INTERNATIONAL STANDARDS FOR PHYTOSANITARY MEASURES

ISPM No. 5

GLOSSARY OF PHYTOSANITARY TERMS

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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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FAO Glossary of phytosanitary terms, FAO Plant Protection Bulletin, 38(1) 1990: 5-23.
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Guidelines for a phytosanitary import regulatory system, 2004. ISPM No. 20, FAO, Rome.
Guidelines for inspection, 2005. ISPM No. 23, FAO, Rome.
Guidelines for pest eradication programmes, 1998. ISPM No. 9, FAO, Rome.
Guidelines for pest risk analysis, 1996. ISPM No. 2, FAO, Rome.
Guidelines for phytosanitary certificates, 2001. ISPM No. 12, FAO, Rome.
Guidelines for regulating wood packaging material in international trade, 2002. ISPM No. 15, FAO, Rome.
Guidelines for surveillance, 1997. ISPM No. 6, FAO, Rome.
Guidelines for the determination and recognition of equivalence of phytosanitary measures, 2005. ISPM No. 24, FAO, Rome.
Guidelines for the notification of non-compliance and emergency action, 2001. ISPM No. 13, FAO, Rome.
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Report of the 2nd session of the Commission on Phytosanitary Measures, 2007. FAO, Rome.
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OUTLINE OF REFERENCE

The purpose of this standard is to assist National Plant Protection Organizations 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).

