

Launching the Future: The IPPC ePhyto Solution Project

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Craig Fedchock, IGTC Innovation Emissary

Beginnings

- A few key trading countries were developing their own digital systems at the turn of the century, among them:
  - Netherlands – The CLIENT system
  - New Zealand – Secure Method of Information Exchange (SMIE)
  - USA – Phytosanitary Certificate Issuance and Tracking (PCIT)
- There were two primary **transmission mechanism** options**.** They are referred to as **point to point** and **single point (**transmission control protocols or TCPs)
- This needed to be resolved

Next Steps

- The IPPC Secretariat conducted a Global ePhyto Feasibility Study in 2013
- The study's 2014 conclusions were:
  - All IPPC contracting parties should accept and use the same transmission control protocol (TCP).
  - NPPOs should harmonize operating or business rules, and further harmonize codes, terms and schema
  - The IPPC develop a hub as a means of widely implementing the harmonized business rules and transmission protocols.
  - Develop a scoping document for an IPPC sponsored hub.

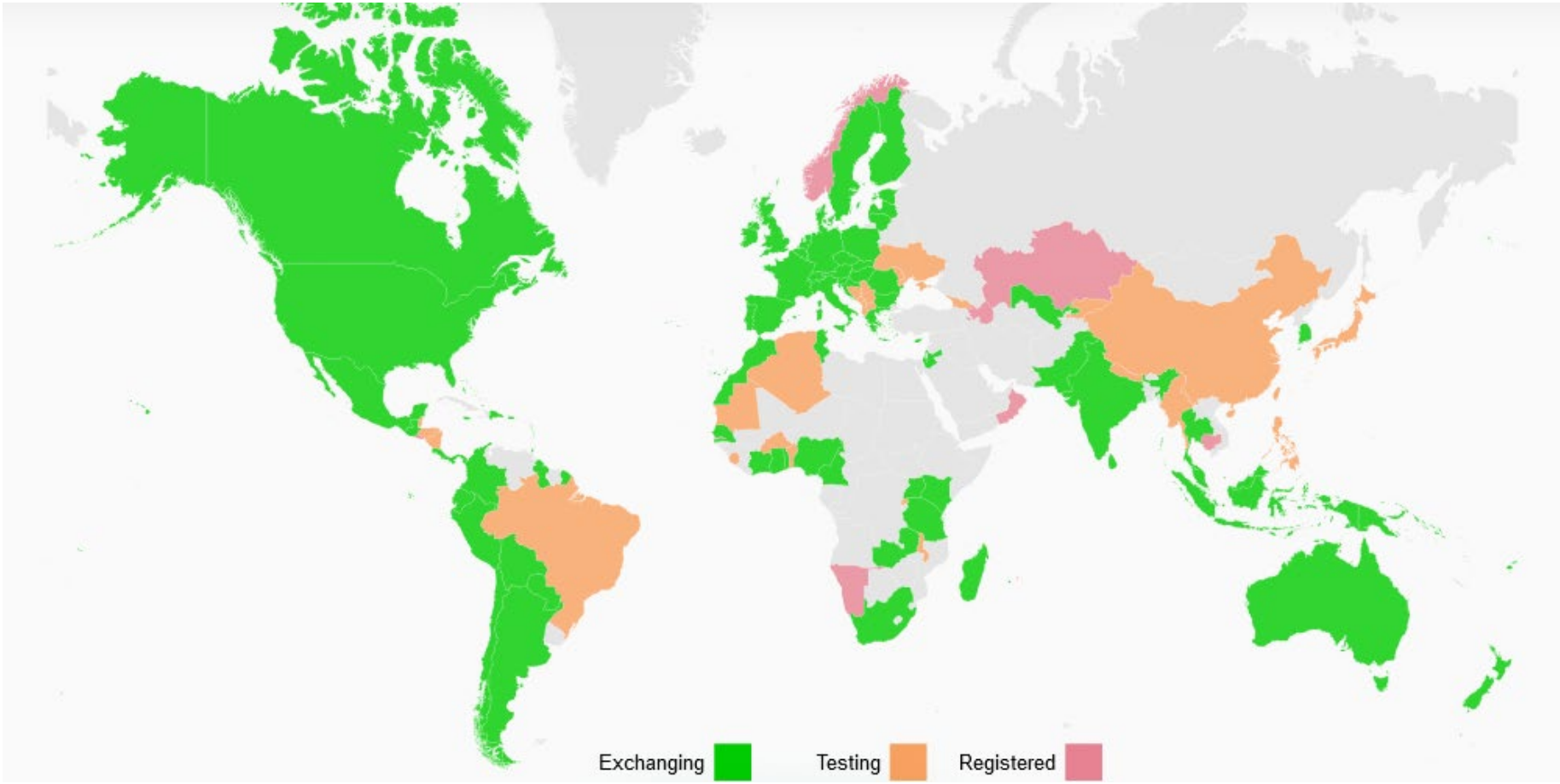
Next Steps (continued)

