

# Digitalization for Safe Trade Facilitation: Driving transformation with SPS e-Certification

BRIEFING NOTE

## Paperless SPS Systems Count for Safe Trade Facilitation

In international trade, sanitary and phytosanitary (SPS) measures are essential to ensure that agricultural and food products meet safety standards to protect human, animal, and plant health. Traditionally, these measures have relied heavily on paper-based certification, which can be time-consuming, costly and prone to fraud. Moving to a paperless system revolutionizes this process, making trade safer, faster and more reliable.

Electronic certification – known as “eCert” – streamlines processes, reducing transaction times and costs, minimizing fraud, and enhancing the traceability of goods. It also supports environmental sustainability by reducing paper use and the need for physical document handling, as well as cutting border wait times that can reduce agri-food waste.

The WTO Trade Facilitation Agreement encourages the use of electronic documents and streamlined procedures by customs and other agencies, including SPS authorities. Work by the international standard-setting bodies (Codex, IPPC, WOH) recognized in the WTO SPS Agreement – and their members – is guiding the use of eCert in practice.

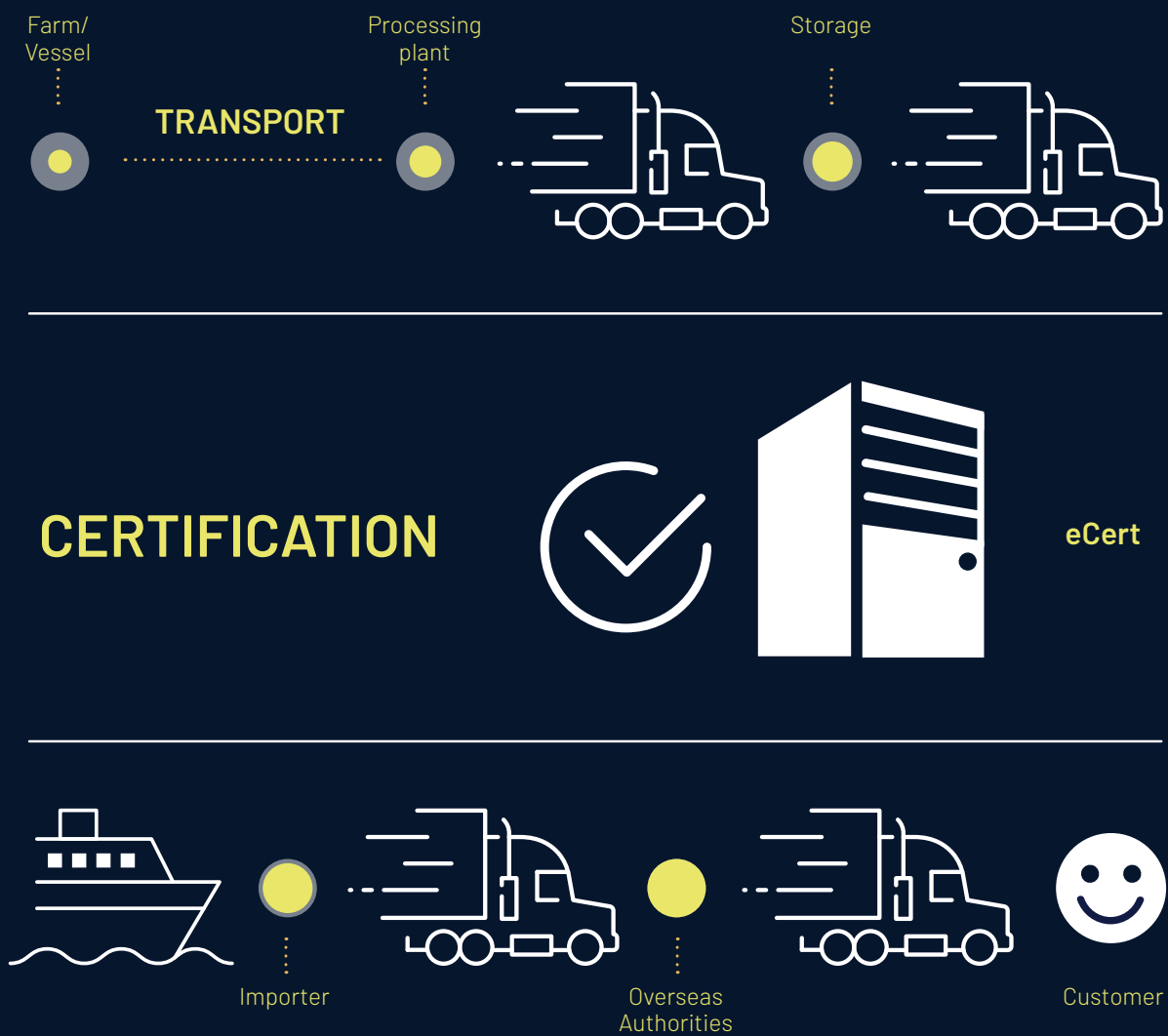
By integrating eCert, countries can enhance the safety of agri-food trade and reduce trade transaction costs. SPS eCert demonstrates that products meet sanitary and phytosanitary requirements of importing countries, thus protecting health and facilitating smooth, secure trade flows.

