**APEC Electronic Export Certification Working Group  
  
*DRAFT******Terms of Reference***

**Overview**: As part of the Asia-Pacific Economic Cooperation (APEC) forum’s Export Certification Roadmap (Roadmap), APEC has called for the development of an electronic certification (e-cert) standard package that is consistent with already agreed international standards. This package would be part of an overall APEC export certification toolbox, as outlined in the [Roadmap](http://fscf-ptin.apec.org/docs/events/fscf-roadmaps-for-regulatory-cooperation/Final_APEC_Export_Certificate_Roadmap.pdf).   
  
  
**Goal:** The Roadmap lays out a goal of developing recommendations for this package to present at an in-person, October 2014 meeting on the margins of the Codex Committee on Food Import and Export Inspection and Certification Systems (CCFICS) meeting in Australia. Depending on the outcome of the meeting, the recommendations could be advanced as new work in CCFICS (or OIE or IPPC, as appropriate).   
  
  
**Membership**: USDA’s Food Safety and Inspection Service (FSIS), Australia, New Zealand, and Chile have volunteered to facilitate an APEC Electronic Export Certification Working Group (eWG) that will develop an e-cert package. The initial eWG Members welcome additional participation from APEC members. Please contact Bryce Carson (USDA-FSIS) at [bryce.carson@fsis.usda.gov](mailto:bryce.carson@fsis.usda.gov) and Lori Tortora (USDA-FAS) [lori.tortora@fas.usda.gov](mailto:lori.tortora@fas.usda.gov) for more information.

**Problem Definition**: The eWG has identified the following problems that an e-cert package could address:

1. ***Lack of Awareness***: While agreed upon international e-cert standards exist, there is a general lack of awareness of those standards among APEC countries, particularly at the non-technical level. These are often the non-technical policy representatives who participate as decision-makers in fora like APEC.
2. ***Lack of Resources & Expertise***: When countries do gain awareness of and seek to develop e-cert systems, resource and expertise constraints often limit progress.
3. ***Inconsistent Mapping and Naming***: As countries with awareness, resources, and expertise develop and adopt e-cert systems, the complexity of mapping these systems with those of trading partners, and varied use of e-cert terminology (XML tags, for example), slows or prevents the interoperability of systems. This challenge is compounded by multiple countries developing “single window” and customs unions systems for receipt of electronic trade information.

**Opportunities**: Using e-certification systems instead of paper-based systems offers countries the following potential opportunities:

* earlier awareness of consignment movements and status;
* more efficient import clearance;
* increased ability to gather, track, and analyze data; and
* enhanced shipment security and enforcement capacity.

Fostering greater awareness of international standards, availability of resources and expertise, and developing common methods of naming and mapping would leverage these benefits within APEC, with the potential to build a foundation for a more global e-certification approach that addresses these challenges.

**Existing International Guidance and Activities**: The primary standards for international electronic export certification have been developed by the United Nations Centre for Trade Facilitation and Electronic Business ([UNCEFACT](http://www.unece.org/cefact.html)).   
  
In addition, three major international bodies – Codex, IPPC, and OIE – are either developing or could develop jurisdiction-specific e-cert guidance based on UNCEFACT standards:

* ***Food***: Codex (CCFICS) guidance for e-certification in food exports exists ([CAC/GL 38-2001](http://www.google.com/url?sa=t&rct=j&q=&esrc=s&frm=1&source=web&cd=1&cad=rja&uact=8&ved=0CCkQFjAA&url=http%3A%2F%2Fwww.codexalimentarius.org%2Finput%2Fdownload%2Fstandards%2F375%2FCXG_038e.pdf&ei=UtKIU92IEaHjsASb34HwAQ&usg=AFQjCNFJyrZbs6Kys20laomSosmcf16gDA&sig2=isEKY165vB_b-K78ILHR-g&bvm=bv.67720277,d.cWc)), which references UNCEFACT e-cert standards; however, the guidance was completed in 2001 and may require an update given the rapidly changing nature of technology, regulatory practices, and trade patterns that impact electronic export certification.
* ***Plants***: IPPC has significantly advanced work on electronic export certification ([ePhyto](https://www.ippc.int/core-activities/ephyto)) for plants and plant products, including adoption in April 2014 of a new guidance on “electronic certification, information on standard XML schemes and exchange mechanisms.” The new guidance is now a part of IPPC’s International Standards for Phytosanitary Measures Plants, in Appendix I ([ISPM 12](http://www.fao.org/docrep/016/k5129e/k5129e.pdf)).
* ***Animal Health***: OIE has limited guidance on electronic animal health certification ([Article 5.2.4, Electronic Certification](http://web.oie.int/eng/normes/mcode/en_chapitre_1.5.2.pdf)).

