Food and Agriculture Organization of the United Nations

International Plant Protection Convention

REPORT

The Third IPPC Global Symposium on ePhyto

ePhyto and Trade Facilitation

22-26 January 2018
Kuala Lumpur, Malaysia

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Executive Summary:

The third IPPC global symposium on ePhyto was attended by over 90 individual participants, representing 36 different countries and 20 different industry associations and NGOs. The presentations covered a wide range of perspectives on ePhyto, from the development of the project, country experience in preparation, industry's perspective on ePhyto, trade facilitation and border collaboration. Three separate work shops took place to gather an understanding of ePhyto business processes that countries need to consider, the operation of the Hub and operation of GeNs with all its codes and terminology. Overall the symposium provided participants with a clear overview of the progress of the project, when they can expect to join the Hub and the GeNS and what NPPOs need to consider in order to get prepared.

The first topic of discussion was the progress of the ePhyto Solution. Explaining the concept of the solution as composed of the Hub and GeNS. The Hub is built, with piloting well on its way and expected to be complete by February of 2018. The GeNS on the other hand is currently under construction. There was also discussion on the funding and business model work that is taking place. Providing an overview of the potential cost recover methods that are available and outlining the next steps to completing the analysis and obtaining a business model to be recommend at CPM19. Detailed presentation of how the Hub and the GeNS operate followed. Outlining the different features such as the "push" and "pull" delivery features of the hub or how the GeNS can function in a low-bandwidth environment. Road maps for each project component were outlined, highlighting to participants when onboarding in the future can be expected.

Sri Lanka, Samoa, and Ghana presented on their experience in preparing to connect to the GeNS. Sri Lanka expects positive system changes through the implementation of GeNS mainly in the PC issuance procedure, import/export procedures at borders and management of records. Samoa outlined the steps it took in preparation and implementation of the GeNS. As did Ghana, outlining how it established designated office space at head office and major exit/entry point, infrastructure development (internet connectivity and electronic equipment), training of officials and engagement of stakeholders.

New Zealand and the Netherlands spoke about their experience with the hub pilot. Based on their experiences with the Hub, NZ identified two broad areas of complexity with regard to e-certification exchange (i.e. various connection protocols and various versions of certificate format). The Netherlands on the other hand, been involved in pre-testing and User Acceptance Testing of the Hub found that strong security system is needed to securely communicate to the Hub.

Kenya, China and Japan, spoke about their experience in preparing to join the hub. Kenya shared issues that need to be considered by countries before embarking on implementation of ePhyto, such as national legislation, level of industry development, institutional capacity. China, explained how even though they have a point to point connection for certificate exchange, the hub has shown to be a better way to exchange data. As for the Japanese government, it is currently in the process of developing their National ePhyto System that will be linked to the NACCS aiming to connect to the Hub by 2020.

The industry sector equally presented on their perspectives on ePhyto. The Industry Advisory Group (IAG) chair presented on the industry specific issues such as high logistic costs, long storage, and perishable goods (to mention a few) that they hope ePhyto will help minimize and improve. The International Cotton Advisory Committee shared their expectations of ePhyto from a trader's perspective. From the International Grain Trade Coalition perspective, electronic documentation benefits exporters through cost and time savings; eliminates or reduces related risks such as fraudulent certificates and non-payment; and increases documentation processing and reporting efficiency. The International Wood products Association (IWPA) shared similar views. This section was completed with an overview of the benefits of blockchain technology and its link to electronic certification and ePhyto.

The World Trade Organization (WTO), the Standards and Trade Development Facility (STDF) and the World Bank (WB) presented on trade facilitation and their on going work in this area. The WTO provided and overview on the Trade Facilitation Agreement (TFA). STDF provided an overview on their work towards SPS measures and the balance of preventing barriers to trade. The WB provided an overview of their work and challenges they have faced in helping developing countries improve their trade flow.

The final topic presented focused on border collaboration. The IPPC provided their view point on how ePhyto can improve border risk management and risk based phystosanitary measures. The implementation of ePhyto would result in national efficiencies, improved security, simplification of information flow between traders and government, and efficient border management for trade facilitation. ASEAN Single Window (ASW) presented on their efforts to constitute a regional facility to enable a seamless, standardized and harmonized routing and communication of trade and custom-related information and data for custom clearance. The Asian Development Bank (ADB) presented on their work to assists development programs that aim to improve plant health, animal health and food safety; increase economic growth through trade in agriculture, fishery and forestry (AFF) products; enhance consumer confidence in products originating from Developing Member Countries (DMC); and build DMC government capacity for SPS management. A separate presentation was given, providing an overview of national border agency collaboration in Kenya, regional border collaboration, challenges faced and benefits gained. The final presentation focused on New Zealand's updated export certificate production system enable analysis of data to explore trade patterns and developments. Data can be used to project way forward with regard to when and what type of commodities will be exported.

Two session of three working groups were held looking and ePhyto business process for countries, operating the hub, and operating the GeNs including codes and terminology for ePhyto. Overall countries understood the diversity of business process aspects they need to consider as they go forward with implementing ePhyto. They were provided visuals of the features of the hub, and they provided feedback on features they felt were important to incorporate in the GeNS.

The symposium concluded with an outline of the future work that will follow for ePhyto. Highlighting the next steps for the technical pilot of the hub which is expected to conclude by the 2nd quarter of 2018 and for the GeNS development to be complete around the same time. Work will be focused on improving communication, information and guidance material related to the project. Secretary Xia closed the symposium identifying five important action items:

(i) development of action plan/strategy to promote implementation of ePhyto. Major target is to have harmonized, user-friendly, secured and effective system;
(ii) preparedness for accessing/joining GeNS. Five (5) elements to consider are uniformity (language – IT, technical, legal), capability (human capacity building), facility, security, and sustainability;
(iii) preparedness for connecting to the Hub – national coordination for legal framework; international coordination for various convention and treaties; development of institutional capacity; preparedness of industry; and involvement of various stakeholders;
(iv) promotion of Hub operation via five (5) important elements such as standard method, business model, charging model, Hub business continuity, and effective coordination of border management
(v) strengthening support measures/tactical for instance, regarding communication and resource mobilization.

REPORT

The 3rd IPPC Global Symposium on ePhyto "ePhyto and Trade Facilitation"

1. Opening of the Symposium

Malaysia's moderator, Mr Salekhan Bin Othman welcomed all speakers and participants to The 3rd IPPC Global Symposium on ePhyto.

1.1 Opening address by the Secretary of the International Plant Protection Convention (IPPC)

Dr. Jingyuan Xia, Secretary of the IPPC welcomed participants to the 3rd IPPC Global Symposium on ePhyto with the theme "ePhyto and Trade Facilitation".

Dr. Xia highlighted five (5) major points related to ePhyto and Trade Facilitation as follows:

(i) **Importance of Implementation of Trade Facilitation Agreement (TFA)**
TFA came into force on February 22, 2017 with the objective to improve efficiency and effectiveness of border agencies control.

(ii) **Contribution of Plant Health to Trade Facilitation - increased the number of ISPMS approved out of which 9 are directly linked to international trade**

(iii) **Support of the IPPC ePhyto to Trade Facilitation**
The development of the ePhyto Solution is to assist countries in implementing electronic certification as the basis of phytosanitary communication on the safe trade of plants and plant product. Apart from that, it is also an important initiative to support the implementation of the TFA.

(iv) **Environment of ePhyto Solution**
Stages of development of the ePhyto Solution are as follow:
- First stage (1990 – 2011) – formulation of eCert's concept
- Second stage (2012 – 2015) – development of project
- Third stage (2016 – now) – The Implementation stage which includes - development, testing, demonstration and extension of ePhyto Solution. This symposium marked the milestone of the third stage which is to promote the ePhyto Solution at global level.

(v) **Objectives and Expected Outcomes of this Symposium**
The three (3) important objectives of this symposium are:
- Sharing information to increase awareness on implementation of ePhyto Solution (Hub and GeNS);

- In depth discussion on the implementation; and
- Discussing ways to establish sustainable development of the ePhyto Solution.

On behalf of the IPPC, Dr. Xia expressed his thanks to the Department of Agriculture (DOA), Malaysia for hosting the symposium; to the Australian Department of Agriculture and Water Resources (DAWR) for providing financial support and to Asia and Pacific Plant Protection Commission (APPPC) for jointly organizing the symposium. He extended his appreciation to the ePhyto Steering Group (ESG) for developing the agenda and promoting ePhyto activities and to the ePhyto project team for supporting the working group to ensure the success of the symposium. In addition, he also thanked the audience for participation and positive contribution to the proceedings.

1.2 Opening address by Executive Secretary of APPPC

Dr. Yongfan Piao, Executive Secretary of the Asia and Pacific Plant Protection Commission (APPPC) expressed his sincere thanks to Deputy Director General (Operation), DOA Malaysia, Mr. Abdul Daut for officiating the symposium. Dr. Piao welcomed all participants and informed that their presence was a clear indication that this global symposium is an important event to find the best approach in implementing ePhyto Solution in the Asia and Pacific region.

Dr. Piao stated that the APPPC has decided to provide continual support to the APPPC ePhyto working group to benefit member countries by allocating funding for the next biennium 2018-2019. As many developing countries in the Asia and Pacific region do not have National systems for ePhyto, he hoped that the Generic ePhyto National System (GeNS) could assist these countries in the exchange of the electronic phytosanitary certificate (eCert). Further, the establishment of the Hub will also facilitate the global ePhyto exchange without many bilateral arrangements. He hoped participating NPPOs will be able to assess the opportunity and risk associated with the ePhyto implementation, and progress piloting of the GeNS with the global Hub. This approach could assist countries to decide on the best way forward in the implementation of ePhyto Solution.

