7.1 The IPPC ePhyto Solution − A Global IPPC Perspective

IPPC Regional Workshops 2023
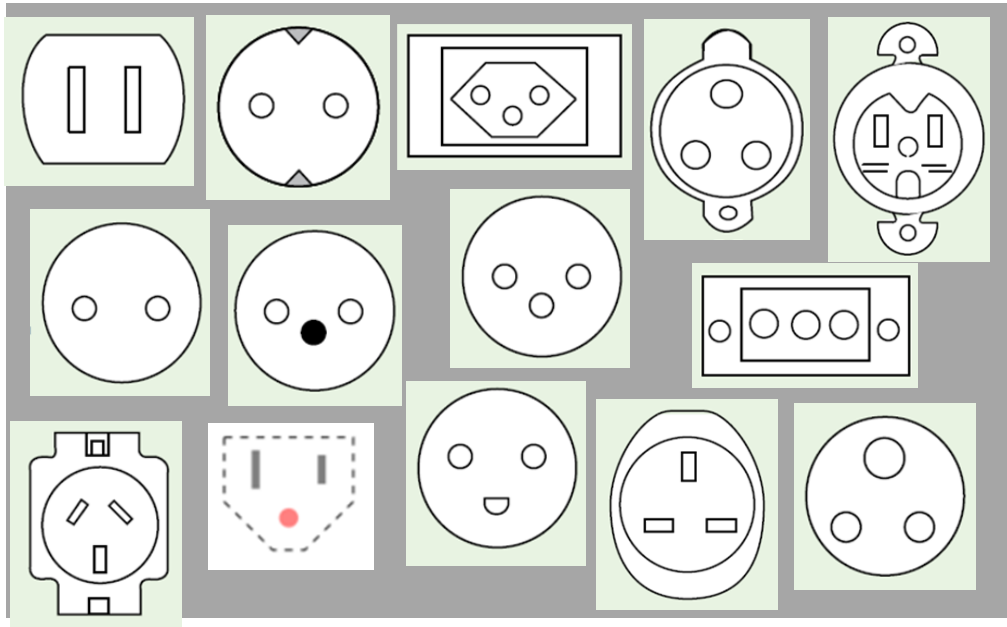
Do these look familiar? If you travel internationally, you know that having to change plugs can be
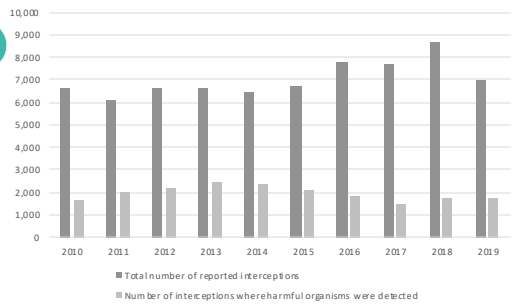
Why ePhyto?

Inefficient processes in place with paper certificates

- ❑ Risks being damaged, lost or faked
- ❑ Handled by numerous parties
- ❑ Costly re-issuance
- ❑ Deterioration of commodities waiting for clearance
- ❑ More problems with non-compliant documents than actual plant health issues -see graph opposite
- → **Time, money and increased risks of spreading pests**

→ **Electronic certification more efficient**

Overview of EUROPHYT* interceptions of plants and other objects imported into the EU

■ Total number of reported interceptions
■ Number of interceptions where harmful organisms were detected

* EUROPHYT - European Union Notification System for Plant Health Interceptions

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We have inefficient processes in place with phytosanitary certificates in paper form and this has a significant impact on safe trade, trade flow and trade cost, because:

