DataBank (World Bank)

Agriculture, value added (% of GDP) 2015

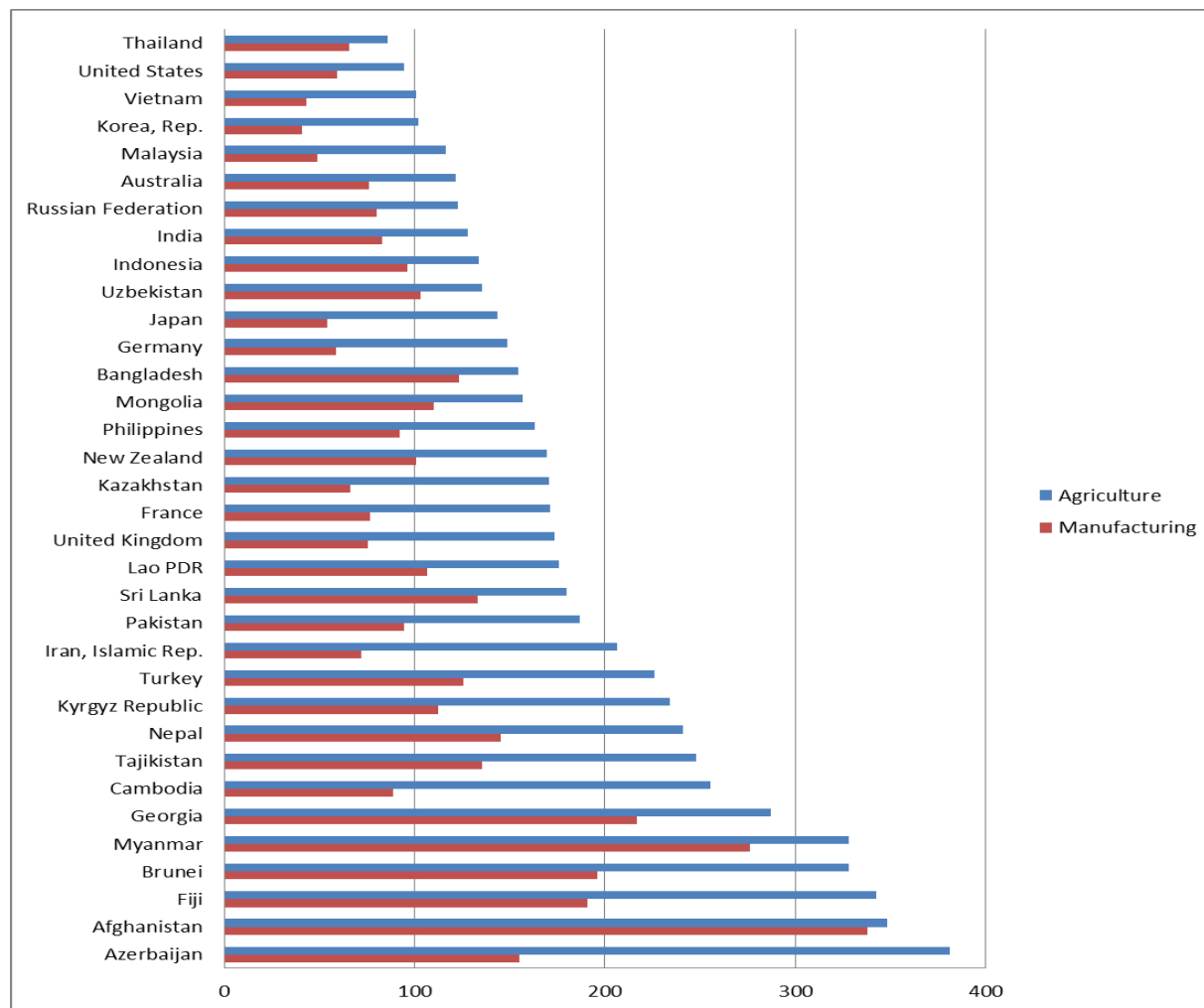


Source: Data retrieved from the World DataBank (World Bank)

Why facilitate trade in the agri-food sector?

- In LDCs in Asia Pacific the agricultural sector account for 53 percent of total employment (ESCAP, 2014)
- Agriculture supply chains are amongst the most complex
- Trade costs for agricultural trade are higher than for manufacturing products,
 - Complex regulatory and commercial procedures: laboratory test, treatments and certifications;
 - Large number of agencies involved in import and export of agricultural products;
 - Time and temperature sensitive nature – special handling, transportation and cold storage.
- High trade cost and time effect competitiveness of agricultural products and participation in global value chains

Agricultural and Manufacturing Comprehensive Trade Costs, excluding tariffs, between Selected Economies and China (2009-2014)



Source: ESCAP-World Bank Trade Cost Database

Actors, time, costs and documents involved in exporting agricultural products

Exporting country	Importing country/region	Product	Days (No.)	Actors involved (No.)	Procedures (No.)	Documents required (No.)	Cost (\$)
Bangladesh	Japan	Frozen shrimp	36.75	14	12	24	500
Bangladesh	India	Jute bag	10	15	12	24	236
Bangladesh	Bhutan	Fruit juice	18	7	9	9	225
Bhutan	Bangladesh	Oranges	12	14	18	14	444
Cambodia	European Union	Rice	32	14	12	24	1 029
Cambodia	China	Maize	20	15	13	22	1 250
Lao People's Democratic Republic	Thailand	Maize	16	11	8	21	735
Myanmar	West Africa	Rice	19-23	20	10	>25	425
Nepal	India	Cardamom	13	11	9	14	1 213
Nepal	Bangladesh	Lentils	13	14	18	18	613
Thailand	Bangladesh	Sugar	13	13	13	31	1 128
Thailand	United States	Jasmine rice	16	16	15	n.a.	n.a.

Source: Derived from SATNET BPA Studies (www.satnetasia.org/theme2.html), SASEC Phase I BPA Study (forthcoming), and other BPA studies available from <http://unnex.unescap.org/pub/tipub2615.pdf>.

Note: While the studies were conducted on the basis of the UNNExT BPA Guide, the scope and context of each study differs. Accordingly, results may not be used for cross-country benchmarking purposes.

