INTERNATIONAL STANDARDS FOR PHYTOSANITARY MEASURES

ISPM 5

GLOSSARY OF PHYTOSANITARY TERMS

(2012)

Produced by the Secretariat of the International Plant Protection Convention

Publication history

This is not an official part of the standard

1986-05 RPPOs recommended creation of a *Core vocabulary of phytosanitary terms*

1988-02 RPPOs reviewed and approved for NAPPO and EPPO consultation

1989-09 RPPOs prepared draft *Core vocabulary of phytosanitary terms*

1990 FAO published *FAO Glossary of phytosanitary terms*; FAO Plant Protection Bulletin 38(1)

1991-05 TC-RPPOs endorsed topic *Glossary phytosanitary terms* (1991-001)

1993-05 TC-RPPOs revised terms and recommended to establish WG for the *FAO Glossary* (GWG)

1994-02 1st meeting of the GWG

1994-03 CEPM-1 revised text and agreed to add new terms

1995-05 CEPM-2 decided publication of revised *Glossary of phytosanitary terms* as an ISPM

ISPM 5. 1995. *Glossary of phytosanitary terms. Rome*, IPPC, FAO.

1996-05 CEPM-3 revised text of *Glossary of phytosanitary terms*

1997-10 CEPM-4 revised the text and 29th Session of the FAO Conference approved **ISPM 5**. 1997

1999-02 GWG revised standard

1999-05 CEPM-6 revised standard for adoption

1999-10 ICPM-2 adopted revised **ISPM 5.** 1999.

1999-09 GWG revised standard

2000-05 ISC-1 revised standard and approved for MC

2000-06 Sent for MC

2000-11 ISC-2 revised standard for adoption

2001-04 ICPM-3 adopted revised **ISPM 5**. 2001.

2000-03 and 2001-03 GWG revised standard

2001-05 ISC-3 approved Specification 1 *Review and updating of the glossary of phytosanitary terms*

2001-05 ISC-3 revised standard and approved for MC

2001-06 Sent for MC

2001-11 ISC-4 revised standard for adoption

2002-03 ICPM-4 adopted revised **ISPM 5**. 2002.

2002-02 GWG revised standard

2002-05 SC revised standard and approved MC

2002-06 Sent for MC

2002-11 SC revised standard for adoption

2003-04 ICPM-5 adopted revised **ISPM 5.** 2003.

2003-02 GWG revised standard

2003-05 SC-7 agreed recommendations by TPG

2003-09 GWG revised standard

2003-11 SC revised standard and requested to add new terms on ISPMs

2004-02 GWG revised standard

2004-04 SC revised standard and approved MC

2004-06 Sent for MC

2004-11 SC revised standard for adoption

2005-04 ICPM-7 adopted revised **ISPM 5.** 2005.

2004-10 & 2005-10 GWG revised standard

2006-05 SC revised standard and approved for MC

2006-06 Sent for MC

2006-11 SC revised standard for adoption

2007-03 CPM-2 adopted revised **ISPM 5.** 2007.

2006-03 CPM-1 created the Technical panel for the glossary (TPG)

2006-10 1st meeting of the TPG. TPG revised standard

2007-05 SC revised standard and approved for MC

2007-06 Sent for MC

2007-11 revised standard for adoption

2008-04 CPM-3 adopted revised **ISPM 5.** 2008.

2007-10 TPG revised standard

2008-05 SC-7 revised standard and approved for MC

2008-06 Sent for MC

2008-11 SC revised standard for adoption

2009-03 CPM-4 adopted revised **ISPM 5.** 2009.

2009-02 TPG revised standard

2009-05 SC revised standard and approved for MC

2009-06 Sent for MC

2009-11 SC revised standard for adoption

2010-03 CPM-5 adopted revised **ISPM 5.** 2010.

2009-06 TPG started reviewing adopted standards for consistency in the use of terms

2009-10 TPG proposed ink amendments to ISPMs 3, 10, 13, 14, 22 and Supplement 1 to ISPM 5

2009-11 SC revised proposed ink amendments

2010-03 CPM-5 noted ink amendments in the English version

2010-10 TPG proposed ink amendments to ISPM 5

2010-11 SC revised proposed ink amendments

2011-03 CPM-6 noted ink amendments in the English version

2011-05 IPPC Secretariat applied ink amendments as noted by CPM-6 (2011)

2010-10 TPG revised standard

2011-05 SC revised standard and approved for MC

2011-06 Sent for MC

2011-11 SC revised standard for adoption

2012-03 CPM-7 adopted revised **ISPM 5.** 2012.

2013-08 IPPC Secretariat applied ink amendments as noted by CPM-8 (2013)

Supplement 1

1999-10 ICPM-2 added topic *Official control* (1999-002)

2000-03 EWG developed draft text

2000-05 ISC-1 revised draft text and approved for MC

2000-06 Sent for MC

2000-11 ISC-2 revised draft text for adoption

2001-04 ICPM-3 adopted Supplement 1 to ISPM 5

ISPM 5. **Supplement 1** *Guidelines on the interpretation and application of the concept of official control for regulated pests* (2001)

2005-03 ICPM-7 added the topic not widely distributed (2005-008) (supplement to ISPM No. 5: Glossary of phytosanitary terms)

2006-05 SC approved specification 33

2008-05 SC-7 reviewed draft

2010-03 revised to incorporate consistency ink amendments noted by CPM-5 (2010)

2011-05 SC approved for member consultation

2011-06 member consultation

2011-11 TPG reviewed member comments

2011-11 SC approved draft supplement to ISPM

2012-03 CPM-7 adopted revised supplement 1 to ISPM 5

ISPM 5. **Supplement 1**. *Guidelines on the interpretation and application of the concepts of "official control" and "not widely distributed"* (2012)

Supplement 2

2001-04 ICPM-3 added topic *Defining economic importance* (2001-004)

2002-02 GWG developed draft text

2002-05 SC revised draft text and approved for MC

2002-06 Sent for MC

2002-11 SC revised draft text for adoption

2003-04 ICPM-5 adopted Supplement 2 to ISPM 5

ISPM 5. **Supplement 2** *Guidelines on the understanding of potential economic importance and related terms including reference to environmental considerations* (2003)

2013-08 IPPC Secretariat applied ink amendments as noted by CPM-8 (2013)

Appendix 1

2005-03 ICPM-7 IPPC and CBD (Convention on Biological Diversity) secretariats decided cooperation programme

2006-04 CPM-1 agreed assess progress on the work programme (2006-033)

2006-10 TPG developed draft text

2007-05 SC requested TPG to develop draft text *CBD terms*

2007-10 TPG developed draft text

2008-05 SC revised draft text and approved for MC

2008-06 Sent for MC

2008-11 SC revised draft text for adoption

2009-03 CPM-4 adopted Appendix 1 to ISPM 5

ISPM 5. **Appendix 1** *Terminology of the Convention on Biological Diversity in relation to the Glossary of phytosanitary terms* (2009)

Publication history: Last modified August 2013

CONTENTS

Adoption

This standard was first adopted by the Twenty-eighth Session of the FAO Conference in November 1995. It has undergone repeated modifications since that time. The current edition of ISPM 5 arises from an amendment adopted by the Seventh Session of the Commission on Phytosanitary Measures in March 2012.

Supplement 1 was first adopted by the Third Session of the Interim Commission on Phytosanitary Measures in April 2001.The first revision of Supplement 1 was adopted by the Seventh Session of the Commission on Phytosanitary Measures in March 2012. Supplement 2 was adopted by the Fifth Session of the Interim Commission on Phytosanitary Measures in April 2003. Appendix 1 was adopted by the Fourth Session of the Commission on Phytosanitary Measures in March–April 2009.

INTRODUCTION

Scope

This reference standard is a listing of terms and definitions with specific meaning for phytosanitary systems worldwide. It has been developed to provide a harmonized, internationally agreed vocabulary associated with the implementation of the International Plant Protection Convention (IPPC) and International Standards for Phytosanitary Measures (ISPMs).

Purpose

The purpose of this reference standard is to increase clarity and consistency in the use and understanding of terms and definitions which are used by contracting parties for official phytosanitary purposes, in phytosanitary legislation and regulations, as well as for official information exchange.

References

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CPM. 2007. *Report of the Second Session of the Commission on Phytosanitary Measures, Rome, 26–30 March 2007*. Rome, IPPC, FAO.

—— 2008. *Report of the Third Session of the Commission on Phytosanitary Measures, Rome, 7–11 April 2008*. Rome, IPPC, FAO.

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—— 2010. *Report of the Fifth Session of the Commission on Phytosanitary Measures, Rome, 22–26 March 2010*. Rome, IPPC, FAO.

—— 2012. *Report of the Seventh Session of the Commission on Phytosanitary Measures, Rome, 19–23 March 2012*. Rome, IPPC, FAO.

FAO. 1990. FAO Glossary of phytosanitary terms. *FAO Plant Protection Bulletin*, 38(1): 5–23. [current equivalent: ISPM 5]

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—— 2001. *Report of the Third Interim Commission on Phytosanitary Measures, Rome, 2–6 April 2001*. Rome, IPPC, FAO.

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—— 2005. *Report of the Seventh Interim Commission on Phytosanitary Measures, Rome, 4–7 April 2005*. Rome, IPPC, FAO.