**Potential Deliverables**: Based on the problems identified and the existing international standards and guidance, the eWG could develop the following recommendations for an e-cert package:

* **Updated Codex guidance** that parallels, where possible and appropriate, the existing IPPC guidance development process, including guidance on mapping and naming procedures; recommendations on changing existing legislation that requires paper-only certification (DRAFT guidance, based in part on IPPC’s new e-cert guideance, is found in Appendix I; also, Appendix II identifies current IPPC areas where there is no corresponding Codex/APEC document);
* **An e-cert resource library** housed on the APEC website that identifies international standards, country specific e-cert points-of-contact and status of e-cert systems in each country, to assist agency experts in identifying each other, building relationships, and encouraging early and regular collaboration;
* **An APEC or Codex-based forum** for those e-cert POCs to raise, discuss, and resolve electronic certification issues on an ongoing basis.

**Potential Audiences**: All APEC, and ultimately Codex members could benefit from these deliverables, particularly those that are considering or already developing e-cert systems.

**Funding:** eWG work group activities will be self-funded by each participating country.

**Key Dates**:

* **ASAP**: Circulate draft package document to U.S. interagency, Australia, New Zealand, Chile, and other interested APEC economies for comment
* *September 11*: High Level Public Private Dialogue on Food Safety
* *September 12*: Food Safety Cooperation Forum Special Session, Beijing, China
* *October 16*: APEC Export Certificate Meeting in Australia on margins of CCFICS meetings in Australia, October 13-17
* *November 7-8*: APEC Ministerial Meeting, Beijing (Yanqi Lake), China

**APPENDIX I**

**DRAFT Reference on Electronic Certification, Information on Standard XML Schemes and Exchange Mechanisms**

Introduction

Electronic certificates are the electronic equivalents of certificates in paper form and may be used if they are accepted by the certifying body of the importing country. When electronic certificates are issued by the certifying body of the exporting or re-exporting country, they should be made directly available to the certifying body of the importing country.

All the requirements and procedures in the Guidelines for Design, Production, Issuance and Use of Generic Official Certificates (CAC/GL 38-2001) apply to electronic certificates.

When using electronic certificates, certifying bodies should develop a system for the issuance, transmission and receipt of electronic certificates that uses Extensible Markup Language (XML), standardized message structure and contents, and standardized exchange protocols.  
  
In developing and maintaining electronic certification systems, countries should consider the following practices:

* Identifying and maintaining points of contact within each certifying body who ensure coordination of electronic certification activities, including coordination among the importing and exporting certifying bodies’ policy, information technology (IT), and business staffs, as well as any private contractors.
* Consulting, as appropriate, with other certifying bodies that maintain electronic certification systems.
* Managing account access by maintaining and updating user lists; addressing user problems; and providing appropriate information to users for accessing the system.
* Conducting outreach to certifying body and industry users, including creating, maintaining, and disseminating user guides and data appendices that can be updated as needed.
* Making electronic certification systems compatible, where possible, with the development of “single window” or customs union systems (Link 10)

This appendix provides guidance on these elements and refers to a page on the [APEC/Codex] website (http://....) that provides links to further details – both [APEC/Codex] and external websites and documents – on the information contained in this appendix. These links are referred to in the text as “Link 1”, “Link 2” and so forth, and the full list can be found at the end of this document.

An electronic certification system should include the following harmonized components.

1. XML Message Structure

Certifying bodies should use the World Wide Web Consortium’s (WC3) XML (Link 1) for exchange of electronic certification data.

The XML message structure is based on the United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT) and SPS XML schema (Link 2) and on XML data mapping, which indicates where the certification data should be placed in the XML schema.

The XML data mapping enables the generation of an electronic certificate for export (Link 3).

2. XML Schema Contents

To facilitate automatic electronic communication and processing of certification data, certifying bodies are encouraged to use standardized (harmonized) terms, codes and text for the data elements associated with the XML message for electronic certificates.

The use of free (i.e. non-standardized) text should be limited when appropriate codes are available.

For dates and country names, harmonized text is available and no free text is anticipated to be required.

For scientific names of food and feed products, consignment description, treatments, additional declarations and points of entry, extensive lists of harmonized terms, GS1 Intended Use Codes should be used (Link 9). Free text may be inserted if the appropriate term, text or value does not appear in the lists.

Further details on the information to be entered for the data elements in the XML message are provided in the following subsections.

