



Netherlands Food and Consumer
Product Safety Authority
Ministry of Economic Affairs

IPPC: Preparation & Implementation of Appendix 1 to ISPM 12

Day 2

Session 5

Nico Horn

Senior Officer Plant Health
NPPO of the Netherlands

Chair of the IPPC ePhyto
Steering Group



Netherlands Food and Consumer
Product Safety Authority
Ministry of Economic Affairs

Contents

1. Electronic phytosanitary certificates
2. ISPM 12 on electronic phytosanitary certificates
3. Harmonisation in ISPM 12
4. Harmonisation of format
5. Harmonisation of contents
6. Harmonisation of exchange
7. ISPM 12 ePhyto developments
8. IPPC ePhyto Steering Group
9. Coming years



ISPM 12

**INTERNATIONAL STANDARDS FOR
PHYTOSANITARY MEASURES**

ISPM 12

PHYTOSANITARY CERTIFICATES


(2011)

Exporting country



Importing country

Paper certificate

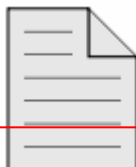


National System Export Certification

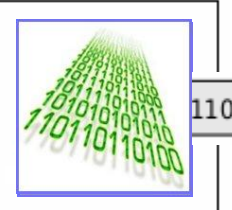
Trade

National system import

Electronic certificate (ePhyto)




National System Export Certification


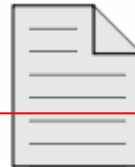


110

ePhyto system



111101101110

National system import



2. Electronic phytosanitary certificates according to ISPM 12 (ePhyto)

- Only if accepted by importing country
- Should be authenticated by issuing NPPO
- This authentication is equivalent to signature and stamp
- Authenticated electronic certification data equivalent to paper phytosanitary certificate



Electronic phytosanitary certificates

- Same wording and data as paper certificates
- Including certifying statement
- Authenticated
- Transmitted from NPPO to NPPO
- Secure transmission

It is not:

- Transmission of pdf by e-mail
- Text processing that results in paper certificate



3. Harmonisation in IPPC

Computers need harmonisation!!

- Format of message
- Contents of message
- Exchange of message

The message is the electronic certificate data and when authenticated the electronic certificate (ePhyto)



4. Format of the message



- XML language
- UN/CEFACT SPS schema
- Separate schema for re-export certificate
- Mapping for all data elements of phytosanitary certificate (ISPM 12): describes how and where information in UN/CEFACT schema
- Also for consignment with more products

<SPSExchangedDocument>
 <Name>Phytosanitary Certificate</Name>
 <ID>KEPHIS/677636/2010</ID>



<IssuerSPSParty>
 <Name>Kenya Plant Health Inspectorate Service
(KEPHIS)</Name>
 <TypeCode>National Plant Protection
Organisation</TypeCode>
</IssuerSPSParty>
 <RecipientSPSParty>
 <Name>Ministry of Economic Affairs, Agriculture and
Innovation</Name>
 <TypeCode>Ministry</TypeCode>
 </RecipientSPSParty>
 <RecipientSPSParty>
 <Name>Netherlands Food and Consumer Product Safety
Authority (NVWA)</Name>
 <TypeCode>National Plant Protection
Organization</TypeCode>
 </RecipientSPSParty>
 <Description>Cut flowers</Description>
 <CommonName>Rose</CommonName>
 <ScientificName>Rosa spp.</ScientificName>
 <NetWeightMeasure

unitCode="NA">109.460</NetWeightMeasure>

1 Name and address of exporter		2 PHYTOSANITARY CERTIFICATE No. EC / NL /  ORIGINAL 04026805	
3 Declared name and address of consignee		4 Plant Protection Organization of the Netherlands to Plant Protection Organization(s) of	
6 Declared means of conveyance		5 Place of origin	
7 Declared point of entry		 agriculture, nature and food quality	
8 Distinguishing marks, number and description of packages; name of product (botanical name of plants)		9 Quantity declared	
10 This is to certify that the plants, plant products or other regulated articles described herein: <ul style="list-style-type: none"> — have been inspected and/or tested according to appropriate official procedures, and — are considered to be free from the quarantine pests specified by the importing contracting party, and — are considered to conform with the current phytosanitary requirements of the importing contracting party, including those for regulated non-quarantine pests. 			
11 Additional declaration			
DISINFESTATION AND/OR DISINFECTION TREATMENT 12 Treatment		13 Place of issue	
13 Chemical (active ingredient)		Date:	
14 Duration and temperature		Name of authorized officer: Stamp of Organization:	
15 Concentration		16 Date	
17 Additional information			

