REPORT

Incheon City, Republic of Korea

9-13 November

Second Global Symposium on ePhyto

November, 2015

Food and Agriculture Organization of the United Nation

CONTENTS

Executive Summary 4
Concluding remarks by the Chair of the IPPC ePhyto Steering Group 5

Report 7
1. Opening of the Symposium 7
   1.1 Welcome address – Republic of Korea 7
   1.2 Opening address – IPPC Secretary 7
   1.3 Opening address - CPM Chair, Dr Khu-Ock Yim 7
   1.4 International year of Plant Health 7
   1.5 Local and logistical information 8
2. ePhyto Overview 8
3. ePhyto technical details 8
4. Regional PPO – Situation updates 10
   4.1 Analysis of ePhyto Survey Results 10
   4.2 EPPO/NEPPO 10
   4.3 NAPPO 11
   4.4 COSAVE/OIRSA/CAN 11
   4.5 APPPC/PPPO 11
   4.6 IAPSC 12
5. Presentations from other organisations 12
   5.1 ASEAN 12
   5.2 CITES 13
   5.3 UNICC 14
   5.4 UNCTAD/ASICUDA/ASYCER 14
6. Industry Presentations 14
   6.1 International Seed Federation 14
   6.2 International Grain Trade Coalitions 15
   6.3 Canada Wood (Forest Products) 15
   6.4 Electronic documentation services 16
   6.5 essDOCS State of eDocs in Agri Market 16
   6.6 STDF 16
   6.7 Union Fleurs (Cut Flower trade) 17
7. Country Presentations 17
   7.1 Republic of Korea 17
   7.2 Argentina 18
   7.3 New Zealand 18
   7.4 The Netherlands 18
   7.5 Kenya 19
   7.6 United States of America 20
   7.7 Chile 20

7.8 Ethiopia 20
7.9 Japan 21
7.10 China 21
7.11 European Union 22
8. Notes from Working Groups discussions 22
8.1 Efficient engagement of industry in future ePhyto development 22
8.2 Pilot of ePhyto IPPC Hub (UNICC) 22
8.3 Experience with electronic documents and exchange 23
8.4 Pilot of the IPPC generic national ePhyto system 23
8.5 How to sustain ePhytos after piloting in countries 23
8.6 Establishment of cost recovery for sustainability of ePhytos 23
8.7 Harmonisation – schema and mapping 24
9. Discussion 24
9.1 Global readiness survey 24
9.2 Pilots – Hub and Generic national system 24
10. Outcomes of the Working Group 25
11. Close of the Symposium 25
11.1 Final remarks 25
11.2 Comments from the CPM Chair 25
12. IPPC ePhyto Steering Group meetings associated with the global symposium 26
12.1 Pre-symposium meeting 26
12.2 Post-symposium meeting 26

Executive Summary

[1] The symposium was attended by over seventy representatives from all areas of the world from regional plant protection organizations, other international organisations, national plant protection organizations, plant industry representative organisations (including the seed, grain, timber and flower industries) and businesses managing commercial trade documents electronically. The participants provided updates on their use of phytosanitary certification procedures with paper and electronic phytosanitary certificates (ePhytos), and shared their experiences, positive and negative, on the development of ePhyto. The workshop was managed by the IPPC ePhyto Steering Group (set up to provide oversight, guidance and advice on IPPC efforts to facilitate the international exchange of electronic phytosanitary certificates), the IPPC Secretariat and the QIA of the Republic of Korea.

[2] The functions and qualities of an ePhyto system were discussed. These included:

- a safe system for the exchange of official certificates;
- increased possibilities for risk management;
- confidentiality and security;
- authenticity and accuracy of certificates;
- improved records management and trade logistics ;
- compliance with national laws;
- reductions in costs, lead times, error rates and fraud;
- lowered risk of document loss;
- management of payments;
- faster production of certified copies.

[3] The requirements needed by many NPPOs to institute ePhyto included:

- political support;
- a cost benefit analysis;
- reforming of the legal framework, particularly for the use of ePhytos in the import system;
- appropriate institutional financing;
- institutional capacity with competent skilled personnel;
- the necessary infrastructure.

[4] The benefits of an ePhyto system included:

- greater efficiency and convenience in service delivery with time savings for industry;
- improved communication between NPPOs;
- more efficient planning for the inspection of regulated articles;
- quicker production of replacement certificates;
- improved security with reduced fraud;
- reduction of data entry and validation functions;
- reduced costs regarding printing, shipping, sorting, distribution, and archiving;
- possibilities for linkages with the Customs “single window” initiative.

[5] Some of the challenges of changing to an ePhyto system discussed were:

- harmonisation of mapping and codification;
- problems with re-export;
- the lack of technical support;

- the legal requirement to use paper phytosanitary certificates;
- non-uniform codes;
- the revision of the SPS standard;
- implementation and security at the exchange of data;
- the taking into account of stakeholder interests such as the development of systems to replace the need for hard copy PCs to back up customer transactions with financial organisations;
- the considerable investment to deal with non-standard data requirements (updating, outages, support issues etc);
- the need for capacity development in some countries.

[6] In short, more harmonisation is needed and support for countries to join ePhyto.

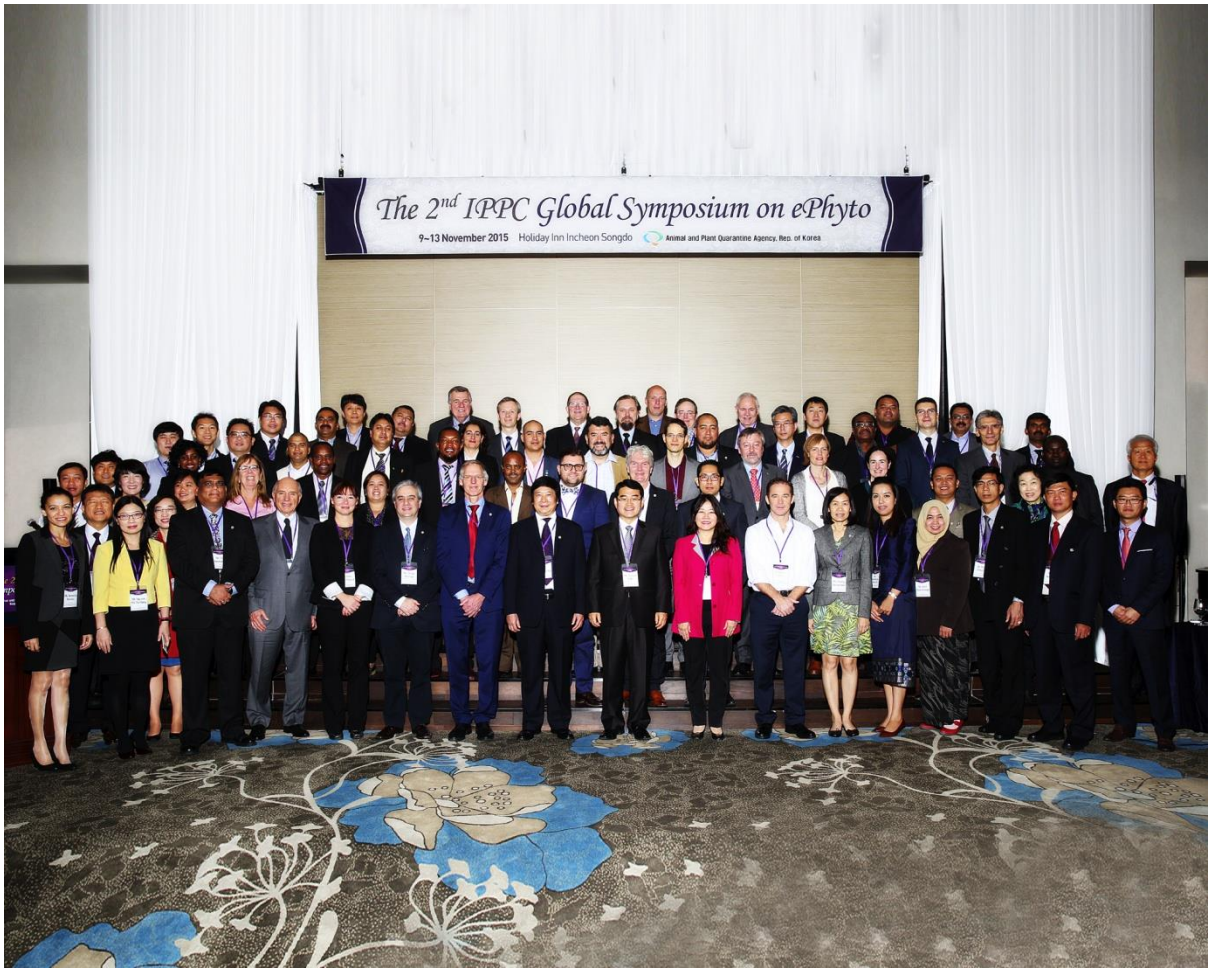
[7] Essential for worldwide exchange of electronic phytosanitary certificates in trade between countries is global harmonisation. This is exactly what the IPPC is achieving with their ePhyto initiatives. The basic harmonisation of ePhytos has already been achieved by the IPPC by adoption of Appendix 1 in the standard on Phytosanitary certificates (ISPM 12). Further harmonisation will be the objective for the near future, further harmonising the format and content of the ePhytos and further harmonising the exchange of ePhytos between countries. With this harmonisation the global use of ePhyto instead of paper phytosanitary certificates will get an enormous boost in the coming years.

