

*ISPM No. 5*



**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.

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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 Fifth session of the Commission on Phytosanitary Measures in 2010. 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

<b>absorbed dose</b>	Quantity of radiating energy (in <b>gray</b> ) absorbed per unit of mass of a specified target [ISPM No. 18, 2003]
<b>Additional Declaration</b>	A statement that is required by an importing country to be entered on a <b>Phytosanitary Certificate</b> and which provides specific additional information on a <b>consignment</b> in relation to <b>regulated pests</b> [FAO, 1990; revised ICPM, 2005]
<b>antagonist</b>	An <b>organism</b> (usually <b>pathogen</b> ) which does no significant damage to the host but its colonization of the host protects the host from significant subsequent damage by a <b>pest</b> [ISPM No. 3, 1996]
<b>area</b>	An <b>officially</b> 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]
<b>area endangered</b>	See <b>endangered area</b>
<b>area of low pest prevalence</b>	An <b>area</b> , 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 <b>pest</b> occurs at low levels and which is subject to effective <b>surveillance</b> , <b>control</b> or <b>eradication</b> measures [IPPC, 1997]
<b>bark</b>	The layer of a woody trunk, branch or root outside the cambium [CPM, 2008]
<b>bark-free wood</b>	<b>Wood</b> from which all <b>bark</b> , except ingrown bark around knots and bark pockets between rings of annual growth, has been removed [ISPM No. 15, 2002; revised CPM, 2008]
<b>biological control agent</b>	A <b>natural enemy</b> , <b>antagonist</b> or <b>competitor</b> , or other <b>organism</b> , used for <b>pest control</b> [ISPM No. 3, 1996; revised ISPM No. 3, 2005]
<b>buffer zone</b>	An <b>area</b> surrounding or adjacent to an <b>area officially</b> delimited for phytosanitary purposes in order to minimize the probability of <b>spread</b> of the target <b>pest</b> 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]
<b>bulbs and tubers</b>	A <b>commodity class</b> for dormant underground parts of <b>plants</b> intended for <b>planting</b> (includes corms and rhizomes) [FAO, 1990; revised ICPM, 2001]
<b>certificate</b>	An <b>official</b> document which attests to the phytosanitary status of any <b>consignment</b> affected by <b>phytosanitary regulations</b> [FAO, 1990]
<b>chemical pressure impregnation</b>	<b>Treatment</b> of <b>wood</b> with a chemical preservative through a process of pressure in accordance with an <b>official</b> technical specification [ISPM No. 15, 2002; revised ICPM, 2005]
<b>clearance (of a consignment)</b>	Verification of compliance with <b>phytosanitary regulations</b> [FAO, 1995]
<b>Commission</b>	The Commission on <b>phytosanitary measures</b> established under Article XI [IPPC, 1997]
<b>commodity</b>	A type of <b>plant</b> , <b>plant product</b> , or other article being moved for trade or other purpose [FAO, 1990; revised ICPM, 2001]
<b>commodity class</b>	A category of similar <b>commodities</b> that can be considered together in <b>phytosanitary regulations</b> [FAO, 1990]
<b>commodity pest list</b>	A list of <b>pests occurring</b> in an <b>area</b> which may be associated with a specific <b>commodity</b> [CEPM, 1996]
<b>competitor</b>	An <b>organism</b> which competes with <b>pests</b> for essential elements (e.g. food, shelter) in the environment [ISPM No. 3, 1996]
<b>compliance procedure (for a consignment)</b>	<b>Official</b> procedure used to verify that a <b>consignment</b> complies with <b>phytosanitary import requirements</b> or <b>phytosanitary measures</b> related to <b>transit</b> [CEPM, 1999; revised CPM, 2009]

<b>consignment</b>	A quantity of <b>plants</b> , <b>plant products</b> and/or other articles being moved from one country to another and covered, when required, by a single <b>phytosanitary certificate</b> (a <b>consignment</b> may be composed of one or more <b>commodities</b> or <b>lots</b> ) [FAO, 1990; revised ICPM, 2001]