- The IPPC Secretariat applied for and received a US$1.1 million project grant from the Standards and Trade Development Facility (STDF) in December 2016 and contracted with the United Nations International Computing Centre (UNICC) to build the Hub.
- March 2017, technical developments were completed, allowing for the Hub piloting effort. Nine countries joined the pilot in October 2017 by connecting their existing national systems to the Hub.
- In January 2018, the IPPC and UNICC finalized a contract to develop the web-based Generic ePhyto National System (GeNS) for countries without their own national system

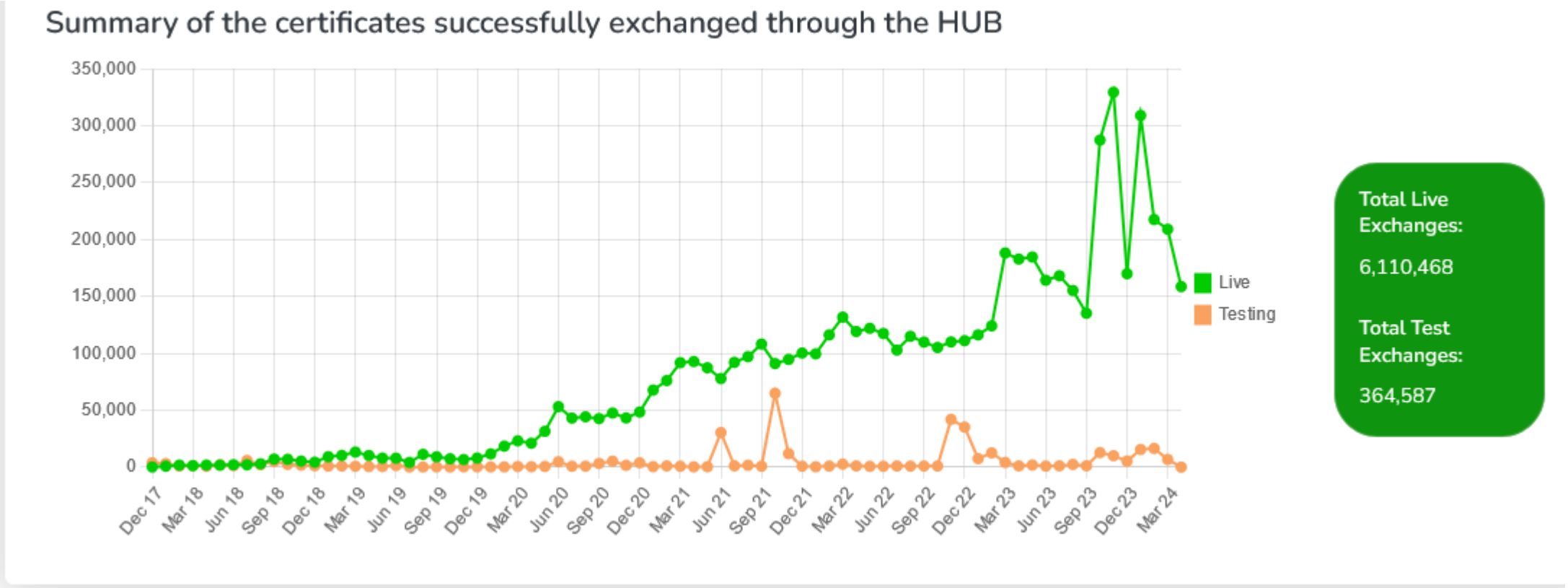
And Finally

- On 15 June 2018, the IPPC ePhyto Hub component of the ePhyto Solution was launched in full production.
- The GeNS component of the ePhyto Solution was opened to all interested IPPC contracting parties as of 15 July 2019
- The onset of the Covid19 pandemic in early 2020, as well as the connection linking EU TRACES NT to the ePhyto Hub significantly boosted the development and uptake of the ePhyto Solution
- The STDF project concluded with a complete build of the Hub and the GeNS in April 2020 under budget!

ePhyto today



ePhyto today



Total Live Exchanges:

6,110,468

Total Test Exchanges:

364,587

ePhyto today

- 133 countries registered
- 90 countries actively exchanging, although it is not clear exactly how many are truly exchanging
- More than 6 million certificates successfully exchanged through March
- Not sustainably funded
- Not all countries have a legal framework to allow for digital exchanges

ePhyto today

- Only one certificate (phytosanitary certificate) being exchanged
- Only available in three of the six FAO languages (Russian, Spanish and Chinese not yet available)
- Developing and less developing countries need assistance to implement
- BUT, it works and works well. Countries like Morocco, Ecuador, and Jordan report significant cost savings through digitalization (as much as US$40 million per year) (https://www.tradefacilitation.org/project/measurable-agri-food-trade-efficiencies/)

ePhyto today

Cost	Who pays/saves	Savings or additional cost
Cost of obtaining the certificate	Exporters	Savings *Transport costs for the certificate*
Costs associated with delays or reissues of certificates	Exporters	Savings *Reissue costs and/or storage, demurrage and power costs while the shipment waits*
Administration printing costs	Administration	Savings *Printing certificate forms*
Setup costs for ePhyto	Administration	Additional cost
Operational costs	Administration	Additional cost
Greenhouse gas emissions associated to reissues of PCs	Society	Savings

FAO country level analyses are being undertaken to assess how ePhyto can decrease trade costs in Serbia, Egypt, Uzbekistan, and Ukraine.

Preliminary results for Egypt show that switching to ePhyto could save:

- Around USD 80 per shipment/certificate, mostly from risks and costs associated with delays and/or reissues of the phytosanitary certificate;
- Over USD 2 million per year (using 2022 export volumes and current ePhyto users) for citruses and potato exporters.

Results for Serbia showed that switching to ePhyto could save USD 9 per shipment for fruit exporters.

Hub Pre-requisites

If you have a national ePhyto 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.

Hub Pre-requisites

For a country to participate in the Hub it is mandatory to have the capacity to produce electronic phytosanitary certificates (ePhytos). Countries having their own national system that produces ePhytos but not exchanging electronic certificates with other countries or countries that are already undertaking point-to-point exchanges can participate in the Hub.

The participation of the National Plant Protection Organization (NPPO) is validated by the Official IPPC Contact Point of the Contracting Party.

Hub Pre-requisites

The national system needs to have at least the following functionality:

- Enter phytosanitary certificate data electronically
- Produce phytosanitary certificates (ePhytos and/or paper)
- Send ePhytos
- Store of electronic phytosanitary certificate data
- Receive ePhytos
- Decrypt ePhytos
- Validate the structure of the ePhyto message
- Read/view/print/produce pdf of ePhytos

Hub Pre-requisites

Once registration has been confirmed, the NPPO representative will receive all relevant on-boarding documents such as the onboarding guide and the web service Application Programming Interface (API) document.

GeNS Pre-requisites

The GeNs is a centralized web- based system that allows countries without their own system to produce, send and receive ePhytos through the ePhyto Hub.

Before registering to use the GeNS the IPPC Secretariat recommends for the participating country to consider the elements listed below to form a project discipline to ensure effective implementation of the GeNS.

The IPPC Secretariat encourages interested countries to review the following:

- IPPC Guide to Implementing the GeNS
- IPPC Guide de mise en oeuvre GeNS
- Implementation Check list
- Liste de contrôle pour la mise en place
- All technical documents uploaded on the IPPC ePhyto Landing page

GeNS Pre-requisites

Countries interested in utilizing the GeNS are requested to complete the on-boarding document (version française) followed by the submission of a letter to the IPPC Secretariat (ippc@fao.org) expressing interest to use the GeNS. The IPPC Secretariat will follow up with further instructions.

VERY IMPORTANT – PART 4

The GeNS is an IT system based on 'web-technology'; the users of the system do not need any specific IT setup on their computers. The information gathered will help the IPPC in determining the best set-up needed for each NPPO. These questions cover the configuration of computers used by NPPO officers, and inspectors who will use the GeNS.

The questions in this section will determine these 4 aspects:

1) Computer setup within the NPPO.
2) Connectivity and access to the internet from the NPPO's office(s).
3) File sharing capability within the NPPO Office(s).
4) General IT support and management

ePhyto Short Term *Possibilities*

- Keep working on national single windows systems, but in the interim use ePhyto GeNS
- Pursue piloting of other certificates, even on a limited basis, to further prove the concept on things such as eVet
- Sustainably fund ePhyto
- Mobile application

ePhyto Long Term *Possibilities*

- Linkages to other systems, both public and private will further enhance the positive impact on trade
- Explore new solutions through the AI and Big Data to build better standards and products for IPPC contracting parties (this could include analysis to improve additional declarations, build technically sound commodity standards, etc.)
- Establish partnerships with the other SPS “Sisters” initially, and then with other organizations that use paper certificates to negate having to duplicate efforts in building an ePhyto-like system
- Encourage and engage the private sector to digitize all trade documentation – not just eCert, but eDocs.
- Especially work with the banking system to figure out a way to eliminate the need for a paper phyto to get a letter of credit

What is it going to take?

- Open minds and ability to change
- Overcoming bureaucracy and distrust between government and the private sector
- *Coordinated* assistance to developing and less developed countries – competing aid agencies MUST figure out ways to work together