At last but not least, he wished everyone a stimulating and successful workshop.

1.3 Official opening by the Deputy Director General (Operation), Department of Agriculture, Malaysia

Mr. Abdul Daut, Deputy Director General (Operation), DOA Malaysia welcomed participants on behalf of the Government of Malaysia. He noted that approximately 90 participants with government officials and industry players from various regions attended this symposium to learn, to exchange views, to build networking and to gain exposure from the latest ePhyto development.

Mr. Daut, expressed his gratitude to the IPPC for selecting Malaysia as the host country and DOA Malaysia as the co-organizer of this symposium. He informed that Malaysia recognizes the importance of implementing electronic certification to increase trade efficiency in the agricultural sector. Malaysia has benefited tremendously from its National system of online application for processing and issuance of Phytosanitary Certificate (PC) (MyPhyto System). He hoped Malaysia could learn and gain more information to expand and add value to its current system from the symposium.

He congratulated and thanked everyone for making the symposium a success and looked forward to having a productive session, before officially opening the 3rd IPPC Global Symposium .

1.4 Local and logistical information

Ms. Rozilawati Mohd Azman, the local Secretariat, briefed participants about the venue and business arrangements of the symposium.

2. ePhyto Overview

Mr Peter Neimanis, Chair of the ePhyto Steering Group (ESG), introduced members (Mr. Josiah Musili Syanda; Mr. Nico Horn; Mr. Christian Dellis; Mr. Walter Fabian Alessandrini; Ms. Yang Heqin; and Mr. Younes Kabbab) of the ESG.

2.1 ePhyto background and development – Mr. Shane Sela

Mr. Shane Sela (Phyto project manager) presented the background and development of ePhyto Solution. ePhyto is an electronic equivalent of a paper phytosanitary certificate with standardized XML schema. ePhyto allows information in phytosanitary certificates to be exchanged between NPPOs of exporting and importing countries. Nevertheless, paper format would be still available during the transitional period.

The establishment of ePhyto Solution began since year 2000s where some countries started to develop electronic certification and exchange bilaterally in order to improve efficiency and facilitate trade. In 2011, Open-Ended Working Group (OEWG) began work towards harmonization. In April 2014, Appendix I of ISPM 12 was adopted to provide guidance on format and contents of ePhytos, mechanism for exchange, harmonized codes and schema to be used in the certificate. In 2014, Commission of Phytosanitary Measures (CPM) commissioned a study (Bryant-Christie Study) which concluded that having a Hub to exchange certificates would further streamline the process. In 2016, funding from the Standards and Trade Development Facility (STDF) and donors advanced the ePhyto Solution with the Hub and GeNS.

The Hub is a system to facilitate exchange of ePhytos between NPPOs while GeNS is a web-based system to allow countries without their National systems to produce, send and receive ePhytos in the XML format. The NPPO authentication process provides verification that the message is securely exchanged during ePhyto transmission.

ePhyto will reduce potential for fraud, improve efficiencies by reduced data entry and validation, improve security, expedite clearance of commodities and pre-arrival processing. The ePhyto Solution is a globally harmonized approach which would expedite international trade, eventually leading to paperless trade. This allows developing countries to participate together without bilateral agreements between NPPOs and potential to link with other e-systems (e.g. single window, other e-documents) to create more efficient environment.

ePhyto Solution components are the Hub (build completed); GeNS (build being initiated); pilot (Hub pilot involving 10 countries is underway and expected to complete by February 2018); Implementation Guidance (development underway); and other components i.e. Policy on Use (in draft) and Business Modelling/Cost Recovery (options being developed).

3. ePhyto Development

3.1 Funding and business model – Ms. Laura Vicaria

One of the ePhyto Project components is to establish a funding model to ensure long term sustainability of the ePhyto Solution. Hence, IPPC commissioned Trade Development and Facilitation Consulting (TDFA) to carry out a study and provide recommendations for the development of a business model. TDFA has produced a report with preliminary recommendations.

The total cost of operating ePhyto Solution (ePS) per year is estimated to be approximately 1 million USD. The cost structure consists of three (3) key areas i.e. basic operational cost, supplemental operational cost and cost related to training and capacity building. There are three (3) options considered to cover these costs funded by the UN Food and Agriculture Organization (FAO); the NPPOs; PC users and/or Donors; and transaction based funding.

This cost structure and funding options are still under analysis and the business model will be finalised based on the input of various experts and completion of the pilot project.

The surveys that were conducted to get an understanding of the ability of countries, willingness to pay, preference in cost recovery model, and restriction they may face showed that:

i. there is strong interest in the ePhyto Solution;
ii. lack of budget, technical expertise and lack of facilities are potential obstacles seen by the NPPOs, whereas users of phytosanitary certificates are concerned on government resistance to change and lack of collaboration between importing and exporting countries; and
iii. NPPOs' preferred cost recovery method was the donor funding model while PC users preferred transaction based funding.

The recommendation by the TDFA consultant was to focus on a total support approach for the first 5 years, and then evaluate options for moving to a sustainable approach.

The next steps in the establishment of the business model are:

i. to gather further input from ESG, Industry Advisory Group (IAG) and Project Advisory Committee (PAC);
ii. conduct cost benefit analysis to have a more strategic selling point;
iii. completion of the pilot to know the actual cost involved;
iv. conduct legal analysis of potential obstacles to costing methods; and
v. analysis on payment mechanism.

3.2 Introducing the hub and GeNS and how it operates – Mr. Venkatram Ventakeswaran

The two (2) components of the IPPC ePhyto Solution are the Hub and GeNS. The Hub is a centralized system to facilitate exchange of ePhytos between NPPOs whereas GeNS is a web-based system to facilitate the exchange of ePhytos for countries that do not have a National system.

The Hub functions as a "post office" to deliver ePhytos (electronic certificates) through a National System or GeNS. Certificates received by the Hub can be sent (PUSH) directly to importing countries or stored temporarily while waiting for the importing countries to receive (PULL). To exchange phytosanitary certificates through the Hub, participating countries require a National System or GeNS, capable of producing ePhytos.

Currently, there are ten (10) countries participating in the testing (pilot) of the Hub namely Argentina, Australia, Chile, China, Ecuador, Kenya, Korea, the Netherlands, New Zealand and the United States of America. Other countries are encouraged to consider connecting to the Hub.

GeNS is a web-based system developed for countries without national system to produce, send and receive ePhytos electronically. Amongst the main features of GeNS are to facilitate data entry and standardization of codes; to produce ePhyto as per ISPM 12 Appendix 1; built-in industry workflows; to integrate with the hub; to ensure authenticity of ePhyto; to provide data extraction and designed to be used in low-bandwidth environment.

Mr. Gianluca Nuzzo explained the three (3) representative/principle workflow currently available in GeNS i.e. Issuance of Phytosanitary Certificate workflow; Re-export workflow and Withdrawal workflow.

3.3 Piloting (Global hub and the GeNS, roadmap following the pilot) – Mr. Christian Dellis

Mr Dellis highlighted the roadmap of the Hub and GeNS.

After the completion of pilot, future roadmap for the Hub includes:
(i) onboarding new countries – this require formal/informal processes and tools for joining the Hub (e.g. system to produce XML format)
(ii) process for change – changes of functions and schema which need to be coordinated;
(iii) bidirectional messages –releases, direct/fast feedback; and
(iv) long term support

As for the GeNS, roadmap includes:
(i) onboarding new countries – formal/informal process, tools for joining;
(ii) process for change – coordinated global enhancement, specific NPPO needs to be considered, and transition process; and
(iii) long term support.

Data Enhancement is an ongoing process and play a major role in providing changes to version and data to ensure that data is always up-to-date. The current focus is on the harmonization of schema.

The speaker emphasized coordination of stakeholders for the success of the roadmap.

3.4 Discussion

During discussions, few clarifications were made by speakers on the issues raised by the participants for the GeNS:

(i) Number of IT experts required for operation of the system. Having troubleshooting skill and good idea of the system operation are sufficient.
(ii) Using data from the first initial PC to issue re-export PC is part of the road map.

(iii) Currently, Additional Declaration (AD) is free text and more structured ways will be identified in future.

(iv) IPPC putting many efforts on the security of the system. Data are stored and managed by UNICC. There are two (2) layers of security i.e. physical security and electronic security.

(v) GeNS is designed to work in low bandwidth with various browsers. The plans are underway to include offline temporary storage of data so that the data transfer will occur soon after the connection is regained.

ePhyto is different from ASYCUDA as the latter is an integrated customs management system for international trade and transport operations, whereas the scope and goal of ePhytos are focused on the communication/exchange of phytosanitary certificates between the NPPOs.

One of the important issues raised by the industry is involvement in the development of the ePhyto Solution. It was mentioned that the input and feedback from the industry are critical to make the Solution more efficient.

4. GeNS Preparedness

4.1 Sri Lanka – Dr. Jayantha Senanayake

Dr. Senanayake shared information on Sri Lankan agricultural sector (import and export), overview of phytosanitary certification and current development of GeNS preparedness in Sri Lanka. He mentioned that ePhyto is important to Sri Lanka to speed up information exchange, to reduce cost, to minimize fraudulent certificates and to create a platform for "single window" initiatives.

He mentioned that Sri Lanka expects positive system changes through the implementation of GeNS mainly in the PC issuance procedure, import/export procedures at borders and management of records.

Basic infrastructure facilities required for ephyto launching in Sri Lanka have been developed with the support from the government of Sri Lanka. Sri Lanka has government support for implementation of the GeNS, Sri Lanka has engaged stakeholders/industry and developed infrastructure for ePhyto implementation. However, funds are required for technical support; piloting; GeNS training and initial system establishment.