[8] The IPPC is currently also working on setting up a global hub for the harmonized exchange of ePhytos worldwide. This will include appropriate authentication and security. The IPPC is also setting up generic national systems to produce and receive ePhytos, especially for those countries that have not developed their own national system for these functionalities. This will greatly facilitate the developing countries to join these ePhyto developments. The STDF has approved a project for setting up a hub and generic national system, thereby providing funds to start this in the coming year. A readiness survey, which assesses the capacity, quantitatively and qualitatively, of a country to take part in this pilot ePhyto project has been designed and tested and will be used to select countries for the pilot project involving some 8-10 countries.

[9] The ePhyto Steering Group has recommended a work programme that includes a smooth start-up of the STDF project, selection of countries to join the pilot of the hub and the generic national system, awareness raising by a regional workshop for the regions Africa and the Near-East, Newsletters, fact sheets and a general presentation.

Concluding remarks by the Chair of the IPPC ePhyto Steering Group

[10] The symposium has been an excellent opportunity to increase understanding and awareness of ePhyto amongst phytosanitary officials from a wide range of countries and representatives from international organizations and industry. Experiences from all over the world were shared and lessons learned exchanged. Also the concept of the hub and the generic national system and the differences between the two was explained and better understood by many participants. The symposium was a very good starting point for further development and harmonisation of ePhyto and for the STDF project to set up a hub and generic national system. These two systems can now be developed and piloted and will give an enormous boost to the global use of ePhyto both by developed and developing countries, thereby facilitating trade. This symposium marks an important change to global implementation of ePhyto.


The 2nd IPPC Global Symposium on ePhyto
9~13 November 2015 Holiday Inn Incheon Songdo
Animal and Plant Quarantine Agency, Rep. of Korea

REPORT

1. Opening of the Symposium

[11] Mr Craig Fedchock, facilitator for the first day, introduced the members of the ePhyto Steering Group to the participants.

1.1 Welcome address – Republic of Korea

[12] Mr Suhyon Rho, Commissioner of the Animal and Plant Quarantine Agency (QIA), welcomed the participants to Incheon on behalf of the South Korean government. The ePhyto will facilitate trade in plants and plant products. He hoped that the discussions would progress the development of ePhyto systems.

1.2 Opening address – IPPC Secretary

[13] Dr. Jingyuan Xia addressed the meeting also welcoming the participants and thanked the government of the Republic of Korea and the symposium team for the arranging the meeting. The first and second Global symposiums on ePhyto have been held in Korea signifying the strong support the Republic of Korea has given to the IPPC. He stated that ePhyto will play an important role in promoting trade and help remove the gap between developing and developed countries. The IPPC has established activity themes for the next five years relating plant health to its areas of work – 2016 food security, 2017 trade and economic development, 2018 national capacity building and 2019 environmental protection. This programme would culminate with the 2020 programme for the International Year of Plant Health.

[14] Dr Xia noted the excellent global representation with nearly 80 participants being present. This included representatives from a number of international organisations along with industry representatives. Regarding the matter of ePhyto implementation, there is now a commitment for funds from WTO STDF and from contracting parties. There has been strong support from the members of the steering group with Canada and Australia providing in-kind support. Dr Xia wished participants success in achieving the objectives of the meeting.

1.3 Opening address - CPM Chair, Dr Khu-Ock Yim

[15] Dr Yim welcomed participants to the meeting and to Korea. She noted that she has emphasized the work in the area of ePhyto during her term as chair of the CPM. After the modifications to ISPM 12, the work on the development of certification systems has continued. There have been a number of successful meetings assisted by a high performing ePhyto steering group. This has moved on to the development of an international hub after a feasibility study and a successful funds application, and the development of generic ePhytos systems. The implementation of ePhyto will benefit all contracting parties. NPPOs need to decide on the use of the hub and negotiate with all the relevant agencies within countries then work together to make this a global enterprise. Dr Yim thanked the Department of Rural Affairs for their support.

1.4 International year of Plant Health

[16] Dr Yim noted that CPM 9 proposed that the IPPC supports an International Year of Plant Health (IYPH). Specific objectives include raising general awareness of plant health, whilst promoting a strengthening of national and regional support. The facilitation of the establishment of plant health partnerships was an important part of this. Possible activities were outlined – an international conference on plant health and trade, an international conference on climate change and other meetings on a regional basis or national level.

[17] The steps involved in the establishment of the IYPH were noted: the decision by CPM, a decision by FAO conference, and a decision by UN General Assembly. ePhyto will be part of this and be developed 2017 -2018 with the hub and many countries will be invited to use the system. CPM 11 will establish an IYPH programme, a tool kit development, and presentations for RPPO meetings, and regional workshops. Much coordination work has to be done within FAO, followed by resource mobilization and the development of possible partners, programme activities and the preparation for the FAO process. Dr Yim then made suggestions on how the meeting participants could be involved.

1.5 Local and logistical information

[18] Mr Baek, QIA provided logistical information.

2. ePhyto Overview

ePhyto development – Nico Horn

[19] The ePhyto Steering Group consisting of Nico Horn (chair), Walter Alessandrini, Christian Dellis, Chen Maoyu, Peter Neimanis, Diego Quiroga, Josiah Syanda, Craig Fedchock and Marie-Pierre Mignault was established by CPM 8 to provide oversight, guidance and advice on IPPC efforts to facilitate the international exchange of electronic phytosanitary information among contracting parties. Mr Horn compared the systems used for the production of paper phytosanitary certificates to that for electronic certification. He noted the terms used – eCert which can be used in relation to veterinary, phytosanitary, food safety and ePhyto which specifically refers to electronic phytosanitary certification only. An ePhyto is a secured data set using standardized format for secure transmission electronically between NPPOs of the exporting country and the importing country. It is the equivalent of a paper phytosanitary certificate and may be used if accepted by the NPPO of the importing country.

[20] Mr Horn listed the benefits from an ePhyto system: reduced fraud, reduced data entry, reduced costs (printing, shipping, sorting, distribution, archiving), the expedition of communication between NPPOs, improved security, improved planning for inspection, the reduction of delays with replacement certificates, and the possibility of links into 'single window' initiative. To achieve this, Mr Horn stressed that harmonisation was essential. Appendix 1 of ISPM 12 provides information on electronic phytosanitary certificates, information on standard XML schemes and exchange mechanisms. It deals with contents of the message (terms and codes), and exchange mechanisms (authentication and security). The ePhyto offers the same wording and data as paper certificates including the certifying statement, is transmitted from NPPO to NPPO, is authenticated, and has secure transmission. Sources of information were provided.

3. ePhyto technical details

ePhyto development – Peter Neimanis

[21] Mr Neimanis explained how Appendix 1 of ISPM 12 was critical to global harmonization. It describes the format and the contents of ePhytos and their exchange. He also noted that UN/CEFACT XML schema and data mapping is used. XML is Extensible Markup Language which is an internationally recognised language used to produce documents in a format that is both human-readable and machine-readable. It is a textual data format that is standardised to allow communication between different computer systems and usability over the internet. It was stressed that phytosanitary data in hard copy needs to be stamped and signed whereas ePhytos contain authorised phytosanitary data in XML format.