<b>consignment in transit</b>	A <b>consignment</b> which passes through a country without being imported, and that may be subject to <b>phytosanitary measures</b> [FAO, 1990; revised CEPM, 1996; CEPM 1999; ICPM, 2002; ISPM No. 25, 2006; formerly <b>country of transit</b> ]
<b>containment</b>	Application of <b>phytosanitary measures</b> in and around an infested <b>area</b> to prevent <b>spread</b> of a <b>pest</b> [FAO, 1995]
<b>contaminating pest</b>	A <b>pest</b> that is carried by a <b>commodity</b> and, in the case of <b>plants</b> and <b>plant products</b> , does not infest those <b>plants</b> or <b>plant products</b> [CEPM, 1996; revised CEPM, 1999]
<b>contamination</b>	Presence in a <b>commodity</b> , storage place, conveyance or container, of <b>pests</b> or other <b>regulated articles</b> , not constituting an <b>infestation</b> (see <b>infestation</b> ) [CEPM, 1997; revised CEPM, 1999]
<b>control</b> (of a pest)	<b>Suppression</b> , <b>containment</b> or <b>eradication</b> of a <b>pest</b> population [FAO, 1995]
<b>control point</b>	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]
<b>controlled area</b>	A <b>regulated area</b> which an <b>NPPO</b> has determined to be the minimum <b>area</b> necessary to prevent <b>spread</b> of a <b>pest</b> from a <b>quarantine area</b> [CEPM, 1996]
<b>corrective action plan</b> (in an area)	Documented plan of <b>phytosanitary actions</b> to be implemented in an <b>area</b> officially delimited for phytosanitary purposes if a <b>pest</b> is detected or a specified pest level is exceeded or in the case of faulty implementation of officially established procedures [CPM, 2009]
<b>country of origin</b> (of a consignment of <b>plant products</b> )	Country where the <b>plants</b> from which the <b>plant products</b> are derived were grown [FAO, 1990; revised CEPM, 1996; CEPM, 1999]
<b>country of origin</b> (of a consignment of <b>plants</b> )	Country where the <b>plants</b> were grown [FAO, 1990; revised CEPM, 1996; CEPM, 1999]
<b>country of origin</b> (of <b>regulated articles</b> other than <b>plants</b> and <b>plant products</b> )	Country where the <b>regulated articles</b> were first exposed to <b>contamination</b> by <b>pests</b> [FAO, 1990; revised CEPM, 1996; CEPM, 1999]
<b>cut flowers and branches</b>	A <b>commodity class</b> for fresh parts of <b>plants</b> intended for decorative use and not for <b>planting</b> [FAO, 1990; revised ICPM, 2001]
<b>debarked wood</b>	<b>Wood</b> that has been subjected to any process that results in the removal of <b>bark</b> . (Debarked wood is not necessarily <b>bark-free wood</b> .) [CPM, 2008; replacing <b>debarking</b> ]
<b>delimiting survey</b>	<b>Survey</b> conducted to establish the boundaries of an <b>area</b> considered to be infested by or <b>free from a pest</b> [FAO, 1990]
<b>detection survey</b>	<b>Survey</b> conducted in an <b>area</b> to determine if <b>pests</b> are present [FAO, 1990, revised FAO, 1995]
<b>detention</b>	Keeping a <b>consignment</b> in <b>official</b> custody or confinement, as a <b>phytosanitary measure</b> (see <b>quarantine</b> ) [FAO, 1990; revised FAO, 1995; CEPM, 1999; ICPM, 2005]
<b>devitalization</b>	A procedure rendering <b>plants</b> or <b>plant products</b> incapable of germination, growth or further reproduction [ICPM, 2001]
<b>dose mapping</b>	Measurement of the <b>absorbed dose</b> distribution within a <b>process load</b> through the use of <b>dosimeters</b> placed at specific locations within the <b>process load</b> [ISPM No. 18, 2003]



<b>dosimeter</b>	A device that, when irradiated, exhibits a quantifiable change in some property of the device which can be related to <b>absorbed dose</b> in a given material using appropriate analytical instrumentation and techniques [ISPM No. 18, 2003]
<b>dosimetry</b>	A system used for determining <b>absorbed dose</b> , consisting of <b>dosimeters</b> , measurement instruments and their associated reference standards, and procedures for the system's use [ISPM No. 18, 2003]