All elements of this Glossary have been established on the basis that the New Revised Text of the IPPC (1997) is approved. The Glossary contains all terms and definitions approved until the First session of the Commission on Phytosanitary Measures in 2007. 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 (in **gray**) absorbed per unit of mass of a specified target [ISPM No. 18, 2003]
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]
antagonist	An **organism** (usually **pathogen**) which does no significant damage to the host but its colonization of the host protects the host from significant subsequent damage by a **pest** [ISPM No. 3, 1996]
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]
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]
authority	The **National Plant Protection Organization**, or other entity or person **officially** designated by the government to deal with matters arising from the responsibilities set forth in the Code [ISPM No. 3, 1996]
bark-free wood	**Wood** from which all bark excluding the vascular cambium, ingrown bark around knots, and bark pockets between rings of annual growth has been removed [ISPM No. 15, 2002]
beneficial organism	Any **organism** directly or indirectly advantageous to **plants** or **plant products**, including **biological control agents** [ISPM No. 3, 2005]
biological control agent	A **natural enemy**, **antagonist** or **competitor**, or other **organism**, used for **pest control** [ISPM No. 3, 1996; revised ISPM No. 3, 2005]
biological pesticide (biopesticide)	A generic term, not specifically definable, but generally applied to a **biological control agent**, usually a pathogen, formulated and applied in a manner similar to a chemical pesticide, and normally used for the rapid reduction of a **pest** population for short-term **pest control** [ISPM No. 3, 1996]
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 No. 10, 1999; revised ISPM No. 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]
certificate	An **official** document which attests to the phytosanitary status of any **consignment** affected by **phytosanitary regulations** [FAO, 1990]
chemical pressure impregnation	**Treatment** of **wood** with a chemical preservative through a process of pressure in accordance with an **official** technical specification [ISPM No. 15, 2002; revised ICPM, 2005]
classical biological control	The intentional introduction and permanent **establishment** of an exotic biological agent for long-term **pest control** [ISPM No. 3, 1996]
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]
competitor	An **organism** which competes with **pests** for essential elements (e.g. food, shelter) in the environment [ISPM No. 3, 1996]
compliance procedure (for a **consignment**)	**Official** procedure used to verify that a **consignment** complies with stated phytosanitary requirements [CEPM, 1999]
consignment	A quantity of **plants**, **plant products** and/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 No. 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]
control point	A step in a system where specific procedures can be applied to achieve a defined effect and can be measured, monitored, controlled and corrected [ISPM No. 14, 2002]
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]
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]
debarking	Removal of bark from **round wood** (**debarking** does not necessarily make the **wood** bark-free) [FAO, 1990]
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 No. 18, 2003]
dosimeter	A device that, when irradiated, exhibits a quantifiable change in some property of the device which can be related to **absorbed dose** in a given material using appropriate analytical instrumentation and techniques [ISPM No. 18, 2003]
dosimetry	A system used for determining **absorbed dose**, consisting of **dosimeters**, measurement instruments and their associated reference standards, and procedures for the system's use [ISPM No. 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 No. 15, 2002]
ecosystem	A dynamic complex of **plant**, animal and micro-organism communities and their abiotic environment interacting as a functional unit [ISPM No. 3, 1996; revised ICPM, 2005]
efficacy (treatment)	A defined, measurable, and reproducible effect by a prescribed **treatment** [ISPM No. 18, 2003]
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 (see Glossary Supplement No. 2) [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; revised ISPM No. 24, 2005]
eradication	Application of **phytosanitary measures** to eliminate a **pest** from an **area** [FAO, 1990; revised FAO, 1995; formerly **eradicate**]
establishment	Perpetuation, for the foreseeable future, of a **pest** within an **area** after **entry** [FAO, 1990; revised FAO, 1995; IPPC, 1997; formerly **established**]
establishment (of a **biological control agent**)	The perpetuation, for the foreseeable future, of a **biological control agent** within an **area** after **entry** [ISPM No. 3, 1996]
exotic	Not native to a particular country, **ecosystem** or **ecoarea** (applied to **organisms** intentionally or accidentally introduced as a result of human activities). As the Code is directed at the **introduction** of **biological control agents** from one country to another, the term **"exotic"** is used for **organisms** not native to a country [ISPM No. 3, 1996]
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]
gray (Gy)	Unit of **absorbed dose** where 1 Gy is equivalent to the absorption of 1 joule per kilogram (1 Gy = 1 J.kg -1) [ISPM No. 18, 2003]
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]
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 No. 15, 2002; revised ICPM, 2005]
hitch-hiker pest	See **contaminating pest**
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 No. 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]
Import Permit (of a **biological control agent**)	An **official** document authorizing importation (of a **biological control agent**) in accordance with specified requirements [ISPM No. 3, 1996]
inactivation	Rendering micro-organisms incapable of development [ISPM No. 18, 2003]
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 and/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 product**s, or other **regulated articles** are imported, produced, or used [ISPM No. 16, 2002]
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 paragraph 1 and 2 of the **IPPC** [IPPC, 1997]
introduction	The **entry** of a **pest** resulting in its **establishment** [FAO, 1990; revised FAO, 1995; IPPC, 1997]
introduction (of a **biological control agent**)	The release of a **biological control agent** into an **ecosystem** where it did not exist previously (see **establishment**) [ISPM No. 3, 1996]
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 No. 3, 1996; revised ISPM No. 3, 2005]
ionizing radiation	Charged particles and electromagnetic waves that as a result of physical interaction create ions by either primary or secondary processes [ISPM No. 18, 2003]
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 No. 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 No. 15, 2002]
legislation	Any act, law, regulation, guideline or other administrative order promulgated by a government [ISPM No. 3, 1996]
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 Diversit*y, 2000]
LMO	**living modified organism** [ISPM No. 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 No. 15, 2002]
micro-organism	A protozoan, fungus, bacterium, virus or other microscopic self-replicating biotic entity [ISPM No. 3, 1996]