4.2 Samoa - Ms. Talei Moors

Ms Moors provided information on phytosanitary system status in Samoa. Samoa currently has a stand alone electronic system known as Samoa Quarantine Information Database (SQID). SQID processes Phytosanitary Certificates, Import Permits and Releases & Transfers. The certificates and permits are printed out manually, endorsed and handed over to clients or scanned and emailed to clients if they are outside the country. Payments are made at the office or border upon arrival of goods. No form of online payment linked directly to the Samoa Quarantine Division (SQS) and online registration for exporters are currently available.

Samoa has taken many steps in the preparation and implementation of the GeNS as follows:

(i) establishment of ePhyto work plan;

(ii) compilation of process maps. Process maps provide guidance to regulate business processes of imports/exports and also used to identify potential areas where changes in the existing work flows may be required;
(iii) examine legislation with the view to include provisions to allow acceptance of electronic certificates; and
(iv) investigate technical requirements (e.g. IT equipment necessary to implement ePhyto, internet connectivity).

Samoa also conducted discussion with the World Bank Mission & IPPC consultants to address issues pertaining to sustainability (local resources and cost recovery mechanism), cost benefit analysis, linkages/alignment to ASYCUDA and Single Window in the long term, implementation guide for ePhyto, and conduct case study (lesson learnt and experiences).

The World Bank Group will continue to work with the IPPC Secretariat and Samoa in assessing business changes, developing reforms, action plans and implementing business changes which can then be used in other ePhyto pilot countries.

Challenges faced by Samoa for preparation are:
(i) Lack of formal policies and procedures;
(ii) Lack of electronic payment facility;
(iii) No security
(iv) Lack of understanding (importers/exporters)
(v) Changing of personnel
(vi) Insufficient time to drive the project activities
(vii) Cost
(viii) Availability of adequate infrastructure and,
(ix) Sustainability.

In future, Samoa expects that the GeNS would provide:
(i) accurate reports generated for certificates issued and received;
(ii) timely and secure exchange of information between competent authorities;
(iii) GeNS work stations;
(iv) changes in business processes;
(v) improvement of security in transmission of certificate documentation (electronic versus paper);
(vi) improvement of planning for the arrival and clearance of plants and plant products at customs that will need phytosanitary clearance;
(vii) conduct advocacy sessions such as seminars and workshops;
(viii) review fees and schedule (cost recovery); and
(ix) sourcing external funds from various sources to improve infra-structure development to facilitate GeNS implementation.

Samoa is looking forward to start piloting GeNS in 2018.

4.3 Ghana – Ms. Felicia Ansah-Amprofi

Dr. Felicia shared Ghana's experience in preparation for the ePhyto Solution. In Ghana, many stakeholders are aware of electronic certification as they have experienced "Single windows" implemented by the customs.

Ghana received assistance from the IPPC to conduct assessment on Business Process Analysis; to organise awareness sessions for staff and stakeholders on GeNS and the Hub. Ghana also has started automation of permit/certificate. Ghana's legislation allows implementation of the ePhyto System.

Ghana has made arrangements in preparation for GeNS implementation i.e. established designated office space at head office and major exit/entry point, infrastructure development (internet connectivity and electronic equipment), training of officials and engagement of stakeholders.

The obstacles faced by Ghana in the preparation process are limited internet connectivity at borders and insufficient financial resources for capacity building and awareness program.

Ghana's expects that the implementation of GeNS would:

i. reduce fraudulent of certificate;
ii. reduce data entry and validation;
iii. improve security in transmission of certificates;
iv. facilitate cargo clearance;
v. reduced bilateral arrangements; and
vi. create platform to link to "Single Window" initiatives

4.4 Discussion

Sri Lanka expects implementing ePhyto would reduce fraudulent certificates with efficient transmission. Samoa is of the view that the GeNS would improve data reporting and clearance of cargo. Ghana aims for faster transaction, authentication of certificate, and paperless transaction at port.

GeNS system is connected to the Hub.

HS Code (expand HS) is not an obligation under ePhyto as genus and species are more significant under phytosanitary requirements.

Countries need to establish project team, budget, and obtain support from higher authority at ministerial level before joining the ePhyto Solution.

5. Countries with Hub Pilot Experience

5.1 New Zealand – Mr. Peter Johnston

Mr. Johnston shared information on NZ ePhyto Solution and experiences with the hub.

NZ ePhyto Solution started 'live' in June 2011. The users must make formal application to participate on the Ministry for Primary Industries (MPI) ePhyto. Username and password will be given to access the system for phytosanitary certificate application. The system could print authorised hard copy certificates and automatically email "registered participants" with a "copy certificate" to facilitate trade communications.

ePhyto is a government to government "Secure Electronic Distribution Facility" between NPPO and exporter. The implementation should be timely and accurate with the Hub playing the role of an important multilevel facility.

Based on their experiences with the Hub, NZ identified two broad areas of complexity with regard to e-certification exchange (i.e. various connection protocols and various versions of certificate format).

The first area of complexity for government to government transactions involves addressing connection protocols and unique design of web service endpoints that each country must negotiate. The security was very expensive to implement and maintain. The IPPC Hub approach has helped addressing the "connection complexity".

The second area of complexity for G2G transactions involves addressing the various certificate formats and versions of the UNCEFACT SPS Schema in some countries as they do not use the expected Schema leading to the variability of data elements to Schema mappings. Once a country has started using a specific certificate format that would have to be locked into the same Schema for the receiving country. This would result in other countries requiring to change their internal systems for phytosanitary exchange. Dealing with such complexities may require more time and money for G2G e-Cert transactions causing barriers to trade facilitation. Based on NZ experiences in piloting the IPPC HUB, there is possibility for addressing the second area of complexity to minimise the cost of entry and the ongoing maintenance of ePhyto transactions.

NZ work with Australia for preparing to connect to the Hub as follows:
(i) Developing and trialling a bilateral "Import Exchange Transaction Process"
(ii) Alignment and integrations of different internal systems related to e-cert business processes
(iii) Create a single point of contact of these internal systems;
(iv) Communications and clarifications of hub requirements with ESG; (v) Participate in the Hub testing
(vi) Provide electronic copy of ePhyto transactions between government and exporter
(vi) Develop a "transformation engine" to transform non-aligned data to ISPM 12 Appendix I data map as a readable XML file.

NZ urged the IPPC Hub to become operational as soon as possible and requested cooperation to further "iron out" and harmonise some of the complexities identified by NZ. There is also need for Capacity Building Workshops to assist in providing consistent guidance to achieve harmonisation. Having a "HUB failover business contingency plan" would ensure that the Hub has a robust backup operational environment to support facilitation of international trade. Robust set of Business Rules are required not only between NPPO to IPPC/HUB Administrators but also between G2G in the form of "Participation Agreement" between NPPOs to agreeing on the bilateral exchanges. The latter is important to ensure all NPPO resources and facilities are aligned and operational to facilitate real time trade and minimise surprise discoveries of new HUB participant certificates. Another suggestions to go forward is to consider extending the use of the Hub to all SPS G2G certificate transactions between countries; and develop a fair and transparent charging model to allow for wider G2G SPS Trade Facilitation.

5.2 The Netherlands – Mr. Benno Slot

According to Mr. Slot, high percentage of import to Europe went through The Netherlands (NL). Thus, it is crucial for NL to safeguard importing countries and protecting Europe in terms of plant health and food security.

Electronic certification could expedite border clearance which is important to private sector as delays cause economic damage. Electronic certification also reduced transaction costs and administrative burden. As for the governments, implementation of electronic certification leads to efficient certification process; contributes to risk based enforcement; reduce fraud and is a prerequisite to paperless.

NL approach to bilateral cooperation in e-certification involved initiation stage (preparation of feasible work plan); design stage (decision on technical issue e.g. format, exchange mechanism); simulation and

testing; parallel run; and evaluation and end seminar (final decision will be made whether to go with the bilateral arrangement or not).

NL has been involved in pre-testing and User Acceptance Testing of the Hub. Based on the testing, NL found that strong security system is needed to securely communicate to the Hub. No significant errors were found; and the Hub is easy to integrate and easy to use. However, extra work was needed for monitoring the system. NL also acknowledged the excellent performance of the UNICC.

NL mentioned that issues related to the risk and costs associated with disaster and recovery procedures still need to be bilaterally decided.

6. Countries Getting Prepared for the Hub

6.1 Kenya – Mr. Josiah Syanda

Kenya has established a National System known as Electronic Certification System (ECS). The development of the system started in 2009 with the assistance from The Netherlands and went live in July 2011. Paper based certificates were earlier produced by this system. In 2014, the National System has been configured for implementation of ePhyto. Kenya is currently conducting ePhyto trial run with NL.

Mr. Syanda shared issues that need to be considered by countries before embarking on implementation of ePhyto, such as national legislation, level of industry development, institutional capacity, organization and collaboration with other related agencies, stakeholders interest, advancement of technology, financing and investment, system maintenance and emergency / recovery procedures.

The main challenges faced by Kenya in implementing ePhyto is the level of understanding of the ePhyto concept within the NPPO. The IT team and phytosanitary team need to closely work together to improve this situation. The configuration of National system to link with the Hub under limited financial resources is another challenge. were.

6.2 China – Ms. Heqin Yang

Ms Yang shared China's preparation for the Hub connection, experiences with the Hub testing and their expectations on the Hub.

China has a point to point connection experiences with few countries. These bilateral arrangements facilitate the clearance of import and export goods; prevent forged phytos; and protect sanitation and safety of goods. China has developed their e-cert system in 2009 and started using it from January 2010. The system is accessed by users with username and password provided by AQSIQ and connected to National systems of other countries.