[22] XML schema is the standardised (harmonised) structure and format for the data elements of the electronic phytosanitary certificate and is used to standardise the transmitted message data. There are several versions and it is important that both exchanging countries support the same version. NPPOs are encouraged to use harmonised terms, codes and text for the data elements of the XML message to facilitate electronic communication and processing phytosanitary data. Free text (not codes) may be inserted if the appropriate term, text or value does not appear in the lists of harmonized terms.

[23] Mr Neimanis discussed Web Services Description Language (WSDL). WSDLs are the way two systems talk with each other, e.g. computer of the NPPO of the exporting country with computer of the NPPO of the importing country. The data exchange mechanism involves the transmission of data over the Internet from the NPPO of the exporting country to the NPPO of the importing country using secure IT mechanisms (e.g. Simple Object Access Protocol (SOAP)) with systems that are mutually compatible.

[24] The transfer of ePhytos between NPPOs can be done as direct exchange between systems of two NPPOs (point-to-point), or exchange via a central hub (hosted by the United Nations International Computing Centre (UNICC)).

[25] The United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT) is an organisation that makes international Electronic Data Interchange (EDI) standards for electronic trade documents in XML format. The particular system used for the hub is UN/CEFACT schema v12B with Sender identity through X.509 certificates.

[26] Authentication is used in the transmission mechanism agreed upon by the two countries involved to exchange ePhytos. With the Hub Option the ePhyto certificate is delivered to the recipients' "mailbox" or hub where all NPPOs participating in the hub accept common rules for authentication. The national system of the NPPO of the importing country accesses the system with its authentication key and "pulls down" or receives the ePhyto certificate from its private "mailbox". With the point to point option the encrypted ePhyto certificate is sent directly to the importing NPPO's system using a transmission mechanism agreed upon by the two countries involved. It should be noted that the Exchange mechanism involves pushing of an ePhyto from the Exporter NPPO to the Hub but the retrieval of messages from can be through a push or pull method.

[27] The differences between the hub and point to point systems were discussed in detail. The rules for operating a hub include: the use of the Hub is voluntary; it is a single, multilateral system; it will be available 24/7; no information (messages, transactions) should be lost; there is a single exchange protocol; the IPPC determines the version of UN/CEFACT schema; participating countries will require a National System to exchange ePhyto through the Hub or use the generic national system; an envelope is used to allow the hub sends the message to the correct destination; messages are in the hub temporarily until they are received by the importing NPPO; the Hub will conduct verification on the envelope of the transmitted ePhytos; the Hub doesn't validate the ePhyto (message) content – the privacy of the message content is maintained as only the destination NPPO is allowed to read the message; the Hub facilitates encrypted transfer of ePhyto data between countries; the Hub will authenticate to ensure the identity of both sending and receiving NPPOs; and any changes in the schema and the exchange protocol will be properly planned and timed.

[28] The components of a generic national system were discussed and include: data entry for export certification; production of an ePhyto with data in the UN/CEFACT format as per ISPM12 Appendix 1; issuance/authorization of the ePhyto; the sending of the ePhyto; the possibility of printing of the sent certificate data on paper; the receipt of the ePhyto; storage of issued ePhytos for an agreed upon time; checking the authenticity of the ePhyto received; extraction of the data from the ePhyto;, printing of the received data on paper; the storage of the ePhytos for later reference; connection to the hub; and reporting.

[29] Further discussion of the data exchange system included the following points: ePhyto requires a harmonised exchange protocol (e.g. a software programme to encrypt and decrypt data for an exchange between national systems); ePhyto format; content and exchange should be harmonised as per Appendix 1 of ISPM12; further harmonisation of the format; contents and exchange are needed later for ESG priority format, terms and codes; ePhyto message format should be XML aligned with the UN/CEFACT SPS Schema with a separate Schema for the re-export certificate; ePhyto scientific names (synonyms; common names etc.) should be guided by the EPPO database and commodity classes align with the IPPC terminology; ePhyto communication between different country platforms should be harmonised; and ePhyto should have provisions built into accommodate future adjustments of Appendix 1 of ISPM12.

[30] Regarding legislative and regulatory requirements, some countries do not have an ePhyto system and major changes will be required. Some countries will have to estimate the benefits of the ePhyto system before regulations are revised. New regulations may have to be established for the use of ePhyto system by some countries.

[31] In estimating the benefits of ePhyto the following can be considered: improvements in planning for the arrival and clearance of goods; reduction in delays on replacement certificates; the maximising of the investment by building on existing initiatives; the potential to link into Customs 'single window' initiative; the reduction of fraud; the reduction of data entry and validation functions; the reduction of costs (printing, shipping, sorting, distribution, archiving); the expediting of communication between NPPOs; and improvements in the security in transmission. Use of the hub can also reduce ongoing bilateral arrangements and associated costs and accelerate the harmonisation in the use of ePhyto.

[32] Guidance was also provided on the analysis of ePhyto benefits. Technical information is available from:

1) https://www.ippc.int/en/ephyto/
2) http://ePhyto.ippc.int/

4. Regional PPO – Situation updates

4.1 Analysis of ePhyto Survey Results

Chin Karunaratne, Department of Agriculture, Australia

[33] Twenty one countries participated in the APPPC workshop in Thailand: 5 of these could send ePhytos, and 5 could receive ePhytos.

[34] A Readiness document is being developed to assess the ability of countries to participate in ePhyto development. The assessment evaluates the capacity of countries for future pilot projects. It includes information on quantitative analysis (including trade volume, sustainability, legislation, and infrastructure requirements) and a qualitative analysis (country interest, regional benefit, and communication). The overall rating system was outlined. All countries were categorized in the assessment areas. The conclusions were that infrastructure structure requirements, legislation and communication were found to be key impediments for implementing ePhyto systems with the APPPC countries. Most countries were interested in joining the Global ePhyto Pilot.

[35] The ePhyto Steering group is planning to extend the Readiness survey to other parts of the world. The Australian Department of Agriculture is using "Survey Monkey" to undertake this survey and analysis of results.

4.2 EPPO/NEPPO

Nico Horn

[36] EPPO has 50 member countries. There has been one workshop on electronic certificates and associated IT systems in Baku, Azerbaijan. Conclusions from the meeting were that: ePhyto will benefit NPPOs, Customs and trade; harmonisation is necessary even for point to point system; the use of EPPO codes is encouraged; and the use of CN codes and IPPC commodity classes needed. Other conclusions were that: NPPOs should link ePhyto to other developments; they should use other facilities (eg STDF); many EPPO countries belong to the EU so there should be a link with TRACES; NPPOs should start small and develop; NPPOs know what they need and IT should follow; ePhytos does not solve all problems (eg links to consignments, availability of import requirements).

[37] Regarding ePhyto developments – many countries have a national system that produce paper PCs but ePhytos are under development in the EU. The Netherlands is exchanging documents electronically.

4.3 NAPPO

Christian Dellis

[38] This is a small active group. The NAPPO special session in 2014 was on ePhyto. NAPPO is trying to deal with small issues – not the big issues such as the codes for commodities.

4.4 COSAVE/OIRSA/CAN

Walter Alessandrini, Senasa

[39] While Chile uses electronic certificates, some countries from COSAVE, OIRSA and CAN are developing ePhyto systems, and others have a system to issue PCs but are not developing ePhyto. The situation regarding PC use was discussed in detail for all countries from these RPPOs. Countries in the region are not willing to provide the resources to set up an ePhyto system themselves. Currently, there are a number of bilateral agreements for eCert. It was noted that the proposed approach for the future demands collaboration with other organisations such as OIE, Codex, CITES, and the WTO and with industry.

[40] In summary, at the moment several countries have different approaches; for the future harmonisation is critical, and the ePhyto hub and generic system is thought to be the solution. It is felt that now is the right time - a lot of experience is available and it is possible to expand to use other types of certification.

[41] The option of push and pull action from the hub was discussed. It will be a configurable characteristic for the system for each country. The generic system works as long as the developing country can access the web.

4.5 APPPC/PPPO

Peter Neimanis, Department of Agriculture, Australia

[42] The APPPC workshop of October, 2014 discussed the basics of ePhyto with the benefits, obstacles, constraints, legislative requirements, infrastructure requirements and elements of a generic ePhyto system. The workshop examined some case studies of successes in the region. Some 10 countries have a system for producing PCs electronically. Eight countries have legislative issues to deal with, 14 countries are interested in the generic system. Australia has two systems at present with eCert for export to China, US and Japan and eCert for import from New Zealand. China has eCert agreement with Australia, New Zealand and the Netherlands. Over 9 million electronic certificates have been uploaded with many other countries discussing arrangements with China. The systems used in these countries include SOAP and SMTP used as message transmission protocols and XML data is structured by using UN/CEFACT E-cert Data Standard Model.

