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COMMISSION ON PHYTOSANITARY MEASURES

First Session

Rome, 3 – 7 April 2006

Report of the Working Group on Electronic Certification

Agenda Item 12.7 of the Provisional Agenda

I. Introduction

1. At ICPM-7 in 2005 there was general support to develop work on electronic certification as a high priority. Additional information from the United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT) had been made available, and the meeting decided that the work would be most appropriately developed outside the normal programme of standard setting.
2. The ICPM agreed to establish a working group on electronic certification to formulate policy recommendations regarding electronic certification to be presented to the SPTA for submission to CPM-1. Due to budgetary constraints, the working group was not able to meet prior to the SPTA. During the SPTA, the Netherlands offered to host and fund the meeting in early 2006. The SPTA agreed that the working group report should be presented directly to CPM-1.
3. The terms of reference for the working group, as adopted at ICPM-7, were to:
 1. Identify a “champion” from the IPPC Secretariat to provide input and direction.
 2. Use Codex input as a guide to provide the basic principles for electronic certification.
 3. Develop a process and use it to quickly obtain information on the status of electronic certification in Member countries.
 4. Suggest a standardization mechanism to ensure compatibility without necessitating standardization of software and hardware.
 5. Involve OIE and Codex in the development process.
 6. Identify challenges associated with electronic certification and recommend ways in which these could be addressed.
 7. Establish a relationship with the electronic certification principles and ISPM No.12 (*Guidelines for phytosanitary certificates*).

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4. The working group met in Wageningen, the Netherlands, on 16-18 January 2006. Mr Mike Robson was identified as the “champion” from the IPPC Secretariat. The meeting was attended by 16 participants, including representatives from both the World Organisation for Animal Health (OIE) and Codex Alimentarius.

5. In November 2005, the IPPC Secretariat had contacted all National Plant Protection Organizations (NPPOs) with a request for information regarding the status of electronic certification in their countries. The responses received (20) were used as background information for the meeting. A document developed by the European and Mediterranean Plant Protection Organization on electronic certification also provided useful input.

II. Benefits of electronic phytosanitary certification

6. The working group reiterated the potential benefits of adopting electronic certification over and above paper certification, notably:

- enhanced levels of security against fraud or misuse
- prompt communication directly between NPPOs
- improved legibility and consistency of certificates
- enhanced communication on import progress (tracking of import decisions, notification of non-compliance)
- ease of downloading and integrating data into existing systems
- data checking being independent of physical location and time
- enhanced management of phytosanitary import systems (e.g. management of sampling regimes, risk based inspections and the collection of statistical information).

III. Scope of electronic phytosanitary certification

7. The working group recognized that electronic phytosanitary certification had not been defined by the Glossary Working Group. However, for the purpose of the meeting, electronic phytosanitary certification was considered as being the provision of phytosanitary information electronically from an exporting NPPO to an importing NPPO. Electronic certification would provide official assurances from exporting to importing authorities, through either publication on a website, or by a file loaded to a server which could be accessed securely by importing authorities, or by electronic transfer (by e-mail or over a secure network).

8. The working group agreed that electronic phytosanitary certification did not cover word processing or other electronic generation of paper forms, which would then be distributed by traditional means, nor the automatic completion of a phytosanitary certificate on the basis of data extracted from an electronic database.

IV. Challenges and means of addressing them

9. The working group identified various challenges associated with electronic certification and considered how they could be addressed.

10. It was recognized that only a small number of countries are currently in a position to exchange phytosanitary certificates electronically. However, as greater numbers become involved, there would be the challenge of building an approach which was “scale-able”. In this context the working group felt that consideration could be given to creating a central ‘hub’ for exchanging electronic certificates, which would accommodate a ‘publisher-subscriber’ model. A central hub could evolve following initiatives by individual countries. The IPPC Secretariat could be the responsible body for operating or for organizing such a central hub. However this development should only follow a feasibility study.