Although point to point connection is convenient for common understanding, more flexible and rapid returns, it is time consuming (negotiation process). It also requires system adjustment (upgrading of system from country to country), which would be governed by the bilateral relationship with other countries (political; country system). Hence, the Hub is a better way to exchange data.

E-cert System in China is provided by E-CIQ Platform. This system allows sending and receiving of electronic certificates in XML language data with the capability to generate PDF versions.

China has successfully harmonized e-cert procedure through the following changes in system and policy.
(i) Proportion of container opening inspection,
(ii) Proportion of lab sampling
(iii) Clearance time of inspection and quarantine (Clearance time for import has been greatly shortened to 1.5 days, a reduction of 88% from the previous time frame).

China has started the Hub testing with import phytosanitary certificates from USA, Argentina and New Zealand whereas for export, exchange tested internally. China found that the Hub can be accessed smoothly and ePhyto can be exchanged. Some small adjustments on National system might be required to solve the possible problem of data structure and compatibility between different countries. There is also a need to develop an interface to facilitate the connection of national system to the Hub.

China expects that the Hub will promote more countries to join. It will also improve and optimize user experience for participants. Further funding support would be needed to achieve a stable and sustainable system; trade facilitation to achieve fully paperless environment; and scope expansion. If possible, expanding the usage of Hub to other areas such as Animal Health Certificate may be useful in future.

6.3 Japan – Mr. Masahiro Sai

Japan has a single window system named Nippon Automated Cargo and Port Consolidated System (NACCS). Application for Phytosanitary Certificate could be done through this system. However, this system does not support exchange of ePhyto. Japanese government is currently in the process of developing their National ePhyto System that will be linked to the NACCS aiming to connect to the Hub by 2020.

For the purpose of implementation of ePhyto, Japan has to revise related legislation to support the system implementation. National seminar will be organized to enhance public awareness of ePhyto in Japan. Japan also has contributed to the FAO Trust Fund Project to support cooperation for development of the ePhyto and implementation of the Convention and ISPMs.

6.4 Discussion

Internet connectivity and IT infrastructure are critical factors in running the ePhyto system as experienced by some countries. ESG stated that setting up national internet facilities and infrastructure to gain access to the ePhyto Solution should be initiated by countries.

For instance, consecutive meetings were conducted between industry and NPPO in Kenya to develop its certification system, infrastructure and capacity of logistics. There is high interest in industry for automation of ePhyto and other government services to reduce bureaucracy.

Coordination of border management is vital for effective ePhyto implementation. Data sharing and working agreements with border agencies need to be achieved.

One issue raised multiple times in the symposium is digital signature on certificate for authorization and validity. Current ePhyto system does not include function for signature or stamp from NPPO and this could affect legality and validity of the electronic certificate. This is one of the main issues that need to be considered by the future IPPC ePhyto Solution.

7. Industry Perspective on ePhyto

7.1 IAG overview of work with ESG – Mr. Gerard Meijerink

The ePhyto Industry Advisory Group (IAG) has been established to provide practical guidance and advice to the IPPC Secretariat on the design, development and deployment of ePhyto Solution (Hub and GeNS) to facilitate exchange of ePhytos by developing countries. IAG also advice the IPPC Secretariat on the feasibility of project and its ability to facilitate efficient and effective trade flows.

IAG includes representatives from Federation of Cocoa Commerce; International Community of Breeders of Asexually Reproduced Ornamental and Fruit Varieties (CIOPORA); International Grain Trade Coalition (IGTC); International Seed Federation (ISF); International Wood Products Association (IWPA); International Flower Trade Association (Union Fleurs); European Seed Association (ESA); European Potato Trade Association (Europatat); European Fresh Fruit and Vegetables Chain (Freshfel Europe), The Global Express Association (GEA); and International Cotton Advisory Committee (ICAC).

In early 2016, ESG completed a survey of IPPC members to identify preparedness for ePhyto. It was noted in 67 countries participated in the survey, 5 million certificates were issued for export consignments and 7.5 million certificates received for import consignments. There were important variations in countries on the basis of developed vs. developing; import vs. export and imbalances in trade.

Some examples of industry specific issues are:
shiploads (e.g. grain), high logistic costs; re-exports (e.g. seeds); long storage; perishable goods (e.g. fruits, flowers); variation in origins and purposes (e.g. wood); import restrictions (e.g. potato); and limited use periods.

Report from Union Fleurs and Freshfel Europe showed that non-compliant documents trigger a higher number of interceptions/import rejections than phytosanitary reasons (harmful organism)s.

Survey on phytosanitary certificate by ISF shows that there are various sources to find requirements of importing countries. The suggestion was to link these sources in the next phase of ePhyto development. There are also variations in fees charged by NPPO and processing time for issuance of PCs.
The percentage of shipments not approved because of error in PC range from 0 to 10% (there is country stating 50%). Main reasons listed for PC rejection are non-acceptance of lab tests, mistakes or missing AD, validity of PCs, mistakes in data, harmful organisms, non-approval of country of origin/distribution, regulatory changes between issued PCs and arrival of seeds, and loss of original certificates.

In summary, issues faced by users with PCs are different due to:
lengthy procedures/country; loss of certificates; and errors in certificates. These result in delays (critical for perishable products), loss of returns (critical for bulky products), and high costs.

The industry suggested following to promote the global use of ePhyto Solution:
(i) Participation of all main trading countries of plants and plant related products,
(ii) Mandatory use of ePhyto once a country has implemented ePhyto,
(iii) Acceptance of global ePhyto rules and principles
(iv) Reducing the need for bilateral agreements between countries, (v) Harmonized ways of working and procedures and,
(vi) Demonstrated improvements in reliability, predictability and efficiencies.

The IAG perspective on rolling out of ePhyto is seamless shift from paper to electronic system, without hiccups and disturbances to trade with industry collaboration. ePhyto should also eliminate notifications on non-compliant document.

Operational helpdesk is available at 24/7 for NPPOs (at global level) and companies (at global and national level (NPPO)) to provide ePhyto support.

The IAG proposed that better insights are needed in assessing total costs of current system (for IPPC, NPPOs and Industry) and added value and benefits (NPPOs and industry) for cost-benefit analysis. The insights need to be based on real data collected during pilot implementations for promoting ePhyto for global use and defining its fee structure and level. Any additional cost should be applied in line with the efficiency.

The industry suggested establishment of global trust fund during initial years for ePhyto funding,. When sufficient number of countries representing significant trade in plants/plant-related products have joined the ePhyto Solution, the following areas could be further assessed.
(i) a global single flat fee (transaction based) per ePhyto, covering operational costs and maintenance;
(ii) trust fund for training, capacity building, implementation support; and
(iii) project fund for enhancements.

In term of commitments on ePhyto, industry will give active participation in system development, pilots and testing, and support IPPC for implementation. Industry will collaborate with NPPOs to develop efficient processes and best practices in conjunction with the IPPC on system enhancements.

In summary, IAG believes that ePhyto could offer many opportunities for companies involved in import/export of plants and plant products, which are instrumental for global food security. ePhyto Solution has full support from industries represented by the IAG. The IAG therefore urged all countries to fully collaborate in the implementation of ePhyto. The industry will continue to work with the IPPC on facilitating trade processes, information exchange and data management.

7.2 International Cotton Advisory Committee (ICAC) – Mr. Andrew Mitchell

Mr. Mitchell shared the expectation of cotton traders on ePhyto implementation.

A merchant or a trader is in the middle of the supply chain i.e. between commodity origin and consumer. Traders receive shipping documents from origin of goods and prepare them for consumer. shipments. Therefore, introduction of ePhyto Solution will improve transmission times and accuracy of issuance.

Major challenges faced by cotton traders are as follow:

(i) trade flows can be complex (e.g. splitting of 1 set of documents into multiple smaller parcels is common)
(ii) sometimes shipments need to be put on 'hold' at transhipment ports when waiting to be sold; and
(iii) consume defaults of stranded and distressed cargo.

ICAC recognizes that the introduction of eDocuments and ePayment is inevitable as these developments will improve the supply chain. They welcome opportunities to assist in the development and testing of the ePhyto Solution.

7.3 International Grain Trade Coalition (IGTC) and Grain Trade Australia – Experiences – Mr. Gerard McMullen

Global grain trade is well developed, highly globalised, utilizes sophisticated infrastructure and involves high volume movement of product. It is a massive, growing and increasingly complex trade. In 2016 Global trade of all grains and oilseeds are reported to have grown by about 150 million tons in the last five years, exceeding the growth of the previous five years by more than 50%.

From an IGTC perspective, electronic documentation benefits exporters through cost and time savings; eliminates or reduces related risks such as fraudulent certificates and non-payment; and increases documentation processing and reporting efficiency. For importers, electronic documentation facilitates rapid and uninterrupted discharge of grain, has the potential to reduce demurrage costs and assist inventory planning due to visibility of transactions.

A survey conducted by the IGTC in 2016 on the industry preparedness for digitization shows that although the use of e-docs is widespread, companies currently do not use electronic documentation for all transactions. Nevertheless, the number of industry players aiming for at least 50% of transactions moving on to electronic documentation by 2018 is increasing. Mr. McMullen emphasized that in order to achieve the full benefits of electronic documentation, systems should be developed to transact all documents.

IGTC is ready to assist in the testing of the ePhyto exchange and lead the process of adoption where possible. The ultimate goal IGTC is seeking is more efficient, faster and flexible solutions to facilitate trade documentation in future. This can only be achieved through a fully working system being in place prior to widespread adoption and once implemented, no reverting to paper document transfer.