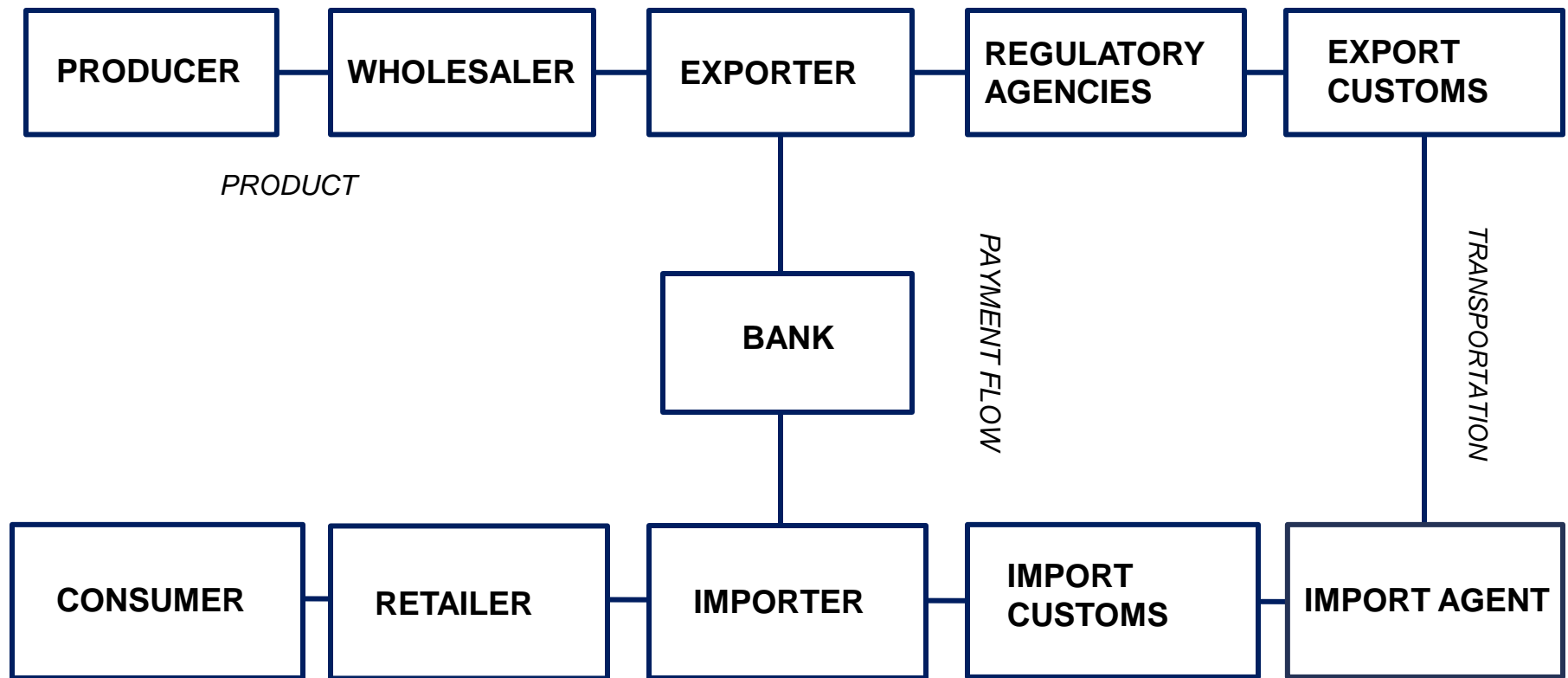
Trade Facilitation is not just about Customs, but several regulatory agencies relate to Agrifood involved.

Several regulatory agencies with a lot of **complicated, cumbersome procedures** and **document transactions** related to export/import agrifood products, e.g.

- Dept of Livestock Development, MOAC
 - Dept of Fisheries, MOAC
 - Dept of Agriculture, MOAC
 - Food and Drug Authority, MOH
 - Dept of Disease Control, MOH
 - Dept of Medical Science, MOH
 - Chamber of Commerce
 - Royal Customs Department, MOF
 - Dept of Business Development, MOC
 - etc.
- General business registration
 - Specific business registration and Quota
 - Onsite Health Inspection
 - Import/Export Permits
 - Import/Export Certification
 - Fumigation and Reports
 - Health Certification
 - Sanitary Certification
 - Phyto-sanitary Certification
 - CITES Certification
 - At-border Inspection
 - Tracking
 - Reports etc.

Interactive session

- Identify challenges for trade in agricultural products.
(See stylized agriculture value chain)