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ISPM 2. 1995. *Guidelines for pest risk analysis*. Rome, IPPC, FAO. [published 1996] [revised; now ISPM 2: 2007]

ISPM 2. 2007. *Framework for pest risk analysis*. Rome, IPPC, FAO.

ISPM 3. 1995. *Code of conduct for the import and release of exotic biological control agents*. Rome, IPPC, FAO. [published 1996] [revised; now ISPM 3: 2005]

ISPM 3. 2005. *Guidelines for the export, shipment, import and release of biological control agents and other beneficial organisms*. Rome, IPPC, FAO.

ISPM 4. 1995. *Requirements for the establishment of pest free areas*. Rome, IPPC, FAO. [published 1996]

ISPM 5. 1995. *Glossary of phytosanitary terms*. Rome, IPPC, FAO. [published 1996]

ISPM 6. 1997. *Guidelines for surveillance*. Rome, IPPC, FAO.

ISPM 7. 1997. *Export certification system*. Rome, IPPC, FAO.

ISPM 8. 1998. *Determination of pest status in an area*. Rome, IPPC, FAO.

ISPM 9. 1998. *Guidelines for pest eradication programmes*. Rome, IPPC, FAO.

ISPM 10. 1999. *Requirements for the establishment of pest free places of production and pest free production sites*. Rome, IPPC, FAO.

ISPM 11. 2001. *Pest risk analysis for quarantine pests*. Rome, IPPC, FAO. [revised; now ISPM 11:2004]

ISPM 11. 2004. *Pest risk analysis for quarantine pests including analysis of environmental risks and living modified organisms*. Rome, IPPC, FAO.

ISPM 12. 2001. *Guidelines for phytosanitary certificates*. Rome, IPPC, FAO.

ISPM 13. 2001. *Guidelines for the notification of non-compliance and emergency action*. Rome, IPPC, FAO.

ISPM 14. 2002. *The use of integrated measures in a systems approach for pest risk management*. Rome, IPPC, FAO.

ISPM 15. 2002. *Guidelines for regulating wood packaging material in international trade*. Rome, IPPC, FAO. [revised; now ISPM 15:2009]

ISPM 16. 2002. *Regulated non-quarantine pests: concept and application*. Rome, IPPC, FAO.

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ISPM 22. 2005. *Requirements for the establishment of areas of low pest prevalence*. Rome, IPPC, FAO.

ISPM 23. 2005. *Guidelines for inspection*. Rome, IPPC, FAO.

ISPM 24. 2005. *Guidelines for the determination and recognition of equivalence of phytosanitary measures*. Rome, IPPC, FAO.

ISPM 25. 2006. *Consignments in transit*. Rome, IPPC, FAO.

ISPM 27. 2006. *Diagnostic protocols for regulated pests*. Rome, IPPC, FAO.

ISPM 28. 2007. *Phytosanitary treatments for regulated pests*. Rome, IPPC, FAO.

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Outline of Reference

The purpose of this standard is to assist national plant protection organizations (NPPOs) and others in information exchange and the harmonization of vocabulary used in official communications and legislation pertaining to phytosanitary measures. The present version incorporates revisions agreed as a result of the approval of the International Plant Protection Convention (1997) and terms added through the adoption of additional International Standards for Phytosanitary Measures (ISPMs).

The Glossary contains all terms and definitions approved until the Seventh Session of the Commission on Phytosanitary Measures (CPM, 2012). References in square brackets refer to the approval of the term and definition, and not to subsequent adjustments in translation.

As in previous editions of the Glossary, terms in definitions are printed in bold to indicate their relation to other Glossary terms and to avoid unnecessary repetition of elements described elsewhere in the Glossary. Derived forms of words that appear in the Glossary, e.g. *inspected* from *inspection*, are also considered glossary terms.

PHYTOSANITARY TERMS AND DEFINITIONS

absorbed dose	Quantity of radiating energy absorbed per unit of mass of a specified target[ISPM 18:2003, revised CPM, 2012]
additional declaration	A statement that is required by an importing country to be entered on a **phytosanitary certificate** and which provides specific additional information on a **consignment** in relation to **regulated pests** [FAO, 1990; revised ICPM, 2005]
area	An **officially** defined country, part of a country or all or parts of several countries [FAO, 1990; revised FAO, 1995; CEPM, 1999; based on the World Trade Organization Agreement on the Application of Sanitary and Phytosanitary Measures (WTO, 1994)]
area endangered	See **endangered area**
area of low pest prevalence	An **area**, whether all of a country, part of a country, or all or parts of several countries, as identified by the competent authorities, in which a specific **pest occurs** at low levels and which is subject to effective **surveillance**, **control** or **eradication** measures [IPPC, 1997]
bark	The layer of a woody trunk, branch or root outside the cambium [CPM, 2008]
bark-free wood	**Wood** from which all **bark**, except ingrown bark around knots and bark pockets between rings of annual growth, has been removed [ISPM 15:2002; revised CPM, 2008]
biological control agent	A **natural enemy**, **antagonist** or **competitor**, or other **organism**, used for **pest control** [ISPM 3:1995; revised ISPM 3:2005]
buffer zone	An **area** surrounding or adjacent to an **area officially** delimited for phytosanitary purposes in order to minimize the probability of **spread** of the target **pest** into or out of the delimited **area**, and subject to phytosanitary or other **control** measures, if appropriate [ISPM 5:1999; revised ISPM 22:2005; CPM, 2007]
bulbs and tubers	A **commodity class** for dormant underground parts of **plants** intended for **planting** (includes corms and rhizomes) [FAO, 1990; revised ICPM, 2001]
chemical pressure impregnation	**Treatment** of **wood** with a chemical preservative through a process of pressure in accordance with an **official** technical specification [ISPM 15:2002; revised ICPM, 2005]
clearance (of a **consignment**)	Verification of compliance with **phytosanitary regulations** [FAO, 1995]
Commission	The Commission on Phytosanitary Measures established under Article XI [IPPC, 1997]
commodity	A type of **plant**, **plant product**, or other article being moved for trade or other purpose [FAO, 1990; revised ICPM, 2001]
commodity class	A category of similar **commodities** that can be considered together in **phytosanitary regulations** [FAO, 1990]

commodity pest list	A list of **pests occurring** in an **area** which may be associated with a specific **commodity** [CEPM, 1996]
compliance procedure (for a **consignment**)	**Official** procedure used to verify that a **consignment** complies with **phytosanitary import requirements** or **phytosanitary measures** related to **transit** [CEPM, 1999; revised CPM, 2009]
confinement (of a **regulated article**)	Application of **phytosanitary measures** to a **regulated article** to prevent the escape of **pests** [CPM, 2012]
consignment	A quantity of **plants**, **plant products** or other articles being moved from one country to another and covered, when required, by a single **phytosanitary certificate** (a **consignment** may be composed of one or more **commodities** or **lots**) [FAO, 1990; revised ICPM, 2001]
consignment in transit	A **consignment** which passes through a country without being imported, and that may be subject to **phytosanitary measures** [FAO, 1990; revised CEPM, 1996; CEPM 1999; ICPM, 2002; ISPM 25:2006; formerly country of transit]
containment	Application of **phytosanitary measures** in and around an infested **area** to prevent **spread** of a **pest** [FAO, 1995]
contaminating pest	A **pest** that is carried by a **commodity** and, in the case of **plants** and **plant products**, does not infest those **plants** or **plant products** [CEPM, 1996; revised CEPM, 1999]
contamination	Presence in a **commodity**, storage place, conveyance or container, of **pests** or other **regulated articles**, not constituting an **infestation** (see **infestation**) [CEPM, 1997; revised CEPM, 1999]
control (of a **pest**)	**Suppression**, **containment** or **eradication** of a **pest** population [FAO, 1995]
controlled area	A **regulated area** which an **NPPO** has determined to be the minimum area necessary to prevent **spread** of a **pest** from a **quarantine area** [CEPM, 1996]
corrective action plan (in an **area**)	Documented plan of **phytosanitary actions** to be implemented in an **area** officially delimited for phytosanitary purposes if a **pest** is detected or a tolerance level is exceeded or in the case of faulty implementation of officially established procedures [CPM, 2009]
country of origin (of a **consignment** of **plant products**)	Country where the **plants** from which the **plant products** are derived were grown [FAO, 1990; revised CEPM, 1996; CEPM, 1999]
country of origin (of a **consignment** of **plants**)	Country where the **plants** were grown [FAO, 1990; revised CEPM, 1996; CEPM, 1999]
country of origin (of **regulated articles** other than **plants** and **plant products**)	Country where the **regulated articles** were first exposed to **contamination** by **pests** [FAO, 1990; revised CEPM, 1996; CEPM, 1999]
cut flowers and branches	A **commodity class** for fresh parts of **plants** intended for decorative use and not for **planting** [FAO, 1990; revised ICPM, 2001]