IGTC shared their views on the Business Modelling report of the ePhyto Solution. One of the main concerns of IGTC is how to ensure sustainable and robust uptake of the ePhyto Solution by countries. IGTC urged a cost-benefit analysis be carried out as soon as possible to provide information on the expected cost of implementation, costs of transactions and impacts on time and efficiencies associated with document exchange. The reduction of costs from less errors and lost certificates for both the NPPOs and industry should be part of this assessment. IGTC is keen to be involved in the development of the Hub and GeNS to better understand the systems.

Government and industry partnership is important for effective implementation of this system; and for the grain trade as a whole to successfully trade grain.

7.4 International Wood Products Association (IWPA) – Experiences – Ms. Cindy Squires

Ms. Squires delivered her presentation on the perspective of IWPA on ePhyto Project via Skype.

IWPA is a U.S. based trade association with the core purpose to build acceptance and demand in North America for globally sourced wood products from sustainably managed forests. Membership includes North American importers and exporters; global suppliers and trade facilitators.

Wood industry has many small-to-medium sized companies and high value wood products such as tropical hardwood which are often exported from developing countries and cross borders multiple times after warehousing. The main concern of IWPA on the ePhyto project is the industry cost. In IWPA point of view, the project has to assess payment for the industry, ease of paying and industry operational costs to work with the new system.

The return on investment for industry also need to be considered. Export and import countries should allow information exchange (two way flow) to ensure correct documentations are exchanged to rectify problems prior to export.

7.5 Emerging Trends – Industry Service Providers, block-chain, trade system - Mr. Venkatram Ventakeswaran

Mr. Ventakeswaran enlightened participants with blockchain technology, a public electronic ledger which is currently being used to develop transactional business applications to achieve transparency, efficiency and accountability into the process. This emerging technology is utilized by various sectors such as banking, financial markets, healthcare, insurance, supply chain and government.

8. ePhyto and Trade Facilitation

8.1 World Trade Organization (WTO) – TFA and need to improve collaboration – Ms. Sheri Rosenow

The Trade Facilitation Agreement (TFA) goals are to expedite movement, release and clearance of goods; improve cooperation between customs/other authorities; and enhance technical and capacity building. TFA is unique when compared to other trade agreements as it has flexibilities in implementation; benefitting developing and least developed countries (LDCs). It also has established a National Committee to oversee implementation with the support provided by the WTO TFA Facility.

There are three (3) sections under the TFA i.e. Section I (Technical Provisions); Section II (Special and Differential Treatment (SDT) Provisions for developing countries); and Section III (Institutional Arrangements and Final Provisions). The implementation of TFA will handle the following:
(i) Overly complex and unnecessary rules and procedures,
(ii) Accuracy of information and inefficient border-crossing procedures.

Committees are set up not only at WTO level but also at the national level to facilitate domestic coordination and implementation of the provisions.

Three (3) types of implementation flexibilities under TFA are:

(i) flexible language for national interpretation;
(ii) level of legal commitment; and
(iii) Special and Differential Treatment (SDT).

SDT applies only to developing countries (including LDCs) where each country can decide when they will implement different provisions. Transparency and proper notification are expected from each country. There are three (3) categories of SDT as follows:

(i) Category A – technical measures already implemented in the country by time Agreement enters into force;
(ii) Category B – measures not been implemented in the country but member does not need technical assistance to implement; and
(iii) Category C - measures not been implemented in the country and member need technical assistance to implement.

The current state of implementation of TFA provisions is 53.9% and an additional 3.3% is expected by February 2018.

WTO TFA Facility (TFAF) was established in 2014 under the Agreement to provide support to developing and LDC Members implementing and benefiting from the TFA.

8.2 Standards and Trade Development Facility (STDF) – Developing Countries and Trade Facilitation from an SPS perspective – Mr. Simon Padilla

As per the WTO SPS Agreement, SPS measures should *inter alia* be non-discriminatory, transparent, not more trade-restrictive than necessary and science-based (risk assessment). For harmonization purposes, international standards are developed. There are three (3) international organizations involved in developing international standards i.e. CODEX, OIE and IPPC.

Annex C of the SPS Agreement focuses on the implementation of SPS measures and aims to avoid unnecessary trade disruption and costs when performing SPS controls, inspections and approval procedures. Annex C is closely linked to the TFA. The final provision of the TFA recognizes SPS and Technical Barriers to Trade (TBT) Agreements at same level and value. But, some TFA provisions can go beyond the SPS and TBT Agreements, “SPS-plus” or “TBT-plus”, such as internal and international cooperation of border agencies.

The STDF conducted research in Southeast Asia and Southern Africa to find how SPS measures for specific products are implemented in practice. The findings identified some SPS-related procedural obstacles to trade such as:
(i) complex and lengthy procedures;
(ii) excessive document requirements;
(iii) limited information;
(iv) multiple inspections;
(v) little coordination between border agencies;
(vi) no complaints or appeal procedures; arbitrariness and unpredictability.
These lead to more controls than justifiable, longer than necessary waiting times, uncertainty, and increased costs for traders and government authorities.

Based on identified experiences, reducing trade costs and improving health protection can be achieved by improving transparency; streamlining documentary requirements and control procedures; implementing risk-based approaches; better coordination between SPS authorities and customs - joint inspections, IT solutions; and participation in Trade Facilitation Committees (TFCs) and TF needs assessments.

In addition, the STDF conducted seminars on SPS e-cert and its contribution towards facilitation of safe trade. Advantages of SPS e-Cert include: integrity, efficiency, security and cost and time savings.

The main challenges in implementing e-SPS certification are: weaknesses in existing paper-based systems; inadequate legislative frameworks; lack of political will, resistance of mid-level management; limited collaboration; lack of standardized exchange protocols (considerable investment to deal with non-standardized data requirements); high costs; and IT infrastructure.

In conclusion, Mr. Padilla stated that SPS e-Cert is most effective when countries already have effective paper-based SPS certification systems, including institutional functioning and adequate legislation. In other words, SPS certification procedures need to be strengthened first before implementing e-Cert as e-Cert does not solve systematic failures in national SPS import/export control systems.

8.3 World Bank (WB) – Global perspectives on TFA and ePhyto and work on border collaboration – Mr. Bill Gain

The World Bank Group (WBG) is a major provider of trade related assistance with a current portfolio of USD 7 billion. WGB provides/offers analysis and diagnostics; technical assistance; financing of major trade infrastructure and institutional reform projects; research and data products; and global advocacy and partnerships. The Trade Facilitation Support Program (TFSP) was established by WBG to assist developing countries in reforming and aligning their trade facilitation laws, procedures, processes and systems to enable implementation of the WTO TFA Requirements.

One of the challenges identified in trade facilitation is disproportionate burden of logistic costs on smaller firms i.e. the percentage of logistic costs is higher in smaller firms. The other challenge faced is varying trade transaction time from country to country. For example, document and border compliance in export range from 1 hour to 92 days and 1 hour to 21.5 days, respectively. As for benefit, trade facilitation leads to big local gains as a result of increase in export and private sector savings.

Trade Facilitation Project focuses on:
(i) simplifying and standardizing procedures
(ii) collaborating at the border
(iii) border risk management
(iv) authorized operator and
(v) automating trade transactions.

Under the WTO TFA, National Trade Facilitation Committee (NTFC) is the key leadership mechanism to implement the TFA. NTFC will assist with coordination and cooperation across relevant government and private sector organizations.

Mr. Gain shared the concept of Single Window (SW) and strategy for building a national single window environment. Strategy components for SW are vision statement, functional model, operational model, governance model, financial model, capacity building plan, legal framework and constraints. Lessons

learned from SW implementation are managing complexity; creating and enabling institutional framework with planning as the key.

In using indicators to assess project progress, Mr. Gain stated a couple of principles which are clustering indicators and measurement; and estimating the impact of indicators.

9. Border Collaboration

9.1 IPPC Perspectives on ePhyto, improving border risk management and risk-based phytosanitary measures – Mr. Shane Sela

The implementation of ePhyto would result in national efficiencies, improved security, simplification of information flow between traders and government, and efficient border management for trade facilitation. The implementation of ePhyto is an opportunity for NPPOs to evaluate their overall border clearance activities. The ePhyto Solution also provides countries with a tool which may improve national border clearance procedures and a tool that NPPOs can use to implement more targeted risk-based measures.

WTO TFA's main objectives are to expedite movement, release and clearance of goods; improve cooperation between customs/other authorities; and to enhance technical assistance and capacity building. Benefits of TFA to exporters and government are in terms of transparency and fairness; good governance; and modernization. Many of the benefits of TFA implementation reflect the benefits of ePhyto such as:
(i) predictability
(ii) reduced time/costs for government and traders;
(iii) reduced delays and complexity for traders
(iv) reduced clearance times and costs.

There is a direct correlation between implementation of the TFA and reduced trade costs with increased trade. The implementation is also an opportunity to improve and take a "whole of government" approach to reduce duplication and fill gaps; and to leverage plant health initiatives within the context of TFA by Working with National Trade Facilitation Committees. The context of "trade facilitation" offers many opportunities to strengthen trade systems and improve economies.

The factors which are critical to the success of ePhyto implementation as follows:
(i) political will/support
(ii) project plan
(iii) adequate funding
(iv) thorough analysis of business changes required to support the future state; legislation; software/hardware; technical tools and strategy for change management.

In developing plans for implementation, steps that need to be considered are concept/feasibility analysis; stakeholder identification; business process analysis of current vs. future states; and cost/benefit analysis. Outputs that can be earned from these are policy support documents to advance governance/financial commitment; opportunity to build links with other national trade facilitation initiatives; communication tools that address the issues of stakeholders; analysis of costs and benefits for pre-implementation support and post implementation analysis of success; and establishment of defined service standards.