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*“ePhyto has been a game-changer for our trade processes. It not only accelerates transactions but also ensures a higher level of security and trust in our agricultural exports. As with the development of any automation system there are growing pains that require close collaboration with developers and with the lead agency for the national single window, Nepal, Department of Customs. We continue to engage with them to streamline issues as they arise.” Bhoj Raj Sapkota, Chief, Plant Quarantine and Pesticide Management Center, Nepal*

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## eCert at a glance\*



\*Ministry for Primary Industries, New Zealand

# DIGITALIZING SPS CERTIFICATES IN PRACTICE



## Plant Health: The IPPC ePhyto Solution

The IPPC ePhyto Solution enables the electronic exchange of phytosanitary certificates. Since its inception in December 2017, the ePhyto Solution has connected over 130 countries, with nearly 90 actively exchanging electronic phytosanitary certificates. This has streamlined trade processes, lowered costs, and significantly reduced fraudulent certificates. It has also shown the potential of digitalization to revolutionize the exchange of other types of SPS certificates for improved results and impacts.

A phytosanitary certificate is an official document requested by the importing country and issued by the exporting country's National Plant Protection Organization (NPPO). It certifies that plants or plant products are free from regulated pests and meet the importing country's phytosanitary requirements.

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## ePhyto: From Innovation to Scale

Launched in 2017, the STDF-funded ePhyto project piloted an innovative approach for the electronic exchange of phytosanitary certificates. In addition to setting up a Hub (harmonized exchange server) for the global exchange of ePhytos, the project developed a simple, off-the-shelf system (known as the Generic ePhyto National System or GeNS) for developing countries to produce, send and receive electronic phytosanitary certificates.

Led by the IPPC Secretariat, with diverse international organizations and the private sector, the STDF project demonstrated the feasibility and transformative potential of a digital approach. This has become a game-changer for international trade, as recognized in a trade facilitation innovation award from UNESCAP in 2019.

By clearly demonstrating the benefits of paperless trade, the project catalyzed additional resources from development partners, as well as the public and private sectors, to scale up the IPPC ePhyto Solution in developing countries. It also encouraged new work on SPS eCert, including a regional STDF project on eVeterinary certification.

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*"The STDF's leadership in the development of ePhyto is a key component of the World Bank's support to the full and effective implementation of the WTO Trade Facilitation Agreement in developing countries."* Shane Sela, Senior Trade Facilitation Specialist, World Bank





## Animal health: eVeterinary Certification (eVet)

While some countries have experience with eVeterinary certification, its use is relatively limited globally. Recognizing the potential of digital transformation to facilitate safe trade, the World Organisation for Animal Health (WOAH) convened a group of technical experts to develop reference data models and standards for the model health certificates in the Terrestrial and Aquatic Animal Health Codes for publication on the WOAH website. As countries move away from paper certificates, harmonized data standards for veterinary certificates will facilitate data exchange between trading partners.

### From Concept to Action: STDF's Support for eVet Certification

#### Piloting the Exchange of eVet Certificates in Latin America and the Caribbean

STDF's eVet project, launched in 2024 and led by IICA in collaboration with diverse public and private sector partners, is piloting a regional approach to harmonize and promote eVet certification that will ultimately enhance the efficiency and security of trade in animal products from the region. By developing a generic eVet certification framework, based on national single window principles, the project will streamline the exchange of veterinary certificates and promote best practices.

