ePhyto Implementation

Meeting of the Strategic Planning Group

1. The technical development of the hub commenced in mid-May 2017. Initial communication tests of the hub began in June. The Netherlands, the United States of America and New Zealand supported the initial testing and had to undertake some reconfiguration of their systems in order to align them with the hub.
2. The International Computing Centre (ICC) confirmed that these initial tests were successful and that two-way exchanges can commence, officially leading to the start of the pilot on 6th October 2017. It is expected that the selected pilot countries listed in Annex 1 will require some time to complete configurations to allow exchanges and that initially some may choose to only exchange certificates in one direction particularly if national export and import systems are independent. As of Tuesday, 10 October, two contracting parties have signed on to the hub.
3. Countries may also need to align the existing format of their electronic certificates to match the harmonization work that has been completed by the ePhyto Steering Group (ESG). Harmonization documents have been posted at <https://www.ippc.int/en/ephyto/ephyto-technical-information/>. Although Appendix 1 of ISPM 12 is linked to various resources on harmonized codes and elements for use in electronic sanitary and phytosanitary certificates, these data elements required further refinement to permit NPPOs to consistently exchange electronic data in a harmonized manner. The ESG will be proposing to the November 2017 meeting of the Standards Committee some minor changes to Appendix 1 of ISPM 12 to link the Appendix to the new harmonized codes and data elements.
4. The ESG and Project Technical Committee (PTC) met from 13 – 17 March in Geneva. During the meeting members completed the following:
   1. The specifications for hub
   2. Penultimate specifications of the Generic ePhyto National System (GeNS).
   3. Evaluation criteria for assessment of a contractor to provide the GeNS system.
   4. Detailed analysis and mapping of the electronic phytosanitary certificate to the components of a paper certificate as described above.
   5. Met with other international organizations to further discuss harmonization of electronic certificate approaches and ongoing collaboration.
5. The ESG met again from 2-6 October 2017. During the meeting members finalized some details of the hub service and did further work on planning the development of the GeNS. The ESG also reviewed the proposed costing of the operation of the Solution required for developing a detailed analysis for the business model. The ESG also reviewed the proposed conditions of use developed by FAO and proposed that the conditions should be simplified.
6. The ICC has been asked and has provided a proposal for developing the GeNS. The proposal was reviewed by the ESG for compliance with their specifications established by the ESG. The Secretariat is currently reviewing the financial aspects of the proposal and once complete will be seeking to complete the contracting process. It is expected that the contracting should be complete in December leading to development. It is expected that the GeNS should be available for piloting in May 2018. The Secretariat is also proposing that a demonstration of both the GeNS and hub be ready for CPM-13.
7. The Secretariat, working with FAO Legal Services, completed the development of a “conditions of use” document to serve as a standard for countries using the hub based on the comments provided by the ESG. The conditions will be posted on the international phytosanitary portal (IPP) and countries using the hub acknowledge their agreement by accessing the hub. Similar conditions will be developed in due time for the GeNS and users will be required to agree with them as part of the login process to the system. The conditions were reviewed by the ESG during its meeting in October. They felt that the document presented a one-sided approach to the operation of system and suggested that a more policy-oriented approach should be considered by the Secretariat and FAO. The Secretariat is working with the FAO Legal Office and is very close to finding an appropriate solution.
8. The Secretariat engaged a consultant in June 2017, to undertake an initial evaluation of potential approaches for recovering the costs of operating the ePhyto Solution. The Consultant has begun analysing existing models used by other organizations to recover costs associated with operating systems on behalf of international communities. The Secretariat has also prepared a preliminary cost estimate for the operation of the Solution including operational and administrative costs (Annex 2). The ESG at its October meeting concluded that the operation of the Solution should be separated from capacity development work. The ESG determined that costs associated with capacity development work should be limited to supporting the implementation of 1-2 countries annually. The operation of expert working groups supporting technical enhancements to the Solution should also be separated from operational costs. The cost estimates provided in Annex 3 were therefore updated following the meeting.
9. Various options are being considered for the funding model including transactional models, donor funding, levies, etc. The consultant has met with the ESG and the Industry Advisory Group (IAG) to get initial feedback on proposed funding options. The ESG has advocated that transactional models should not be considered as they add significant costs to the overall operation in terms of monitoring and recovering funds; create instability in funding, if countries fail to pay; create difficulties in fairness resulting from determination of benefactors and who should pay, etc. The consultant therefore will not be proposing a transactional-based fee structure. The consultant in early September commenced a survey of NPPOs and industry with the objective of identifying some general conclusions on the key benefits of the Solution; willingness and readiness to implement; and preferred methods for funding. The survey is expected to be complete by the end of September or early October with the report from the consultant being presented to Secretariat by the end of October. A meeting of experts on funding similar systems has been proposed for early December to review the report and further analyse options.
10. The IPPC Secretariat, working with the Asia Pacific Plant Protection Organization, will be conducting the 3rd ePhyto symposium. The symposium is scheduled for 22-26 January 2018 in Kuala Lumpur, Malaysia. The symposium will focus on: understanding the technical and business aspects of implementing ePhyto, providing guidance on the processes required in changing businesses practices to implement ePhyto and how these changes can improve trade flows through improved border cooperation and greater information sharing.
11. A support officer has been hired by the Secretariat to assist with the increasing workload in implementing the ePhyto Solution. The new staff member is supporting the work of the ePhyto groups and committees as well as providing technical support in the development of the hub and GeNS. It is expected that in-kind contributions of resources from China and Japan will be used to further support the work of the project.
12. The IAG met on June 27 in Washington. The Secretariat briefed the IAG on the progress of the project and also obtained their feedback on next steps in development and on identifying the benefits of ePhyto to industry sectors. The IAG will continue to further identify the links between electronic certification and the benefits to the trade of plants and plant products.
13. The Secretariat has been working with the World Bank to advance discussions on the benefits of ePhyto implementation in facilitating trade. For example work with Samoan Quarantine has focussed on sharing of electronic data between Quarantine and Customs authorities to better manage imports by improving risk-based controls.