Components of a strategy for implementing ePhyto are:
(i) Establishing a vision – provides a high level description of the policy intent of implementation;

(ii) Governance model – describe the overall governance of the national system;
(iii) Functional model - describes the structure of the system;
(iv) Mapping Business Processes – analysis of current state vs. future state;
(v) Operational model - describes the technical operation and responsibilities for the national ePhyto system;
(v) Financing model – provides clarity on how the system will be operated;
(vi) Legal – implementation and operation of the ePhyto System must be based on a legal framework;
(vii) Stakeholders consultation; and
(viii) Change management.

9.2 ASEAN Single Window and links to ePhyto – Mr. Ghazali Zakaria

ASEAN Single Window (ASW) is a regional initiative that connects and integrates National Single Window (NSW) of ASEAN Member States (AMSs). It provides secure IT architecture and legal framework that will allow trade, transport, and commercial data to be exchanged electronically among government agencies or the trading community. The aim of ASW is to expedite cargo clearance, further integrate the region's economies, and improve enforcement at the border.

ASW constitutes a regional facility to enable a seamless, standardized and harmonized routing and communication of trade and custom-related information and data for custom clearance. All trade and related customs data and information will stay within, and belong to respective Member States.

Under ASW, NSW is defined as a system, which enables a single submission of data and information; a single and synchronous processing of data and information; and a single decision-making for customs release and clearance.

The implementation of ASW started with live operation of e-ATIGA (ASEAN Trade in Goods Agreement) Form D Certificate of Origin exchange. The exchange commenced on 1st January 2018 and involved five (5) AMSs namely Malaysia, Indonesia, Singapore, Thailand and Vietnam. Coverage of ASW will expand over time to cover exchange of export declaration data, sanitary and phyto-sanitary (SPS) certificates, and the shipping manifest or related documents. e-SPS Certificates that would be exchanged in future are Phytosanitary Certificate (e-Phyto); Animal Health Certificate (e-AH) and Food Safety Certificate (e-FS).

U.S. Agency of International Development (USAID) assists the implementation and expansion of ASW project through its ASEAN Connectivity through Trade and Investment (US-ACTI) program. For e-SPS Certificates under ASW, US-ACTI engaged consultant to assist the development and implementation. Message Implementation Guide and Process Specification for e-Phyto and e-AH have been developed.

The main challenge of implementing ePhyto under ASW is the different level of readiness of AMSs. A few AMSs has ePhyto system in place which was not integrated with NSW. Other countries are either in the process of upgrading or enhancing their ePhyto System/NSW; or developing their ePhyto System.

Mr. Zakaria briefly shared information on Malaysian NSW known as myTRADELINK portal. Currently, there are six (6) core services under this NSW namely e-PCO (Preferential Certificate of Origin); e-Manifest; e-Declare; e-Permit; e-PermitSTA; and e-Payment. Malaysia also has national

ePhyto System in place known as Malaysia Phytosanitary Certification System (MyPhyto). However, this system functions independently, and not integrated to NSW.

Apart from facilitating cargo clearance and enhanced trade efficiency and competitiveness, other expected benefits of ASW are technical inter-operability, legal inter-operability, creation of platform for any business application, better view of regional data and time stamping for record keeping.

9.3 Asian Development Bank (ADB) – Support and access to funding for SPS in Greater Mekong sub-region – Ms. Jacqueline Lam

ADB assists development programs that aim to improve plant health, animal health and food safety; increase economic growth through trade in agriculture, fishery and forestry (AFF) products; enhance consumer confidence in products originating from Developing Member Countries (DMC); and build DMC government capacity for SPS management. Examples of initiatives assisted were construction/upgrading of laboratory facilities and equipment, technical training for SPS specialist and capacity building for policy and regulatory improvement in SPS management.

Ms. Lam gave the overview of projects supported and funded by ADB in Southeast Asia and Greater Mekong Subregion (GMS); South Asia and East Asia. The projects are as follow:

(i) GMS – promote and transform GMS agriculture systems into leading global suppliers of safe and environment-friendly agriculture products.
(ii) Southeast Asia (Lao PDR, Cambodia, Vietnam) – strengthen surveillance and inspection for plant health, animal health and food safety; improve regional harmonization and cooperation; enhance education levels and training of SPS specialists.
(iii) South Asia (Bangladesh, Bhutan, Nepal) – modern and effective customs administration and management; streamlined and transparent trade processes; improve services and information for traders and investors.
(iv) East Asia (Mongolia) – facilities upgrade for laboratories, quarantine and border-crossing inspection; establishment of SPS Inspection Management System; align national SPS controls and inspections with international standards.

Other scope of projects covered under plant health, animal health, food safety and education were also listed by Ms. Lam in her presentation.

9.4 Border Agency Collaboration to Facilitate Exports – Mr. Josiah Musili Syanda

Mr. Syanda gave an overview of national border agency collaboration in Kenya, regional border collaboration, challenges faced and benefits gain.

In 2014, Kenya amended its Citizenship and Immigration Act, under Section 75 of the Security Laws (Amendment) Act by adding Section 5A-5D to establish Border Control and Operations Co-ordination Committee (BCOCC) to enhance border efficiency and inter-agency coordination in border management.

The Points of entry in Kenya are managed either by Kenya Ports Authority for sea ports or Kenya Airports Authority for airports. These authorities are the custodians of the entry/exit points while the Customs exercises authority within the designated customs areas in the entry/exit points. The Kenya Security Law requires that government agencies working within the points of entry/exit should work in

collaboration and coordinated manner. The agencies are coordinated under a national committee called BCOCC. The committee membership includes the heads of the various government agencies working at the points of entry/exit.

For regional border cooperation, Kenya cooperates with Uganda, Rwanda, Tanzania, South Sudan, Burundi and Democratic Republic of the Congo.

Border control agencies are housed in different offices and some of them are distanced away from the ports of exit. The movement across various offices for document endorsement can lead to delays, additional costs and loss of cargo especially for perishable goods. It is important to note that although cargo maybe sourced from various origins, the point of entry/ exit provides a "gate effect" where regulatory control may be undertaken. In most cases, various government agencies lack adequate personnel for management of the cargo to ensure fast clearance. The "gate effect" can be limiting in trade facilitation leading to cargo pile up at the port. Sharing of information and reuse of data leads to a more effective way of cargo clearance. Border agencies can undertake cargo risk management and prior release based on the information available to them. The "gate effect" is managed through the implementation of National Single Window system.

Kenya is implementing the National Single Window System as a means of eliminating the "gate effect". Information keyed-in by the exporter/importer is visible to the relevant government agency for regulatory or statutory process. The ability to use online information eliminates the need to move to a physical location. The availability of information to various border control agencies at the same time ensures that processes can be completed concurrently thereby saving time and transport/logistical costs.

Challenges faced in border collaboration are overlapping of mandates (national & regional); cross border regulations and laws; harmonization – SPS issues; capacity – human resource, infrastructure, technical knowledge; process re-engineering; costs and process financing.

In conclusion, Mr. Syanda stated that knowledge and information sharing is critical for collaboration and trade facilitation so as to nurture developing and Less Developed Countries to create regional balance in trade flows.

9.5 The Use of Data in Border Collaboration – In The Targeting Centre – Mr. Peter Johnston

The NZ's updated export certificate production system enable analysis of data to explore trade patterns and developments. Data can also be used to project way forward with regard to when and what type of commodities will be exported.

The Integrated Targeting and Operations Centre (ITOC) was established to support command, planning and coordination of operation within the NZ's border. ITOC consists of six (6) agencies working together to protect the border 24/7. These agencies are New Zealand Customs Service; Ministry for Primary Industries (MPI); Immigration New Zealand (INZ); Maritime New Zealand (MNZ); New Zealand Police; and New Zealand Security Intelligence Service (SIS). Working from one location allows these agencies to better understand each other's roles and share information within legal boundaries. Sophisticated technology and advanced intelligence tools are used to gather information to identify potential threats and conduct risk assessments. This integration also streamlines border activities, removes duplication of effort, and vastly improves use of resources across the sector.

NZ's import database currently in use need to be improved and updated to ensure efficiency, reliability and accuracy of data. For this purpose, NZ's has identified significant programs of work to refresh not only import data capture but also create pro-active linkages to other "inter-relational" phytosanitary

biosecurity risk management database. The key cornerstone of proposed program of improved biosecurity intelligence work includes ability in future to electronically capture import phytosanitary certificate XML information into modern robust database. Ultimately, this will help to manage import and export risk management.

10. Working Groups Discussion

Participants were assigned into three (3) groups to discuss identified topics as follow:

(I) Group One
Facilitator: Mr. Shane Sela and Ms. Laura Vicaria
Topic: ePhyto business process for countries
- User policy of the ePhyto Solution and legal dimensions on country preparation for the adoption of ePhyto Solution
- Work planning
- Understanding workflows
- Project management
- Change management and benefit analysis
- Stakeholder engagement
- Funding sustainable operations

(II) Group Two
Facilitator: Dr. Venkatram Venkateswaran and Mr. Christian Dellis
Topic: Operating the Hub including codes and terminology for ePhyto

(III) Group Three
Facilitator: Mr. Nico Horn and Mr. Gianluca Nuzzo
Topic: Operating the GeNS including codes and terminology for ePhyto

11. Outcome of Working Groups

11.1 Working Group 1

Mr. Fitzroy White presented the outcome of Group 1 discussion on vision for establishing an ePhyto System and challenges that may be faced.