Challenges in the agriculture supply chain

**Access to finance
and credit**

**Complying regulatory
standards**

**SPS laboratory
capacity**

Post-harvest handling

Compliance to quality and production standards

**Making
international
payments**

**Complying to
compliance standards**

**Conformity assessment
infrastructure**

**Paperwork and
Paper based
systems**

**Additional procedures
and certifications**

**Inadequate logistics and
infrastructure**

Customs procedures

Lack of transparency

**Lack of risk-based
controls at borders**

**Poor coordination between
border agencies**

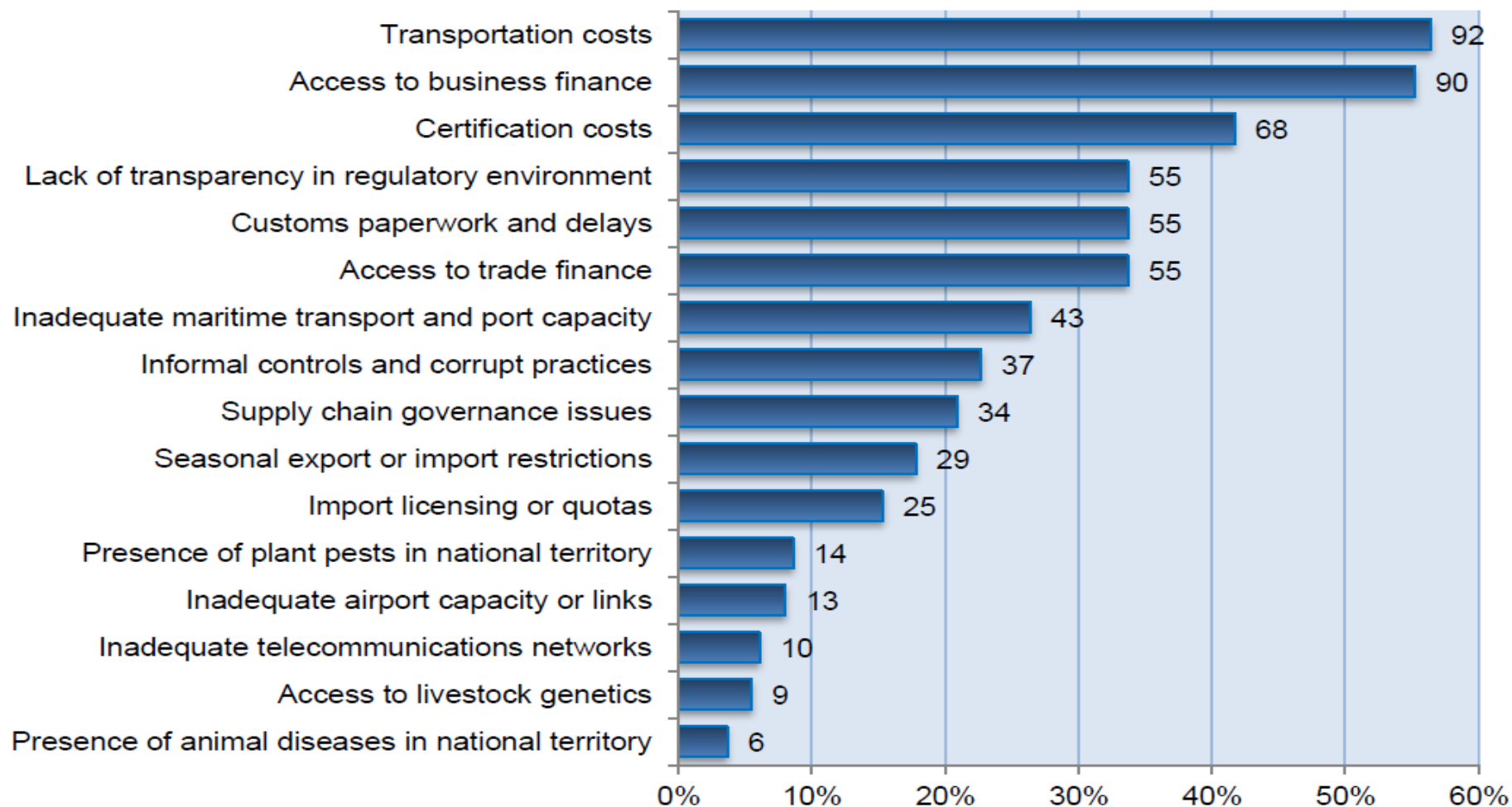
**Costs of
certification**

High transport costs

Pest management

IT infrastructure

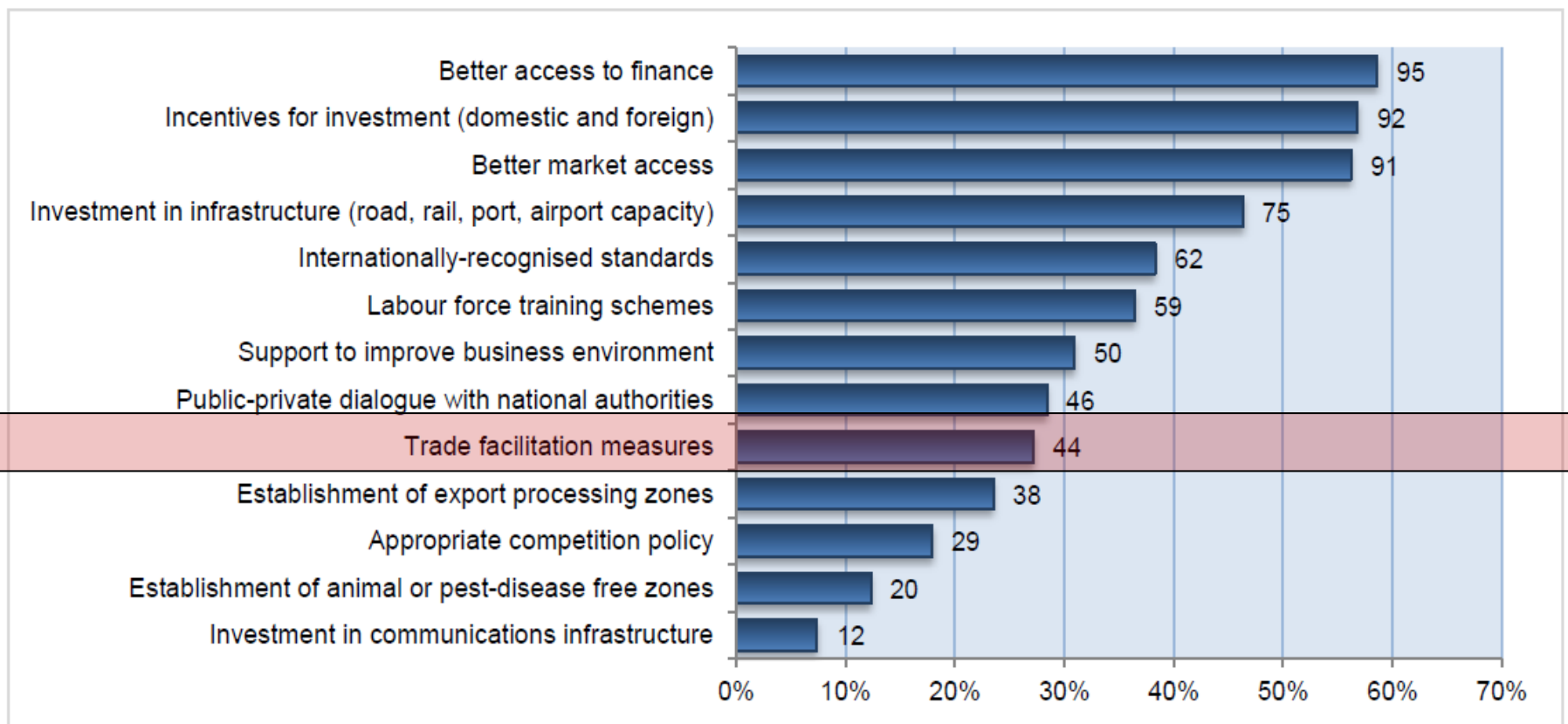
Barriers in connect to agrifood value chains



Source: OECD/WTO Questionnaire 2013, www.aid4trade.org.

How to overcome the barriers?

Types of support most effective to enter, establish or move up agrifood value chains (surveyed from developing country suppliers)



Source: OECD/WTO Questionnaire 2013, www.aid4trade.org.

Extracted from presentation: S. Keretho, 2014

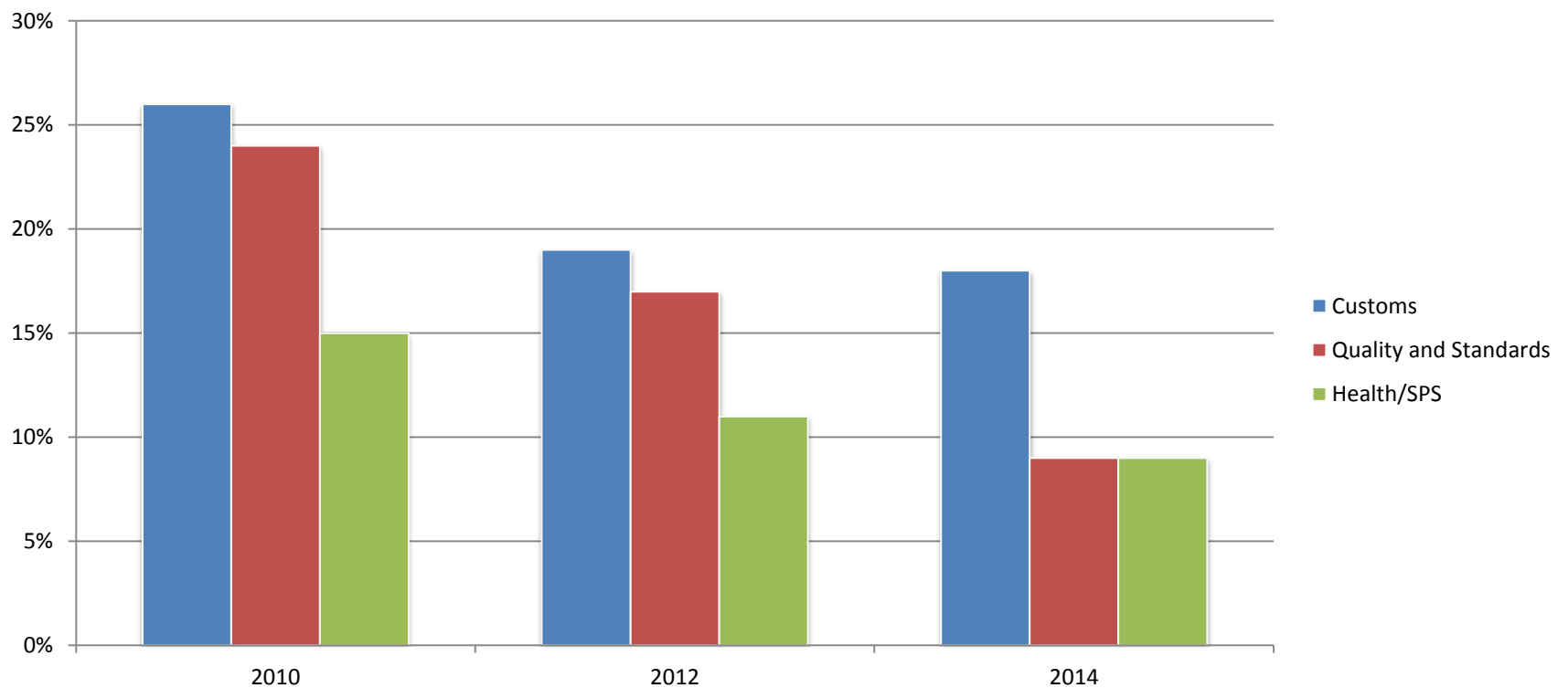
Objectives of Agricultural Trade Facilitation