debarked wood	**Wood** that has been subjected to any process that results in the removal of **bark**. (Debarked wood is not necessarily **bark-free wood**.) [CPM, 2008; replacing debarking]
delimiting survey	**Survey** conducted to establish the boundaries of an **area** considered to be infested by or **free from** a **pest** [FAO, 1990]
detection survey	**Survey** conducted in an **area** to determine if **pests** are present [FAO, 1990; revised FAO, 1995]
detention	Keeping a **consignment** in **official** custody or confinement, as a **phytosanitary measure** (see **quarantine**) [FAO, 1990; revised FAO, 1995; CEPM, 1999; ICPM, 2005]
devitalization	A procedure rendering **plants** or **plant products** incapable of germination, growth or further reproduction [ICPM, 2001]
dose mapping	Measurement of the **absorbed dose** distribution within a **process load** through the use of **dosimeters** placed at specific locations within the **process load** [ISPM 18:2003]
dunnage	**Wood packaging material** used to secure or support a **commodity** but which does not remain associated with the **commodity** [FAO, 1990; revised ISPM 15:2002]
ecosystem	A dynamic complex of **plant**, animal and micro-organism communities and their abiotic environment interacting as a functional unit [ISPM 3:1995; revised CPM, 2005]
efficacy (of a **treatment)**	A defined, measurable, and reproducible effect by a prescribed **treatment** [ISPM 28:2007]
emergency action	A prompt **phytosanitary action** undertaken in a new or unexpected phytosanitary situation [ICPM, 2001]
emergency measure	A **phytosanitary measure** established as a matter of urgency in a new or unexpected phytosanitary situation. An emergency measure may or may not be a **provisional measure** [ICPM, 2001; revised ICPM, 2005]
endangered area	An **area** where ecological factors favour the **establishment** of a **pest** whose presence in the **area** will result in economically important loss [FAO, 1995]
entry (of a **consignment**)	Movement through a **point of entry** into an **area** [FAO, 1995]
entry (of a **pest**)	Movement of a **pest** into an **area** where it is not yet present, or present but not widely distributed and being **officially controlled** [FAO, 1995]
equivalence (of **phytosanitary measures**)	The situation where, for a specified pest risk, different **phytosanitary measures** achieve a contracting party's appropriate level of protection [FAO, 1995; revised CEPM, 1999; based on the World Trade Organization Agreement on the Application of Sanitary and Phytosanitary Measures (WTO, 1994); revised ISPM 24:2005]
eradication	Application of **phytosanitary measures** to eliminate a **pest** from an **area** [FAO, 1990; revised FAO, 1995; formerly eradicate]

establishment (of a **pest**) Perpetuation, for the foreseeable future, of a **pest** within an **area** after **entry** [FAO, 1990; revised FAO, 1995; IPPC, 1997; formerly established]

field A plot of land with defined boundaries within a **place of production** on which a **commodity** is grown [FAO, 1990]

find free To **inspect** a **consignment**, **field** or **place of production** and consider it to be **free from** a specific **pest** [FAO, 1990]

free from (of a **consignment**, **field** or **place of production**) Without **pests** (or a specific **pest**) in numbers or quantities that can be detected by the application of **phytosanitary procedures** [FAO, 1990; revised FAO, 1995; CEPM, 1999]

fresh Living; not dried, deep-frozen or otherwise conserved [FAO, 1990]

fruits and vegetables A **commodity class** for **fresh** parts of **plants** intended for consumption or processing and not for **planting** [FAO, 1990; revised ICPM, 2001]

fumigation **Treatment** with a chemical agent that reaches the **commodity** wholly or primarily in a gaseous state [FAO, 1990; revised FAO, 1995]

germplasm **Plants** intended for use in breeding or conservation programmes [FAO, 1990]

grain A **commodity class** for **seeds** intended for processing or consumption and not for **planting** (see **seeds**) [FAO, 1990; revised ICPM, 2001]

growing medium Any material in which **plant** roots are growing or intended for that purpose [FAO, 1990]

growing period (of a **plant** species) Time period of active growth during a **growing season** [ICPM, 2003]

growing season Period or periods of the year when **plants** actively grow in an **area**, **place of production** or production site [FAO, 1990; revised ICPM, 2003]

habitat Part of an **ecosystem** with conditions in which an **organism** naturally occurs or can establish [ICPM, 2005]

harmonization The establishment, recognition and application by different countries of **phytosanitary measures** based on common **standards** [FAO, 1995; revised CEPM, 1999; based on the World Trade Organization Agreement on the Application of Sanitary and Phytosanitary Measures (WTO, 1994)]

harmonized phytosanitary measures **Phytosanitary measures** established by contracting parties to the **IPPC**, based on **international standards** [IPPC, 1997]

heat treatment The process in which a **commodity** is heated until it reaches a minimum temperature for a minimum period of time according to an **official** technical specification [ISPM 15:2002; revised ICPM, 2005]

host pest list A list of **pests** that infest a **plant** species, globally or in an **area** [CEPM, 1996; revised CEPM, 1999]

host range	Species capable, under natural conditions, of sustaining a specific **pest** or other **organism** [FAO, 1990; revised ISPM 3:2005]
import permit	**Official** document authorizing importation of a **commodity** in accordance with specified **phytosanitary import requirements** [FAO, 1990; revised FAO, 1995; ICPM, 2005]
inactivation	Rendering micro-organisms incapable of development [ISPM 18:2003]
incidence (of a **pest**)	Proportion or number of units in which a **pest** is present in a sample, **consignment**, **field** or other defined population [CPM, 2009]
incursion	An isolated population of a **pest** recently detected in an **area**, not known to be **established**, but expected to survive for the immediate future [ICPM, 2003]
infestation (of a **commodity**)	Presence in a **commodity** of a living **pest** of the **plant** or **plant product** concerned. **Infestation** includes infection [CEPM, 1997; revised CEPM, 1999]
inspection	**Official visual examination** of **plants**, **plant products** or other **regulated articles** to determine if **pests** are present or to determine compliance with **phytosanitary regulations** [FAO, 1990; revised FAO, 1995; formerly inspect]
inspector	Person authorized by a **national plant protection organization** to discharge its functions [FAO, 1990]
integrity (of a **consignment**)	Composition of a **consignment** as described by its **phytosanitary certificate** or other **officially** acceptable document, maintained without loss, addition or substitution [CPM, 2007]
intended use	Declared purpose for which **plants**, **plant products** or other articles are imported, produced or used [ISPM 16:2002; revised CPM, 2009]
interception (of a **consignment**)	The refusal or controlled **entry** of an imported **consignment** due to failure to comply with **phytosanitary regulations** [FAO, 1990; revised FAO, 1995]
interception (of a **pest**)	The detection of a **pest** during **inspection** or **testing** of an imported **consignment** [FAO, 1990; revised CEPM, 1996]
intermediate quarantine	**Quarantine** in a country other than the **country of origin** or destination [CEPM, 1996]
International Plant Protection Convention	International Plant Protection Convention, as deposited with FAO in Rome in 1951 and as subsequently amended [FAO, 1990]
International Standard for Phytosanitary Measures	An **international standard** adopted by the Conference of FAO, the Interim Commission on Phytosanitary Measures or the Commission on Phytosanitary Measures, established under the **IPPC** [CEPM, 1996; revised CEPM, 1999]
international standards	International **standards** established in accordance with Article X paragraphs 1 and 2 of the **IPPC** [IPPC, 1997]
introduction (of a **pest**)	The **entry** of a **pest** resulting in its **establishment** [FAO, 1990; revised FAO, 1995; IPPC, 1997]

inundative release The release of large numbers of mass-produced **biological control agents** or **beneficial organisms** with the expectation of achieving a rapid effect [ISPM 3:1995; revised ISPM 3:2005]

IPPC **International Plant Protection Convention**, as deposited in 1951 with FAO in Rome and as subsequently amended [FAO, 1990; revised ICPM, 2001]

irradiation **Treatment** with any type of **ionizing radiation** [ISPM 18:2003]

ISPM **International Standard for Phytosanitary Measures** [CEPM, 1996; revised ICPM, 2001]

kiln-drying A process in which **wood** is dried in a closed chamber using heat and/or humidity control to achieve a required moisture content [ISPM 15:2002]

living modified organism Any living organism that possesses a novel combination of genetic material obtained through the use of **modern biotechnology** [Cartagena Protocol on Biosafety to the Convention on Biological Diversity (CBD, 2000)]

LMO **living modified organism** [ISPM 11:2004]

lot A number of units of a single **commodity**, identifiable by its homogeneity of composition, origin etc., forming part of a **consignment** [FAO, 1990]

mark An **official** stamp or brand, internationally recognized, applied to a **regulated article** to attest its phytosanitary status [ISPM 15:2002]

minimum absorbed dose (Dmin) The localized minimum **absorbed dose** within the **process load** [ISPM 18:2003]

modern biotechnology The application of:

a. in vitro nucleic acid techniques, including recombinant deoxyribonucleic acid (DNA) and direct injection of nucleic acid into cells or organelles; or

b. fusion of cells beyond the taxonomic family,

that overcome natural physiological reproductive or recombination barriers and that are not techniques used in traditional breeding and selection. [Cartagena Protocol on Biosafety to the Convention on Biological Diversity (CBD, 2000)]

monitoring An **official** ongoing process to verify phytosanitary situations [CEPM, 1996]

monitoring survey Ongoing **survey** to verify the characteristics of a **pest** population [FAO, 1995]

national plant protection organization **Official** service established by a government to discharge the functions specified by the **IPPC** [FAO, 1990; formerly plant protection organization (national)]

natural enemy An **organism** which lives at the expense of another **organism** in its area of origin and which may help to limit the population of that **organism**. This includes **parasitoids**, **parasites**, **predators**, phytophagous organisms and **pathogens** [ISPM 3:1995; revised ISPM 3:2005]

naturally occurring A component of an **ecosystem** or a selection from a wild population, not altered by artificial means [ISPM 3:1995]

non-quarantine pest **Pest** that is not a **quarantine pest** for an **area** [FAO, 1995]