Visions for establishing the ePhyto system are: overall cost reduction; paper reduction; improved efficiency; connect to Single Window; reduce risk of fraudulent certificates; harmonize internal work and additional information of certificate; achieve full electronic status; facilitate safe trade and implement TFA objectives; facilitate efficient information flow to clients; linking NPPO and phytosanitary certificate payments; efficient import procedure for phytosanitary certificates; facilitate and address issues of re-export; and increase internal and external confidence of participants

The challenges that may be faced for ePhyto implementation will vary from country to country. Possible challenges listed are: legal framework; legislation not in place for accepting electronic certification; legislation does not allow data entry by industry; understanding the overall benefits and deciding whether using GeNS or having national system is better in terms of funding and time of development; changes to operation particularly to processes; system security; system to transmit and receive ePhyto securely; reliability of information; ability to amend information; budget; cost of system resources; financial resources of NPPO vs government; capacity availability; procuring IT equipment; internet connectivity; getting trading partners to participate; process for joint participation; commitment of government to overall implementation across the years; ongoing report; contingency planning; fail over process/back-up system; staff training and in particular senior staff; not enough experts and infrastructure available to implement project; coordinating with stakeholders; making stakeholders use online payment system instead of paying in cash; and difficulty to upload export certificate from custom union to overseas countries (this is applicable to legislative restrictions in the Russian Federation).

11.2 Working Group 2

The discussion in Working Group 2 started off with facilitator sharing features (technical information, operation/workflow, mapping, pre-requisite for joining) on the Hub, followed by demonstration on how ePhyto are exchanged through the Hub (taking exchange between USA and Argentina as example) and discussions.

There were remarks made on certificate status and certificate type. In the Hub system, only "withdrawn" status is available but not "replaced" status. In regards to the certificate type, information on the envelope is useful to help the Hub routing the message to the respective country.

One of the issues raised during the discussions was authenticity of ePhyto sent via the Hub. From the demonstration, it was shown that exchanged PC was retrieved in a format/template of importing country but not as in the format of the exporting country. This issue was raised as this could cause confusion especially when re-export phytosanitary certificates are issued.

11.3 Working Group 3

Participants requested IPPC to include phytosanitary import requirements of other countries as referrals (road map) in the repository of GeNS system. Mr Dellis added that transparency and willingness of importing countries to notify other countries of their requirements are needed for this to develop.

Other feedback and suggestion from Working Group 3 on GeNS are: flexibility on language used; data security (e.g. limitation of system accessibility by authorized person in the IPPC); data storage (e.g. storage for at least five years); validation tool; survey on estimated cost; internet connectivity; harmonized codes for commodities; adequate IT facility; awareness and training of staff and stakeholders; attachment of document; process of adding additional declaration; online payment; function for conversion of unit (e.g. kg to metric); easy interaction with exporter; and ability to hold phytosanitary certificates before release.

GeNS is a non-bilateral arrangement for ePhyto exchange. Collaboration on ePhyto is important for processing efficient phytosanitary certificates and managing biosecurity issues. The issues that need to

be considered are the cost; defining responsibility of related agencies/organization, and sustainability of the system. The IPPC has to share contact points on different aspects of this project and provide guidance on how to implement and where to start.

IPPC also need to have clear direction on the next steps and what need to be done for way forward.

IGTC emphasized that industry is willing to support the implementation.

12. Future Work

12.1 Request by African Union – Mr. Abdel Fattah Mabrouk Amer Salem

Representative from the African Union, Mr Salem forwarded a request to the IPPC to conduct workshop/symposium especially for Africa on the ePhyto Solution. This is to increase awareness on the importance of ePhyto to African countries.

12.2 Future ePhyto Work Plan and Ongoing Communications – Mr. Peter Neimanis

Mr. Neimanis shared the future work plan of IPPC ePhyto Solution and medium of communications to provide information on ePhyto and messages for the IPPC, ESG, RPPO, NPPOs and industry groups to progress the ePhyto development and implementation.

Piloting of the Hub will be on-going until the 2nd Quarter of 2018 and after evaluation, onboarding of additional countries is expected to begin in the 3rd Quarter of 2018. As for the GeNS, the system development is expected to be completed in 2nd Quarter of 2018, followed by piloting in mid 2018. The contract for development/service operation of the Hub and GeNS is nearing completion.

IPPC is also developing Implementation Guidance to assist countries in joining and implementing. The Business Model is also in progress. Recommendations from experts and outcomes from pilot will be utilized to further enhance the model. The model is expected to be finalized and submitted to the CPM (governing body) for consideration by 2019.

IPPC Secretariat updates ePhyto website regularly with current information including factsheets, news items, technical information etc. to communicate information and progress on the ePhyto Solution. The CPM bureau and CPM are updated annually and letters are sent to NPPOs for future updates

Other suggested methods for communications are:

(i) participants attending the symposium to raise ePhyto awareness with their government and organization;
(ii) to facilitate decision making and implementation, IPPC should take component by component approach (step by step) in communicating to ensure countries can follow clearly;
(iii) through social media;
(iv) through IPPC contact points;
(v) ePhyto newsletter; and

(vi) approach specific community/groups for example institution/organization/community related to plant health.

IAG's initiative is that they will call upon members involved in the pilot project for feedback. IAG requested regular updates from the IPPC regarding countries involved in the Hub or bilateral, to create opportunity for the development of the system.

Messages from Mr. Neimanis to organization and stakeholders are:

(i) IPPC – strategic plan; maintain and extend collaborations (integration with trade facilitation initiatives, certification bodies); plan for more countries coming onboard; implement a sustainable funding base.

(ii) IPPC ePhyto Steering Group (ESG) – continue technical focus on harmonization (contents and schema), Hub and GeNS; communicate global timetable of activities; coordinate development of guidelines for ePhyto at country level (e.g. legislation; infrastructure; business processes); define criteria for participating in the IPPC ePhyto (pre-requisite); raising awareness amongst contracting parties via series of fact sheets, standard PowerPoint presentations and regional workshops; support work on a sustainable funding base.

(iii) Regional Plant Protection Organisation (RPPO) – establish a regional ePhyto Working Group (member countries to coordinate activities; guided by Terms of Reference agreed by membership); seek agreement at RPPO session for ePhyto work plan and funding; provide technical feedback to the IPPC ePhyto steering group; coordinate actions across countries; identify countries for the next phase of ePhyto implementation; identify regional opportunities for collaboration.

(iv) NPPOs – policy decision to pursue ePhyto; investigate trade facilitation initiatives in own country; establish ePhyto project team with multiple roles; develop process maps/workflows; define user needs (industry and NPPO); increase stakeholder awareness; review IT to support ePhyto; review legislation to support ePhyto; develop a change management plan; estimate benefits and costs of implementation; and obtain funding domestically and regionally.

(v) Industry groups (domestic and international) – lobby governments to support ePhyto project; provide practical guidance on the industry impacts on ePhyto; identify implementation requirements supporting trade facilitation; propose initiatives to raise awareness, understanding and capacity building amongst NPPOs and cooperating border agencies; and assist in the development of funding proposals and options for the sustainability of ePhyto.

The APPPC ePhyto Working Group aims to achieve the following outcomes, as per its Terms of Reference:

(i) foster an environment of co-operation through open information sharing;
(ii) increase harmonisation through implementation of Appendix 1 to ISPM 12;
(iii) encourage and support broad uptake of ePhyto throughout APPPC;
(iv) develop and maintain a status report of existing ePhyto systems within the APPPC;
(v) explore and secure capacity building funding for APPPC members; and
(vi) develop an ePhyto Work Plan for presentation at the RPPO planning meeting.

Participants informed initiatives that they would consider after the symposium as follows:
(i) engagement of stakeholders (especially higher authorities) to brief them about the ePhyto Solution to make ePhyto policy decisions;
(ii) initiate collaboration with other agencies and countries;
(iii) raising GeNS awareness amongst participating agencies and initiate effort for GeNS implementation.

Mr Neimanis emphasized that the IT team and NPPO of each country should work together to discuss the country priority, changes in legislation and how to communicate information to stakeholders. For this purpose, regional coordination is required to disseminate information to decide on the next important steps for implementation.

He acknowledged the efforts of the main committee, which consists of personnel from the IPPC FAO Italy, DAWR Australia, APPPC FAO Thailand, Australian High Commission Kuala Lumpur and Plant Biosecurity Division, DOA Malaysia, in making the symposium a success.

13. Summary of the Symposium

Conclusive remarks were addressed by Dr. Jingyuan Xia, Secretary of the IPPC.

Dr Xia acknowledged the presence of many participants from the world throughout the symposium.

He listed the major achievements of the symposium as follows:

(i) awareness to promote IPPC ePhyto Solution;
(ii) increase readiness for implementation as a result of in depth analysis of challenges and opportunity. According to Dr Xia, five (5) major challenges are awareness, legal framework, security, capability/capacity, and budget.
(iii) The major opportunity is to facilitate trade and provide clear direction to move forward (i.e. testing and demonstration).

Dr Xia also identified five (5) important action items for next steps as listed below:

(i) development of action plan/strategy to promote implementation of ePhyto. Major target is to have harmonized, user-friendly, secured and effective system;
(ii) preparedness for accessing/joining GeNS. Five (5) elements to consider are uniformity (language – IT, technical, legal), capability (human capacity building), facility, security, and sustainability;
(iii) preparedness for connecting to the Hub – national coordination for legal framework; international coordination for various convention and treaties; development of institutional capacity; preparedness of industry; and involvement of various stakeholders;
(iv) promotion of Hub operation via five (5) important elements such as standard method, business model, charging model, Hub business continuity, and effective coordination of border management
(v) strengthening support measures/tactical for instance, regarding communication and resource mobilization.