- Reducing time and costs associated with trading of agricultural and food products.
- Ensuring compliance with relevant laws and regulations.
- Meeting the growing information needs of buyers.
- Gaining and maintaining access to markets
- **All procedures involved in agricultural trade may be considered, including:**
 - Commercial procedures:
 - Transport and logistics procedures
 - Regulatory procedures:
 - Financial procedures:

Agricultural trade facilitation measures include:

- Access to trade finance and payment systems for agricultural trade exporters
- Capacity building and training on compliance to production, food safety and quality standards for farmers and exporters
- Adequate infrastructure – cold storage and transportation
- Traceability systems for agricultural products
- Risk management at the borders for agricultural products
- Automation of testing, inspection and certification procedures

Private sector % rate of satisfaction with selected border agencies (bottom quintile respondents)*



Source: World Bank Logistics Performance Index

WTO SPS Agreement

- The Agreement on the Application of Sanitary and Phytosanitary Measures (the "SPS Agreement") entered into force with the establishment of the World Trade Organization on 1 January 1995. It concerns the application of food safety and animal and plant health regulations.
- Defines the basic rules for food safety and animal and plant health standards. All countries maintain measures to ensure that food is safe for consumers, and to prevent the spread of diseases or pests among animals and plants
- Three sisters: IPPC (Plant health); Codex Alimentarius (Food safety/ health); OIE (Animal health)
- Protection
- Justification for measures
- Based on international standards

Trade Facilitation Agreement Art 7.9

9 Perishable Goods¹⁰

9.1 With a view to preventing avoidable loss or deterioration of perishable goods, and provided that all regulatory requirements have been met, each Member shall provide for the release of perishable goods:

- (a) under normal circumstances within the shortest possible time; and
- (b) in exceptional circumstances where it would be appropriate to do so, outside the business hours of customs and other relevant authorities.

9.2 Each Member shall give appropriate priority to perishable goods when scheduling any examinations that may be required.

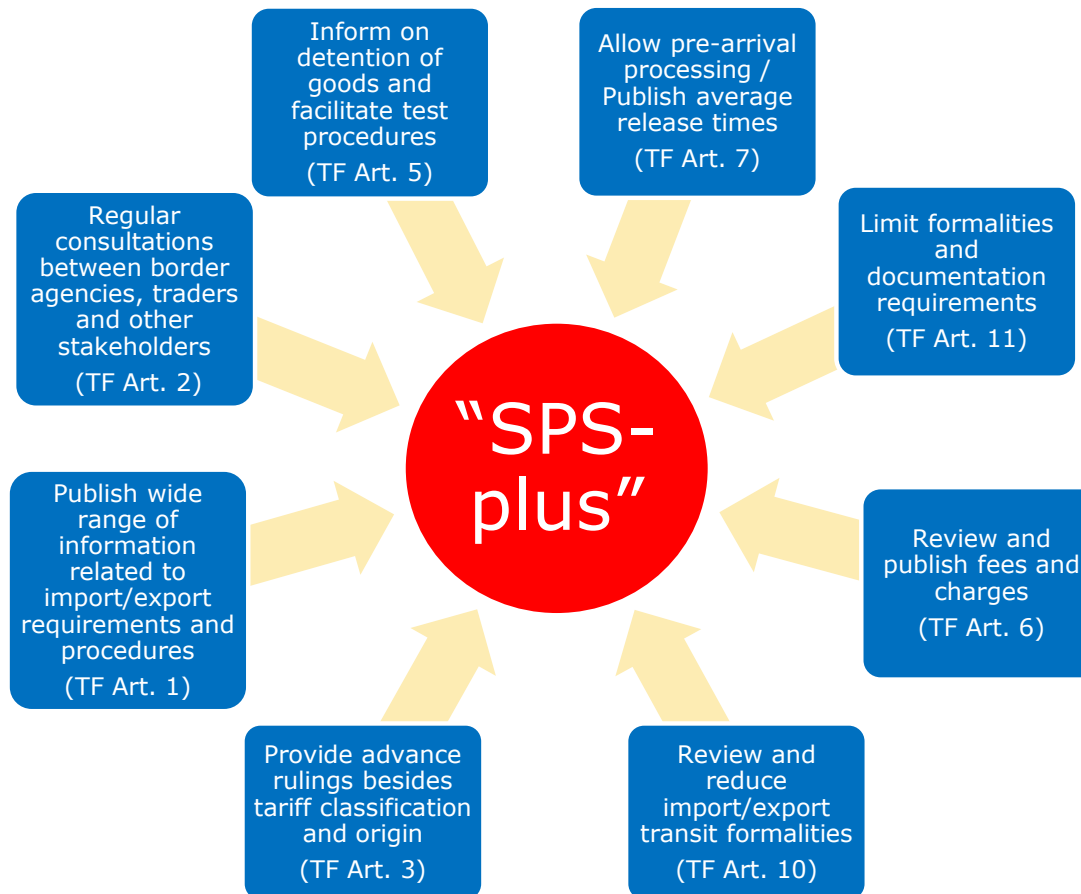
9.3 Each Member shall either arrange or allow an importer to arrange for the proper storage of perishable goods pending their release. The Member may require that any storage facilities arranged by the importer have been approved or designated by its relevant authorities. The movement of the goods to those storage facilities, including authorizations for the operator moving the goods, may be subject to the approval, where required, of the relevant authorities. The Member shall, where practicable and consistent with domestic legislation, upon the request of the importer, provide for any procedures necessary for release to take place at those storage facilities.

