Policy on the Use of the ePhyto Solution

*Draft for Review During the Pilot*

# Introduction

The International Plant Protection Convention (IPPC) Secretariat is developing the ePhyto Solution at the request of the Commission on Phytosanitary Measures (CPM). The ePhyto Solution consists of two information communication technology elements:

1. a secure server (hereinafter referred to as the “Hub”) to facilitate the exchange of electronic phytosanitary certificates (ePhytos) in a harmonized manner and,
2. a generic ePhyto national system (GeNS) which will allow countries with minimal technology infrastructure to create, send and receive ePhytos by way of a Hub and to produce paper certificates.

The process of use of electronic certificates is described in International Standard for Phytosanitary Measures (ISPM)12 *Phytosanitary certificates.* In accordance with ISPM 12, this policy framework provides guidance to National Plant Protection Organizations (NPPOs), the IPPC and its service providers on the safe, secure operation of the system.

# What is ePhyto

ePhytos are the electronic equivalents of phytosanitary certificates in paper form. They are not images of paper certificates but instead contain the data of certificates in a specific electronic format as prescribed in ISPM 12. The ePhyto moves directly from the National Plant Protection Organization (NPPO) of the exporting country to NPPO of the importing country through the Hub. Paper copies of the certificate move with the trade transaction.

Any NPPO may transfer an ePhyto from their national electronic system through its connection with the Hub. Once in the Hub, the ePhyto will be transferred to the importing country’s national system. Each country’s connection to the Hub is secured by way of validation of client certificates by both the Hub and by the national system. Further details on the operation of the Hub are described in the document Service Requirements Specifications posted at: <https://www.ippc.int/en/publications/84631/>. Equivalently, countries may use the web-based generic ePhyto national system (GeNS) to produce, send or receive the electronic certificate. The system uses various authentication tools to monitor and manage those accessing the system. Only those authorized by the NPPO of the country using the GeNS will have access to the system. Various other security features including firewalls and monitoring tools ensure that both the Hub and GeNS are protected from unauthorized access.

# The purpose of the Solution

The information exchanged in a paper certificate regime may be subject to a number of significant risks as it moves through the trade flow. These risks involve alteration of the certificate information or loss or damage to the certificate. The ePhyto Solution aims to reduce these potential risks by improving both efficiency and security of exchanges. It also promotes improved border efficiencies and better risk management through the collection and analysis of electronic data. It also reduces the costs associated with bilateral arrangements for electronic certificate transfer, creates increased harmonization in the messages exchanged and most importantly provides a more accessible electronic platform for developing countries to produce, send and receive electronic certificates. In this way, the transition to electronic certificates serves national governments, traders and the international community.

# The roles and responsibilities of the IPPC Secretariat

The Secretariat does not operate the Solution but utilizes a service provider, the United Nations International Computing Centre (UNICC), which provides technology services to thirty eight other United Nations Organizations including the Food and Agriculture Organization (FAO) which established the IPPC as an Statutory Body under Art. XIV of its Constitution. The UNICC brings a number of significant advantages to the operation of the Solution including that:

* FAO’s existing relationship with UNICC provides cost advantages through economies of scale;
* FAO is a member of the UNICC’s management board;
* Data centres and offices are extra-territorial and are protected by the privileges and immunities granted to the United Nations;
* Its technical and financial operations are audited and monitored;
* Its operations have been in existence for 45 years demonstrating capacity and stability; and
* Its operations are in keeping with industry/business standards for service continuity/business continuity, disaster recovery and information security.

The Hub is located on a secure network containing appropriate tools for security and monitoring. The Hub does not read or record any of the data contained in the ePhyto. The GeNS is also located on a secure network and made available for use by the NPPO based upon their use of the system to produce, receive and send electronic phytosanitary certificates or to print paper certificates.

The GeNS contains appropriate tools for security and monitoring. The service operator of the GeNS will store data created on the GeNS on its servers. The data remains the property of the NPPO storing the data. The data will not be read or extracted by the IPPC Secretariat or UNICC.

To ensure the consistent, timely operation of the Hub and GeNS, the IPPC Secretariat has entered into specific service agreements with the UNICC in which the roles and responsibilities include:

* Hosting and operating of services for the systems including installation, configuration, environmental control, monitoring, maintenance and support and physical security of the infrastructure;
* System operation and availability of at least 99.5%;
* Sufficient and suitable infrastructure and updates or upgrades as required;
* Managed storage and backup of services to prevent data loss;
* Monitoring of the service at all times including providing security and anti-virus protection; the application of system patches, service packs, hot-fixes for operating systems and standard monitoring/security software, event and log-file management; performance base lining and availability monitoring; anti-virus updating; backup monitoring and incident support;
* Network or system access to the services;
* Management of all domain name records;
* Access to all managerial, technical and administrative resources (staff, consultants) required for the service;
* Technical and as appropriate business training resources for users to effectively operate the systems;
* Timely response to changes in capacity requirements including changes to environments, storage, internet traffic, user accounts, etc. to permit adequate time to implement changes without impact on operations;
* Ongoing service management and response to additional support requests;
* 24 hours advance notification of any emergency infrastructure work or activities that may affect the services
* Technical and business support with contact availability at all times;
* Development, testing and deployment of application software;
* Testing of new infrastructure before implementation;
* Timely and complete communications to end-users;
* Maintenance of the security and confidentiality of application data;
* Provision, maintenance and support of software licenses for all application components and related third-party products;
* Planning and routine testing of disaster recovery;
* In case of a disaster, restoration of operations within 24 hours with no loss of data;

# The roles and responsibilities of NPPOs

The establishment of the Hub and GeNS is intended to support the harmonized international implementation of Appendix 1 of ISPM 12. The use of the Hub and GeNS is voluntary and should be consistent with the requirements described in the Appendix and used only in relation to phytosanitary activities. The use of electronic certificates has to be accepted by the importing country and countries should not prescribe its use or require more than described in Appendix 1 of ISPM 12.

Access to the Hub and GeNS is managed through user accounts which are specific to NPPOs and those individuals authorized by the NPPO. NPPOs therefore should ensure the security of their accounts including maintaining the security of passwords. The use of complex passwords is recommended such as those exceeding at least 8 characters, containing both numbers and letters of differing cases and symbols assembled in a randomized way.

NPPOs are responsible for all of the content exchanged through the Hub. NPPOs should not upload or download content other than those used in phytosanitary activities.

NPPOs and those authorized by the NPPO should not access the system in a way that could cause damage or impairment to the system or should not attempt to access areas that are not authorized by the IPPC Secretariat. In particular, NPPOs should ensure that those accessing the system are authorized by the NPPO and that all access is done so in a manner that is lawful.

The IPPC expects to maintain an acceptable level of performance and therefore discourages frivolous, excessive, or inappropriate use of the systems to prevent losses in performance for others.

Should NPPOs determine that an individual has misused the system, they should notify the IPPC Secretariat immediately to ensure that data can be protected and that any misrepresenting information is removed. NPPOs should also take appropriate national action against such misuses.

The use of harmonized codes and terms has been developed to facilitate the harmonized exchange of certificates. These harmonized codes and terms are posted on the international phytosanitary portal and NPPOs should be encouraged to use them in developing their national phytosanitary systems. The use of harmonized codes and terms ensures that both the NPPO of the exporting country and the NPPO of the importing country can read the certificate easily.

# User compliance

Those using the ePhyto Solution components and those providing the Solution services agree to abide by this policy. Non-compliance will result in removal from the service.