<b>dunnage</b>	<b>Wood packaging material</b> used to secure or support a <b>commodity</b> but which does not remain associated with the <b>commodity</b> [FAO, 1990; revised ISPM No. 15, 2002]
<b>ecosystem</b>	A dynamic complex of <b>plant</b> , animal and micro-organism communities and their abiotic environment interacting as a functional unit [ISPM No. 3, 1996; revised ICPM, 2005]
<b>efficacy (treatment)</b>	A defined, measurable, and reproducible effect by a prescribed <b>treatment</b> [ISPM No. 18, 2003]
<b>emergency action</b>	A prompt <b>phytosanitary action</b> undertaken in a new or unexpected phytosanitary situation [ICPM, 2001]
<b>emergency measure</b>	A <b>phytosanitary measure</b> established as a matter of urgency in a new or unexpected phytosanitary situation. An emergency measure may or may not be a <b>provisional measure</b> [ICPM, 2001; revised ICPM, 2005]
<b>endangered area</b>	An <b>area</b> where ecological factors favour the <b>establishment</b> of a <b>pest</b> whose presence in the <b>area</b> will result in economically important loss (see Glossary Supplement No. 2) [FAO, 1995]
<b>entry (of a consignment)</b>	Movement through a <b>point of entry</b> into an <b>area</b> [FAO, 1995]
<b>entry (of a pest)</b>	Movement of a <b>pest</b> into an <b>area</b> where it is not yet present, or present but not widely distributed and being <b>officially controlled</b> [FAO, 1995]
<b>equivalence (of phytosanitary measures)</b>	The situation where, for a specified pest risk, different <b>phytosanitary measures</b> 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]
<b>eradication</b>	Application of <b>phytosanitary measures</b> to eliminate a <b>pest</b> from an <b>area</b> [FAO, 1990; revised FAO, 1995; formerly <b>eradicate</b> ]
<b>establishment</b>	Perpetuation, for the foreseeable future, of a <b>pest</b> within an <b>area</b> after <b>entry</b> [FAO, 1990; revised FAO, 1995; IPPC, 1997; formerly <b>established</b> ]
<b>field</b>	A plot of land with defined boundaries within a <b>place of production</b> on which a <b>commodity</b> is grown [FAO, 1990]
<b>find free</b>	To <b>inspect</b> a <b>consignment</b> , <b>field</b> or <b>place of production</b> and consider it to be <b>free from</b> a specific <b>pest</b> [FAO, 1990]
<b>free from (of a consignment, field or place of production)</b>	Without <b>pests</b> (or a specific <b>pest</b> ) in numbers or quantities that can be detected by the application of <b>phytosanitary procedures</b> [FAO, 1990; revised FAO, 1995; CEPM, 1999]
<b>fresh</b>	Living; not dried, deep-frozen or otherwise conserved [FAO, 1990]
<b>fruits and vegetables</b>	A <b>commodity class</b> for <b>fresh</b> parts of <b>plants</b> intended for consumption or processing and not for <b>planting</b> [FAO, 1990; revised ICPM, 2001]
<b>fumigation</b>	<b>Treatment</b> with a chemical agent that reaches the <b>commodity</b> wholly or primarily in a gaseous state [FAO, 1990; revised FAO, 1995]
<b>germplasm</b>	<b>Plants</b> intended for use in breeding or conservation programmes [FAO, 1990]
<b>grain</b>	A <b>commodity class</b> for <b>seeds</b> intended for processing or consumption and not for <b>planting</b> (see <b>seeds</b> ) [FAO, 1990; revised ICPM, 2001]

<b>gray (Gy)</b>	Unit of <b>absorbed dose</b> where 1 Gy is equivalent to the absorption of 1 joule per kilogram (1 Gy = 1 J.kg <sup>-1</sup> ) [ISPM No. 18, 2003]
<b>growing medium</b>	Any material in which <b>plant</b> roots are growing or intended for that purpose [FAO, 1990]
<b>growing period</b> (of a <b>plant</b> species)	Time period of active growth during a <b>growing season</b> [ICPM, 2003]
<b>growing season</b>	Period or periods of the year when <b>plants</b> actively grow in an <b>area, place of production</b> or production site [FAO, 1990; revised ICPM, 2003]
<b>habitat</b>	Part of an <b>ecosystem</b> with conditions in which an <b>organism</b> naturally occurs or can establish [ICPM, 2005]
<b>harmonization</b>	The establishment, recognition and application by different countries of <b>phytosanitary measures</b> based on common <b>standards</b> [FAO, 1995; revised CEPM, 1999; based on the World Trade Organization Agreement on the Application of Sanitary and Phytosanitary Measures]