9.4 In cases of significant delay in the release of perishable goods, and upon written request, the importing Member shall, to the extent practicable, provide a communication on the reasons for the delay.

Trade Facilitation Agreement Art 7.9

- To release perishable goods under normal circumstances in the shortest time possible. Under exceptional circumstances provide for the release of such goods outside the business hours of customs and relevant authorities
- Priority should be given to perishable goods when scheduling any examination and arrange or allow the importer to arrange proper storage of perishable goods. And if consistent with domestic legislation allow the release to take place at the storage facilities

TF Agreement and SPS Agreement



Source: WTO

Towards automation for agricultural trade

Challenges of traditional paper-based processes for agricultural trade

- Large volumes of data to submitted and processed
 - Can cause delays in inspection and release of goods
- Manual intervention in the review, processing and approval
 - Can lead to errors
- Efficiency
 - Data re-entry required to generate reports
- Transparency
 - Retrieval
 - Limited data analysis and aggregation capabilities
- Security
 - Higher risk of forgery and manipulation
 - Higher risk of import control failures

Interactive session

- What are some of the opportunities and benefits of automation for agricultural trade?

Opportunities and benefits of automation for agricultural trade

**Streamlining
business procedures**

**Allow traceability in
the value chain**

**Better data and
analytics**

**Better control of
fraud**

**Enhanced
transparency of
procedures**

Reduce transaction costs

**Address food crises more
efficiently**

Pre-arrival processing

Generate better reports

**Facilitate compliance to
regulatory procedures**

**Facilitates verification of
authenticity of certificates**

Better service delivery

**Speed up border
clearance procedures**

**Improved risk
management**

**Opportunities for
further process
improvement**

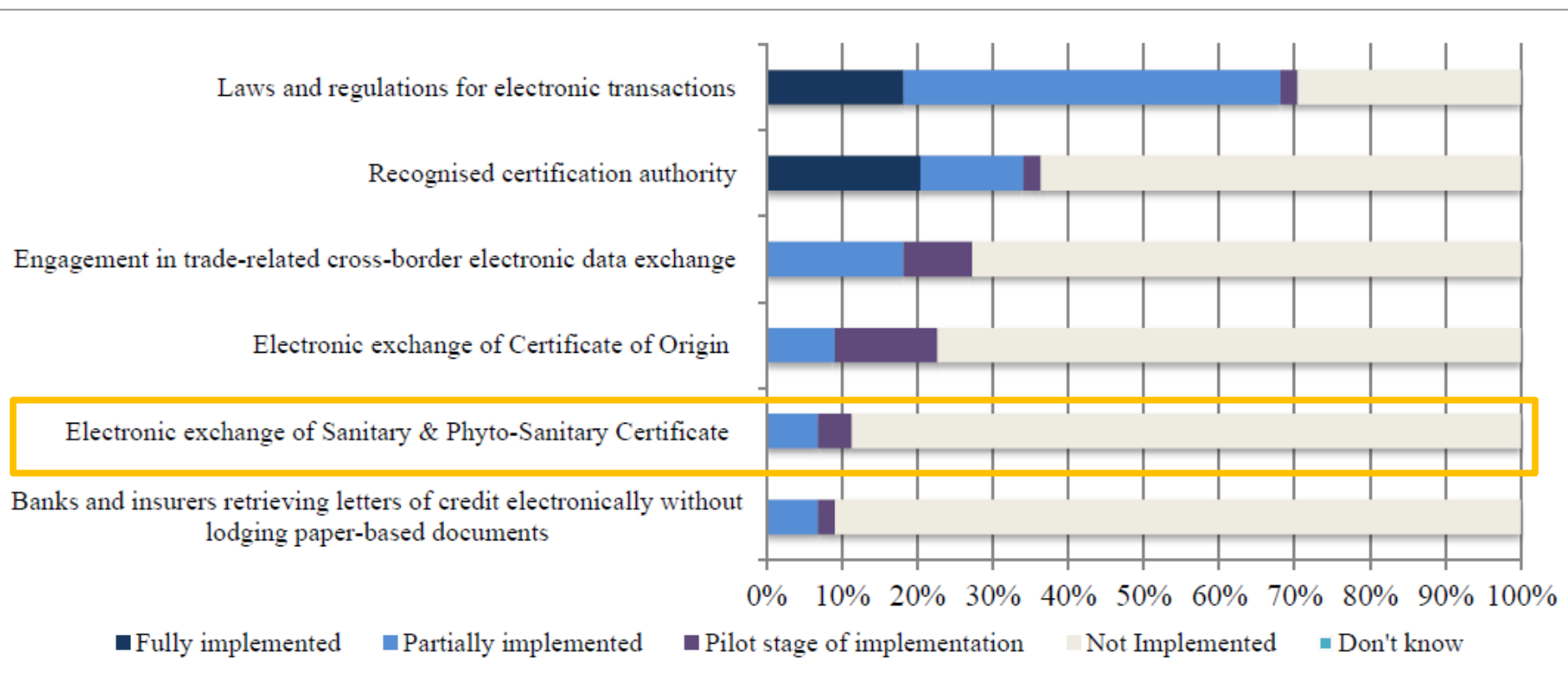
**Monitor and tackle
non-compliance
more effectively**

Scalable

Opportunities for automation and paperless systems in the agri-food trade

- National Single Window
- Electronic traceability
- Electronic business standards (such eLAB, FLUX, eCITES)
- Electronic Certifications (include e-SPS)

Figure 14: State of implementation of “cross-border paperless trade” measures in Asia-Pacific economies (in %)



Introduction to e-SPS certification

Definition:

A secure exchange of e-Cert Messages from Issuing Authority (Export) to Quarantine Authority/ National Plant Protection Organization - NPPO (Import)

e-SPS certificates/ e-Cert refers to an electronic certification system using Extensible Markup Language (XML) to transmit data of agricultural products.

Objectives:

- Ensure compliance to health, sanitary requirements of exporting and importing country
- Facilitate quarantine compliance and control fraud
- Trade facilitation, cross border efficiencies with advanced information, reusable data

Why e-SPS certificates?