- Risks being damaged or lost or faked and this often causes delays in the delivery of products and increase the risks of spreading pests and diseases
- Paper certificates are handled by numerous parties, meaning labour intensive and highly manual, with physical paperwork being transported by land, sea, air or mail. [For instance, millions of emails sent – in the grains industry alone more than 275 million emails are sent annually to process the estimated 11,000 shipments of grain transported on the ocean worldwide.]
- Any re-issuance of a paper PC has a tremendous cost for business, with expensive paper printed, stored or destroyed each year
- Deterioration of perishable commodities waiting for clearance
- It should also be noted that in some cases there are more problems with mistakes in the paper certificates than there are pests or diseases on the actual products! See the graph from EUROPHYT showing that non-compliant documents trigger a higher number of import rejections than actual plant health issues (harmful organisms) ≈ if you compare the dark blue and light blue colors, more than 2/3 of interceptions are not actual plant health issues (non-compliant documents, …). Therefore, harmonization of phytosanitary certificates is key to avoid non-

compliant documents or reduce the risk of non-compliant documents. We will see in a few moments that harmonization is a key element of the ePhyto Solution.

- *["The statistics on interceptions made by the EU and Switzerland of harmful organisms in imported plants and other objects, provided by the European Union Notification System for Plant Health Interceptions (EUROPHYT) show that there are more problems with non-compliant certificates than there are with actual pests found in the shipments."]*
- **In conclusion, paper phytosanitary certificates are not the most efficient way for certification as it costs time and money and the risk of spreading plant pests is high**

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Article IV of the Revised Convention

1. Each contracting party shall make provision, to the best of its ability, for an **official national plant protection organization** with the following main functions:

Article IV of the Revised Convention (Continued)

2. (a) <u>the issuance of certificates</u> relating to the phytosanitary regulations of the importing contracting party for consignments of plants, plant products and other regulated articles (hereinafter referred to as "phytosanitary certificates");

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Improving Safe Trade in Plants and Plant Products

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ISPM 12 1.2

- <u>Phytosanitary certificates can be in</u> paper form or, where it is accepted by the NPPO of the importing country, in <u>electronic form</u>.

- <u>Electronic phytosanitary certificates are the electronic equivalent of the wording and data of phytosanitary certificates in paper form</u>, including the certifying statement, transmitted by authenticated and secure electronic means from the NPPO of the exporting country to the NPPO of the importing country. Electronic phytosanitary certification does not constitute text processing or other electronic generation of paper forms, which are then distributed non-electronically. Nor is it the transfer of an electronic version of the paper certificate (e.g. through e-mail).

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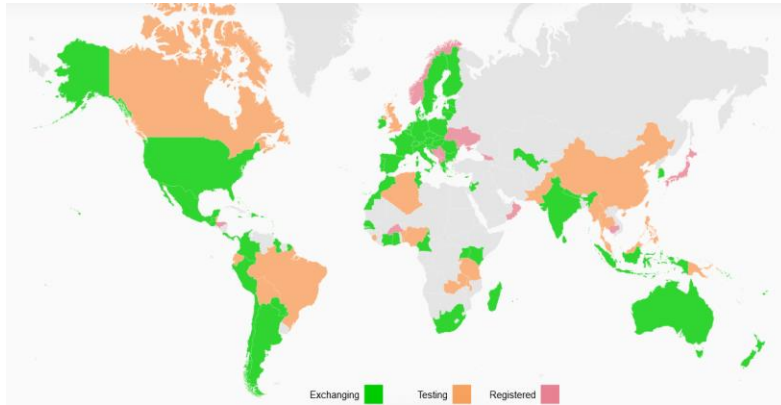
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Some figures on the IPPC ePhyto Solution

**126 countries onboard:**
- **Registered: 9**
- **Testing: 39**
- **Live: 78**

Exchanging Testing Registered

Data from www.ephytoexchange.org as per June 2023

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126 countries involved in the system in total either only registered, or testing or in
production mode (live)

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Some figures on the IPPC ePhyto Solution