minimum absorbed dose (Dmin)	The localized minimum **absorbed dose** within the **process load** [ISPM No. 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 Diversit*y, 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 No. 3, 1996; revised ISPM No. 3, 2005]
naturally occurring	A component of an **ecosystem** or a selection from a wild population, not altered by artificial means [ISPM No. 3, 1996]
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 No. 17; 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** (see Glossary Supplement No. 1) [ICPM, 2001]
organism	Any biotic entity capable of reproduction or replication in its naturally occurring state [ISPM No. 3, 1996; revised ISPM No. 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 No. 20, 2004]
parasite	An **organism** which lives on or in a larger **organism**, feeding upon it [ISPM No. 3, 1996]
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 No. 3, 1996]
pathogen	**Micro-organism** causing disease [ISPM No. 3, 1996]
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** [FAO, 1990; revised FAO, 1995; IPPC, 1997]
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 No. 11, 2001]
pest diagnosis	The process of detection and identification of a **pest** [ISPM No. 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 No. 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 No. 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 (see Glossary Supplement No. 2) [ISPM No. 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 (see Glossary Supplement No. 2) [ISPM No. 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 No. 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 (see Glossary Supplement No. 2) [FAO, 1995; revised ISPM No. 11, 2001; ISPM No. 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 (see Glossary Supplement No. 2) [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 No. 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** (see Glossary Supplement No. 2) [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	**Certificate** patterned after the model **certificates** of the **IPPC** [FAO, 1990]
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** and/or **spread** of **quarantine pest**s, or to limit the economic impact of **regulated non-quarantine pests** [FAO, 1995; revised IPPC, 1997; ISPM, 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** and/or **spread** of **quarantine pests**, or to limit the economic impact of **regulated non-quarantine pests**, including establishment of **procedures** for **phytosanitary certification** (see Glossary Supplement No. 2) [FAO, 1990; revised FAO, 1995; CEPM, 1999; ICPM, 2001]
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 pest	See **pest**
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** and/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 ICPM, 2001]
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 No. 3, 1996]
process load	A volume of material with a specified loading configuration and treated as a single entity [ISPM No. 18, 2003]

processed wood material	Products that are a composite of **wood** constructed using glue, heat and pressure, or any combination thereof [ISPM No. 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** and/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 No. 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 (formerly **country of re-export**) [FAO, 1990; revised CEPM, 1996; CEPM, 1999; ICPM, 2001; ICPM, 2002]
reference specimen(s)	Individual specimen(s) from a specific population conserved in a reference culture collection and, where possible, in publicly available collection(s) [ISPM No. 3, 2005]
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 and/or from which **plants**, **plant products** and other **regulated articles** are subjected to **phytosanitary regulations** or **procedures** in order to prevent the **introduction** and/or **spread** of **quarantine pests** or to limit the economic impact of **regulated non-quarantine pests** (see Glossary Supplement No. 2) [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 (see Glossary Supplement No. 2) [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 (see **introduction** and **establishment**) [ISPM No. 3, 1996]

release (of a **consignmen**t)	Authorization for **entry** after **clearance** [FAO, 1995]
replanting	See **planting**
required response	A specified level of effect for a **treatment** [ISPM No. 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 No. 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 No. 3, 2005]
specificity	A measure of the **host range** of a **biological control agent** on a scale ranging from an extreme specialist only able to complete development on a single species or strain of its host (monophagous) to a generalist with many hosts ranging over several groups of **organisms** (polyphagous) [ISPM No. 3, 1996]
spread	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 No. 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 No. 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 No. 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]
transience	Presence of a **pest** that is not expected to lead to **establishment** [ISPM No. 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]
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 No. 15, 2002; ISPM No. 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 No. 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 No. 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 No. 15, 2002]

Supplement No. 1

GUIDELINES ON THE INTERPRETATION AND APPLICATION OF THE CONCEPT OF OFFICIAL CONTROL FOR REGULATED PESTS

1. Purpose

The words *officially controlled* express an essential concept in the definition of a quarantine pest. *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 guideline is to describe more precisely the interpretation of the concept of official control and its application in practice.

2. Scope

This guideline refers only to the official control of regulated pests. For the purposes of this guideline, the relevant regulated pests are both quarantine pests that are present in an importing country but not widely distributed and regulated non-quarantine pests.

3. 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.

4. General Requirements

Official control is subject to the "principles of plant quarantine as related to international trade," in particular the principles of non-discrimination, transparency, equivalence and risk analysis.

In the case of a quarantine pest that is present but not widely distributed, and where appropriate in the case of certain regulated non-quarantine pests, the importing country should define the infested area(s), endangered area(s) and protected area(s).