Find out more: [STDF eVet project](#)

### Learning About eVet Certification Globally

An STDF project led by WOAH from 2018 to 2020 increased knowledge and learning about the use of eVet certification globally. The work included an in-depth survey of regulators to understand eVet certification and national single window systems in 11 countries, and learning visits to selected countries in Africa, Asia and Latin America to gain deeper insight into each country's context, including challenges and opportunities. Compiled in a [study](#), the findings, recommendations and lessons have informed regional dialogue and work to digitalize eVet certificates, including STDF's eVet project in Latin America and the Caribbean.

Find out more: [STDF eVet Study](#)





## Food safety

Codex is actively involved in developing guidelines and frameworks for electronic certification to enhance food safety and trade efficiency. In 2021, the Codex Committee on Food Import and Export Inspection and Certification Systems (CCFICS) updated its Guidelines for Design, Production, Issuance, and Use of Generic Official Certificates to include guidance on the exchange of electronic certificates. The guidelines provide a standardized approach to paperless electronic certification, helping countries implement robust food safety controls and facilitate the smooth exchange of food products across borders. By harmonizing certification processes, these efforts contribute to safer global food trade and increased consumer confidence.



## SPS eCert: Leveraging Synergies for Stronger Results

Going digital with eSPS certification has helped SPS authorities to improve cooperation and synergies with other parts of government involved in trade, encouraging further trade digitalization that benefits traders and the private sector, with additional efficiencies and savings for governments.

In some countries, including Uganda and Sri Lanka, successful delivery of the ePhyto Solution has catalyzed governments to explore further digital solutions, including transitioning to ePayments. The integration of ePayments with eCert systems has streamlined the financial aspects of trade, enabling quicker and more secure transactions. This has resulted in significant time and cost savings for small-scale traders.

In Sri Lanka, a pilot led by ITC with other partners, is learning from the ePhyto experience to digitalize Certificates of Origin, which verify the country of manufacture of goods, in order to reduce trade processing times and costs. There is also growing interest in potential of eCert to transform the tracking and control of hazardous waste movements.

*“Collaboration with international partners has been key to the success of eCert initiatives, enabling us to overcome challenges and achieve significant improvements in trade efficiency and security.”* Philippe Isler, Director, Global Alliance For Trade Facilitation



## Moving Forward: Connecting SPS eCert with Broader Trade Digitalization

Experiences have shown that for maximum effectiveness, countries should move towards a whole-of-government approach to eCert. Implementation can be a stepwise process, starting with a pilot like ePhyto, to demonstrate proof of concept and learn, and refine the system based on national needs. This allows for gradual scaling, ensuring that the wider vision is clear from the outset, even as specific components are rolled out incrementally.

A whole-of-government approach involves integrating SPS eCert into existing trade digitalization systems like national single windows and customs systems, such as ASYCUDA. It also means linking eSPS certification to other digital certifications including certificates of origin and ePayments, as well as electronic permits and certificates (eCITES) that ensure compliance with the Convention on International Trade in Endangered Species (CITES). While more comprehensive systems can require significant time and resources to set up, the benefits in terms of efficiency and security are substantial.

## Ensure Interoperability for Longer-term Success

Interoperability is key to maximizing the efficiency and scalability of eSPS certification systems in global trade. While a GeNS system provides a practical starting point for countries to begin exchanging certificates in the short to medium term, ensuring that these systems can seamlessly integrate with other digital platforms is essential for sustained success. This approach lays the foundation for more streamlined, efficient and interconnected trade systems over time.

### Interoperability is encouraged by:

- Adoption of globally recognized international standards, like those set by the UN/CEFACT, to harmonize requirements.
- Use of structured and agreed-upon data formats, like the WCO Data Model, to ensure information is consistently interpreted across different systems.
- Linking to and integrating with existing systems from the planning stage through delivery.
- Capacity building and dialogue with developing countries to share good practices and support.

## Different Approaches for the Exchange of Electronic Certificates

- **Bilateral** exchange of certificates offers direct communication between national authorities of two trading partners, allowing for customized agreements and potentially faster implementation. However, this can be resource-intensive, requiring separate agreements and technical infrastructure for each trading partner, which can become complex and costly as the number of partners increases.
- **Multilateral** exchange, such as a Hub, streamlines processes by providing a single platform for multiple countries to exchange certificates, reducing the need for multiple bilateral agreements. This promotes harmonization and is especially beneficial for LDCs and countries with little experience on digital solutions. However, harmonizing certificates, standardizing procedures and developing global systems requires substantial time and efforts.