NPPO **National plant protection organization** [FAO, 1990; ICPM, 2001]

occurrence The presence in an **area** of a **pest officially** recognized to be indigenous or **introduced** and not **officially** reported to have been **eradicated** [FAO, 1990; revised FAO, 1995; ISPM 17:2002; formerly occur]

official Established, authorized or performed by a **national plant protection organization** [FAO, 1990]

official control The active enforcement of mandatory **phytosanitary regulations** and the application of mandatory **phytosanitary procedures** with the objective of **eradication** or **containment** of **quarantine pests** or for the management of **regulated non-quarantine pests** [ICPM, 2001]

organism Any biotic entity capable of reproduction or replication in its **naturally occurring** state [ISPM 3:1995; revised ISPM 3:2005]

outbreak A recently detected **pest** population, including an **incursion**, or a sudden significant increase of an established **pest** population in an **area** [FAO, 1995; revised ICPM, 2003]

packaging Material used in supporting, protecting or carrying a **commodity** [ISPM 15:2004]

parasite An **organism** which lives on or in a larger **organism**, feeding upon it [ISPM 3:1995]

parasitoid An insect **parasitic** only in its immature stages, killing its host in the process of its development, and free living as an adult [ISPM 3:1995]

pathogen Micro-organism causing disease [ISPM 3:1995]

pathway Any means that allows the **entry** or **spread** of a **pest** [FAO, 1990; revised FAO, 1995]

pest Any species, strain or biotype of plant, animal or **pathogenic** agent injurious to **plants** or **plant products**. Note: In the IPPC, plant pest is sometimes used for the term pest [FAO, 1990; revised FAO, 1995; IPPC, 1997; revised CPM, 2012]

pest categorization The process for determining whether a **pest** has or has not the characteristics of a **quarantine pest** or those of a **regulated non-quarantine pest** [ISPM 11:2001]

pest diagnosis The process of detection and identification of a **pest** [ISPM 27:2006]

pest free area	An **area** in which a specific **pest** does not **occur** as demonstrated by scientific evidence and in which, where appropriate, this condition is being **officially** maintained [FAO, 1995]
pest free place of production	**Place of production** in which a specific **pest** does not **occur** as demonstrated by scientific evidence and in which, where appropriate, this condition is being **officially** maintained for a defined period [ISPM 10:1999]
pest free production site	A defined portion of a **place of production** in which a specific **pest** does not **occur** as demonstrated by scientific evidence and in which, where appropriate, this condition is being **officially** maintained for a defined period and that is managed as a separate unit in the same way as a **pest free place of production** [ISPM 10:1999]
pest record	A document providing information concerning the presence or absence of a specific **pest** at a particular location at a certain time, within an **area** (usually a country) under described circumstances [CEPM, 1997]
pest risk (for **quarantine pests**)	The probability of **introduction** and **spread** of a **pest** and the magnitude of the associated potential economic consequences [ISPM 2:2007]
pest risk (for **regulated non-quarantine pests**)	The probability that a **pest** in **plants for planting** affects the **intended use** of those **plants** with an economically unacceptable impact [ISPM 2:2007]
pest risk analysis (agreed interpretation)	The process of evaluating biological or other scientific and economic evidence to determine whether an **organism** is a **pest**, whether it should be regulated, and the strength of any **phytosanitary measures** to be taken against it [FAO, 1995; revised IPPC, 1997; ISPM 2:2007]
pest risk assessment (for **quarantine pests**)	Evaluation of the probability of the **introduction** and **spread** of a **pest** and the magnitude of the associated potential economic consequences [FAO, 1995; revised ISPM 11:2001; ISPM 2:2007]
pest risk assessment (for **regulated non-quarantine pests**)	Evaluation of the probability that a **pest** in **plants for planting** affects the **intended use** of those **plants** with an economically unacceptable impact [ICPM, 2005]
pest risk management (for **quarantine pests**)	Evaluation and selection of options to reduce the risk of **introduction** and **spread** of a **pest** [FAO, 1995; revised ISPM 11:2001]
pest risk management (for **regulated non-quarantine pests**)	Evaluation and selection of options to reduce the risk that a **pest** in **plants for planting** causes an economically unacceptable impact on the **intended use** of those **plants** [ICPM, 2005]
pest status (in an **area**)	Presence or absence, at the present time, of a **pest** in an **area**, including where appropriate its distribution, as **officially** determined using expert judgement on the basis of current and historical **pest records** and other information [CEPM, 1997; revised ICPM, 1998]
PFA	**Pest free area** [FAO, 1995; revised ICPM, 2001]
phytosanitary action	An **official** operation, such as **inspection**, **testing**, **surveillance** or **treatment**, undertaken to implement **phytosanitary measures** [ICPM, 2001; revised ICPM, 2005]

phytosanitary certificate	An **official** paper document or its **official** electronic equivalent, consistent with the model certificates of the **IPPC**, attesting that a **consignment** meets **phytosanitary import requirements**[FAO, 1990; revised CPM, 2012]
phytosanitary certification	Use of **phytosanitary procedures** leading to the issue of a **phytosanitary certificate** [FAO, 1990]
phytosanitary import requirements	Specific **phytosanitary measures** established by an importing country concerning **consignments** moving into that country [ICPM, 2005]
phytosanitary legislation	Basic laws granting legal authority to a **national plant protection organization** from which **phytosanitary regulations** may be drafted [FAO, 1990; revised FAO, 1995]
phytosanitary measure (agreed interpretation)	Any **legislation**, **regulation** or **official** procedure having the purpose to prevent the **introduction** or **spread** of **quarantine pests**, or to limit the economic impact of **regulated non-quarantine pests** [FAO, 1995; revised IPPC, 1997; ICPM, 2002]

The agreed interpretation of the term phytosanitary measure accounts for the relationship of phytosanitary measures to regulated non-quarantine pests. This relationship is not adequately reflected in the definition found in Article II of the IPPC (1997).

phytosanitary procedure	Any **official** method for implementing **phytosanitary measures** including the performance of **inspections**, **tests**, **surveillance** or **treatments** in connection with **regulated pests** [FAO, 1990; revised FAO, 1995; CEPM, 1999; ICPM, 2001; ICPM, 2005]
phytosanitary regulation	**Official** rule to prevent the **introduction** or **spread** of **quarantine pests**, or to limit the economic impact of **regulated non-quarantine pests**, including establishment of procedures for **phytosanitary certification** [FAO, 1990; revised FAO, 1995; CEPM, 1999; ICPM, 2001]
phytosanitary security (of a **consignment**)	Maintenance of the **integrity** of a **consignment** and prevention of its **infestation** and **contamination** by **regulated pests**, through the application of appropriate **phytosanitary measures** [CPM, 2009]
place of production	Any premises or collection of **fields** operated as a single production or farming unit. This may include production sites which are separately managed for phytosanitary purposes [FAO, 1990; revised CEPM, 1999]
plant products	Unmanufactured material of **plant** origin (including **grain**) and those manufactured products that, by their nature or that of their processing, may create a risk for the **introduction** and **spread** of pests [FAO, 1990; revised IPPC, 1997; formerly plant product]
plant protection organization (national)	See **national plant protection organization**
plant quarantine	All activities designed to prevent the **introduction** or **spread** of **quarantine pests** or to ensure their **official control** [FAO, 1990; revised FAO, 1995]

planting (including **replanting**)	Any operation for the placing of **plants** in a **growing medium**, or by grafting or similar operations, to ensure their subsequent growth, reproduction or propagation [FAO, 1990; revised CEPM,1999]
plants	Living plants and parts thereof, including **seeds** and **germplasm** [FAO, 1990; revised IPPC, 1997]
plants for planting	**Plants** intended to remain **planted**, to be **planted** or **replanted** [FAO, 1990]
plants *in vitro*	A **commodity class** for **plants** growing in an aseptic medium in a closed container [FAO, 1990; revised CEPM, 1999; ICPM, 2002; formerly plants in tissue culture]
point of entry	Airport, seaport or land border point **officially** designated for the importation of **consignments**, and/or entrance of passengers [FAO, 1995]
post-entry quarantine	**Quarantine** applied to a **consignment** after entry [FAO, 1995]
PRA	**Pest risk analysis** [FAO, 1995; revised CPM, 2011]
PRA area	**Area** in relation to which a **pest risk analysis** is conducted [FAO, 1995]
practically free	Of a **consignment**, **field**, or **place of production**, without **pests** (or a specific **pest**) in numbers or quantities in excess of those that can be expected to result from, and be consistent with good cultural and handling practices employed in the production and marketing of the **commodity** [FAO, 1990; revised FAO, 1995]
pre-clearance	**Phytosanitary certification** and/or **clearance** in the **country of origin**, performed by or under the regular supervision of the **national plant protection organization** of the country of destination [FAO, 1990; revised FAO, 1995]
predator	A **natural enemy** that preys and feeds on other animal **organisms**, more than one of which are killed during its lifetime [ISPM 3:1995]
process load	A volume of material with a specified loading configuration and treated as a single entity [ISPM 18:2003]
processed wood material	Products that are a composite of **wood** constructed using glue, heat and pressure, or any combination thereof [ISPM 15:2002]
prohibition	A **phytosanitary regulation** forbidding the importation or movement of specified **pests** or **commodities** [FAO, 1990; revised FAO, 1995]
protected area	A **regulated area** that an **NPPO** has determined to be the minimum **area** necessary for the effective protection of an **endangered area** [FAO, 1990; omitted from FAO, 1995; new concept from CEPM, 1996]
provisional measure	A **phytosanitary regulation** or procedure established without full **technical justification** owing to current lack of adequate information. A **provisional measure** is subjected to periodic review and full technical justification as soon as possible [ICPM, 2001]