<b>harmonized phytosanitary measures</b>	<b>Phytosanitary measures</b> established by contracting parties to the <b>IPPC</b> , based on <b>international standards</b> [IPPC, 1997]
<b>heat treatment</b>	The process in which a <b>commodity</b> is heated until it reaches a minimum temperature for a minimum period of time according to an <b>official</b> technical specification [ISPM No. 15, 2002; revised ICPM, 2005]
<b>hitch-hiker pest</b>	See <b>contaminating pest</b>
<b>host pest list</b>	A list of <b>pests</b> that infest a <b>plant</b> species, globally or in an <b>area</b> [CEPM, 1996; revised CEPM, 1999]
<b>host range</b>	Species capable, under natural conditions, of sustaining a specific <b>pest</b> or other <b>organism</b> [FAO, 1990; revised ISPM No. 3, 2005]
<b>Import Permit</b>	<b>Official</b> document authorizing importation of a <b>commodity</b> in accordance with specified <b>phytosanitary import requirements</b> [FAO, 1990; revised FAO, 1995; ICPM, 2005]
<b>inactivation</b>	Rendering micro-organisms incapable of development [ISPM No. 18, 2003]
<b>incidence</b> (of a <b>pest</b> )	Proportion or number of units in which a pest is present in a sample, <b>consignment, field</b> or other defined population [CPM, 2009]
<b>incursion</b>	An isolated population of a <b>pest</b> recently detected in an <b>area</b> , not known to be <b>established</b> , but expected to survive for the immediate future [ICPM, 2003]
<b>infestation</b> (of a <b>commodity</b> )	Presence in a <b>commodity</b> of a living <b>pest</b> of the <b>plant</b> or <b>plant product</b> concerned. <b>Infestation</b> includes infection [CEPM, 1997; revised CEPM, 1999]
<b>inspection</b>	<b>Official</b> visual examination of <b>plants, plant products</b> or other <b>regulated articles</b> to determine if <b>pests</b> are present and/or to determine compliance with <b>phytosanitary regulations</b> [FAO, 1990; revised FAO, 1995; formerly <b>inspect</b> ]
<b>inspector</b>	Person authorized by a <b>National Plant Protection Organization</b> to discharge its functions [FAO, 1990]
<b>integrity</b> (of a <b>consignment</b> )	Composition of a <b>consignment</b> as described by its <b>phytosanitary certificate</b> or other <b>officially</b> acceptable document, maintained without loss, addition or substitution [CPM, 2007]
<b>intended use</b>	Declared purpose for which <b>plants, plant products</b> or other articles are imported, produced or used [ISPM No. 16, 2002; revised CPM, 2009]
<b>interception</b> (of a <b>consignment</b> )	The <b>refusal</b> or controlled <b>entry</b> of an imported <b>consignment</b> due to failure to comply with <b>phytosanitary regulations</b> [FAO, 1990; revised FAO, 1995]
<b>interception</b> (of a <b>pest</b> )	The detection of a <b>pest</b> during <b>inspection</b> or <b>testing</b> of an imported <b>consignment</b> [FAO, 1990; revised CEPM, 1996]

<b>intermediate quarantine</b>	<b>Quarantine</b> in a country other than the <b>country of origin</b> or destination [CEPM, 1996]
<b>International Plant Protection Convention</b>	International Plant Protection Convention, as deposited with FAO in Rome in 1951 and as subsequently amended [FAO, 1990]
<b>International Standard for Phytosanitary Measures</b>	An <b>international standard</b> adopted by the Conference of FAO, the Interim Commission on <b>phytosanitary measures</b> or the Commission on <b>phytosanitary measures</b> , established under the <b>IPPC</b> [CEPM, 1996; revised CEPM, 1999]
<b>international standards</b>	International <b>standards</b> established in accordance with Article X paragraph 1 and 2 of the <b>IPPC</b> [IPPC, 1997]
<b>introduction</b>	The <b>entry</b> of a <b>pest</b> resulting in its <b>establishment</b> [FAO, 1990; revised FAO, 1995; IPPC, 1997]
<b>inundative release</b>	The release of large numbers of mass-produced <b>biological control agents</b> or <b>beneficial organisms</b> with the expectation of achieving a rapid effect [ISPM No. 3, 1996; revised ISPM No. 3, 2005]