2.1 Country names

For the names of countries (i.e. the country of origin, export, re-export, transit and destination) it is encouraged that the two-letter country codes of the International Organization for Standardization (ISO) (Link 4) be used.

2.2 Scientific names of food and feed products

For the scientific names of the food and feed products in the consignment and the animals from which food and feed products were derived, the use of the database of scientific names available on the [APEC/Codex website (http:…)] is encouraged.

2.3 Description of consignment

The type of commodity and the type of packaging should be included in the description of the consignment. It is encouraged that the commodity be described using GS1 Intended Use Code commodity terminology (Link 9). It is also encouraged that the type of packaging be described using the United Nations Economic Commission for Europe (UNECE) Recommendation 21 (Link 6).

Other elements of the description of the consignment may include, where possible:

- weight, volume and height (which is encouraged to be described using UNECE Recommendation 20 (Link 6)

- declared means of conveyance (which is encouraged to be described using UNECE Recommendation 19 (Link 6)

- declared point of entry (which is encouraged to be described using the United Nations Code for Trade and Transportation Locations (UN/LOCODE) (Link 8) or country name.

2.4 Treatments

It is encouraged that treatment types be specified using harmonized terms for treatment types. Active ingredients are encouraged to be specified using the pesticide index of the Codex Alimentarius (Link 7). Other parameters (e.g. concentration, dosage, temperature, and duration of exposure) are encouraged to be described using UNECE Recommendation 20 (Link 6).

2.5 Additional declarations

Recommended standardized wording for additional declarations is provided in [ ] and it is encouraged to be described using [ ] codes for additional declarations. Free text may be used to supplement the additional declarations or to describe additional declarations that have not been standardized.

2.6 Name of authorized officer

The name of the authorized officer issuing the electronic certificates should be included in each types of electronic certificate.

3. Secure Data Exchange Mechanisms

Certifying bodies are responsible for the security of their IT system used for generating electronic certificates.

During transmission, the data should be encrypted to ensure that the electronic exchange of the electronic certification data between certifying bodies is secure and authenticated. Certifying bodies should use a secure protocol with a minimum 128-bit encryption. Before transmission, the electronic phyto certification data may be subjected to additional encryption (Link 11) that remains intact after transmission.

Transmission of data over the Internet from the certifying body of the exporting country to the certifying body of the importing country should be performed using secure IT mechanisms (e.g. Simple Object Access Protocol (SOAP), Secure/Multipurpose Internet Mail Extensions (S/MIME), File Transfer Protocol (FTP), Representative State Transfer (REST)) using systems that are mutually compatible.

The certifying body of the exporting country should make available to the exporter the actual electronic certificate number for the consignment.

Communication on the status of the message exchange between certifying bodies should follow UN/CEFACT recommended standard messages (Link 11).

Certifying bodies are responsible for developing and maintaining their systems for exchanging electronic certification data. In cases where an exchange mechanism is suspended due to maintenance or unexpected system failure, the certifying body should notify other certifying bodies as soon as possible.

4. Electronic Certificate for Re-export

In paper-only systems, the original certificate for export or its certified copy should be available as an attachment to the certificate for re-export. In the situation where paper and electronic phyto certificates are both in use, the following requirements should be met.

4.1 Electronic certificate for re-export with original certificate for export in electronic form

When both the certificate for export and the certificate for re-export are in electronic form, the electronic certificate for export should be attached electronically to the electronic certificate for re-export.

4.2 Electronic certificates for re-export with original certificate in paper form

When the original phyto certificate for export is in paper form and the certificate for re-export is in electronic form, a scan of the original certificate for export (in PDF or other non-editable format) should be attached to the electronic certificate for re-export.

4.3 Paper certificate for re-export with original certificate in electronic form

When the original certificate for export is in electronic form and the certificate for re-export is in paper form, the electronic certificate for export should be printed and validated by the certifying body of the country of re-export by stamping, dating and countersigning. The printed version of the electronic certificate for export becomes a certified copy and should then, in paper form, be attached to the certificate for re-export.  
  
5. Management of Electronic Certificates Issued by Certifying Bodies

5.1 Retrieval issues

If the certifying body of the importing country is unable to retrieve the electronic certificates, the certifying body of the exporting country should resubmit the original electronic phyto certificates at the request of the certifying body of the importing country.

5.2 Alteration and replacement

If any of the information in electronic certificates needs to be altered after their issuance, the original electronic certificates should be revoked and replacement electronic certificates with alterations should be issued.

5.3 Cancelled dispatch

If the certifying body of the exporting country becomes aware of a consignment that is not dispatched after the issuance of electronic certificates, the certifying body of the exporting country should revoke the associated electronic certificates.