Annex 1 – Hub pilot countries

Australia

Argentina

Chile

China

Ecuador

Kenya

Netherlands

New Zealand

Republic of Korea

United States of America

Annex 2 – Cost analysis

## Background

The Commission on Phytosanitary Measures (CPM), the governing body of the International Plant Protection Convention (IPPC), at its 10th meeting confirmed its full support for the development of an ePhyto Solution that would facilitate adoption of a harmonized system of electronic certification by contracting parties for plants and plant products moving in international trade. The CPM also supported the IPPC Secretariat in implementing the project, subject to the outcome of a request for funding to the Standards and Trade Development Facility (STDF) to provide the funds necessary to build and test the technology.

The project is funded by the STDF and aims to achieve the following with a pilot set of countries:

1. Provide developing countries without an existing national system with a simple generic web-based system (GeNS) to issue, send and receive electronic phytosanitary certificates.
2. Establish a harmonized exchange tool, referred to as a "hub" which facilitates electronic exchange based upon a standardized communication protocol.
3. Support implementation of the two systems with a selected set of countries leading to broad national uptake.

The combination of these two systems is referred to as "the ePhyto Solution". It is expected that the implementation of the solution will make it easier for countries (especially those with limited resources) to exchange electronic certificates. The GeNS will operate as a web based or stand-alone system in countries and the hub will operate as a centralized sever operated under contract by the United Nations International Computing Centre. The UNICC will design both systems, install and operate them. The project funding only allows for time-limited testing (1 year) - not exceeding the year 2019.

To ensure long term sustainability of the Solution a funding model has to be decided. The model should address direct operational costs as well as certain indirect costs. The final model that is proposed will be developed based upon input by various experts through a thorough analysis of the potential cost recovery options, particularly taking into account lessons from the pilot implementation phase of the project. The options will be presented to the CPM in 2019 at its annual meeting for ratification and implementation.