<b>ionizing radiation</b>	Charged particles and electromagnetic waves that as a result of physical interaction create ions by either primary or secondary processes [ISPM No. 18, 2003]
<b>IPPC</b>	<b>International Plant Protection Convention</b> , as deposited in 1951 with FAO in Rome and as subsequently amended [FAO, 1990; revised ICPM, 2001]
<b>irradiation</b>	Treatment with any type of <b>ionizing radiation</b> [ISPM No. 18, 2003]
<b>ISPM</b>	<b>International Standard for Phytosanitary Measures</b> [CEPM, 1996; revised ICPM, 2001]
<b>kiln-drying</b>	A process in which <b>wood</b> is dried in a closed chamber using heat and/or humidity control to achieve a required moisture content [ISPM No. 15, 2002]
<b>legislation</b>	Any act, law, regulation, guideline or other administrative order promulgated by a government [ISPM No. 3, 1996]
<b>living modified organism</b>	Any living organism that possesses a novel combination of genetic material obtained through the use of <b>modern biotechnology</b> [ <i>Cartagena Protocol on Biosafety to the Convention on Biological Diversity</i> , 2000]
<b>LMO</b>	<b>living modified organism</b> [ISPM No. 11, 2004]
<b>lot</b>	A number of units of a single <b>commodity</b> , identifiable by its homogeneity of composition, origin etc., forming part of a <b>consignment</b> [FAO, 1990]
<b>mark</b>	An <b>official</b> stamp or brand, internationally recognized, applied to a <b>regulated article</b> to attest its phytosanitary status [ISPM No. 15, 2002]
<b>minimum absorbed dose (Dmin)</b>	The localized minimum <b>absorbed dose</b> within the <b>process load</b> [ISPM No. 18, 2003]
<b>modern biotechnology</b>	The application of: <ol style="list-style-type: none"> <li>a. in vitro nucleic acid techniques, including recombinant deoxyribonucleic acid (DNA) and direct injection of nucleic acid into cells or organelles; or</li> <li>b. fusion of cells beyond the taxonomic family,</li> </ol> that overcome natural physiological reproductive or recombination barriers and that are not techniques used in traditional breeding and selection. [ <i>Cartagena Protocol on Biosafety to the Convention on Biological Diversity</i> , 2000]
<b>monitoring</b>	An <b>official</b> ongoing process to verify phytosanitary situations [CEPM, 1996]
<b>monitoring survey</b>	Ongoing <b>survey</b> to verify the characteristics of a <b>pest</b> population [FAO, 1995]
<b>National Plant Protection Organization</b>	<b>Official</b> service established by a government to discharge the functions specified by the <b>IPPC</b> [FAO, 1990; formerly <b>Plant Protection Organization (National)</b> ]

<b>natural enemy</b>	An <b>organism</b> which lives at the expense of another <b>organism</b> in its area of origin and which may help to limit the population of that <b>organism</b> . This includes <b>parasitoids</b> , <b>parasites</b> , <b>predators</b> , phytophagous organisms and <b>pathogens</b> [ISPM No. 3, 1996; revised ISPM No. 3, 2005]
<b>naturally occurring</b>	A component of an <b>ecosystem</b> or a selection from a wild population, not altered by artificial means [ISPM No. 3, 1996]
<b>non-quarantine pest</b>	<b>Pest</b> that is not a <b>quarantine pest</b> for an <b>area</b> [FAO, 1995]
<b>NPPO</b>	<b>National Plant Protection Organization</b> [FAO, 1990; ICPM, 2001]
<b>occurrence</b>	The presence in an <b>area</b> of a <b>pest</b> <b>officially</b> recognized to be indigenous or <b>introduced</b> and not <b>officially</b> reported to have been <b>eradicated</b> [FAO, 1990; revised FAO, 1995; ISPM No. 17; formerly <b>occur</b> ]
<b>official</b>	Established, authorized or performed by a <b>National Plant Protection Organization</b> [FAO, 1990]
<b>official control</b>	The active enforcement of mandatory <b>phytosanitary regulations</b> and the application of mandatory <b>phytosanitary procedures</b> with the objective of <b>eradication</b> or <b>containment</b> of <b>quarantine pests</b> or for the management of <b>regulated non-quarantine pests</b> (see Glossary Supplement No. 1) [ICPM, 2001]