5.4 Certified copy

Certified copies of electronic certificates are printouts of the electronic certification data that are validated (stamped, dated and countersigned) by a certifying body attesting the authenticity of the data.

The printouts should be in the format that follows the standardized wording provided by the Codex model certificates and recognized as export certificates. However, the printouts may be XML data in XML format if accepted by the certifying body of the importing country.

6. Declared Name and Address of Consignee

In the case of paper certificates, for “Declared name and address of consignee” the term “To order” may be used in instances where the consignee is not known and the certifying body of the importing country permits use of the term.

With electronic certificates, the consignment information may arrive in the importing country well before the consignment arrives, which will allow pre-entry verification of the electronic certification data.

Instead of using the “To order” option, certifying bodies are encouraged to require the electronic certificates to include the name and address of a contact person in the importing country responsible for the consignment.

| **Link Number** | **Subject** | **Link URL (links to be used in documents or articles)** | |
| --- | --- | --- | --- |
| **Formats** | | | |
| 1 | [WC3 Extensible Markup Language (XML)](http://ephyto.ippc.int/XML) | <http://www.w3.org/XML/> | |
| 2 | [UN/CEFACT SPS XML Schema](http://ephyto.ippc.int/UN-CEFACT-schema) | <http://www.unece.org/fileadmin/DAM/uncefact/data/standard/SPSCertificate_5p0.xsd> | |
| 3 | Codex Guidelines for Design, Production, Issuance and Use of Generic Official Certificates | [www.codexalimentarius.org/input/download/standards/.../CXG\_038e.pdf](http://www.codexalimentarius.org/input/download/standards/.../CXG_038e.pdf) | |
| **Harmonized Terms** | | | |
| 4. | [ISO two-digit country](http://ephyto.ippc.int/ISO-country) | | <https://www.iso.org/obp/ui/#search/code/> |
| 5. | [Database of scientific names](http://ephyto.ippc.int/EPPO-codes) and commmodity classes | | <ftp://ftp.fao.org/codex/Meetings/CCPR/ccpr38/pr38CxCl.pdf> |
| 6. | [UNECE recommendations](http://ephyto.ippc.int/UNECE-recommendations#rec21) on Units of Measure and Packaging | | Weight, volume and additional elements: <http://www.unece.org/fileadmin/DAM/cefact/recommendations/rec_index.htm>  Concentration & Temperature: <http://www.unece.org/fileadmin/DAM/cefact/recommendations/rec_index.htm>  Modes of Transport: <http://www.unece.org/fileadmin/DAM/cefact/recommendations/rec_index.htm>  Packaging and packaging materials: <http://www.unece.org/fileadmin/DAM/cefact/recommendations/rec_index.htm> |
| 7. | [Codex active ingredients](http://ephyto.ippc.int/Codex-ai) | | <http://www.codexalimentarius.net/pestres/data/pesticides/index.html> |
| 8. | [UN/LOCODE for Trade and Transport Locations](http://ephyto.ippc.int/UN-LOCODE-locations) | | <http://www.unece.org/cefact/codesfortrade/codes_index.html> |
| 9. | Intended Use Codes | | <http://www.gs1.org/> |
| 10. | Single Window Guidelines | | <http://www.wcoomd.org/en/topics/facilitation/activities-and-programmes/single-window/single-window-guidelines.aspx> |
|  |  | |  |
| **Exchange Mechanism** | | | |
| 11. | [UN/CEFACT encryption system](http://ephyto.ippc.int/UN-CEFACT-encryption) | <http://www.unece.org/fileadmin/DAM/cefact/recommendations/PublicReview/UN-CEFACT%20-%20DEC-R%20V1.1%20-%20v2.0.2%20VF.pdf> | |

**APPENDIX 2**

**IPPC e-cert documents with no corresponding APEC/Codex document:**

|  |  |
| --- | --- |
| **IPPC topic** | **IPPC link/document** |
| Communication on status of message exchange between certifying bodies | <http://ephyto.ippc.int/COMMS-STATUS-MSGEX-NPPOS> |
| [Additional declarations](http://ephyto.ippc.int/AD) | <http://ephyto.ippc.int/AD> |
| Treatment types | <http://ephyto.ippc.int/Tmt-types> |
| Model certificate for re-export | <http://ephyto.ippc.int/Re-export> |
| [Replacement of certificates](http://ephyto.ippc.int/ReplacementPC) | <http://ephyto.ippc.int/ReplacementPC> |
| Electronic certificate for export | <http://ephyto.ippc.int/Export> |