Official control includes:

- eradication and/or containment in the infested area(s)
- surveillance in the endangered area(s)
- measures related to controls on movement into and within the protected area(s) including 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 measures applied at import for the same purpose. Measures applied at import should be consistent with the principle of non-discrimination (see section 5.1 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.

5. Specific Requirements

5.1 Non-discrimination

The principle of non-discrimination between domestic and 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 import and domestic 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 actions should be taken on imported consignments as are taken domestically;

- if a tolerance is applied within a national programme, the same tolerance should be applied to equivalent imported material. In particular, if no action is taken in the national official control programme because the infestation level does not exceed a particular level, then no action should be taken for an imported consignment if its infestation level does not exceed that same level. Compliance with import tolerance is generally determined by inspection or testing at entry, whereas the tolerance for domestic consignments should be determined at the last point where official control is applied;
- if downgrading or reclassifying is permitted within a national official control programme, similar options should be available for imported consignments.

5.2 Transparency

The import and domestic requirements for official control should be documented and made available, on request.

5.3 Technical justification (risk analysis)

Domestic and import requirements should be technically justified and result in non-discriminatory risk management.

5.4 Enforcement

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

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

5.5 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).

5.6 Area of application

An official control programme can be applied at national, sub-national or local area level. The area of application of official control measures should be specified. Any import restrictions should have the same effect as the measures applied internally for official control.

5.7 NPPO authority and involvement in official control

Official control should:

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

Responsibility and accountability for official control programmes rests with the national government. 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 sub-national authorities or the private sector. The NPPO should be fully aware of all aspects of official control programmes in their country.

References

Report of the ICPM open-ended working group on official control, 22-24 March 2000, Bordeaux, France, IPPC Secretariat, FAO, Rome.

Supplement No. 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 (ISPM). 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 plant 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 consequences;
- maintains the right of members 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 plant pests, that the scope of the IPPC covers the protection of cultivated plants in agriculture (including horticulture or forestry), uncultivated/unmanaged plants, wild flora, habitats and ecosystems.

2. Background

The IPPC has historically maintained that the adverse consequences of plant 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 harmonization 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 No. 11 and ISPM No. 16);
- *economic consequences and potential economic consequences* (in ISPM No. 11);
- *commercial and non-commercial consequences* (in ISPM No. 11).

ISPM No. 2 refers to *environmental damage* as a factor to consider in the assessment of potential economic importance. Section 2.2.3 includes many items demonstrating the broad scope of economic impacts that is intended to be covered.

ISPM No. 11 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, which may include environmental impact, in the PRA area. Section 2.3 of the standard describes the procedure for assessing potential economic consequences of an introduction of a 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 risk analysis. *Environmental or other undesirable effects of control measures* are covered in section 2.3.1.2 (Indirect effects) as part of the analysis of economic consequences. Where a risk is found to be unacceptable, Section 3.4 provides guidance on the selection of risk management options, including measurements of cost-effectiveness, feasibility and least trade restrictiveness.

In April 2001 the ICPM recognized that under the IPPC's 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 plant 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 as way as to result in ecosystem destabilization;
- resulting in control, eradication or management programs that would be needed if a quarantine pest was introduced, and impacts of such programs (e.g. pesticides or the release of 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 (including 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 judgments 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 plant pest is deemed to have *potential economic importance*:

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

As stated in Section 3, environmental damage, arising from the introduction of a plant 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 Pest 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 No. 16: *Regulated non-quarantine pests: concept and application*).

References

International Plant Protection Convention, 1997. FAO, Rome.
Guidelines for Pest Risk Analysis, 1996. ISPM No. 2, FAO, Rome.
Pest Risk Analysis for quarantine pests, 2001. ISPM No. 11, FAO, Rome.
Regulated non-quarantine pests: concept and application, 2002. ISPM No. 16, FAO, Rome.
Report of the Third Session of the Interim Commission on Phytosanitary Measures (includes the working group document in Appendix XII), 2001. FAO, Rome.

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

APPENDIX

This appendix provides additional clarification of some terms used in this supplement. It is not a prescriptive part of 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.