Key benefits include:

For private sector:

- Speed up border clearance
- Reduce transaction costs
- Reduce administrative burden

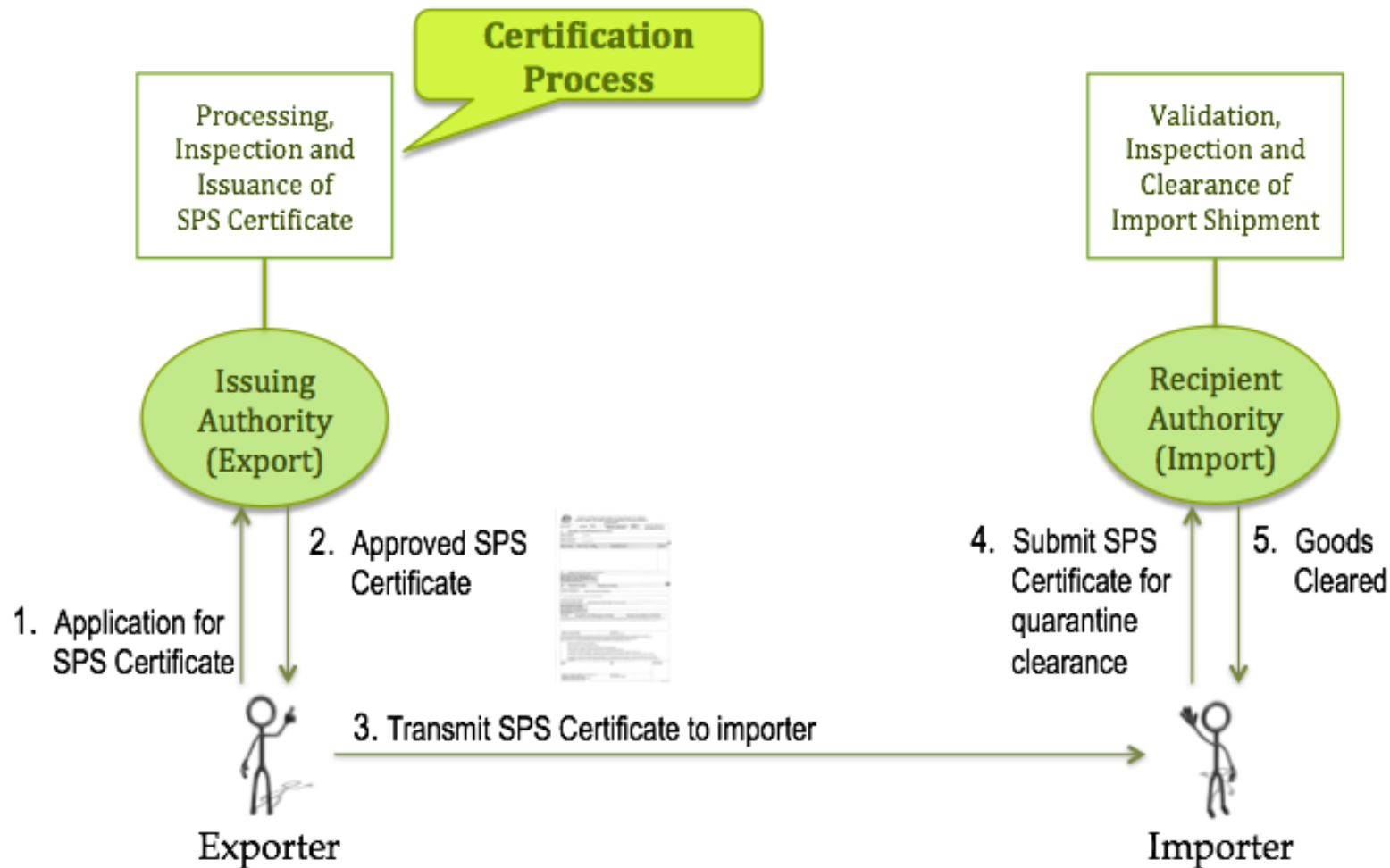
For government:

- Increased efficiency in processing SPS certificates
 - Real time verification and cross-checking of certificates
 - Pre-arrival validation and processing of certificates
 - Reduced requirements for data re-entry – reusable data
- Contributes to risk based inspection
- Contributes to food security
- Reduces the opportunities for fraud

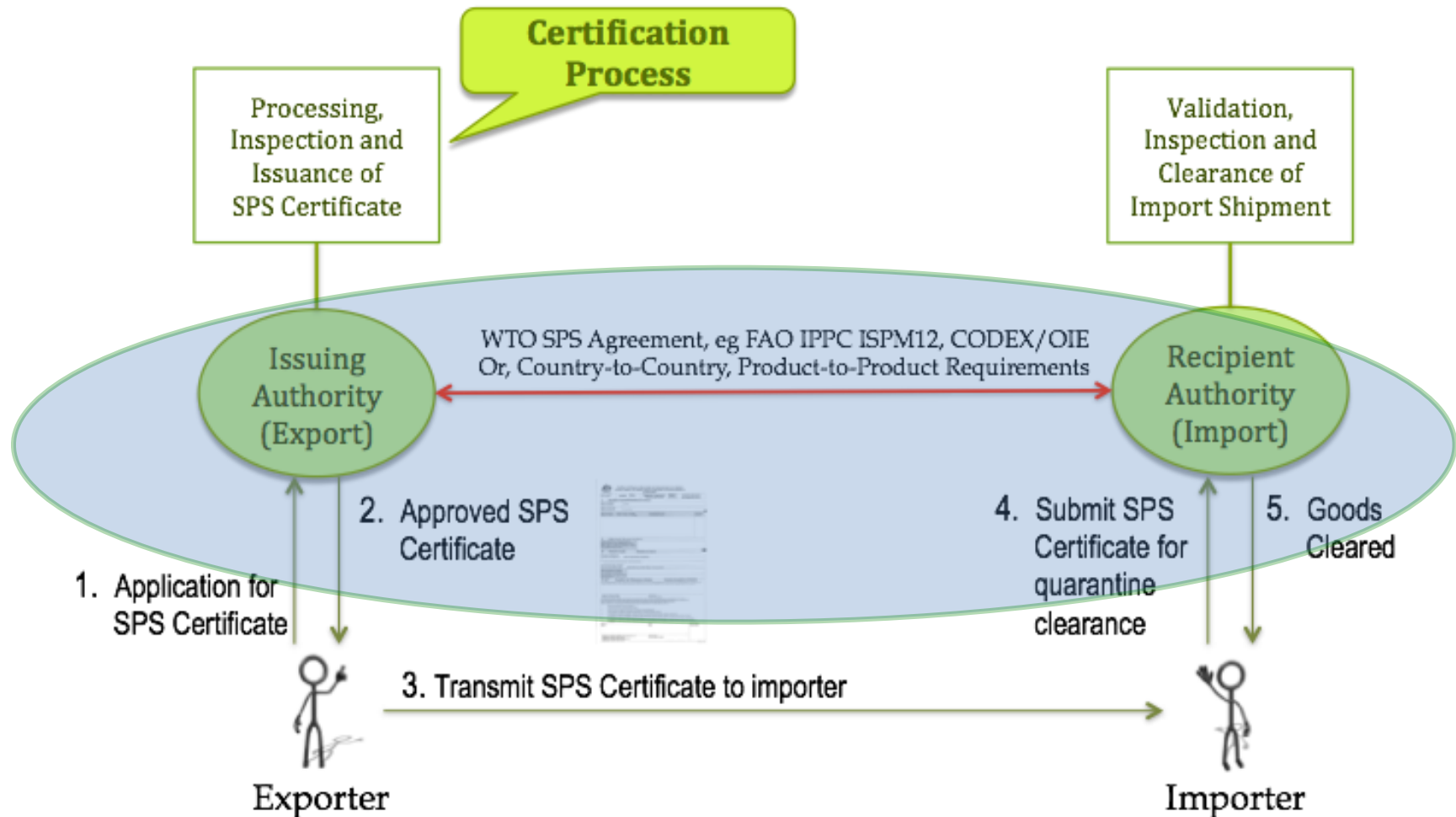
Key features of e-SPS certification

- G2G exchange
- Equivalent to paper SPS certificate
- Prior notice – certificate available in advance, before arrival of goods
- Allows for pre-clearance processes, including risk management
- Verification of paper SPS certificate
- Reusable data