Dr Xia also requested following follow-up action after the symposium

(i) ESG to strategize change from project obligation to system implementation;
(ii) RPPO to get involved and make coordination between the IPPC and NPPO;
(iii) NPPO to implement and establish ePhyto working team consisting various agencies (NPPO, customs etc.) for national coordination;
(iv) continuous direct and indirect support to the IPPC ePhyto Solution.

Dr Xia extended thanks to DOA Malaysia, DAWR Australia, ESG, Mr Shane Sela, Mr Peter Neimanis, Ms Laura Vicaria, local organizing committee and all the participants in his closing remarks. He looked forward to seeing everyone at the 4th IPPC Global Symposium on ePhyto.

Annex I- Symposium Agenda

The 3rd IPPC Global Symposium on ePhyto
"ePhyto and Trade Facilitation"

22-26 January 2018
Berjaya Times Square Hotel, 1 Jalan Imbi, 55100 Kuala Lumpur, Malaysia

Day One - Monday 22nd January *Facilitator Peter Neimanis*			
Time	**Topics**	**Presenter**	**Venue**
8.30-9.25	Arrival and Registration		Foyer, Manhattan V (14th Floor)
	Section 1: Opening of Symposium		
9.30-10.00	Opening address by International Plant Protection Convention (IPPC)	Jingyuan Xia	Foyer, Manhattan V (14th Floor)
	Opening address by Asia and Pacific Plant Protection Commission	Yongfan Piao	Foyer, Manhattan V (14th Floor)
	Official opening by Ministry of Agriculture and Agro-based Industry, Malaysia	His Excellency, Dato' Sri Ahmad Shabery Cheek	Foyer, Manhattan V (14th Floor)
10.00-10.15	Group Photo		Foyer, Manhattan V (14th Floor)
10.15-10.45	Press Conference		VIP holding room / Press Conference room
	Coffee Break		Foyer, Manhattan V (14th Floor)
	Section 2: ePhyto Overview		
10.45-10.50	Local and logistical information	Rozilawati Mohd Azman	Manhattan V (14th Floor)
10.50-11.10	ePhyto background and development	Shane Sela	Manhattan V (14th Floor)
	Section 3: ePhyto Development		
	Funding and business model	Laura Vicaria	Manhattan V (14th Floor)

11.10-12.30	Introducing the Hub and how it operates	Venkat Venkateswaran	Manhattan V (14th Floor)
	Introducing the GeNS and how it operates	Venkat Venkateswaran	Manhattan V (14th Floor)
	Piloting (Global Hub and the GeNS, roadmap following the pilot)	Christian Dellis	Manhattan V (14th Floor)
12.30-13.00	Questions and Answers	All	Manhattan V (14th Floor)
13.00-2.30	Lunch		Big Apple Restaurant (14th Floor)
	Section 4: GeNS Preparedness		
2.30-3.00	Sri Lanka	Jayantha Senanayake	Manhattan V (14th Floor)
3.00-3.30	Samoa	Talei Moors	Manhattan V (14th Floor)
3.30-4.00	Ghana	Felicia Ansah-Amprofi	Manhattan V (14th Floor)
4.00-4.30	Discussion & daily summary	Peter Neimanis	Manhattan V (14th Floor)
6.30-9.00	"Ice Breaker" Session- Pool Side (depending on weather)	All	Poolside Gazebo (15th Floor) or Broadway Lounge (14th Floor)

Day Two - Tuesday 23nd January *Facilitator Nico Horn*			
Time	**Topics**	**Presenter**	**Venue**
	Section 5: Countries with Hub Pilot Experiences		
9.00-9.30	New Zealand	Peter Johnston	Manhattan V (14th Floor)
9.30-10.00	Netherlands	Benno Slot	Manhattan V (14th Floor)
10.00-10.30	Coffee Break		Foyer, Manhattan V (14th Floor)
	Section 6: Countries Getting Prepared for the Hub		
10.30-11.00	Kenya	Josiah Syanda	Manhattan V (14th Floor)
11.00-11.30	China	Heqin Yang	Manhattan V (14th Floor)
11.30-12.00	Japan	Masahiro Sai	Manhattan V (14th Floor)

12.00-12.30	Discussion and Summary	Nico Horn	Manhattan V (14th Floor)
12.30-2.00	Lunch		Big Apple Restaurant (14th Floor)
	Section 7: Industry Perspective on ePhyto		
2.00-2.25	IAG overview of work with ESG	Gerard Meijerink	Manhattan V (14th Floor)
2.25-3.00	International Cotton Advisory Committee (ICAC)	Andrew Mitchell	Manhattan V (14th Floor)
3.00-3.25	International Grain Trade Coalition (IGTC) and Grain Trade Australia- Experiences	Gerard McMullen	Manhattan V (14th Floor)
3.25-4.00	International Wood Products Association (IWPA)– Experiences	Cindy Squires	Manhattan V (14th Floor)
4.00-4.20	Coffee Break		Foyer, Manhattan V (14th Floor)
4:20-4.45	Emerging Trends- Industry Service providers, block-chain, trade system	Venkatram Venkateswaran	Manhattan V (14th Floor)
4.45-5.00	Wrap up	Nico Horn	Manhattan V (14th Floor)

Day Three - Wednesday 24th January 2018 Field Trip			
Time	**Activities**	**Organizer**	
9.00-5.00	**Option One:** Tour One Stop Center of Agriculture Regulatory (OSCAR), followed by a look at the MyPhyto. Ending at the Central Market and Petaling Street	DOA Malaysia	Plant Biosecurity Division's office, Kuala Lumpur
	Option Two: Tour of Malaysian port operation. Ending at the Central Market and Petaling Street		Westport Sdn Bhd, Port Klang

Day Four - Thursday 25th January *Facilitator Craig Fedchock*			
Time	**Topics**	**Presenter**	**Venue**
	Section 8: ePhyto & Trade Facilitation		

9.00-9.30	World Trade Organizations(WTO) – TFA and need to improve collaboration	Sheri Rosenow	Manhattan V (14th Floor)
9.30-10.00	Standards and Trade Development Facility (STDF)- Developing Countries and Trade Facilitation from an SPS perspective	Simon Padilla	Manhattan V (14th Floor)
10.00-10.30	World Bank (WB) – Global perspectives on TFA and ePhyto and work on border collaboration	Bill Gain	Manhattan V (14th Floor)
10.30-11.00	Coffee Break		Foyer, Manhattan V (14th Floor)
	Section 9: Border Collaboration		
11.00-11.30	IPPC perspectives on ePhyto, improving border risk management and risk-based phytosanitary measures	Shane Sela	Manhattan V (14th Floor)
11.30-12.00	ASEAN Single Window and links to ePhyto	Hazali bin Zakaria	Manhattan V (14th Floor)
12.00-12.30	Asian Development Bank (ADB)- Support and access to funding for SPS in Greater Mekong Sub-region	Jaqueline Lam	Manhattan V (14th Floor)
12.30-2.00	Lunch		Big Apple Restaurant (14th Floor)
2.00-2.30	Border agency collaboration to facilitate exports	Josiah Syanda	Manhattan V (14th Floor)
2.30-3.00	The use of data in border collaboration- in the targeting center	Peter Johnston	Manhattan V (14th Floor)
3.00-3.30	Coffee Break		Foyer, Manhattan V (14th Floor)
	Section 10: Working Groups Discussion – Phase one Group leader/rapporteur to be selected		
4.00-5.30	**Group One:** ePhyto Business process for countries • User Policy of the ePhyto Solution and legal dimensions on country preparation for the adoption of ePhyto Solution • Work planning • Understanding workflows • Project management • Change management and benefit analysis • Stakeholder engagement • Funding sustainable operations	Shane Sela/Laura Vicaria	Bronx I (14th Floor)

	Group Two: Operating the Hub Including Codes and terminology for ePhyto	Venkatram Venkateswaran/ Christian Dellis	Manhattan VII (14th Floor)
	Group Three: Operating the GeNS including codes and terminology for ePhyto	Nico Horn/ Gianluca Nuzzo	Manhattan VIII (14th Floor)
6.30-9.00	Conference Dinner	All	

Day Five - Friday 26th January *Facilitator Shane Sela*			
Time	**Topics**	**Presenter**	**Venue**
	Section 10: Working Groups Discussion – Phase two Group leader/rapporteur to be selected		
9.00-10.30	**Group One:** Business process for countries • User Policy of the ePhyto Solution and legal dimensions on country preparation for the adoption of ePhyto Solution • Work planning • Understanding workflows • Project management • Change management and benefit analysis • Stakeholder engagement • Funding sustainable operations	Shane Sela/Laura Vicaria	Bronx I (14th Floor)
	Group Two: Operating the Hub Including codes and terminology for ePhyto	Venkatram Venkateswaran/ Christian Dellis	Manhattan VII (14th Floor)
	Group Three: Operating the GeNS including codes and terminology for ePhyto	Nico Horn/ Gianluca Nuzzo	Manhattan VIII (14th Floor)
10.30-11.00	Coffee Break		Foyer, Manhattan V (14th Floor)
	Section 11: Outcome of Working Groups		
11:00-12:30	Reports to Plenary of the Working Group Session	Working Group Leaders	Manhattan V (14th Floor)
	Questions and Answers		

12.30-2.00	Lunch		Big Apple Restaurant (14th Floor)
	Section 12: Future Work		
2.00-2.30	Future ePhyto Work Plan and ongoing communications	Peter Neimanis	Manhattan V (14th Floor)
	Section 13: Summary of the Symposium		
3.00-3.30	Wrap up and closing of Symposium	Jingyuan Xia	Manhattan V (14th Floor)

Annex II: Participants

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