quarantine	**Official** confinement of **regulated articles** for observation and research or for further **inspection**, **testing** or **treatment** [FAO, 1990; revised FAO, 1995; CEPM, 1999]
quarantine area	An **area** within which a **quarantine pest** is present and is being **officially controlled** [FAO, 1990; revised FAO, 1995]
quarantine pest	A **pest** of potential economic importance to the **area endangered** thereby and not yet present there, or present but not widely distributed and being **officially controlled** [FAO, 1990; revised FAO, 1995; IPPC 1997]
quarantine station	**Official** station for holding **plants** or **plant products** in **quarantine** [FAO, 1990; revised FAO, 1995; formerly quarantine station or facility]
raw wood	**Wood** which has not undergone processing or **treatment** [ISPM 15:2002]
re-exported consignment	**Consignment** that has been imported into a country from which it is then exported. The **consignment** may be stored, split up, combined with other **consignments** or have its **packaging** changed [FAO, 1990; revised CEPM, 1996; CEPM, 1999; ICPM, 2001; ICPM, 2002; formerly country of re-export]
reference specimen	Specimen, from a population of a specific **organism**, conserved and accessible for the purpose of identification, verification or comparison. [ISPM 3:2005; revised CEPM, 2009]
refusal	Forbidding **entry** of a **consignment** or other **regulated article** when it fails to comply with **phytosanitary regulations** [FAO, 1990; revised FAO, 1995]
regional plant protection organization	An intergovernmental organization with the functions laid down by Article IX of the **IPPC** [FAO, 1990; revised FAO, 1995; CEPM, 1999; formerly plant protection organization (regional)]
regional standards	**Standards** established by a **regional plant protection organization** for the guidance of the members of that organization [IPPC, 1997]
regulated area	An **area** into which, within which or from which **plants**, **plant products** and other **regulated articles** are subjected to **phytosanitary measures** [CEPM, 1996; revised CEPM, 1999; ICPM, 2001]
regulated article	Any **plant**, **plant product**, storage place, **packaging**, conveyance, container, soil and any other **organism**, object or material capable of harbouring or spreading **pests**, deemed to require **phytosanitary measures**, particularly where international transportation is involved [FAO, 1990; revised FAO, 1995; IPPC, 1997]
regulated non-quarantine pest	A **non-quarantine pest** whose presence in **plants for planting** affects the **intended use** of those **plants** with an economically unacceptable impact and which is therefore regulated within the territory of the importing contracting party [IPPC, 1997]
regulated pest	A **quarantine pest** or a **regulated non-quarantine pest** [IPPC, 1997]

release (into the environment)	Intentional liberation of an **organism** into the environment [ISPM 3:1995]
release (of a **consignment**)	Authorization for **entry** after **clearance** [FAO, 1995]
replanting	See **planting**
required response	A specified level of effect for a **treatment** [ISPM 18:2003]
restriction	A **phytosanitary regulation** allowing the importation or movement of specified **commodities** subject to specific requirements [CEPM, 1996; revised CEPM, 1999]
RNQP	**Regulated non-quarantine pest** [ISPM 16:2002]
round wood	**Wood** not sawn longitudinally, carrying its natural rounded surface, with or without **bark** [FAO, 1990]
RPPO	**Regional plant protection organization** [FAO, 1990; revised ICPM, 2001]
sawn wood	**Wood** sawn longitudinally, with or without its natural rounded surface with or without **bark** [FAO, 1990]
Secretary	**Secretary** of the **Commission** appointed pursuant to Article XII [IPPC, 1997]
seeds	A **commodity class** for seeds for **planting** or intended for planting and not for consumption or processing (see **grain**) [FAO, 1990; revised ICPM, 2001]
SIT	**sterile insect technique** [ISPM 3:2005]
spread (of a **pest**)	Expansion of the geographical distribution of a **pest** within an **area** [FAO, 1995]
standard	Document established by consensus and approved by a recognized body, that provides, for common and repeated use, rules, guidelines or characteristics for activities or their results, aimed at the achievement of the optimum degree of order in a given context [FAO, 1995; ISO/IEC Guide 2:1991 definition]
sterile insect	An insect that, as a result of a specific treatment, is unable to reproduce [ISPM 3:2005]
sterile insect technique	Method of **pest control** using area-wide **inundative release** of **sterile insects** to reduce reproduction in a field population of the same species [ISPM 3:2005]
stored product	Unmanufactured **plant product** intended for consumption or processing, stored in a dried form (this includes in particular **grain** and dried **fruits and vegetables**) [FAO, 1990]
suppression	The application of **phytosanitary measures** in an infested **area** to reduce **pest** populations [FAO, 1995; revised CEPM, 1999]
surveillance	An **official** process which collects and records data on **pest occurrence** or absence by **survey**, **monitoring** or other procedures [CEPM, 1996]

survey	An **official** procedure conducted over a defined period of time to determine the characteristics of a **pest** population or to determine which species **occur** in an **area** [FAO, 1990; revised CEPM, 1996]
systems approach(es)	The integration of different risk management measures, at least two of which act independently, and which cumulatively achieve the appropriate level of protection against **regulated pests** [ISPM 14:2002; revised ICPM, 2005]
technically justified	Justified on the basis of conclusions reached by using an appropriate **pest risk analysis** or, where applicable, another comparable examination and evaluation of available scientific information [IPPC, 1997]
test	**Official** examination, other than visual, to determine if **pests** are present or to identify **pests** [FAO, 1990]
tolerance level (of a **pest**)	**Incidence** of a **pest** specified as a threshold for action to **control** that **pest** or to prevent its **spread** or **introduction** [ICPM, 2009]
transience	Presence of a **pest** that is not expected to lead to **establishment** [ISPM 8:1998]
transit	See **consignment in transit**
transparency	The principle of making available, at the international level, **phytosanitary measures** and their rationale [FAO, 1995; revised CEPM, 1999; based on the World Trade Organization Agreement on the Application of Sanitary and Phytosanitary Measures (WTO, 1994)]
treatment	**Official** procedure for the killing, **inactivation** or removal of **pests**, or for rendering **pests** infertile or for **devitalization** [FAO, 1990, revised FAO, 1995; ISPM 15:2002; ISPM 18:2003; ICPM, 2005]
treatment schedule	The critical parameters of a **treatment** which need to be met to achieve the intended outcome (i.e. the killing, **inactivation** or removal of **pests**, or rendering **pests** infertile, or **devitalization**) at a stated **efficacy** [ISPM 28:2007]
visual examination	The physical examination of **plants**, **plant products**, or other **regulated articles** using the unaided eye, lens, stereoscope or microscope to detect **pests** or **contaminants** without **testing** or processing [ISPM 23:2005]
wood	A **commodity class** for **round wood**, **sawn wood**, wood chips or **dunnage**, with or without **bark** [FAO, 1990; revised ICPM, 2001]
wood packaging material	**Wood** or wood products (excluding paper products) used in supporting, protecting or carrying a **commodity** (includes **dunnage**) [ISPM 15:2002]

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The supplement is a prescriptive part of the standard.

SUPPLEMENT 1: Guidelines on the interpretation and application of the concepts of "official control" and "not widely distributed"

INTRODUCTION

Scope

This supplement provides guidance on:

- the official control of regulated pests, and
- determination of when a pest is considered to be present but not widely distributed, for the decision on whether a pest qualifies as a quarantine pest.

References

ISPM 1. 2006. *Phytosanitary principles for the protection of plants and the application of phytosanitary measures in international trade*. Rome, IPPC, FAO.

ISPM 2. 2007. *Framework for pest risk analysis*. Rome, IPPC, FAO.

ISPM 6. 1997. *Guidelines for surveillance*. Rome, IPPC, FAO.

ISPM 8. 1998. *Determination of pest status in an area*. Rome, IPPC, FAO.

ISPM 11. 2004. *Pest risk analysis for quarantine pests including analysis of environmental risks and living modified organisms*. Rome, IPPC, FAO.

Definition

Official control is defined as:

The active enforcement of mandatory phytosanitary regulations and the application of mandatory phytosanitary procedures with the objective of eradication or containment of quarantine pests or for the management of regulated non-quarantine pests.

BACKGROUND

The words "present but not widely distributed and being officially controlled" express an essential concept in the definition of quarantine pest. According to that definition, a quarantine pest must always be of potential economic importance to an endangered area. In addition, it must either meet the criterion of not being present in that area or it must meet the combined criteria of being present but not widely distributed and subject to official control.

The *Glossary of phytosanitary terms* defines official as "established, authorized or performed by an NPPO" and control as "suppression, containment or eradication of a pest population". However, for phytosanitary purposes, the concept of *official control* is not adequately expressed by the combination of these two definitions.

The purpose of this supplement is to describe more precisely the interpretation of:

- the concept of official control and its application in practice for quarantine pests that are present in an area as well as for regulated non-quarantine pests, and
- the concept of "present but not widely distributed and under official control" for quarantine pests.

"Not widely distributed" is not a term included in the description of pest status listed in ISPM 8:1998.