Summary of the certificates successfully exchanged through the HUB

Total Live Exchanges: 3,914,071

Total Test Exchanges: 292,563
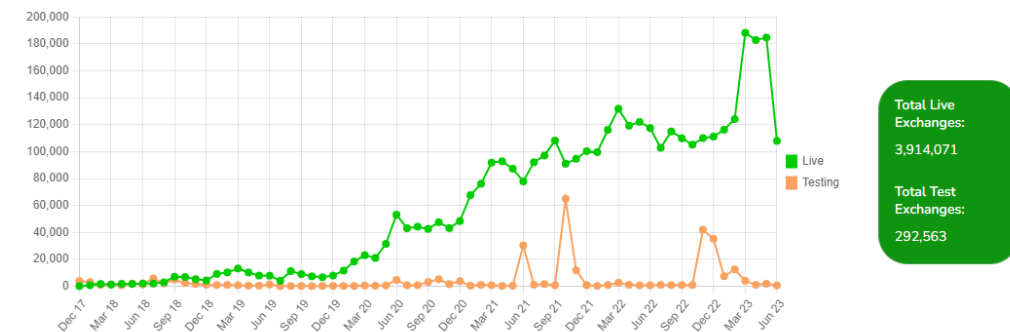
The system is increasingly handling over 125,000 certificates *per month*, with the capacity to handle (in the current configuration) up to 100,000 certificates *per day*   Data from www.ephytoexchange.org as of June 2023

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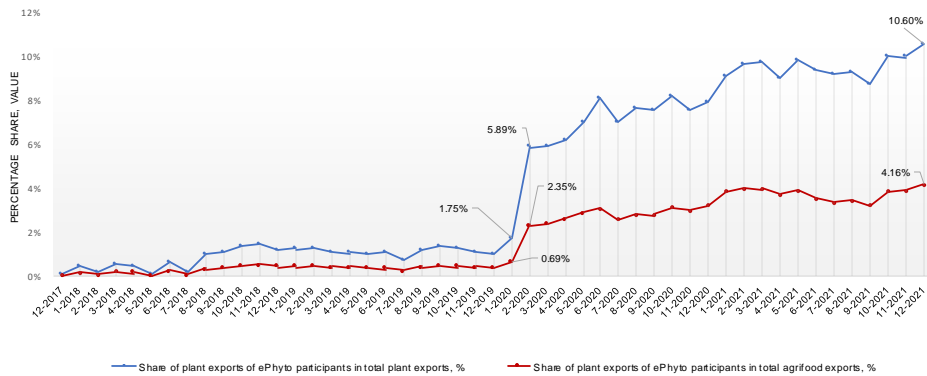International Plant Protection Convention

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- More than 3.9 million certificates exchanged as of today since the inception of the Hub.
- The number of ePhyto certificates has increased significantly between 2018 and 2022, with strong growth recorded between January and March 2020 in particular. The outbreak of the Covid-19 pandemic may have driven this increase

[There is an implication that Covid-19 provided an increase in the use of ePhyto as there was a big jump in use. The EU also came onboard as well during that time, but only two member states were using at that time. As a result there was a definite relationship between the uptake of ePhyto and the Covid -19 pandemic.]

Monthly Value share of plant exports that require ePhytos from countries that issue ePhyto certificates

In this slide, it is important to note that at present only about 11% of all trade in plants and plant products is done using ePhyto. With the expected additions of China, Japan, the UK and Canada in the near future these numbers should see a big increase.

- The value of plant exports from ePhyto participants increased sharply at the onset of the Covid-19 pandemic, with the value increasing by 225 percent between January and February 2020 (from 1 billion USD in January to 3.2 billion USD in February 2020)

- With an acceleration in the use of ePhytos in 2020/21, the value of plant exports from ePhyto participants grew by 682 percent from 1 billion USD

in January 2020 to 7.8 billion USD in December 2021.

- The value of plant product exports from countries that issue ePhyto certificates has also increased significantly, with over 4.8 billion USD recorded in 2018 to over 79 billion USD by the end of 2021.