Same rules apply to electronic certificates and paper certificates

<Name>Phytosanitary certificate<Name>

<ID>EC/NL/04026805<ID>

<IssueDateTime>2011-07-20<IssueDate Time>

<IssuerSPSParty>

<Name>Plant Protection Organization of the Netherlands<Name>

<RecipientSPSParty>

<Name>APHIS<Name>

<Description>Cut flowers<Description>

<ScientificName>Rosa spp.<ScientificName>

The validity of this certificate shall remain in force until the date of expiry of the phytosanitary certificate of the Member State to which it is issued.



TABLE 1: PHYTOSANITARY CERTIFICATE for EXPORT

Phytosanitary certificate artefact (ISPM12)	Information element	Level DOC - document COT - consignment EPT - export product QPT - quarantine product	BIE Dictionary Entry Name (DEN)	Schema element notes
Certificate name	Certificate model	DOC	SPSExchangedDocument_TypeCode	851 for phytosanitary certificate for export
		DOC	SPSExchangedDocument_Name	
		DOC	SPSExchangedDocument_Description	
No.	unique identification number	COT	SPSExchangedDocument_ID	
Plant Protection Organization of	name of the country issuing	COT	SPSConsignment_ExportSPSCountry_Name	
		COT	SPSConsignment_ExportSPSCountry_ID	
	name of the state/province etc. within a country	COT	SPSConsignment_ExportSPSCountry_SubordinateSPSCountrySubDivision_Name	E.g.: Niedersachsen (within Germany), Sonora (within Mexico), Jiangxi (within China)
		COT	SPSConsignment_ExportSPSCountry_SubordinateSPSCountrySubDivision_ID	
	name of the NPPO	COT	SPSExchangedDocument_IssuerSPSParty_Name	
		COT	SPSExchangedDocument_IssuerSPSParty_ID	
TO: Plant Protection Organization(s) of	name of the importing country	COT	SPSConsignment_ImportSPSCountry_Name	
		COT	SPSConsignment_ImportSPSCountry_ID	
	name of the transit country	COT	SPSConsignment_TransitSPSCountry_Name	
		COT	SPSConsignment_TransitSPSCountry_ID	
	name of the country of re-export	COT		In UN/CEFACT mapping there is no place available for this element, this element is however needed and should be proposed to UN/CEFACT as improvement



5. Contents of message

- Harmonized terms and codes:
- Scientific names of plants and pests
- ISO country codes
- Description of product: e.g. seeds for sowing
- Treatment type
- Kg, m, date etc



IPPC commodity class

[Download Document](#)

Harmonized Terms for Intended Use

First level: general description of type of product	Possible Code	Second level: further specification of type of product	Possible Code
Plants for planting	PLFPL	Seeds	SEE
		Plants in-vitro with roots	IVR
		Plants in-vitro without roots	IVU
		Underground organs (e.g. bulbs, tubers, rhizoms, stolons, corms)	BTR
		Budwood	BUD
		Cuttings or saplings with roots	CSR
		Cuttings without roots	CNR
		Other plants for planting	OTH
Plants other than plants for planting	PLOTH	Grain	GRA
		Cut flowers, cut herbs, cut branches with foliage	CBF
		Cut flowers, cut herbs, cut branches without foliage	CNF



5. Scientific names plants and pests

Criteria for database

- Verified names
- Synonyms and old names
- Common names
- Easily accessible
- Maintainable
- As complete as possible