11. NPPOs should have a good understanding of the principles and requirements of electronic phytosanitary certification before they implement a system. The working group suggested that the

IPPC Secretariat could organize sessions on electronic certification, as required, in conjunction with other IPPC activities/meetings. The establishment of adequate infrastructure (hardware and software) and human resources for electronic certification by developing countries may also need special attention.

12. A digital signature is needed for determining the authenticity and integrity of the electronic phytosanitary certificate. An infrastructure will be required to manage the electronic keys (e.g. x509 standard) to validate digital signatures of NPPOs (one digital signature for each NPPO). Eventually this infrastructure could be maintained by a neutral international body, for instance as part of a central hub.
13. Contingency planning is required to ensure that disruption to trade is minimal in the event of electronic phytosanitary certification system failure.

V. Policy recommendations

14. The working group developed a series of policy recommendations in two main areas, i.e. basic principles and standardization.
15. Recommendations relating to *basic principles* were:
 - i) Electronic certification should not result in any additional obligations for contracting parties.
 - ii) The key focus for electronic certification should be the interface between NPPOs.
 - iii) Paper versions should continue to be accepted by importing countries.
 - iv) Importing countries should not require both an electronic version and a paper version of the phytosanitary certificate for the same consignment as part of their import requirements (the NPPO of the exporting country may issue both electronic and paper versions on request to accommodate the phase-in of electronic certification or to facilitate logistical procedures).
 - v) Countries with experience in introducing systems to support electronic phytosanitary certification should make information on this available to other contracting parties via the IPPC Secretariat (relevant documents submitted could be displayed on the IPP).
 - vi) Electronic information should be secure (respecting integrity and confidentiality) in storage and while being transmitted.
 - vii) Authentication of electronic certification should be supplied by a 'digital signature' (of the NPPO).
16. Recommendations for *standardization* of the system were:
 - i) All the data elements currently used in ISPM No. 12 should be included in electronic certification (ISPM No. 12 contains sufficient information for drafting a uniform IPPC XML¹ format, which could be annexed to ISPM No. 12).
 - ii) The UN/CEFACT phytosanitary project should be used for the standardization of a uniform XML format to be adopted within the IPPC framework
 - iii) The UN/CEFACT phytosanitary project being progressed with NAPPO, New Zealand and Australia will result in a uniform 'XML schema definition' for phytosanitary electronic certification. Using the UN/CEFACT project will facilitate streamlining data with other international frameworks and agreements. The IPPC Secretariat should be responsible for liaison with the UN/CEFACT phytosanitary

¹ XML: Extensible Markup Language. XML documents are made up of storage units called entities, which contain either parsed or unparsed data. Parsed data is made up of characters, some of which form character data, and some of which form markup. Markup encodes a description of the document's storage layout and logical structure. XML provides a mechanism to impose constraints on the storage layout and logical structure. See: <http://www.w3.org/TR/2004/REC-xml-20040204> [Extensible Markup Language (XML) 1.0 (Third Edition) W3C Recommendation 04 February 2004].

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- project and following its finalization ensure inclusion within the IPPC framework (for instance as part of an annex to ISPM No.12).
- iv) The IPPC, OIE and Codez Alimentarius Secretariats should continue to exchange information to assist standardization within each individual framework.
 - v) Existing international standards for secure communication and validation of origin should be adopted within the IPPC framework wherever possible (for example, standards for electronic “signature” - XMLsignature 12 February 2002 - developed by the World Wide Web Consortium (W3C); SOAP – Simple Object Access Protocol, PKI – Public Key Infrastructure, HTTPS).
 - vi) The Glossary Working Group should develop a definition for electronic phytosanitary certification.
17. The CPM is invited to:
- 1. *Thank* the Government of the Netherlands for hosting and funding the working group on electronic certification.
 - 2. *Note* the active participation of the representatives of OIE and Codex Alimentarius in the working group.
 - 3. *Note* the challenges associated with the implementation of electronic phytosanitary certification.
 - 4. *Agree* that the IPPC Secretariat keep informed of the challenges associated with the global introduction/implementation of electronic phytosanitary certification and assist with addressing these as required and appropriate.
 - 5. *Endorse* the policy recommendations made by the working group.