## Scaling up eCert Innovations for Greater Results and Impacts

Globally, the implementation of the IPPC ePhyto Solution has shown remarkable results, with over seven million ePhytos exchanged since 2017. Building on the success of the STDF pilot project, the Global Alliance for Trade Facilitation (GATF) and others have stepped in to scale up the results and leverage financing for more developing countries to benefit.

Thanks to this follow-on support, countries implementing eCert for plants and plant products have experienced significant benefits in terms of time and cost savings, illustrating how SPS eCert drives trade facilitation and efficiencies across diverse contexts.

## Measuring the Benefits of Going Paperless

The GAFT have put in place robust systems to measure the benefits and cost savings of its work to support the use of ePhyto. For instance:

- **In Zambia**, ePhyto has reduced the clearance time for certain products from 5-7 days to less than 24 hours.
- **In Morocco** ePhyto saved exporters up to four days and an average of US\$283 per container.

Other cost-benefit studies carried out by the GATF show the expected benefits of ePhyto for traders:

- **In Senegal**, the implementation of ePhyto is projected to cut processing time by three hours (a 39% reduction), resulting in savings of US\$57 per certificate.
- **In Ecuador**, the transition to ePhyto is expected to save exporters approximately 1.9 million hours and over US\$6 million annually.
- **In Fiji**, adopting ePhyto is estimated to reduce document processing times by 56% and save exporters around US\$6 per certificate.

[Find out more](#)



## eCert Works

- **Time and Cost Reduction:** Streamlined processes reduce the time and costs associated with trade.
- **Fraud Reduction:** Enhanced security measures significantly decrease instances of fraudulent certificates.
- **Increased Integrity:** Improved traceability and verification ensure the integrity of traded goods.
- **Environmental Benefits:** Reduced paper use and minimized travel lower the environmental impact of trade processes.
- **Inclusive Trade:** Drives inclusive trade, particularly benefiting Micro, Small and Medium-sized Enterprises (MSMEs) and women traders.

*“The journey towards electronic trade is not just about efficiency but also about ensuring the safety and integrity of our global food supply chains. eCert is a crucial step in this direction.”* José H. Urdaz, Manager Agricultural Health, Safety and Agrifood Quality Program, Inter-American Institute for Cooperation on Agriculture (IICA)

## ePhyto works in Morocco

Since exchanging its first ePhyto in April 2020, Morocco has become a leading user. Now, 80% of its agricultural exports use ePhytos, covering key markets like the EU and USA, which has transformed Morocco's agri-food trade, accounting for significant portions of GDP, exports, and employment. This shift has reduced delays (reduction of 82% in processing times) and saved money (US\$43 million annually). The trust built through ePhyto has laid the groundwork for more eCert in Morocco and inspired other countries in the region, including Cameroon, Madagascar and Senegal, to follow suit.

Source: [GATF](#)

*“Moving to an electronic system has improved data sharing between authorities. This has helped to facilitate trade, speed up border processes, and tackle fraud.”* Hamid Lachhab, Deputy Director, National Office for Health Security of Food Products, Morocco



## ePhyto: Learning from an External Evaluation

An external evaluation assessed the effectiveness, impact and sustainability of the STDF ePhyto project, and made recommendations to improve the ePhyto Solution and inform future initiatives and work on SPS eCert.

### Evaluation Takeaways

- Harmonization of certificates is crucial to implementing eCertification.
- Minor investments in digitization have catalyzing effects in trade facilitation.
- Developing countries' access and equipment challenges inhibit uptake.
- Private sector is interested, engaged, and willing to contribute to trade facilitation.
- eCertification: a rolling implementation is both possible and effective.

*"The ePhyto Solution resulted in SPS capacity, trade facilitation and environmental benefits and is a good example of STDF's role in driving catalytic SPS improvements in developing countries. It added significant security to the process of plant trade. The ease of movement of ePhytos facilitated trade including for NPPOs in least developed country contexts, and reduced trade transaction costs."*

Neil Pogorelsky, External Evaluator

[Find out more](#)

## Private Sector Drives the Success of Trade Digitalization

Partnerships with the private sector are essential to ensure that SPS eCert and digital systems align with industry needs to drive efficiencies and facilitate smooth trade operations. It also helps to leverage knowledge and resources that strengthens delivery, results and sustainability. Partnerships with the private sector engagement are encouraged by early and ongoing dialogue, and creating opportunities for industry to share advice and inform and influence decision-making throughout the process.