3 databases shortlisted, EPPO database selected



EPPO Plant Protection Thesaurus EPPT

View

Brassica oleracea (BR5OX)



Other Scientific Names

Taxonomic Classification

Brassica sylvestris

- | Plantae
- |--- Magnoliophyta
- |----- Angiospermae
- |----- Malvids
- |----- Brassicales
- |----- Brassicaceae
- |----- Brassica

[Explore Taxonomy](#)

IPPC secretariat in discussion with EPPO secretariat to make it an easily accessible global database with easy addition of names needed to have global coverage

Common Names

General Information

- [de] Wildkohl
- [en] wild cabbage
- [nl] kool
- [pt] couve
- [se] kál

- ...: **Plant habit group** ...
- |--- Herbaceous perennial (la)
- |--- krautartig, mehrjährig (de)
- ...: **Bayer Taxonomic Group** ...
- |--- Brassicaceae (la)
- |--- Cruciferae (la)
- |--- crucifer family (en)
- |--- Kreuzblütlergewächse (de)
- |--- mustard family (en)
- |--- wallflower family (en)

Show authorities [Filter](#)

Show only the language : All available [Filter](#)



6. Exchange of message

- At least https security
- Optional additional encryption
- Harmonized communication on message exchange, e.g. acknowledge receipt of electronic certificate data
- Further harmonisation needed



7. ISPM 12 Appendix 1 development

- Appendix developed by Steward ISPM 12 and IPPC Steering Committee
- Country consultation (two times)
- Comments assessed and incorporated by Steward ISPM 12 and IPPC Steering Committee
- Appendix approved by CPM in March 2014



This appendix was adopted by the Ninth Session of the Commission on Phytosanitary Measures in April 2014.
This appendix is for reference purposes only and is not a prescriptive part of the standard.

APPENDIX 1: Electronic phytosanitary certificates, information on standard XML schemes and exchange mechanisms (2014)

Introduction

Electronic phytosanitary certificates are the electronic equivalents of phytosanitary certificates in paper form and may be used if they are accepted by the national plant protection organization (NPPO) of the importing country. When electronic phytosanitary certificates are issued by the NPPO of the exporting or re-exporting country, they should be made directly available to the NPPO of the importing country.

All the requirements and procedures in this standard apply to electronic phytosanitary certificates.

When using electronic phytosanitary certificates, NPPOs should develop a system for the issuance, transmission and receipt of electronic phytosanitary certificates that uses Extensible Markup Language (XML), standardized message structure and contents, and standardized exchange protocols.

This appendix provides guidance on these elements and refers to a page on the IPPC website (<http://ePhyto.ippc.int>) that provides links to further details – both IPPC and external websites and



ePhyto

[Background Documents](#)

Link No.	Subject	Link URL (links to be used in documents or articles)
Formats		
1	WC3 Extensible Markup Language (XML)	http://ephyto.ippc.int/XML
2	UN/CEFACT SPS XML Schema	http://ephyto.ippc.int/UN-CEFACT-schema
3	IPPC ePhyto certificate for export	http://ephyto.ippc.int/Export
4	IPPC ePhyto certificate for re-export	http://ephyto.ippc.int/Re-export
5	IPPC replacement of phytosanitary certificates	http://ephyto.ippc.int/ReplacementPC
Harmonized Terms		
6	ISO two-digit country	http://ephyto.ippc.int/ISO-country
7	Database of scientific names	http://ephyto.ippc.int/EPPO-codes
8	IPPC commodity class	http://ephyto.ippc.int/Commodities
9	UNECE recommendation 21 (packages and packaging materials)	http://ephyto.ippc.int/UNECE-recommendations
10	UNECE recommendation 20 (units of measure used in international trade)	http://ephyto.ippc.int/UNECE-recommendations
11	IPPC treatment types	http://ephyto.ippc.int/Tmt-types
12	Codex active ingredients	http://ephyto.ippc.int/Codex-ai
13	UNECE recommendation 20 (concentration, dosage, temperature and duration of exposure)	http://ephyto.ippc.int/UNECE-recommendations
14	IPPC additional declarations	http://ephyto.ippc.int/AD
15	UN/LOCODE for Trade and Transport Locations	http://ephyto.ippc.int/UN-LOCODE-locations
16	UNECE recommendation 19, Codes for modes of transport	http://ephyto.ippc.int/UNECE-recommendations
Exchange Mechanism		