REQUIREMENTS

1. General Requirements

Official control is subject to ISPM 1:2006, in particular the principles of non-discrimination, transparency, equivalence of phytosanitary measures and pest risk analysis.

1.1 Official control

Official control includes:

- eradication and/or containment in the infested area(s)
- surveillance in the endangered area(s)
- restrictions related to the movement into and within the protected area(s) including phytosanitary measures applied at import.

All official control programmes have elements that are mandatory. At minimum, programme evaluation and pest surveillance are required in official control programmes to determine the need for and effect of control to justify phytosanitary measures applied at import for the same purpose. Phytosanitary measures applied at import should be consistent with the principle of non-discrimination (see section 2.2 below).

For quarantine pests, eradication and containment may have an element of suppression. For regulated non-quarantine pests, suppression may be used to avoid unacceptable economic impact as it applies to the intended use of plants for planting.

1.2 Not widely distributed

"Not widely distributed" is a concept referring to a pest's occurrence and distribution within an area. A pest may be categorized as present and widely distributed in an area or not widely distributed, or absent. In pest risk analysis (PRA), the determination of whether a pest is not widely distributed is carried out in the pest categorization step. Transient means that a pest is not expected to establish and therefore is not relevant to the concept of "not widely distributed".

In the case of a quarantine pest that is present but not widely distributed, the importing country should define the infested area(s) and the endangered area(s). When a quarantine pest is considered not widely distributed, this means that the pest is limited to parts of its potential distribution and there are areas free from the pest that are at risk of economic loss from its introduction or spread. These endangered areas do not need to be contiguous but may consist of several distinct parts. In order to justify the statement of a pest being not widely distributed, a description and delimitation of the endangered areas should be made available if requested. There is a degree of uncertainty attached to any categorization of distribution. The categorization may also change over time.

The area in which the pest is not widely distributed should be the same as the area for which the economic impact applies (i.e. the endangered area) and where the pest is under or being considered for official control. The decision that a pest is a quarantine pest, including consideration of its distribution, and placing that pest under official control, is typically made with respect to an entire country. However, in some instances it may be more appropriate to regulate a pest as a quarantine pest in parts of a country rather than in the whole country. It is the potential economic importance of the pest for those parts that has to be considered in determining phytosanitary measures. Examples of when this may be appropriate are countries whose territories include one or more islands or other cases where there are natural or artificially created barriers to pest establishment and spread, such as large countries in which specified crops are restricted by climate to well-defined areas.

1.3 Decision to apply official control

A national plant protection organization (NPPO) may choose whether or not to officially control a pest of potential economic importance that is present but not widely distributed, taking into account

relevant factors from PRA, for example the costs and benefits of regulating the specific pest, and the technical and logistical ability to control the pest within the defined area. If the pest is not subjected to official control, it does not then qualify as a quarantine pest.

2. Specific Requirements

The specific requirements to be met relate to pest risk analysis, technical justification, non-discrimination, transparency, enforcement, mandatory nature of official control, area of application, and NPPO authority and involvement in official control.

2.1 Technical justification

Domestic requirements and phytosanitary import requirements should be technically justified and result in non-discriminatory phytosanitary measures.

Application of the definition of a quarantine pest requires knowledge of potential economic importance, potential distribution and official control programmes (ISPM 2:2007). The categorization of a pest as present and widely distributed or present but not widely distributed is determined in relation to its potential distribution. This potential distribution represents the areas where the pest could become established if given the opportunity, i.e. its hosts are present and environmental factors such as climate and soil are favourable. ISPM 11:2004 provides guidance on the factors to be considered in assessing the probability of establishment and spread when conducting a pest risk analysis. In the case of a pest that is present but not widely distributed, the assessment of potential economic importance should relate to the areas where the pest is not established.

Surveillance should be used to determine the distribution of a pest in an area as a basis for the further consideration of whether the pest is not widely distributed. ISPM 6:1997 provides guidance on surveillance, and includes provisions on transparency. Biological factors such as pest life cycle, means of dispersal and rate of reproduction may influence the design of surveillance programmes, the interpretation of survey data and the level of confidence in the categorization of a pest as not widely distributed. The distribution of a pest in an area is not a static condition. Changing conditions or new information may necessitate reconsideration of whether a pest is not widely distributed.

2.2 Non-discrimination

The principle of non-discrimination between domestic requirements and phytosanitary import requirements is fundamental. In particular, requirements for imports should not be more stringent than the effect of official control in an importing country. There should therefore be consistency between domestic requirements and phytosanitary import requirements for a defined pest:

- Import requirements should not be more stringent than domestic requirements.
- Domestic and import requirements should be the same or have an equivalent effect.
- Mandatory elements of domestic and import requirements should be the same.
- The intensity of inspection of imported consignments should be the same as equivalent processes in domestic control programmes.
- In the case of non-compliance, the same or equivalent phytosanitary actions should be taken on imported consignments as are taken domestically.
- If a tolerance level is applied within a domestic official control programme, the same tolerance level should be applied to equivalent imported material. In particular, if no action is taken in the domestic official control programme because the pest incidence does not exceed the tolerance level concerned, then no action should be taken for an imported consignment if the pest incidence does not exceed that same tolerance level. Compliance with import tolerance levels is generally determined by inspection or testing at entry, whereas compliance with the tolerance level for domestic consignments should be determined at the last point where official control is applied.

- If downgrading or reclassifying is permitted within a domestic official control programme, similar options should be available for imported consignments.

2.3 Transparency

Domestic requirements for official control and the phytosanitary import requirements should be documented and made available, on request.

2.4 Enforcement

The domestic enforcement of official control programmes should be equivalent to the enforcement of phytosanitary import requirements. Enforcement should include:

- a legal basis
- operational implementation
- evaluation and review
- phytosanitary action in the case of non-compliance.

2.5 Mandatory nature of official control

Official control is mandatory in the sense that all persons involved are legally bound to perform the actions required. The scope of official control programmes for quarantine pests is completely mandatory (e.g. procedures for eradication campaigns), whereas the scope for regulated non-quarantine pests is mandatory only in certain circumstances (e.g. official certification programmes).

2.6 Area of application

An official control programme can be applied at national, subnational or local area level. The area of application of official control measures should be specified. Any phytosanitary import requirements should have the same effect as the domestic requirements for official control.

2.7 NPPO authority and involvement in official control

Official control should:

- be established or recognized by the contracting party or the NPPO under appropriate legislative authority
- be performed, managed, supervised or, at minimum, audited/reviewed by the NPPO
- have enforcement assured by the contracting party or the NPPO
- be modified, terminated or lose official recognition by the contracting party or the NPPO.

Responsibility and accountability for official control programmes rests with the contracting party. Agencies other than the NPPO may be responsible for aspects of official control programmes, and certain aspects of official control programmes may be the responsibility of subnational authorities or the private sector. The NPPO should be fully aware of all aspects of official control programmes in its country.

This supplement was adopted by the Fifth Session of the Interim Commission on Phytosanitary Measures in April 2003.
The supplement is a prescriptive part of the standard.

SUPPLEMENT 2: Guidelines on the understanding of *potential economic importance* and related terms including reference to environmental considerations

1. Purpose and Scope

These guidelines provide the background and other relevant information to clarify *potential economic importance* and related terms, so that such terms are clearly understood and their application is consistent with the International Plant Protection Convention (IPPC) and the International Standards for Phytosanitary Measures (ISPMs). These guidelines also show the application of certain economic principles as they relate to the IPPC's objectives, in particular in protecting uncultivated/unmanaged plants, wild flora, habitats and ecosystems with respect to invasive alien species that are pests.

These guidelines clarify that the IPPC:

- can account for environmental concerns in economic terms using monetary or non-monetary values
- asserts that market impacts are not the sole indicator of pest impact
- maintains the right of contracting parties to adopt phytosanitary measures with respect to pests for which the economic damage caused to plants, plant products or ecosystems within an area cannot be easily quantified.

They also clarify, with respect to pests, that the scope of the IPPC covers the protection of cultivated plants in agriculture, horticulture and forestry, uncultivated/unmanaged plants, wild flora, habitats and ecosystems.

2. Background

The IPPC has historically maintained that the adverse consequences of pests, including those concerning uncultivated/unmanaged plants, wild flora, habitats and ecosystems, are measured in economic terms. References to the terms *economic effects*, *economic impacts*, *potential economic importance* and *economically unacceptable impact* and the use of the word *economic* in the IPPC and in ISPMs has resulted in some misunderstanding of the application of such terms and of the focus of the IPPC.

The scope of the Convention applies to the protection of wild flora resulting in an important contribution to the conservation of biological diversity. However, it has been misinterpreted that the IPPC is only commercially focused and limited in scope. It has not been clearly understood that the IPPC can account for environmental concerns in economic terms. This has created issues of consistency with other agreements, including the Convention on Biological Diversity and the Montreal Protocol on Substances that Deplete the Ozone Layer.

3. Economic Terms and Environmental Scope of the IPPC and ISPMs

The economic terms found in the IPPC and ISPMs may be categorized as follows.

Terms requiring judgement to support policy decisions:

- potential economic importance (in the definition for quarantine pest)
- economically unacceptable impact (in the definition for regulated non-quarantine pest)
- economically important loss (in the definition for endangered area).