The ePhyto feasibility study, 2014 provided the only projections of estimates for the overall operational costs of the hub . The study reported that “*estimates secured by the United States suggest that the cost to move 500,000 ePhyto certificates per month (6 million per year) would be about US$315,000 per year. Other estimates could put this figure as high as $450,000. At this rate, moving 170,000 certificates per month, or roughly 2 million certificates a year, would cost about US$215,000-US$300,000… The hosting fees would include basic technical assistance….Based on these estimates, one could project that technical upgrades would range between US$50,000 and $80,000 per year; hosting would range about $300,000 per year; technical assistance/support would cost up to US$240,000 per year. That provides a sum of a very rough range of US$450- $620,000 annually… The IPPC administration fee would range between $60,000-$90,000. So, the annual cost to operate the hub could be about US$500,000-$700,000”*. The study did not conclude on the operating and administrative costs of a system to allow developing countries to produce, send and receive electronic certificates. Since this time, the UNICC hub proposal indicates that 13 million transactions are possible based upon a running cost of approximately $200, 000/annum.

## Considerations

There is significant uncertainty on the costs of operation and management of the service provided by the service provider given that the full level of production is unknown, what economies of scale can be achieved over time, what support is required for both the hub and GeNS, etc. The length of time to achieve a full production uptake is uncertain. Therefore the current environment is built around the costs of operating the systems for a limited amount of transactions. The current service agreement will be reviewed as the project moves to a more stabilized program.

## Current estimates of operating the Solution

The following provides a general estimate of potential costs for operating and managing the Solution. These are based upon estimated annual operating costs supplied by the United Nations International Computing Centre (UNICC), the service provider for the technology involved in the system and estimations of the administrative costs of operating the solution prescribed in the current service agreement.

### Operation of the ePhyto Solution (based upon estimates for the initial 2 years)

|  |  |  |
| --- | --- | --- |
|  | | **Estimated Annual Cost ($ U.S.)** |
| UNICC costs of operating hub | Hub technology operation cost1 | 100,000 |
| UNICC costs of operating GeNS | GeNS technology operation costs2 | 100,000 |
| Management and support services3 | HUB and GeNS | 200,000 |
| IPPC support costs (manager and support staff) | Business management (1 P3 officer)4 | 95,000 |
| 30% G3-4 Administrative support | 13,000 |
| Expert working group meetings and travel costs for invited experts (2 meetings per annum)5 | | 31,000 |
| **Estimated Total Operating Costs** | | **539,000** |

### Support to countries

|  |  |  |
| --- | --- | --- |
|  | | **Estimated Annual Cost ($ U.S.)** |
| Capacity building support program: | Costs of hosting of meetings and working groups including at least 10 developing country participants (at least 2 annually), | 90,000 |
| IPPC costs associated with in-country capacity development costs – meetings, training, etc.6 | 63,000 |
| **Estimated cost in expansion** | | **153,0007** |

1. Hub technology operating costs are those specified by UNICC and are based upon services for 150,000 transactions/annum with the ability to absorb the costs of up to 180,000 transactions/annum. Additional uplift could add costs to the operation. However, economies of scale may equally stabilize costs.
2. GeNS technology operation costs are those specified by UNICC and are based upon 9 countries using the GeNS with about 1400 users with the ability to absorb the costs of up to 11 countries and about 1700 users. Additional uplift could add costs to operation. The estimates also do not take into account any improvement of technology based upon user needs.
3. UNICC management and support services are those specified by UNICC are based upon a monthly estimated 30 hours of service desk and first level support and 5 hours of service management support, on boarding (technology level) support to the 9 GeNS countries, etc. Should additional support be required this could affect management and support costs
4. Business management and administration costs account for the staffing of a full time manager and 0.3 FTEs support staff to provide program and financial management, statistical information gathering and analysis, system and program analysis, reporting, coordinating IPPC ePhyto activities, managing working groups, providing business support to countries. Should in-kind support be provided to assist with the overall operation of the system these costs could be removed.
5. Meetings of expert working groups and support of travel of the UNICC to provide updates to groups and meetings are optional.
6. The costs associated with capacity development are unlikely to be required until 2019. The costs associated also do not include potential synergies with other capacity development activities that could be used to train on ePhyto. Should these be used the costs could be further reduced.
7. FAO levies a 12% overhead charge to donations received in support of project activities.