7. ISPM 12 Appendix 1 developments

- Harmonisation of exchange protocol (for hub and bilateral exchange)
- Procedures for access and update of lists of harmonized terms (codes)
- Further development harmonized terms
- Feasibility Hub (central CMS)
- STDF project proposal to set up hub and tools for ePhyto generation and receipt



8. IPPC ePhyto Steering Group



Coordinates
developments and
awareness raising

- Global representation
- Global developments



ePhyto Newsletter – December 2013

ePhyto Steering Group

The IPPC ePhyto Steering Group was established by the 8th session of the Commission on Phytosanitary Measures (CPM) to commence work on key components to assist countries with their implementation of ePhyto.

The first face-to-face meeting of the group took place in Auckland, New Zealand from 16 to 19 September 2013.



The ePhyto Steering Group is comprised of (left to right in photo)

- Walter Fabian Alessandrini (Latin America region, Argentina)
- Christian B. Dellis (North America region, United States of America)
- Chen Maoyu (Asia region, China)
- Peter Neimanis (Southwest Pacific region, Australia)
- Jo Horn – chair (Europe region, The Netherlands)
- Peter Thomson (Bureau member, New Zealand)
- Craig Fedchock (IPPC Secretariat)
- Serafina Ernesto Mangana (Africa region, Mozambique) - absent

What is an ePhyto?

ePhyto is short for “electronic phytosanitary certificate”. An ePhyto is the electronic version of a paper phytosanitary certificate.

All the information contained in a paper phytosanitary certificate is also detailed in the ePhyto.

ePhytos can be exchanged electronically between countries or the data printed out into a paper-based phytosanitary certificate.

ePhytos should be produced in accordance with ISPM 12 and its Appendix 1. ePhytos store phytosanitary data in XML format.

...

What is an ePhyto system?

An **ePhyto system** is the IT system by which phytosanitary certificates are produced and exchanged



ePhyto Fact Sheet – No. 1

What is an ePhyto?

ePhyto is short for “electronic phytosanitary certificate”. An ePhyto is the electronic version of a paper phytosanitary certificate.

All the information contained in a paper phytosanitary certificate is also detailed in the ePhyto.

ePhytos can be exchanged electronically between countries or the data printed out into a paper-based phytosanitary certificate.

ePhytos should be produced in accordance with ISPM 12 and its Appendix 1. ePhytos store phytosanitary data in XML format.

What is XML?

Extensible Markup Language (XML) is a markup language that defines a set of rules for encoding documents in a format that is both human-readable and machine-readable.

XML is a textual data format that emphasize simplicity, generality, and usability over the Internet.

XML is widely used has come into common use for the interchange of data over the Internet.

How do ePhytos compare with paper phytosanitary certificates?

Benefits of ePhytos

The use of ePhyto provides a number of benefits, in comparison to paper-based phytosanitary certification, to both exporting and importing countries:

- use of a single global ISPM 12:2011 (Phytosanitary Certificates) for electronic phytosanitary certification
- reduction of potential fraudulent documentation
- reduce data entry and validation functions by NPPO staff
- improve security in transmission of certificate documentation
- improve planning for the arrival and clearance of plants and plant products at customs
- reduction in delays in receiving replacement phytosanitary certificates



9. What to expect in coming years

- Harmonised exchange protocol
- Global access to and updated databases
harmonized terms
- Hub (central CMS) decision of CPM 2015
- Hub for global exchange
- Tools for setting up a national system
- Web-based system for ePhytos (production
and receipt)
- Awareness raising



9. What to expect in coming years

Aiming at wide implementation of electronic phytosanitary certificates in many countries all over the world

This is the only way to implement Appendix 1 of ISPM 12 effectively



thank you for your attention