[43] Challenges include differences in transmission protocols, the lack of technical support and the fact that some countries have to use hardcopy PCs as required by their legislation. Emerging issues include that the hub concept needs further development with a single WSDL (Web Services Description Language). Capacity development is also required to promote ePhytos to developing countries.

[44] Regarding legislative and regulatory requirements - some countries will need to make major changes where they do not have an ePhyto system. Legislative changes should be planned out in advance for participating countries as this process may take several years.

[45] Action Plans developed by APPPC participants were for the country and regional level, and included recommendations for the IPPC ePhyto Steering Group and for CPM. At the country level, plans need to be made for: a policy decision to pursue ePhyto developments; the definition of user needs and system functionality (industry and NPPO); to increase awareness across stakeholders; to review IT systems to determine if they are able to support ePhyto; to review legislation to ensure it supports implementing ePhyto and commence change processes, if required; the estimation of costs and benefits for setting up and gain funding approval; and then the building, testing and implementation of the system.

[46] On a regional level it was suggested that the APPPC should consider: establishing a regional ePhyto Working Group with some member countries to coordinate activities; seek agreement at the next

APPPC biennial session for ePhyto work plan and funding; provide technical input to the IPPC ePhyto Steering Group; and coordinate actions across countries and identify countries for the pilot project.

[47] Recommendations to CPM were that countries continue to express support for ePhyto activities and for the development of an IPPC global ePhyto hub and generic web based system.

[48] The APPPC ePhyto Working group has been set up with an appropriate ToR. The group includes Australia (Chair); Thailand; Korea (Vice Chair); Philippines; Malaysia; Indonesia; Japan and China

[49] A newsletter has been prepared. The group hopes to monitor activity across the region, develop capacity development and have a regional plan. The initial survey has moved into an assessment stage.

[50] In summary, the APPPC supports App 1 of ISPM 12, the development of a hub and a generic national system. The idea is to have a consistent approach from all the RPPOs. The Global Readiness survey should be online followed by the finalisation of the work plan and supporting documents.

4.6 IAPSC

Josiah Syanda

[51] Mr Syanda noted that this was the right time for the development of the ePhyto. He stressed the value of the ecosystem in Africa that it needs protection. The continent has 54 independent states. A regional body was recommended by FAO in 1951. By 1965 the IAPSC was managed by the OAU. The activities of IAPSC were listed – one of which was the development of ePhyto. He noted the strengths of pre and post-independence phytosanitary systems but stated that a number of limitations exist.

[52] Regarding readiness for ePhtyo – functional NPPOs were still a challenge for some states, some have national phytosanitary systems. Ethiopia, Uganda, Rwanda, South Africa, and Tanzania have indicated their intention to implement ePhyto. Kenya has a national system for ePhyto. The region is in the early stages of forming a Regional ePhyto Steering group (RESG).

[53] Conclusions were that: Africa has 17% of global agricultural trade; states are at diverse stages of phytosanitary system development; agricultural trade is one of the key economic pillars: countries recognize and support ePhyto initiatives and call for support towards the implementation of the ePhyto initiative (awareness, capacity development building and infrastructural development).

5. Presentations from other organisations

5.1 ASEAN

Nurul Huda Ismail, Malaysia

[54] Ms Ismail discussed the nature of an ASEAN single window (ASW) and single decision making for customs release and clearance. It complements National Single Windows to inter-connect to each other and start exchanging trade documents

[55] The ASW project is funded by USAID and is managed by a steering committee supported by technical and legal working groups. The system for Indonesia and Malaysia was described. Each country collates information then shares it with the ASW of the other country.

[56] The ASEAN agreement on customs was finalised in 2012. ASW “LIVE” is expected to commence on January 2016 for four countries: Malaysia, Singapore, Indonesia and Thailand. The benefits to government include: a standard for supply chain security and facilitation at regional and global levels for economic operators that enables the integration of cargo data and expedites the movement of goods seamlessly. There are a number of challenges including standardisation and harmonisation of data processes and procedures, resistance to operate in an automated environment, coordination and communication between all parties and stakeholders and budget constraints.

[57] Ms Ismail noted the Project development of MyPhyto System Development – 1st Phase - 2012-13 and 2nd phase - 2014-15 will be implemented in Sabah and Sarawak soon. The MyPhyto Portal was shown. It includes fields for registration, application, verification, task scheduling, inspection, approval, payment and the issuance of certificates.

5.2 CITES

Marcos Silva

[58] CITES stands at the intersection between trade, environment and development. It is a multi-billion dollar business with parties now issuing 1 million permits per year – certifying that trade is legal and sustainable. CITES and the IPPC are linked where Article 23 refers to the artificial propagation of Appendix II specimens. Over 30,000 plants are recognized by CITES. CITES has 3 appendices. App I concerns items where trade in these species is prohibited as they are critically endangered. App II – trade is permitted but controlled. App III trade is permitted but controlled – by one party. Of 35 000 permits, 97 % are App II and III and 3% are App I. CITES uses permits and certificates – it is mature, stable and universally recognised. CITES also produces primary data which helps policy makers to make more effective decisions; it allows countries to examine the information. CITES data can be used in the development of targets for Sustainable Development Goals.

[59] In the world of international trade, countries are moving to paperless e-trade with faster Customs processing. Such measures generate invaluable data for monitoring trade in wildlife. CITES documents are conforming to international standards and protocols for electronic data exchange. Parties have adopted a standardized permit form and guidance has been provided,

[60] Current trends include the need to harmonise with the WCO data model and UN/CEFACT standards.

[61] CITES has an E-permitting Working group with members from Brazil, Belarus, Canada, Czechoslovakia, France, Guatemala, Japan, Monaco, Philippines, Portugal, Singapore, South Africa, Thailand, the United Kingdom, the United States and Vietnam.

[62] The WCO Data Model establishes a standard, international, harmonized data set that will meet governments' requirements for international cross-border trade. With the UNCTAD trade efficiency study it was shown that the average trade transaction goes through 27-30 persons, at least 40 documents are involved, and over 200 data elements are typically requested.

[63] The Trade Facilitation Agreement will enter into force once two thirds of members have completed their domestic ratification process. Many articles are of direct interest to CITES. CITES does not promote trade – this is up to the Parties. But CITES is to ensure that trade is legal and sustainable. Trade facilitation allows for the avoidance of data replication.

[64] Mr Silva discussed the CITES E-permitting tool kit. UNCTAD/ASYCUDA was noted. CITES has established an MoU with UNCTAD to integrate CITES e-permitting guidelines in the ASYCUDA World system. This is under development.

[65] The single windows is a facility that allows participants to lodge standardised information at a single entry point. The ASEAN single window system is an important framework.

[66] Biodiversity e-trade development projects include:

- France and Switzerland are implementing a project with customs to make CITES business fully electronic
- OTCA – is working with CITES in the implementation of a e-permitting system
- CITES is working with IATA to eliminate the need for all paper documents for air cargo shipments

[67] CITES hopes that more cooperation with the IPPC could take place in areas of development of capacity building and training materials.

5.3 UNICC

Venkat Venkatarswaran

[68] The International computing centre was established in 1970 to provide ICT services to UN family, to maximise the sharing of infrastructure, systems and skills, and to generate economies of scale. UNICC has UN bodies as partners all over the world. The UNICC conducts business according to its mandate, and uses a memorandum of understanding and service delivery agreement with each client organisation.

[69] The governance is conducted by a management committee, advisory group, and a director. The organisations unique characteristics include: the UN jurisdiction (privileges and immunities, confidentiality, tax and duty exemption); its principles (win-win relationship, cost recovery, economies of scale, cost saving returned to partners); and safeguards (governance role of management committee, benchmarks and independent audits).

[70] The UNICC aim is to help to strengthen the IT centres of its partner organisations. The services provided were listed. UNICC has a number of data centres – in Geneva, Piscataway, Valencia.

[71] The key differences of UNICC from commercial vendors include: cost recovery, not for profit; no sales operation; prices set by Management committee; privileges and immunities; a UN system staff; the use of its mandate/MOU/SDA rather than contracts; and investigations.