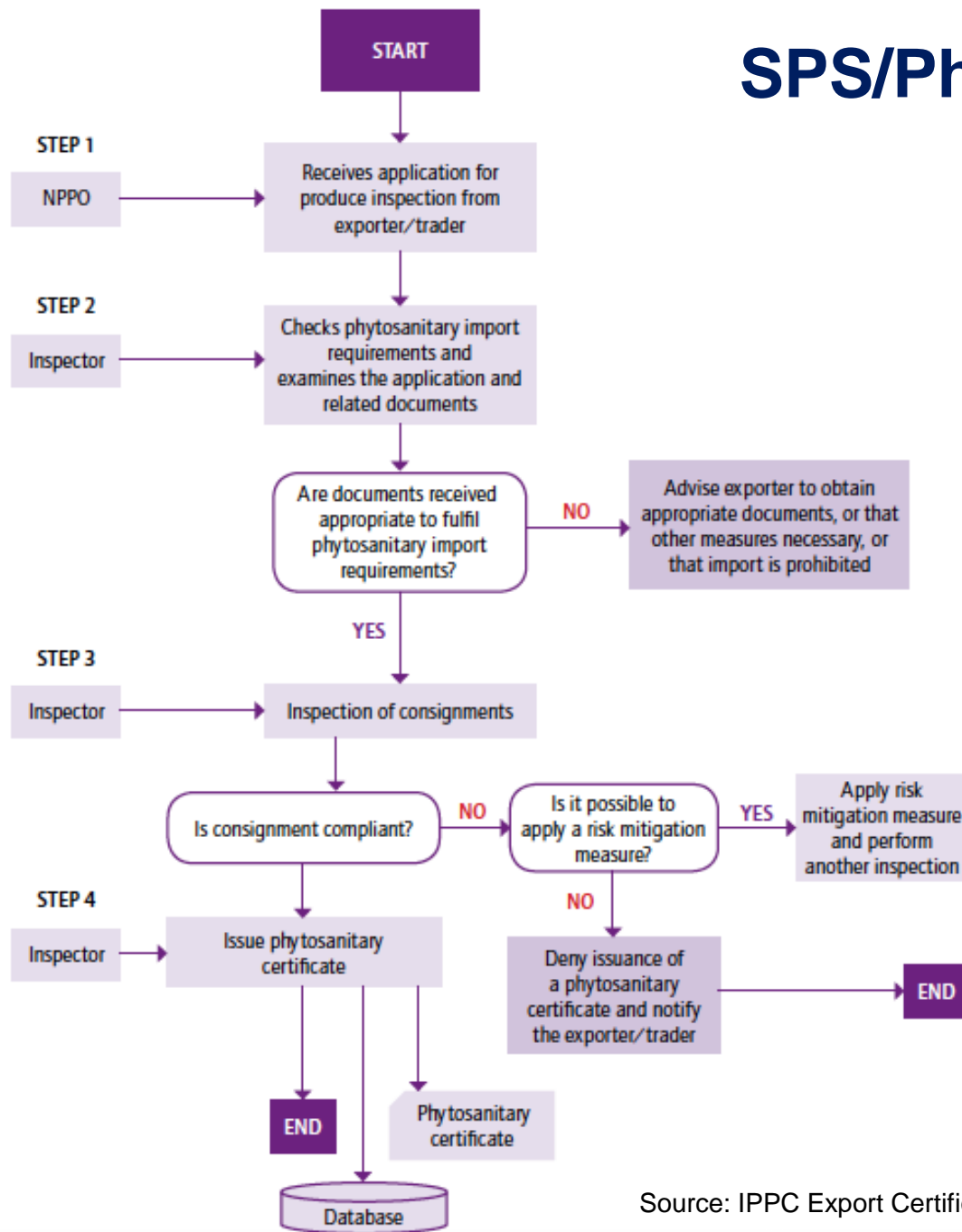
SPS Certification workflow



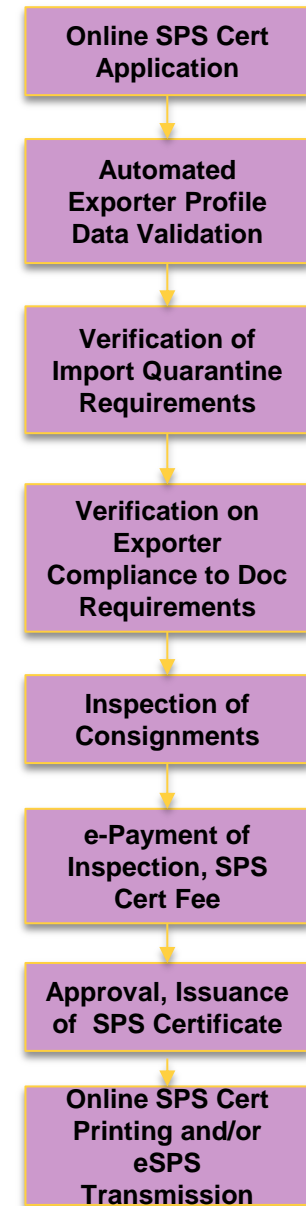
e-SPS Certification Workflow



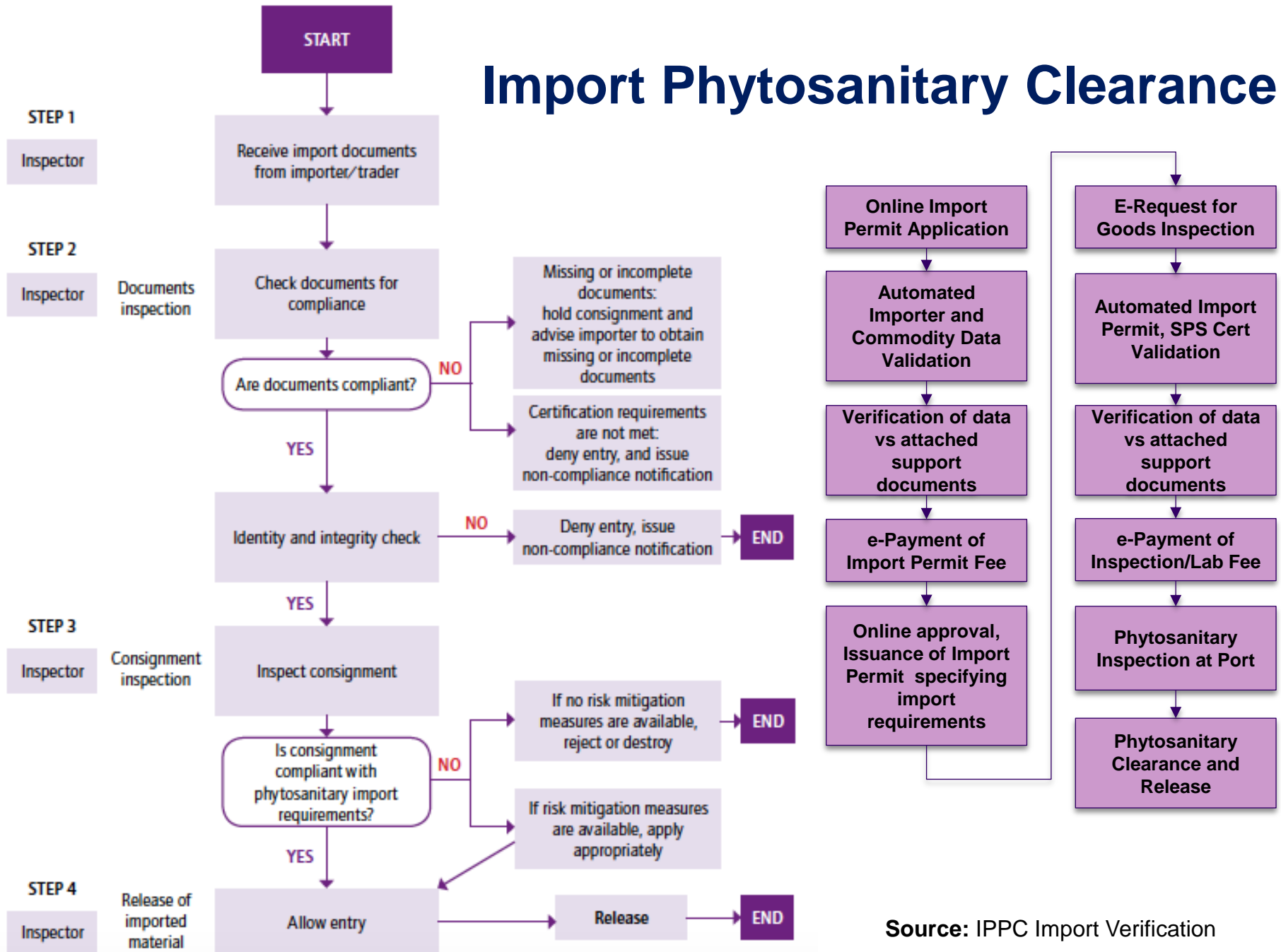
SPS/Phyto Certification



Source: IPPC Export Certification



Import Phytosanitary Clearance



Source: IPPC Import Verification

Source: IPPC Import Verification

e-SPS implementation in Asia-Pacific

- **China**

- Cooperative agreements with New Zealand, Australia, the Netherlands, Singapore, Chile, Iran, Egypt, Belgium, France, Chinese Taiwan, RoK

- **Malaysia**

- Recently developed system (MyPhyto) for the online application, processing and issuance of phytosanitary certificates
- Bilateral negotiations for exchange with: Australia, Netherlands, Indonesia, Singapore. Planning exchanges with: Philippines, China, RoK and NZ

- **Philippines**

- Automation of import process – can receive electronic SPS certificates
- Trial ongoing with Australia - in negotiations with other countries.

- **Indonesia**

- Signed e-Phyto cooperation agreements with the Netherlands (2015) and Australia (2016)

- **ASEAN**

- Conducting data harmonization and planning on pilot exchanges of e-SPS certificates through the ASW

Prospects and Way Forward

- Electronic SPS certification can contribute significantly to facilitating safe trade
- Electronic SPS certification => a driver for reform (streamlining import-export business process, promoting regulatory reform and inter-institutional collaboration)
- Business Process Analysis (BPA) first step, then cost-benefit analysis and feasibility assessments.
- Include a pilot phase, a transition phase and a fall-back plan
- Establish a sustainable cost recovery mechanism
- Stakeholder consultation
- Guidance and support to developing countries (carry out BPA, map out business process reengineering needs, and undertake the necessary cost-benefit analysis to inform investment decision).

Challenges and pre-requisites for implementation of electronic SPS certification

- Lack of standard certificate (for animal health and food safety)
- Lack of standardized exchange protocols
- Lack of political will (sometimes buy-in at top level, but resistance of mid-level management);
- Adequate legislative framework
- Adequate technical capacity
- High costs of establishing a system
- Weak SPS systems – need to streamline existing business processes
- Lack of collaboration framework between relevant national agencies (Inter-agency competition)
- Weak ICT infrastructure in agencies in charge of SPS matters
