DIGITAL OPPORTUNITIES FOR SPS SYSTEMS AND THE TRADE FACILITATION EFFECTS OF SPS ELECTRONIC CERTIFICATION

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Digital technologies offer ways to achieve efficiencies within each of the three stages of the SPS regulatory framework:

- **Risk assessment**, e.g. OIE World Animal Health Information System
- **Risk management**, e.g. STDF regional pest detection framework
- **Product movement and compliance verification**, e.g. SPS e-certification systems

Given rising trade volumes and the risk of trade disruptions, countries and businesses are prioritising these technologies.

This paper examines:

- Trends in country use of these digital technologies
- The potential for these technologies to create additional efficiencies
- The challenges and conditions associated with the expanded use of these technologies
Digital technologies and COVID-19

- Digital SPS technologies (most notably e-certification) are helping to minimise the effects of trade disruptions due to COVID-19
- E-certification reduces the need for personal contact and the exchange of paper certificates, making it easier to adjust to travel and contact restrictions
- Many countries have made time-bound exceptions to SPS verification requirements, including switching to electronic documentation
- Countries are exchanging ePhytos in greater numbers – 45,351 in Aug 2020 (up from 7,992 in Dec 2019)

Key trends in digital technologies

- Digital technologies are mostly used in SPS systems in relation to product movement and compliance verification (stage 3)
- Countries are advancing e-certification through bilateral, plurilateral, and multilateral channels
- The exact number of active e-certification systems continues to evolve
- E-certificates for plant products are used more widely than animal products
- Completely paperless exchanges are not yet commonplace, but do exist between some trading partners (e.g. Australia and New Zealand)
- There is an opportunity to push for greater adoption of digital technologies in the context of the response to COVID-19
Three sisters: approaches to e-certification

- The IPPC, OIE, and Codex Alimentarius Commission have to date taken different approaches to e-certification within SPS systems:
  - **IPPC**: Guidelines for phytosanitary e-certification issued in 2017, established multilateral exchange of phytosanitary e-certificates via the ePhyto Hub
  - **OIE**: Developed *Terrestrial Animal Health Code* Article on e-certification for animal health in 2014, managed STDF project on a framework for e-veterinary certification
  - **Codex**: Established electronic working group (EWG) in 2016 to consider e-certificates, proposed guidance on paperless e-certificates currently under consideration

- There is scope for cooperation among the three organisations, especially in harmonising the exchange of e-certificates through XML messages
Potential for greater efficiencies

• Increased security and reduced processing time
  – Digital technologies enable risk-based and risk-proportional SPS systems
  – Avoids uncertainties of paper-based analogue systems, including risk of delays
  – Estimated savings from switch to paperless trade: annual export gains of USD 257 billion, 44% reduction in export time, 33% reduction in export costs (STDF, 2017)

• Fast and trusted flow of data
  – Helps to build trust and reduce transaction costs
  – Highlights new solutions for least trade restrictive measures
  – Enables better SPS service design, delivery, and oversight

• Greater equity, inclusion, and access within international trade
  – Helps overcome duplicative, costly, and inefficient SPS processes
  – Supports developing countries to participate in trade system
  – Reduces barriers for SMEs, may contribute to increased gender inclusivity in trade
Rapid rise of e-certificates in agriculture & food trade

Count of bilateral flows HS 6 covered by e-certification

Source: OECD estimates.

**Section I**: live animals, animal products (HS chapters 1-5); **Section II**: vegetable products (HS chapters 6-14); **Section III**: animal or vegetable fats and oils (HS chapter 15); **Section IV**: prepared foodstuffs, beverages, spirits and vinegar, and tobacco (HS chapters 16-24).
Does it matter?
Estimating trade effects of e-certificates

• Gravity model to quantify effects of electronic certificates on bilateral trade volume and value

• Among others, variation in bilateral trade volume or value is explained by:
  - Changes in tariffs and regional trade agreement participation
  - Two lag variables indicating the effects of e-certificates one and two years after their implementation

• 2007-2018 bilateral trade flows data at the six-digit level of the Harmonized System (HS6) from BACI database (CEPII)

• Electronic certification data was collected for this project from responses sent by several jurisdictions to the OECD Secretariat in August 2020

• More recent data would be nice to have
Export values increase from implementing SPS e-certificates – with a time lag

Source: OECD estimates.
Electronic certificates have a positive impact on bilateral trade value and strong market-creation potential.

Findings for vegetable products show value of central platforms:
- Leverage central platforms (such as the IPPC ePhyto Hub) to further decrease information asymmetry and trade costs.

Future research could focus on:
- Including more recent data when it becomes available.
- Assessing trade-off for SMEs between investing in e-certificates systems and benefitting from larger trade value revenue.

Estimating e-certificate trade facilitation
Challenges and conditions

- Digital technologies require careful planning, analysis, and investment
  - Technically complex process to adopt digital technologies within SPS systems
  - Existing systems must be mapped, and must remain operational during implementation
  - E-certification relies on country expertise and sustainable long-term funding

- Need for a clear and enabling legal framework
  - E-certification must have the same value as traditional paper certificates

- Capacity and capability to adopt digital technologies is mixed
  - Expertise and familiarity with digital tools (e.g. e-certification) is not always widespread
  - Sharing case studies and technical expertise can help

- Digital technologies can give rise to trust concerns regarding data
  - Countries and organisations must consider trust, privacy, and data security safeguards
This paper recommends that countries:

• Identify their automation needs within SPS systems and consider the appropriate expansion of digital tools

• Consider the elements needed to support this expansion, including:
  – Careful planning and analysis
  – Building capacity in the use of digital technologies
  – Accessing dependable long-term sources of funding
  – Interoperability and equivalence

• Examine the increased use of these technologies in response to COVID-19

• Continue to exchange best-practice guidance regarding the use of these digital technologies to develop a shared pool of expertise

• Examine the potential for further harmonisation between countries and international organisations using these technologies
THANK YOU