5.4 UNCTAD/ASICUDA/ASYCER

Lex Moret
UNNExt Workshops on Trade Facilitation – Almaty, Kazakstan

[72] The speaker discussed the work of the Netherlands in the development of a global e-phytosanitary certification system. It uses the elaboration of an international ePhyto document based on UN/CEFACT and other standards.

[73] ASYCER Electronic PC, a joint project of the Kingdom of the Netherlands and UNCTAD aimed to provide two services: submission, processing and issue of e-Phytosanitary Certificate application at a national level; and the transfer of the e-Phytosanitary Certificate data across borders from the exporting country to the importing country.

[74] The export component will include the ASYCER phytosanitary export certificate, third countries phytosanitary requirements, and accounting and payments, and SAD – automatic verification and acceptance of certificates. There is a portal for use that includes pages for: a User Accounts management page with an exporters' database; reference tables (or importing country criteria); creation of e-application; data re-use; XML; then verification and submission, execution of criteria, document tracking, processing of e-application by the Plant Protection Service, payment processing, followed by the issuance of electronic PC.

[75] The lessons learned included: political goodwill is needed to proceed with ePhyto; there can be inter-agency competition and some resistance from mid-management; there was weak ICT structure in MoA and PPC; sound expert level of staff and management is needed; there were no uniform standards; support of trading community is the key; and donor's assistance is necessary.

[76] The supply chain security was questioned and the challenges to the system's sustainability noted.

6. Industry Presentations

6.1 International Seed Federation

Movie presentation

[77] That the value of the seed industry is increasing all the time was noted. ISF is very supportive of further development of ePhyto. Challenges include the problems related to re-export. There may be several seed production places – in different countries in the two hemispheres. All have to comply with

phytosanitary requirements of countries and clients. Seeds may be pelleted or coated or frozen etc. There may be different wordings for the same requirement for different countries. Re-export is a frequent occurence – often many countries are involved and too many phytosanitary requirements have to be met. However, it is an essential part of the seed trade. The trade may take place 10 years after harvest – so the information must be available over this period. The trade must have access to the PC information even with an ePhyto system and it should be kept. The additional elements required by industry should be included in the different fields to facilitate trade. ISF is willing to be involved in further development of ePhyto.

6.2 International Grain Trade Coalitions

Arvid Hawk

[78] The grain trade moves grain from areas of surplus to an area of need. It is dealing with a fungible supply – that is reliable and responsive. It is bulk, comingled supply chains. There is great diversity in the components of the system. The movement of soybean from the US was shown.

[79] The IGTC involves 24 trade associations, 8000 businesses in 85 countries. It aims to eliminate or reduce trade barriers, identify opportunities for cooperation to facilitate the movement of agricultural products and to ensure transparent, effective, enforceable and compatible regulatory and commercial systems. They should be both risk and science based, adhere to international best practices, and assure high levels of collaboration among governments and their stakeholders.

[80] The IGTC priority list includes: the international labelling mandates and guidance for agricultural bulk commodities; the IPPC ISPM on grain; accommodating the presence of grain produced with GMO seeds and new genetic techniques; and innovating electronic management including e-Phytos.

[81] In summary, the situation today involves: the supply chain – based on legacy paper driven processes; and multiple players based on multiple processes such as commodity contracts and shipping documents (bills of lading, certs of quality, certificates of origin, Phytos, etc). Only a portion of this is captured electronically but there is a track record of successes and support. Limitations are sometimes institutional (banking, shipping, regulatory) resulting in some reluctance to champion technology and support "paperless" transactions.

[82] With 25 buyers for a shipload of grain, the paper work is replicated – producing large volumes of documents. The paperwork must be available when the vessel arrives – bills of lading etc. Regarding the commercial values, electronic documents are easier to change, easier to replace, overall it is much easier than the cumbersome system presently used.

[83] The system needs to be responsive to the entire value chain, to have confidentiality, and security, and there should be authenticity of documents, improved records management, reduced waste, and result in improved compliance with national laws, reduced chances of fraud and lowered risk of document loss. Trade should also be able to ensure that ePhytos are available for a consignment and to validate ePhytos.

[84] In the future there is the need to accomplish the following: leadership to provide innovation that is compatible with a transition; collaboration between stakeholders; communication to raise industry and government awareness; and engagement with a broader set of stakeholders.

6.3 Canada Wood (Forest Products)

Tai Jeong, Canadian Forest Product Industry

[85] In Canada, some 395,000 certificates are issued per year, 70,000 for plant products. Primary industries exports are valued at $85 billon. Benefits of ePhyto is seen as: improved faster service delivery, safe and secure, reduced document issues on entry, and quicker release to importers.

[86] Industry needs to be addressed are: inclusion of 11000 industry certifications as options to PC in e-delivery; hard copy of PCs and industry information for shipping manifests and files as back-up, customer transactions using Letters of Credit through banks which require an original PC.

[87] Canada's status with ePhyto is said to be late in development. Industry competitiveness is at risk. The Canadian industry wants to move more quickly that current plans are allowing.

6.4 Electronic documentation services

Alejandro Pernias, GlobalShare - EPHYTO IN AGRIBUSINESS – Approaches and considerations

[88] There is a need for systems integration. There is a need for supporting evidence of ePhytos to be delivered to the private sector. Industry is sensitive to document issuance and handling. GAFTA (Grain and Feed Trade Association) and FOSFA (Federation of Oils, Seeds and Fats Associations Ltd) contracts are typically the framework documents for industry. There are also complex documents such as those involving international banks – many sets for each shipment – with often several hundred documents for the shipments in a contract. Mistakes in issuance process can be costly. Mr Pernias noted a Global International net could assist. All the different players in the trading arena were noted – fumigation companies, survey companies, maritime agents, ship owners, importers, exporters shippers, chambers, banks, and official authorities.

[89] The conclusions of Mr Pernias were that: Standard communication protocols to allow system integration is needed; and that the public and private sectors working together in the local and international fields could facilitate information transmission so that financial institutions would take ePhyto information into account in contract settling.

6.5 essDOCS State of eDocs in Agri Market

Alexander Goulandris, essDOCS

[90] The business was established in 2005. It has 7 offices and delivers a service which enables electronic sales, finance and shipping documentation. The service solution improves visibility, connects trade participant through a data exchange.

[91] CargoDocs for Agri aims to enable paperless trade and finance management. eDocs target is to facilitate the movement of all documents in particular bills of lading, certificates of origin, invoices and inspectors reports, and PCs. The data flow was described and the time savings with electronic systems emphasized.

[92] The trade facilitation efforts include the operation of a User association which is tasked with ensuring global acceptance of the CargoDocs services. Regular workshops are run by essDOCS Databridge Development Group with industry bodies including NGOs such as GAFTA, FOSFA, NAEGI, BIMCO etc.

[93] The firm is now working with Cargill, 26 banking groups, Bunge, COFCO, Noble Grain and Louis Dreyfus. The use of eDocs is rising by 250% per year. The firm has developed a website on ePhyto – http://stg.ePhyto.org

[94] Lessons learned include: parties move at their own speed in the transition to eDocs – all will not move at same speed; web based solutions allow parties to fine-tune new processes; digitally signed PDFs are often all that is needed – not all parties need data; the legal aspect is the key to the solution – legislation has not worked in many cases; capacity development is needed; running multiple processes – paper and electronic- for too long is stressful; the move to eDocs can cause serious problems if you the use of the paperwork is not fully understood.

6.6 STDF

Kenza Le Mentec

[95] The functions of STDF were described. Examples of SPS related procedural delays were listed. However, SPS measures may result in justifiable transaction costs based on the need to protect health. But ineffective and inefficient SPS controls result in poor health protection – and disrupt trade more than necessary.

[96] Proposals regarding the implementation of ePhyto were provided – it should be a stepwise approach, a streamlined import/export business is a pre-requisite, a cost/ benefit analysis should be done, paperless trade initiatives and linkages with other global initiatives should be taken into account.

6.7 Union Fleurs (Cut Flower trade)

Sylvie Mamias, Secretary General

[97] Union Fleurs represents the national associations and companies active in the floricultural trade (cut flowers, foliage and pot plants). The Netherlands acts as an international trade centre hub (50% of the world trade transits the Netherlands). Kenya supplies one third of the total EU market and exports to 50 destinations. Columbia and Ecuador supply 90% of the US market. 90.4% of this passes through Miami airport. The trade in cut flowers in 2011 was valued at some US$7.5 billion. The Netherlands, Columbia, Ecuador, Kenya and Ethiopia are the top five flower exporting countries.