Private sector stakeholders quickly recognized the huge potential and benefits of digitalizing phytosanitary certification. Recognizing the expected time and cost savings, many businesses participated actively in the ePhyto Industry Advisory Group and contributed financially to support the implementation and operation of the IPPC's ePhyto Solution. This shows that when trade facilitation offers tangible advantages, the private sector is both willing and capable of contributing.

*"Governments and the private sector must collaborate on implementing eCertification for mutual benefit—ensuring a fast, secure system that guarantees timely access to high-quality food, seeds, and grains worldwide, meeting both food security needs and customer demand."* Rose Souza-Richards, Phytosanitary Affairs Manager, International Seed Federation (ISF)

## Connecting Globally Strengthens Results Locally

The STDF ePhyto project demonstrated the importance of dialogue and learning on SPS eCert across regulators, policymakers and practitioners. Building on this successful collaboration, STDF's Practitioner Group brings together experts from international organizations, government agencies and industry. This growing community includes Codex, CITES, FAO, GATF, IPPC, ISF, UNCTAD, UNECE/UNCEFACT, UNICC, World Bank, WCO, WOA, WTO and others.

**The future of eCert looks promising, with increasing adoption and continuous innovation. By embracing eCert, countries can enhance the safety and efficiency of their trade processes, ultimately contributing to global food safety and security.**

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*“The future of eCert hinges on our success with ePhyto—making trade safer, faster, and more affordable. Scaling up to animal health and food safety will enhance global trade, incomes, production, food security, and overall prosperity.”*

Sarah Brunel, Implementation and Facilitation Unit Lead, International Plant Protection Convention, IPPC Secretariat

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## KEY LESSONS

- **Governments:** Need to invest more in the technical infrastructure and capacity building to support SPS eCert.
- **Private Sector, Industry Associations and Traders:** Must engage with SPS eCert systems to leverage their benefits fully.
- **International Donors:** Should provide technical and financial assistance to developing countries to scale up the benefits of SPS eCert.
- **Gender and Environment:** Integrate gender and environmental considerations into the design and evaluation of SPS eCert systems to better understand the impact.

## KEY SUCCESS FACTORS

- Harmonization of requirements and processes.
- Readiness of countries to adopt digital solutions.
- Strong public and private sector engagement.
- Effective change management strategies.
- Continuous improvement.
- Clear and consistent communication among stakeholders.

## KEY RECOMMENDATIONS

- Continue investing in digital infrastructure to support SPS eCert.
- Foster international cooperation to harmonize standards and practices, including for agri-food commodities in transit.
- Encourage broader adoption of SPS eCert through awareness and training programs.
- Ensure the long-term sustainability of the SPS eCert system (financial and operational).

Visit the [STDF website](#) to learn more about eCert.

**MORE**



[www.standardsfacility.org](http://www.standardsfacility.org)

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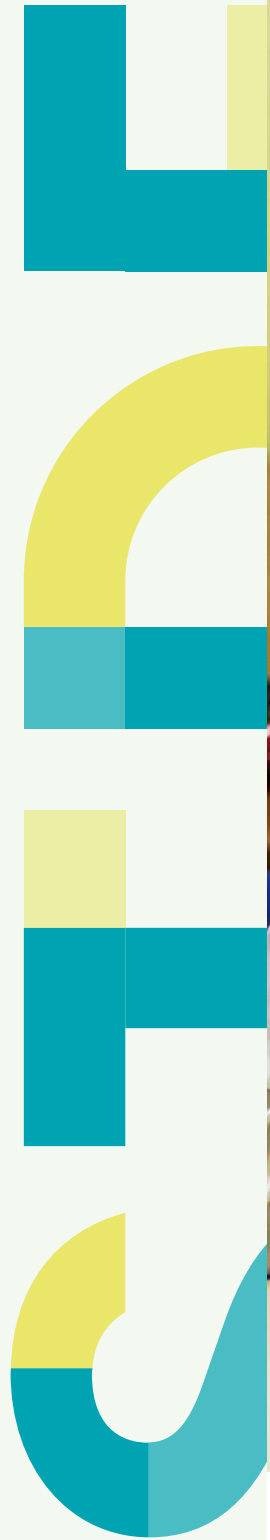


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