- In 2021 only 10.6 percent of the value of plant exports requiring phytosanitary certifications was covered by the ePhyto solution, meaning there is scope for expanding country participation in the use of ePhyto

Results from an unpublished study (1/3)

- **Cost of sending documents:** In the paper-based system, each rejection requires exporters to disburse an average of EUR 88. These costs have been eliminated with the implementation of the ePhyto.

- **Cost of penalties for late delivery:** 46 percent of the sample had reported incurring such costs when the paper-based system was in place compared to 8 percent in the paperless system. The total average value of penalties paid by exporters for shipment is EUR 2,200. Our survey suggests that these rejection-related penalties have been eliminated except on rare occasions.

Cost of sending documents: In the paper-based system, whenever a PC was rejected at the point of entry, importers and exporters had to exchange documents via express mail. 71 percent of exporters reported having to pay for these types of costs. Each rejection requires exporters to disburse an average of EUR 88. In some cases, it was sufficient for exporters to send a scanned copy of the replacement certificate by email to the importer, which could explain part of the remaining 30 percent of respondents. These costs have been eliminated with the implementation of the ePhyto.

Cost of penalties for late delivery: Occasionally, exporters must pay financial penalties for delivering goods past a certain date. These costs are not necessarily incurred for every delay. 46 percent of the sample had reported incurring such costs when the paper-based system was in place compared to 8 percent in the paperless system. The amount paid in penalties is defined by the sales contract agreed between the buyer and seller. In one case, a respondent reported the amount of the penalty at $1/1,000^{th}$ of the value of the goods for the first three days of delay after the agreed date of delivery. The total average value of penalties paid by exporters for shipment is EUR 2,200. Our survey suggests that these rejection-related penalties have been eliminated except on rare occasions.

Demurrage costs: Depending on the length of the delay, exporters may also have to pay demurrage charges**.** Normally, the shipping line allows the client to a certain number of free days before they charge for demurrage. The total costs amount depends on the service provider, the size and type of loading unit used for transporting cargo. Temperature-sensitive goods such as fresh fruits and vegetables often require refrigerated containers (or reefers) to preserve the quality of the goods during transit. Shipping lines usually charge higher demurrage costs for reefers compared to dry containers. 40 percent of respondents in our sample reported incurring such costs in the prevailing paper-based system, with an average total cost of EUR 300 per occurrence. These costs related to a phytosanitary rejection have largely been eliminated with the ePhyto.

Storage costs: When the clearance of the cargo is delayed, it may need to be stored at the port terminal or at a bonded warehouse outside the port area. The pricing structure of storage depends on the provider, the length of the storage period and the type of loading unit that need. The storage costs of refrigerated containers– for fresh produce, for example– will be more expensive than dry containers. In our sample, only 30 percent of respondents reported incurring these costs when a shipment is delayed. The average additional cost of storing cargo amounts to EUR 91

for each occurrence. Like demurrage, these costs have also been eliminated

Results from an unpublished study (3/3)

- **Total costs:** With all the considered costs in our analytical framework, we estimate phytosanitary certificate rejections to add EUR 360 per exported container of perishable goods, EUR 60 per container of non-perishable goods. With the introduction of the ePhyto, we estimate the average indirect costs of phyto rejection delays to have decreased to EUR 14 per container for perishable goods, and 2 EUR per container for non-perishable goods.

- Extrapolation of the impact of the ePhyto for the private sector and applying the results expressed on a per certificate and per consignment basis and the number of certificates issued annually by the NPPO, total savings generated by the ePhyto are estimated to be **USD 37.4M** and **USD 43.2M** for 2020 and 2021 respectively. The year-to-year variation in savings being explained by the increase in the number of phytosanitary certificates issued.

Total costs: With all the considered costs in our analytical framework, we estimate phytosanitary certificate rejections to add EUR 360 per exported container of perishable goods. This amount is significantly lower for exporters of non-perishable goods. Instead, these exporters face an additional cost of EUR 60 per container. With the introduction of the ePhyto, we estimate the average indirect costs of phyto rejection delays to have decreased to EUR 14 per container for perishable goods, and 2 EUR per container for non-perishable goods..