[98] The perishable quality of cut flowers mean that efficient logistics and processes along the supply chain from origin to destination are imperative. Cold-chain management is necessary to preserve quality. Often, traders request two certified copies with the original PC to facilitate the movement of consignments. There are more problems with non-compliant documents than with interceptions of harmful organisms. The anticipated benefits with an ePhyto system would include: reductions in costs, lead times and error rates; and safer systems for the exchange of data; more efficient logistics; better planned arrival and clearance of flowers; official controls could be better directed at actual pest risks; and a positive impact on product quality.

[99] Recommendations include: security and back-up systems will be essential; the number of steps in the process should be limited; ePhyto should not be compulsory and the implementation costs should be carefully examined; the development and implementation of a digital signature is the key; PCs are not the only documents accompanying shipments. All the documents – certificates of origin, CITES, commercial invoices, airway bills, packing lists – need to be digitised to make a real breakthrough in trade facilitation.

[100] Union Fleurs supports the development of international standards for electronic messages, the streamlining of legislation and regulations, standard code lists for operators to use and capacity building support especially for developing countries.

7. Country Presentations

7.1 Republic of Korea

Seiki Jun

[101] Ms Jun introduced the information systems status in South Korea. The single window or UNU-PASS system was described. This was followed by a description of the Korean ePhtyo system. The SOAP method to exchange ePhyto was adopted in 2005. The import system is not yet directly connected to PQIS for the completion of import procedures.

[102] The challenges faced by QIA include:

- The Plant Protection Act has to be amended along with the related enforcement regulations and notification of QIA
- Operational matters – the log in system will provide ePhyto numbers, inspectors will have more information available, exporters will not receive paper documents when the system is fully in place.
- Technical matters – more technical information could be added to ISPM 12 – it was suggested a field is missing; there are some difficulties with some harmonised terms, formats and the exchange mechanism.

[103] QIA will participate in the IPPC ePhyto. There has been a point to point system in use with the Netherlands.

7.2 Argentina

Diego Quiroga

[104] Mr Quiroga described the steps that Senasa has taken to introduce ePhyto. The main functions of the system are to: maintain the import requirements (there are 4,639 valid import requirements) and facilitate the inspector's work; issuance of PCs (on paper); tracking all information that supports PCs; applying safeguard measures for paper used for PCs; the system is adapted to take account of different kinds of consignments, different types of transportation and different places of issuance. It also deals with payments, certified copies, growing season reports, laboratory analysis requests, records of laboratory analyses and growing season inspections and statistical data.

[105] One hundred per cent of the Phytosanitary Certificates have been registered by the system since October 2012 (402,281). The system has 7,475 external users.

[106] Senasa has 77 offices in Argentina. All documents (e.g. import permits, phytosanitary certificates) issued by the Argentinean NPPO contain a Unique Code to allow Electronic Validation (CUVE).

[107] The Argentinean NPPO is currently not yet creating and exchanging electronic certificates (ePhytos). Once the ePhyto Hub is developed and working the Argentinean NPPO will adjust the National Phytosanitary Certification System to begin to exchange ePhytos during 2016.

7.3 New Zealand

Peter Johnston, Ministry for Primary Industries

[108] Mr Johnston mentioned a number of points on the development of ePhyto: New Zealand started with ePhyto in the mid–nineties and by 2006 there was a partial system; there was a major developmental meeting in Ottawa in 2009; and in 2011 the term ePhyto was starting to be used. The work from the first symposium developed some components of the system.

[109] The objective of ePhyto is to enable government to government information transfer. It operates on a web-based application and provides secure electronic exchange of phytosanitary certification information. The application components consist of IT coding that holds: the business rules as per ISPM12 Appendix 1; the building blocks needed for the user interface; a web server; a database recording user inputs (certificate records) and system information (e.g. user permissions); XML output (UN/CEFACT SPS Schema); and simple electronic exchange security (SSL).

[110] New Zealand is committed to help countries where possible. At the moment MPI does not have the ability to receive ePhytos from other NPPOs – but this is being developed.

[111] The MPI system is tailored to the New Zealand situation and needs. It needs to be electronically linked to New Zealand records, importing countries phytosanitary requirements, pest survey information, New Zealand phytosanitary inspection/verification & audit records and other databases. There is an increasing complexity of requirements by importing countries, a need for better risk management and more efficient export and import systems.

[112] The changes required are the ability to receive other NPPOs ePhytos and to align receiving functionality within other MPI eCert applications to also facilitate receipt of other official SPS assurances. It was suggested that the Customs Department, with their interest in taxable items, could be of considerable assistance in system development.

7.4 The Netherlands

Lex Moret, Specialist Adviser e-Certification

[113] Mr Moret represented the Netherlands Food and Consumer Product Safety Authority (NVWA). The NVWA safeguards the health of animals and plants, animal welfare and the safety of food and consumer products and maintains the legislation in the field of nature. The Netherlands is the second largest

exporter of Agricultural goods in the world. It deals with 19,000 PCs per week (import and export) and has 2200 economic operators and 650 certifying officers.

[114] The Netherlands Government wants more efficient certification processes, with risk based enforcement that contributes to food security, with reduced fraud and with transparency. The private sector wants faster border clearance, reduced transaction costs and administrative burdens.

[115] The programme called Smarter Inspections by Smarter Communication includes development on imports, exports (more than 200 countries), and e-certification.

[116] The e-certification system involves working with the IPPC, OIE, and Codex, UNCTAD – enabling developing countries to meet requirements, and UN/CEFACT. The countries and their level of involvement were listed. The system need not be expensive and common technology and standards are available.

[117] The challenges listed included: mapping, codification, re-export still has major problems, non-repudiation (digital signing), revision of the SPS standard (code lists, treatments), implementation and security at the exchange of data.

[118] Observations on the present situation by Mr Moret included that: most countries focus on the production of e-certs for export whereas most benefits are at import; the parallel running of systems should not be used for acceptance but for confidence building; paperless certification often needs the reform of import regulations; legal reform is time consuming; side effects of paperless certification can be easily solved by industry because of the visible benefits.

[119] Further action is needed in the areas of: harmonisation (legislation, Codex, IPPC, OIE), standardisation of implementation (UN/CEFACT), digital evidence, and open import requirements.

7.5 Kenya

Josiah Syanda

[120] Mr Syanda described some aspects of Kenyan agriculture and the institutional organisations involved in agriculture KEPHIS. Kenya is cited as a region of phytosanitary excellence. The phytosanitary certification system was started in 2000; this was followed by a bilateral agreement in 2008 with the Netherlands. In 2011 there was a pilot run with industry. In 2012, an ePhyto Pilot was run using paper PCs then in 2014 there was ePhyto transmission.

[121] The functions of the Kenyan Electronic Certification System (ECS) were described: collecting consignment data; communicating between government and business; maintaining import regulations; the auto-generation of PCs; managing payments; managing certified copies; recording laboratory analysis and growing season inspections; and statistical data recording. Since July 2011 more than 892,000 PCs issued and 60,800 received. The system is now integrated into the National Single Window system.

[122] The successes include: the existence of a NPPO; there is National ICT legislation; political goodwill and support; a national PC system that generates ePhyto for export consignments; and a system for bilateral exchange with the Netherlands. The limitations are: the high cost of establishing the system; the receiving system is not developed yet; the lack of appropriate institutional financing to support ePhyto; and the lack of budgetary support for participation in international fora. The benefits are that the government revenue is increased, there is greater efficiency in service delivery, there are time savings for industry and communications improved, and there is minimised risk regarding the authenticity of certificates.

[123] Some of the experience gained in the development of the Kenyan system include: the development of the national legal framework was required; political goodwill was necessary; the system must be able to deal with large and small stakeholders; there must be Institutional capacity – competence, skill, personnel, infrastructure; other government agencies need to be involved; stakeholder interests need to be considered; the use of multiple languages must be considered; agreement on technology and method

of implementation both is critical; electronic exchange of data is significantly more efficient, convenient and secure than printed certificates; considerable investment required to deal with non-standard data requirements, updating the systems, notification of system outages, handling support issues, etc; and transition and fall-back plans have to be prepared.