Terms related to evidence that supports the above judgements:

- limit the economic impact (in the definition for phytosanitary regulation and the agreed interpretation of phytosanitary measure)
- economic evidence (in the definition for pest risk analysis)

- *cause economic damage* (in Article VII.3 of the IPPC, 1997)
- direct and indirect *economic impacts* (in ISPM 11:2004 and ISPM 16:2002)
- economic consequences and potential economic consequences (in ISPM 11:2004)
- commercial consequences and non-commercial consequences (in ISPM 11:2004).

ISPM 11:2004 notes in section 2.1.1.5 with respect to pest categorization, that there should be a clear indication that the pest is likely to have an unacceptable economic impact, including environmental impact, in the PRA area. Section 2.3 of the standard describes the procedure for assessing potential economic consequences of a pest introduction. Pest effects may be considered to be direct or indirect. Section 2.3.2.2 addresses analysis of commercial consequences. Section 2.3.2.4 provides guidance on the assessment of the non-commercial and environmental consequences of pest introduction. It acknowledges that certain types of effects may not apply to an existing market that can be easily identified, but it goes on to state that the impacts could be approximated with an appropriate non-market valuation method. This section notes that if a quantitative measurement is not feasible, then this part of the assessment should at least include a qualitative analysis and an explanation of how the information is used in the PRA. Environmental or other undesirable effects of control measures are covered in section 2.3.1.2 (Indirect pest effects) as part of the analysis of potential economic consequences. Where a pest risk is found to be unacceptable, section 3.4 provides guidance on the selection of pest risk management options, including measurements of cost-effectiveness, feasibility and least trade restrictiveness.

In April 2001 the ICPM recognized that under the IPPC existing mandate, to take account of environmental concerns, further clarification should include consideration of the following five proposed points relating to potential environmental risks of pests:

- reduction or elimination of endangered (or threatened) native plant species
- reduction or elimination of a keystone plant species (a species which plays a major role in the maintenance of an ecosystem)
- reduction or elimination of a plant species which is a major component of a native ecosystem
- causing a change to plant biological diversity in such a way as to result in ecosystem destabilization
- resulting in control, eradication or management programmes that would be needed if a quarantine pest was introduced and impacts of such programmes (e.g. pesticides, non-indigenous predators or parasites) on biological diversity.

Thus it is clear, with respect to plant pests, that the scope of the IPPC covers the protection of cultivated plants in agriculture, horticulture and forestry, uncultivated/unmanaged plants, wild flora, habitats and ecosystems.

4. Economic Considerations in PRA

4.1 Types of economic effect

In PRA, economic effects should not be interpreted to be only market effects. Goods and services not sold in commercial markets can have economic value, and economic analysis encompasses much more than the study of market goods and services. The use of the term *economic effects* provides a framework in which a wide variety of effects (including environmental and social effects) may be analysed. Economic analysis uses a monetary value as a measure to allow policy makers to compare costs and benefits from different types of goods and services. This does not preclude the use of other tools such as qualitative and environmental analyses that may not use monetary terms.

4.2 Costs and benefits

A general economic test for any policy is to pursue the policy if its benefit is at least as large as its cost. Costs and benefits are broadly understood to include both market and non-market aspects. Costs and benefits can be represented by both quantifiable measurements and qualitative measurements.

Non-market goods and services may be difficult to quantify or measure but nevertheless are essential to consider.

Economic analysis for phytosanitary purposes can only provide information with regard to costs and benefits, and does not judge if one distribution is necessarily better than another distribution of costs and benefits of a specific policy. In principle, costs and benefits should be measured regardless to whom they occur. Given that judgements about the preferred distribution of costs and benefits are policy choices, these should have a rational relationship to phytosanitary considerations.

Costs and benefits should be counted whether they occur as a direct or indirect result of a pest introduction or if a chain of causation is required before the costs are incurred or the benefits realized. Costs and benefits associated with indirect consequences of pest introductions may be less certain than costs and benefits associated with direct consequences. Often, there is no monetary information about the cost of any loss that may result from pests introduced into natural environments. Any analysis should identify and explain uncertainties involved in estimating costs and benefits and assumptions should be clearly stated.

5. Application

The following criteria[1] should be met before a pest is deemed to have *potential economic importance*:

- a potential for introduction in the PRA area
- the potential to spread after establishment
- a potential harmful impact on plants, for example
  - crops (for example loss of yield or quality)
  - the environment, for example damage to ecosystems, habitats or species
  - some other specified value, for example recreation, tourism, aesthetics.

As stated in section 3, environmental damage arising from the introduction of a pest, is one of the types of damage recognized by the IPPC. Thus, with respect to the third criterion above, contracting parties to the IPPC have the right to adopt phytosanitary measures even with respect to a pest that only has the potential for environmental damage. Such action should be based upon a pest risk analysis that includes the consideration of evidence of potential environmental damage. When indicating the direct and indirect impact of pests on the environment, the nature of the harm or losses arising from a pest introduction should be specified in the risk analysis.

In the case of regulated non-quarantine pests, because such pest populations are already established, introduction in an area of concern and environmental effects are not relevant criteria in the consideration of *economically unacceptable impacts* (see ISPM 16:2002 and ISPM 21:2004).

References

ICPM. 2001. *Report of the Third Interim Commission on Phytosanitary Measures, Rome, 2–6 April 2001*. (Includes Appendix XIII, "Statements of the ICPM Exploratory Open-ended Working Group on Phytosanitary Aspects of GMOs, Biosafety, and Invasive Species, 13–16 June 2000, Rome".) Rome, IPPC, FAO.

IPPC. 1997. *International Plant Protection Convention*. Rome, IPPC, FAO.

ISPM 11. 2004. *Pest risk analysis for quarantine pests, including analysis of environmental risks and living modified organisms.* Rome, IPPC, FAO.

ISPM 16. 2002. *Regulated non-quarantine pests: concept and application*. Rome, IPPC, FAO.

ISPM 21. 2004. *Pest risk analysis for regulated non-quarantine pests.* Rome, IPPC, FAO.

[1] With respect to the first and second criteria, IPPC (1997) Article VII.3 states that for pests that may not be capable of establishment, measures taken against these pests must be technically justified.

This appendix is for reference purposes only and is not a prescriptive part of the standard.

APPENDIX TO SUPPLEMENT 2

This appendix provides additional clarification of some terms used in this supplement.

Economic analysis: It primarily uses monetary values as a measure to allow policy makers to compare costs and benefits from different types of goods and services. It encompasses more than the study of market goods and services. Economic analysis does not prevent the use of other measures that do not use a monetary value; for example, qualitative or environmental analysis.

Economic effects: This includes market effects as well as non-market effects, such as environmental and social considerations. Measurement of the economic value of environmental effects or social effects may be difficult to establish. For example, the survival and well-being of another species or the value of the aesthetics of a forest or a jungle. Both qualitative and quantitative worth may be considered in measuring economic effects.

Economic impacts of plant pests: This includes both market measures as well as those consequences that may not be easy to measure in direct economic terms, but which represent a loss or damage to cultivated plants, uncultivated plants or plant products.

Economic value: This is the basis for measuring the cost of the effect of changes (e.g. in biodiversity, ecosystems, managed resources or natural resources) on human welfare. Goods and services not sold in commercial markets can have economic value. Determining economic value does not prevent ethical or altruistic concerns for the survival and well-being of other species based on cooperative behaviour.

Qualitative measurement: This is the valuation of qualities or characteristics in other than monetary or numeric terms.

Quantitative measurement: This is the valuation of qualities or characteristics in monetary or other numeric terms.

This appendix was adopted by the Fourth Session of the Commission on Phytosanitary Measures in March–April 2009.
The appendix is for reference purposes only and is not a prescriptive part of the standard.

APPENDIX 1: Terminology of the Convention on Biological Diversity in relation to the *Glossary of phytosanitary terms*

1. Introduction

Since 2001, it has been made clear that the scope of the IPPC extends to risks arising from pests that primarily affect the environment and biological diversity, including harmful plants. The Technical Panel for the Glossary, which reviews ISPM 5 (*Glossary of phytosanitary terms*, hereinafter referred to as the Glossary), therefore examined the possibility of adding new terms and definitions to the standard to cover this area of concern. In particular, it considered the terms and definitions that are in use by the Convention on Biological Diversity (CBD)[*], with a view to adding them to the Glossary, as has previously been done in several cases for the terminology of other intergovernmental organizations.

However, study of the terms and definitions available from the CBD has shown that they are based on concepts different from those of the IPPC, so that similar terms are given distinctly different meanings. The CBD terms and definitions could not accordingly be used directly in the Glossary. It was decided instead to present these terms and definitions in the present Appendix to the Glossary, providing explanations of how they differ from IPPC terminology.

This Appendix is not intended to provide a clarification of the scope of the CBD, nor of the scope of the IPPC.

2. Presentation

In relation to each term considered, the CBD definition is first provided. This is placed alongside an "Explanation in IPPC context", in which, as usual, Glossary terms (or derived forms of Glossary terms) are shown in **bold**. These explanations may also include CBD terms, in which case these are also in **bold** and followed by "**(CBD)**". The explanations constitute the main body of this Appendix. Each is followed by notes, providing further clarification of some of the difficulties.