Using a back-of-the-envelope approach to extrapolate the impact of the ePhyto on time and cost savings for the private sector on an annual basis and applying the results expressed on a per certificate and per consignment basis and the number of certificates issued annually by the NPPO, total savings generated by the ePhyto are estimated to be **USD 37.4M** and **USD 43.2M** for 2020 and 2021 respectively. The year-to-year variation in savings being explained by the increase in the number of phytosanitary certificates issued.

RECENT IPPC ePHYTO SOLUTION ENHANCEMENTS

eSignatures/eSeal

What is an electronic signature?
An electronic signature (e-signature) refers to data in electronic form attached to or logically associated with other data in electronic form and which is used by the signatory to sign.

Due to EU regulation, any country wishing to trade with EU Member States using the ePhyto Solution needs to have the ePhytos signed digitally or have a digital seal.

UNICC works with NPPOs and certification providers to facilitate compliance.

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FUTURE PLANS

- CPM Focus Group on Sustainable Funding for ePhyto
  - Seeking short, medium, and long term funding solutions
- Translation into other languages (GeNS)
  - **French** and **Arabic** versions are live, **Spanish soon!!**
- Routine maintenance and enhancements
  - Channel enhancements
  - ePayments
- Continued collaboration with non-phytosanitary agencies/organizations (OIE/Codex/Others)
  - NPPO workshops with the ePhyto Industry Advisory Group (IAG)
  - Ongoing projects with the Global Alliance for Trade Facilitation and World Bank
- Linkage to other government/non-government systems (Single Windows, Customs, ASYCUDA, Blockchains (Covantis, eBills of Lading, etc.)

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COLLABORATION

The IPPC Secretariat is working with a number of international organizations and groups to make the ePhyto Solution a trade facilitation tool for any country (or organization) wishing to use it. These include:

- The Global Alliance for Trade Facilitation of the World Economic Forum
- The ePhyto Industry Advisory Group
- The Standards and Trade Development Facility
- The World Bank and International Finance Corporation
- The World Customs Organization

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Joining the IPPC ePhyto Solution – National System

- **If you have a national e-Phyto system**, you should ensure that the pre-requisites are met before registering to participate in exchanges through the Hub (available at this link): *https://www.ephytoexchange.org/landing/hub/index.html*.
- If your country meets the listed pre-requisite criteria, you can request registration for participation on the Hub by following the link: https://www.ephytoexchange.org/onboard.
- Once the request for registration is submitted online, an automated message will be sent to the country IPPC official contact point (OCP*), . The message will request the OCP to verify that the person requesting registration is authorized as an administrator for connecting the national system to the Hub and will also contain information on how to confirm registration.
- When a response confirming the authorization has been received by the United Nations International Computing Centre (UNICC), specific instructions on connecting to the Hub will be provided to the administrator by UNICC.

Joining the IPPC ePhyto Solution – GeNS

- **If you do not have a national ePhyto system,** then you may avail of the GeNS in order to initiate your registration to the GeNS. The onboarding (Customization) Document is available at this link: https://www.ephytoexchange.org/landing/gens/index.html and will be sent to Christian Dellis, IPPC Technical Project Manager (christian.b.dellis@usda.gov) for review.

- The completion of this onboarding document is lengthy and requires specific, detailed information, which will take considerable time to complete. Please allow for sufficient time and resources to complete the process sucessfully.

- Once the onboarding document is finalized, it will be forwarded to the UNICC and will take approximately one week to have your country account set up in the GeNS. Once your account is set up, your country will be registered in the Hub. Please make sure to review and complete the implementation check list prior to using the GeNS.

www.ephytoexchange.org

How to join, technical documentation, case studies and other information.

Thank you!!