[124] For Kenya, most government services are now on line. Kenya encourages the use of ePhyto and the integration with the Single Window system. Kenya is willing to collaborate with other countries in the region in the development of ePhyto. It was suggested that developing countries should be exempted from paying for the Hub usage. Also, Kenya welcomes the IPPC/STDF or other agencies to host a Regional ePhyto Workshop in Kenya.

7.6 United States of America

Christian Dellis, PPQ, APHIS Export Services, USDA

[125] The system is now known PCIT – the Phytosanitary Issuance and Tracking System. It was setup in 2005, has 250,000 users, generated more than 3 million certificates and 98% of all US PCs. PCIT was described; it includes material on certificate issuance, fees, training, electronic exchange, reporting and foreign requirements repository. PCIT can send and receive. It takes 3 months to establish the system with a trade partner.

[126] The ongoing challenges include the use of common names and the terms for quantity – grams, Kgs, pounds, Pallets, etc. There are still challenges in the use of codes, the use of different versions of the schema, the web security mechanism, non-uniform codes, ISPM 12 versus electronic systems – eg ADs at consignment level not species, unique fields – special fields that some countries use, and treatments.

[127] The lessons learned include: development constantly evolving; difficulty with internal policies; the diversity of communities is great – some use pen and paper; there are numerous ways to do the same thing; it is important to standardize but reality must be maintained; there are unforeseen impacts; and the importance of partnership and collaboration with all parties. Paper PCs are still issued – some truck drivers use PCs as an external validation mechanism to have on entry to a country.

7.7 Chile

Rodrigo Robles

[128] In 2014 some 146,000 PCs were issued. SAG is the competent authority. There is now a system for the transmission for electronic PC and veterinary certificates in a standard language, There has been a 2 year exchange with the Netherlands and a 1 year operation with grapes and pork to China. Active discussions are taking place with China, Russia, the United States and Mexico. The interoperability systems architecture was discussed to link with CITES, the Fisheries authority, and veterinary systems.

[129] Chile's experiences include – character set codification, communication channels for support and response timing.

[130] The eCert Unit is established with motivated personnel and will move forward to connect the eCert system to other countries. Its functions are negotiation, agreements, developments, implementation, transmission, support, improvements and services. It is projected that there will be some 178,000 eCerts issues in 2015. There were large financial benefits for industry quoted with the use of the electronic system. Chile is working to apply eCert potentials with direct communication and to define standard procedures for the operation of eCert.

7.8 Ethiopia

Weldehawariat Assefa

[131] The organisation of the agricultural departments was described. More than 45,500 PCs are issued each year. Electronic certification offers the benefits of reduced transaction costs, lower administrative burdens, and timely and secure exchange of information.

[132] The government has been working with the Netherlands using a module known as ASYCER developed in collaboration with ERCA. It integrates the functions of the ASYCUDA world system and the

Netherlands export control system. Some flower farms were selected for a pilot scheme. Inspectors were trained with UNCTAD experts. The server of ASYCER system housed at ERCA was linked to the MoA. There were problems with the lack of trained and dedicated personnel in the government. It is recommended that further training be made available, the server be relocated, the IT services are increased, stakeholder awareness be created, and the connection to quarantine posts be improved.

[133] Industry asked how they can obtain a copy of the PC. In Australia, industry is supplied with a copy of the electronic certificate which is sent to the importing country. Something similar happens in the US. Sudan noted that as other documents for shipping consignment are on paper – so the PC should available as a paper document.

7.9 Japan

Shinichi Takahara

[134] PCs received in 2014 numbered 208,000, PCs issued 24,000, and re-export PCs 1,400. These were all paper PCs. The Nippon Automated Cargo and Port Consolidated system (NACCS) is the Japanese single window system. The system was outlined. The system could handle electronic certificates but does not do so presently.

[135] Japan would prefer a hub system to avoid the expense of setting up bilateral arrangements. Cost sharing for system development and operation was proposed. A user fee would need to be considered. The management of the system, needed for example in case of malfunction, would have to be decided and established. With the proposed 24 hr operation, the coverage of different time zones would have to be dealt with. It is suggested that all countries maintain a paper system in parallel to ePhyto for those trade partners that do not use ePhyto.

[136] The challenges of security were discussed noting the need for anti-virus software, information leakage prevention, cyber-attack measures etc. The problems with harmonised terms and codes were noted and the observation made that the update and maintenance of systems might be difficult.

[137] Overall, the challenges include: cost sharing development and maintenance; managing the responsibility of the system; requirements for a server for non-stop performance; a cost effective security policy; the collaboration with other border control agencies; legislative and operation al modification; and conversion from the code to the domestic system.

7.10 China

Gao Peng, AQSIQ

[138] AQSIQ has 300 branches and 200 local offices. 2,250,000 PCs are issued each year. The use of E-cert is to increase efficiency, to prevent fraud and ensure the quality and safety of import commodities. ASISQ believes that the fundamental solution is to set up an international online electronic certificate verification mechanism. By 2009 the China E-cert system was developed and by 2010 the E-cert system was officially being used. The operation of the system was described.

[139] The system conforms to the UN/CEFACT E-cert data standard model and uses extensible mark-up language. The system uses the SOAP interface and the SMTP interface. The system had no limit on the number of users. The system had timeliness, security, convenience and allows E-cert information checking in real time, the submission of on-line inquiries and the adoption of measures according to verification results.

[140] The present situation is that over 9 million PCs have been uploaded, cooperative agreements have been signed with New Zealand, Australia, Chile and the Netherlands – and 300,000 E-certs received. Many other countries can be communicated with using the system. The system expedites the procedure, prevents fraudulent certificates, establishes a communication channel (in real time).

[141] In the future, China is willing to cooperate with all countries to set up an E-cert system. Development will continue and China welcomes suggestions and comments on its E-cert system.

7.11 European Union

Roman Vagner

[142] The European Union has 500 million people from 28 countries with 23 official languages. With import matters all the regulations are the same but this is not the case for exports. The European Commission deals with health, food, animals, plants and anti-microbial resistance consisting of 28 persons.

[143] TRACES - Trade control and expert system – covers the documentation, checking for food, plants, feed, wood etc and manages this online. There are some 25,000 users. It deals with 1.2 mill certificates per year and 1 million email notifications daily. The system allows traceability. Its aim is to protect consumers and provide trade facilitation. The information covers imports and intra-union movement and deals with a growing number of policy areas. Plant health export systems have to undertake some development to be equivalent with the animal health systems. Plant and plant product data harmonisation is most important. The WCO Harmonized System is used along with the EPPO Code System for pests and plants. Statistics from TRACES data are reported by using business intelligence tools such as Data Warehouse, SAP Business Objects and QuikView. Access to the data is through secure authentication layers with user id and password allowing users restricted rights.

[144] There is a pilot for plant health interceptions using a Common Health Entry document.

[145] Traces will be extended with Traces New Technlogy (TNT) and phytosanitary certification that be compatible with ISPM 12 and use format XML will be introduced by the end of 2016.

[146] There are still some legal aspects and technical conditions to be finalised so full cooperation for ePhytos is not possible yet. Some bilateral arrangements have been made – eg with New Zealand for some animal/veterinary matters.

8. Notes from Working Groups discussions

Working Group 1A

8.1 Efficient engagement of industry in future ePhyto development

[147] The providers work with UN/CEFACT. There should be an Industry advisory group including a user's group with representatives from banks, the WCO, IATA, ICC and the Pan-Asian Alliance.

[148] The industry challenges include: organising systems, system integration, electronic supporting evidence, electronic bills of lading, equal distribution of costs, speed is important, verification of certificates, a central location for documents, correct contact point, terms of bilateral negotiation, payments from banks.

Working Group 2A

8.2 Pilot of ePhyto IPPC Hub (UNICC)

[149] The concept of the hub was described – a post office and general mail delivery service – so with encryption it is the security equivalent of registered mail. The hub harmonises the transfer process – with ease of transfer arrangements for NPPOs with low numbers of shipments/certificates. The hub will not be able to read documents as they are encrypted in the national or generic national system. The documents will be as safe as monetary transactions. The system could be hacked but that would be very expensive to accomplish. The hub should keep the message secret, transfer different messages – ePhyto, rejection, status message, re-export,, send notifications about non-delivery, keep messages in a queue, be able to verify the schema version used. It should not read the message, keep copies of the message, validate content, or fail in operation.