3. Terminology

3.1 "Alien species"

CBD definition	*Explanation in IPPC context*
A species, subspecies or lower taxon, introduced outside its natural past[1] or present distribution; includes any part, gametes, seeds, eggs, or propagules of such species that might survive and subsequently reproduce	An **alien**[2] **species (CBD)** is an individual[3] or population, at any life stage, or a viable part of an **organism** that is non-indigenous to an **area** and that has **entered**[4] by human agency[5] into the **area**

Notes:

[1] The qualification concerning "past and present" distribution is not relevant for IPPC purposes, since the IPPC is concerned only with existing situations. It does not matter that the species was present in the past if it is present now. The word "past" in the CBD definition presumably allows for the re-introduction of a species into an area where it has recently become extinct and thus a reintroduced species would presumably not be considered an alien species.

[*] The terms and definitions discussed in this document have resulted from discussion on invasive alien species by the Parties of the Convention on Biological Diversity (Secretariat of the Convention on Biological Diversity).

[2] "Alien" refers only to the location and distribution of an organism compared with its natural range. It does not imply that the organism is harmful.

[3] The CBD definition emphasizes the physical presence of individuals of a species at a certain time, whereas the IPPC concept of occurrence relates to the geographical distribution of the taxon in general.

[4] For CBD purposes, an alien species is already present in the **area** that is not within its native distribution (see **Introduction** below). The IPPC is more concerned with organisms that are not yet present in the area of concern (i.e. quarantine pests). The term "alien" is not appropriate for them, and terms such as "exotic", "non-indigenous" or "non-native" have been used in ISPMs. To avoid confusion, it would be preferable to use only one of these terms, in which case "non-indigenous" would be suitable, especially as it can accompany its opposite "indigenous". "Exotic" is not suitable because it presents translation problems.

[5] A species that is non-indigenous and has entered an **area** through natural means is not an a**lien species (CBD)**. It is simply extending its natural range. For **IPPC** purposes, such a species could still be considered as a potential **quarantine pest**.

3.2 "Introduction"

CBD definition	*Explanation in IPPC context*
The movement by human agency, indirect or direct, of an alien species[6] outside of its natural range (past or present). This movement can be either within a country or between countries or areas beyond national jurisdiction[7]	The **entry** of a **species** into an **area where it is non-indigenous**, through movement by human agency, either directly from an area where the species is indigenous, or indirectly[8] (by successive movement from an area where the species is indigenous through one or several areas where it is not)

Notes:

[6] The CBD definition suggests that **introduction (CBD)** concerns an **alien species (CBD)**, and thus a species that has already entered the area. However, it may be supposed, on the basis of other documents made available by CBD, that this is not so, and that a non-indigenous species entering for the first time is being **introduced (CBD)**. For CBD, a species can be **introduced (CBD)** many times, but for IPPC a species, once established, cannot be **introduced** again.

[7] The issue of "areas beyond national jurisdiction" is not relevant for the IPPC.

[8] In the case of indirect movement, it is not specifically stated in the definition whether all the movements from one **area** to another must be **introductions (CBD)** (i.e. by human agency, intentional or unintentional), or whether some can be by natural movement. This question arises, for example, where a species is **introduced (CBD)** into one **area** and then moves naturally to an adjoining **area**. It seems that this may be considered as an indirect **introduction (CBD)**, so that the species concerned is an **alien species (CBD)** in the adjoining area, despite the fact that it **entered** it naturally. In the IPPC context, the intermediate country, from which the natural movement occurs, has no obligation to act to limit the natural movement, though it may have obligations to prevent intentional or unintentional **introduction (CBD)** if the importing country concerned establishes corresponding **phytosanitary measures**.

3.3 "Invasive alien species"

CBD definition	*Explanation in IPPC context*
An alien species whose introduction and/or spread threaten[9] biological diversity[10, 11]	An **invasive**[12] **alien species (CBD)** is an **alien species (CBD)** that by its **establishment** or **spread** has become injurious to **plants**[13], or that by **risk analysis (CBD)**[14] is shown to be potentially injurious to **plants**

Notes:

[9] The word "threaten" does not have an immediate equivalent in IPPC language. The IPPC definition of a **pest** uses the term "injurious", while the definition of a **quarantine pest** refers to "economic importance". ISPM 11:2004 makes it clear that **quarantine pests** may be "injurious" to **plants** directly, or indirectly (via other components of ecosystems), while Supplement 2 of the Glossary explains that "economic importance" depends on a harmful impact on crops, or on the environment, or on some other specific value (recreation, tourism, aesthetics).

[10] **Invasive alien species (CBD)** threaten "biological diversity". This is not an IPPC term, and the question arises whether it has a scope corresponding to that of the IPPC. "Biological diversity" would then have to be given a wide meaning, extending to the integrity of cultivated plants in agro-ecosystems, non-indigenous **plants** that have been imported and **planted** for forestry, amenity or habitat management, and indigenous **plants** in any **habitat**, whether "man-made" or not. The **IPPC** does protect **plants** in any of these situations, but it is not clear whether the scope of the CBD is as wide; some definitions of "biological diversity" take a much narrower view.

[11] On the basis of other documents made available by CBD, **invasive alien species** may also threaten "ecosystems, habitats or species".

[12] The CBD definition and its explanation concern the whole term **invasive alien species** and do not address the term "invasive" as such.

[13] The context of the IPPC is the protection of **plants**. It is clear that there are effects on biological diversity that do not concern **plants**, and so there are **invasive alien species (CBD)** that are not relevant to the **IPPC**. The IPPC is also concerned with **plant products**, but it is not clear to what extent the CBD considers **plant products** as a component of biological diversity.

[14] For the IPPC, **organisms** that have never entered the **endangered area** can also be considered as potentially injurious to **plants**, as a result of **pest risk analysis**.

3.4 "Establishment"

CBD definition	*Explanation in IPPC context*
The process[15] of an alien species in a new habitat successfully producing viable offspring[16] with a likelihood of continued survival	The **establishment** of an **alien species (CBD)** in a **habitat** in the **area** it has **entered**, by successful reproduction

Notes:

[15] **Establishment (CBD)** is a process, not a result. It seems that a single generation of reproduction can be **establishment (CBD)**, provided the offspring have a likelihood of continued survival (otherwise there would be a comma after "offspring"). The CBD definition does not express the **IPPC** concept of "perpetuation for the foreseeable future".

[16] It is not clear how far "offspring" applies to **organisms** that propagate themselves vegetatively (many **plants**, most fungi, other micro-organisms). By using "perpetuation", the **IPPC** avoids the

question of reproduction or replication of individuals altogether. It is the species as a whole that survives. Even the growth of long-lived individuals to maturity could be considered to be perpetuation for the foreseeable future (e.g. plantations of a non-indigenous **plant**).

3.5 "Intentional introduction"

CBD definition	*Explanation in IPPC context*
Deliberate movement and/or[17] release by humans of an alien species outside its natural range	Deliberate movement of a non-indigenous species into an **area**, including its **release** into the environment[18]

Notes:

[17] The "and/or" of the CBD definition is difficult to understand.

[18] Under most phytosanitary import regulatory systems the intentional introduction of regulated pests is prohibited.

3.6 "Unintentional introduction"

CBD definition	*Explanation in IPPC context*
All other introductions which are not intentional	**Entry** of a non-indigenous species with a traded **consignment**, which **infests** or **contaminates**, or by some other human agency including **pathway** such as passengers' baggage, vehicles, artificial waterways[19]

Notes:

[19] The prevention of unintentional introduction of regulated pests is an important focus of phytosanitary import regulatory systems.

3.7 "Risk analysis"

CBD definition	*Explanation in IPPC context*
1) the assessment of the consequences[20] of the introduction and of the likelihood of establishment of an alien species using science-based information (i.e., risk assessment), and 2) the identification of measures that can be implemented to reduce or manage these risks (i.e., risk management), taking into account socio-economic and cultural considerations[21]	**Risk analysis (CBD)**[22] is: 1) evaluation of the probability of **establishment** and **spread**, within an **area**[23], of an **alien species (CBD)** that has entered that **area**, 2) evaluation of the associated potential undesirable consequences, and 3) evaluation and selection of measures to reduce the risk of such **establishment** and **spread**

Notes:

[20] It is not clear what kinds of consequences are considered.

[21] It is not clear at what stages in the process of **risk analysis (CBD)** socio-economic and cultural considerations are taken into account (during assessment, or during management, or both). No explanation can be offered in relation to ISPM 11:2004 or Supplement 2 of ISPM 5.

[22] This explanation is based on the IPPC definitions of **pest risk assessment** and **pest risk management**, rather than on that of **pest risk analysis**.

[23] It is unclear whether **risk analysis (CBD)** may be conducted prior to **entry**, in which case the probability of **introduction** may also need to be assessed, and measures evaluated and selected to reduce the risk of **introduction**. It may be supposed (on the basis of other documents made available by CBD) that **risk analysis (CBD)** can identify measures restricting further introductions, in which case it relates more closely to **pest risk analysis**.

4. Other concepts

The CBD does not propose definitions of other terms, but does use a number of concepts that do not seem to be considered in the same light by the IPPC and the CBD, or are not distinguished by the IPPC. These include:

- border controls
- quarantine measures
- burden of proof
- natural range or distribution
- precautionary approach
- provisional measures
- control
- statutory measures
- regulatory measures
- social impact
- economic impact.

5. References

CBD. 1992. *Convention on Biological Diversity*. Montreal, CBD.

CBD. *Glossary of terms* (available at http://www.cbd.int/invasive/terms.shtml, accessed November 2008).

ISPM 11. 2004. *Pest risk analysis for quarantine pests including analysis of environmental risks and living modified organisms*. Rome, IPPC, FAO.