- Challenges of the system's sustainability

Facilitating Agricultural Trade

- Fundamental to review and simplify procedures and documentation through Business Process Analysis
- Perishable and time-sensitive nature requires considerations to logistics and infrastructure
- Priority in release should be provided to perishable goods (TFA)
- Including risk based controls at the borders
- Enhancing capacity to meet SPS requirements is key (laboratory capacity, streamlining inspection and certification procedures)
- Enhancing transparency and information to allow traders to comply with the requirements for trade in agricultural procedures

UNNExT Tools, Guidelines and Studies



Information Management in Agrifood Chains: Towards an Integrated Paperless Framework for Agrifood Trade Facilitation

<http://www.unescap.org/resources/information-management-agrifood-chains-towards-integrated-paperless-framework-agrifood>

UNNExT Handbook on Implementing UN/CEFACT e-Business standards in agricultural trade

<http://www.unescap.org/resources/unnext-handbook-implementing-uncefact-e-business-standards-agricultural-trade>



E-Learning Series on Business Process Analysis for Trade Facilitation

The ESCAP course consists of seven modules and introduces a step-by-step approach to conducting BPA. It is aimed at government officials and other stakeholders responsible for trade facilitation.

<http://www.unescap.org/our-work/trade-investment-innovation/trade-facilitation/bpa-course>



Capacity building workshops and training materials:

- [Workshop on Implementation of e-SPS and Automation for Agriculture Trade Facilitation](#)
- [Workshop on UN/CEFACT e-Business Standards in Agricultural Trade](#)
- [Workshop on Electronic Exchange of SPS Certificates for Better Trade Control and Facilitation](#)



UNNExT Briefs:

Streamlining and Automating Procedures in Agricultural Trade: A Case Study of the Philippines, UNNExT Brief No. 18

The State of Paperless Trade in Asia-Pacific 2015, UNNExT Brief No. 17

Electronic Traceability of Aquaculture Products: the Case of TraceVerified in Viet Nam, UNNExT Brief No. 16

Electronic Traceability of Agriculture Products in India: the Case of GrapeNet, UNNExT Brief No. 15

Available here: <http://unnext.unescap.org/pub/brief.asp>

Thank you.

For more information see:

<http://www.unescap.org/our-work/trade-investment-innovation/trade-facilitation>

<http://unnex.unescap.org/>

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