[150] The UNICC is different from all other Cloud suppliers and it is obliged to provide quality systems.

[151] The benefits are reduced complexity and reduced costs for the NPPO.

Working Group 1B

8.3 Experience with electronic documents and exchange

[152] Experiences were exchanged between participants of the working group. This was very useful but did not lead to specific conclusions.

Working Group 2B

8.4 Pilot of the IPPC generic national ePhyto system

[153] Functionalities of a generic national system include the creation of certificates, the printing of certificates, and the sending to another country. This should be a secure system. It should use acceptable codes and have standardized fields. The system should validate inputs. ISPM 12 should be used.

[154] Responsibility of inputting data on system – should industry do so or NPPOs? Concerns on security were raised. NPPOs will have to use the correct schema. The option of NPPOs using their own servers was discussed. This is possible but would be more costly and the updates would be missed.

[155] Regarding the security of the hub – the UNICC keeps the server under UN law and only UN staff have access to it.

[156] It was asked if PCs should be stored in the generic national system. This could be for 10 years as the space required is very small. But this should not be stored on the hub. It would be better to store material in generic hub in case PC needs correcting etc and also so that there would be no need to re-enter all the data.

Working Groups 1C

8.5 How to sustain ePhytos after piloting in countries

[157] To build sustainability there must be:

- communication of the benefits;
- sufficient resources (staff, IT training);
- stability of the staff;
- industry engagement (partnership);
- sufficient funds must be available;
- there must be system maintenance, feedback (follow-up of meetings), and contingency plans.

[158] The need for information from IPPC would include:

- an ongoing feedback mechanism,
- clear information on costs,
- a standard on technical function,
- material on information and advocacy,
- a graph the benefits over time.

Working Group 2C

8.6 Establishment of cost recovery for sustainability of ePhytos

[159] Cost recovery activities were discussed. Different ideas included:

- short term 2015-2017 - money from STDF Funds would be used for the establishment of the hub and generic national system development and to pilot them.

- medium term – could be funded by a trust fund with donations from developed countries or big companies and business.
- long term – funds would come from the users of the system either by a fee per Phyto (or a flat rate based on the intensity of use) or by an increase in the membership contribution to FAO.

Working Group 3

8.7 Harmonisation – schema and mapping

[160] The schema needs further harmonisation. It was noted that ePhyto information is tailored for business or IT types. Several lists will need amendment. This will need input from all parties. Some terms need to be added (eg cardboard boxes). Status codes – need to state which code list is to be used.

9. Discussion

[161] Israel noted the problems with the list of codes – difficult to maintain and change. Some codes are maintained outside of the organisation – ISO and EPPO. With our own codes and outside codes this leads to difficulties. IPPC will have to set up a mechanism for this.

[162] Sudan noted that developing countries will require financial assistance. There could be an international agreement with a dispute resolution body. This could be discussed by the standards committee and CPM 11. The IPPC Coordinator noted that developing countries will need assistance to help implement any systems.

[163] The EU Commission representative asked if there is a timetable for the harmonisation for agreement on codes etc. It was suggested that in next 3-4 months agreement on a schema number to be used, further harmonisation of the mapping and the exchange mechanism would be reached.

[164] With Africa, Zambia suggested that there should be a regional workshop on ePhyto to create awareness and to share information on systems already present. Kenya supported this proposal. This would create awareness among governments, and develop and understanding of the capacity development needed, and the continuing resource needed.

9.1 Global readiness survey

Chin Karunaratne

[165] The global readiness survey was developed from the APPPC survey and was further explained. This survey will be done by survey monkey and a request to join this survey will soon be sent to all IPPC contact points.

9.2 Pilots – Hub and Generic national system

Nico Horn

[166] The IPPC secretariat together with the ePhyto steering group will start the pilot hub and the pilot generic national system within the STDF project. This will be the start of harmonized implementation of ePhyto on a larger scale. This will hopefully also be the start of ePhyto use by many countries.

[167] The system will be basic and limited to eight to ten countries testing the system in the pilot phase. For the pilot hub they would like countries with national systems and that are using ePhyto. They would make the link to the hub themselves. The countries should continue using the hub after the pilot. Two countries would be selected for testing the generic national system in the pilot phase. With the generic national system – it would be preferred to have countries with no national system.

[168] The selection would use the readiness survey results and the criteria such as volume of trade, sustainability, infrastructure, legislation and willingness. First selection by December 2015 and final by CPM 2016 The steering group will advise the Bureau which will make the final decision.

[169] Further harmonisation of the ePhytos format will continue after this meeting. Development of the pilot hub will be 2015-16 and the pilot national generic system over the same period.

[170] The 3rd Global Symposium could be held in 2017 as this is the year with the theme of Plant Health and trade facilitation.

10. Outcomes of the Working Group

[171] The ePhyto steering group will formulate further actions from this symposium having the valuable input from many countires, organisations and industry from all over the world. This will help taking the right actions and formulate the necessary time path for implementation of ePhyto world wide.

11. Close of the Symposium

11.1 Final remarks

IPPC Secretary

[172] The Secretary noted that there has been good global, regional - with eight RPPOs represented - and national coverage in this meeting. There was substantial cooperation with industry and international organisations as well. The meeting was well organised by the ePhyto Steering Group with excellent contributions from all participants.

[173] The major achievements could be grouped into four main areas:

- the benefits of ePhyto – economic benefit, trade facilitation, the efficiency of paperless trade, and the political effect
- that we have reached an important consensus that this is the time to increase awareness, to enhance case studies data, to move on the pilot project, to act and cooperate
- the barriers or challenges. We need to manage, in this new concept, the operational mechanisms to develop security and sustainability
- there is clear direction and the need for immediate action.

[174] These achievements have led to a way forward being defined. This could be described by identifying five directions. These are:

- leadership and organisation, support of the chair,
- implementation of the pilot project,
- communication
- synergy – work with RPPOs, WTO, industry, World Bank
- resource mobilisation.

[175] Finally, the Secretary acknowledged the generosity, excellent organisation and hospitality of the team from the Republic of Korea. The leadership of Dr Yim and management of Mr Baek were notable. The Secretary thanked all presenters for their inputs which has made the meeting so successful.

11.2 Comments from the CPM Chair

[176] The meeting was seen to be most useful for the participants with information on systems from countries and international organisations being shared. QIA has been pleased to be part of this process and hopes that substantial progress in the implementation of IPPC support for an international ePhyto system will be made as soon as possible.

[177] The CPM chair thanked all participants for their contributions and wished them safe travel to their homes.

12. IPPC ePhyto Steering Group meetings associated with the global symposium

12.1 Pre-symposium meeting

[178] The IPPC ePhyto Steering Group (ESG) met the day before the start of the global symposium to finalize the agenda of the symposium and check the availability of all speakers. The agenda was discussed and slightly amended so that there was sufficient time for:

- presentations and updates to be made by representatives of the participating groups; regional plant protection organisations; other relevant international organisations; national plant protection organisations; and plant or plant product industry organisations.
- Working groups to discuss a number of important issues in the development of ePhyto systems.

[179] The participants of each working group were selected to match their expertise with the issues being discussed by each working group.

[180] The ESG met with the meeting organisers from the Republic of Korea and checked the logistics for the meeting to find out that it was all well arranged.

12.2 Post-symposium meeting

[181] The IPPC ePhyto Steering Group met the day after the global symposium to evaluate the symposium and to discuss follow-up actions. The following actions were planned:

- Revision of the STDF project document on the development of a Hub and a 'generic national system' to allow for a quick and smooth start of the project.
- Arrangements were discussed for further involvement of UNICC in the development and the running of the hub and the generic national system.
- For the country selection for the pilot of the hub and the pilot of the generic national system a timeline was developed and arrangements were made to facilitate the process.
- The readiness survey was finalized and procedures to send it out to all countries were arranged.
- The possibilities for a combined regional ePhyto workshop for the regions Africa and the Near-East were discussed to raise awareness and understanding of ePhyto in these two regions that have not had the opportunity yet to attend a regional workshop.
- Plans to set up an industry advisory group on ePhyto were discussed and terms of reference for such a group will be drafted.
- A work plan will be made to further harmonize the use of terms, codes and mapping for ePhyto.
- Fact sheet, Newsletters and a generic Presentation on ePhyto, the hub and the generic national system will be produced.