<b>organism</b>	Any biotic entity capable of reproduction or replication in its naturally occurring state [ISPM No. 3, 1996; revised ISPM No. 3, 2005]
<b>outbreak</b>	A recently detected <b>pest</b> population, including an <b>incursion</b> , or a sudden significant increase of an established <b>pest</b> population in an <b>area</b> [FAO, 1995; revised ICPM, 2003]
<b>packaging</b>	Material used in supporting, protecting or carrying a <b>commodity</b> [ISPM No. 20, 2004]
<b>parasite</b>	An <b>organism</b> which lives on or in a larger <b>organism</b> , feeding upon it [ISPM No. 3, 1996]
<b>parasitoid</b>	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]
<b>pathogen</b>	<b>Micro-organism</b> causing disease [ISPM No. 3, 1996]
<b>pathway</b>	Any means that allows the <b>entry</b> or <b>spread</b> of a <b>pest</b> [FAO, 1990; revised FAO, 1995]
<b>pest</b>	Any species, strain or biotype of plant, animal or pathogenic agent injurious to <b>plants</b> or <b>plant products</b> [FAO, 1990; revised FAO, 1995; IPPC, 1997]
<b>pest categorization</b>	The process for determining whether a <b>pest</b> has or has not the characteristics of a <b>quarantine pest</b> or those of a <b>regulated non-quarantine pest</b> [ISPM No. 11, 2001]
<b>pest diagnosis</b>	The process of detection and identification of a <b>pest</b> [ISPM No. 27, 2006]
<b>Pest Free Area</b>	An <b>area</b> in which a specific <b>pest</b> does not occur as demonstrated by scientific evidence and in which, where appropriate, this condition is being <b>officially</b> maintained [FAO, 1995]
<b>pest free place of production</b>	<b>Place of production</b> in which a specific <b>pest</b> 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]
<b>pest free production site</b>	A defined portion of a <b>place of production</b> in which a specific <b>pest</b> 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 <b>pest free place of production</b> [ISPM No. 10, 1999]

<b>pest record</b>	A document providing information concerning the presence or absence of a specific <b>pest</b> at a particular location at a certain time, within an <b>area</b> (usually a country) under described circumstances [CEPM, 1997]
<b>pest risk</b> (for <b>quarantine pests</b> )	The probability of <b>introduction</b> and <b>spread</b> of a <b>pest</b> and the magnitude of the associated potential economic consequences (see Glossary Supplement No. 2) [ISPM No. 2, 2007]
<b>pest risk</b> (for <b>regulated non-quarantine pests</b> )	The probability that a <b>pest</b> in <b>plants for planting</b> affects the <b>intended use</b> of those <b>plants</b> with an economically unacceptable impact (see Glossary Supplement No. 2) [ISPM No. 2, 2007]
<b>Pest Risk Analysis</b> (agreed interpretation)	The process of evaluating biological or other scientific and economic evidence to determine whether an <b>organism</b> is a <b>pest</b> , whether it should be regulated, and the strength of any <b>phytosanitary measures</b> to be taken against it [FAO, 1995; revised IPPC, 1997; ISPM No. 2, 2007]
<b>pest risk assessment</b> (for <b>quarantine pests</b> )	Evaluation of the probability of the <b>introduction</b> and <b>spread</b> of a <b>pest</b> 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]
<b>pest risk assessment</b> (for <b>regulated non-quarantine pests</b> )	Evaluation of the probability that a <b>pest</b> in <b>plants for planting</b> affects the <b>intended use</b> of those <b>plants</b> with an economically unacceptable impact (see Glossary Supplement No. 2) [ICPM, 2005]
<b>pest risk management</b> (for <b>quarantine pests</b> )	Evaluation and selection of options to reduce the risk of <b>introduction</b> and <b>spread</b> of a <b>pest</b> [FAO, 1995; revised ISPM No. 11, 2001]
<b>pest risk management</b> (for <b>regulated non-quarantine pests</b> )	Evaluation and selection of options to reduce the risk that a <b>pest</b> in <b>plants for planting</b> causes an economically unacceptable impact on the <b>intended use</b> of those <b>plants</b> (see Glossary Supplement No. 2) [ICPM, 2005]
<b>pest status</b> (in an <b>area</b> )	Presence or absence, at the present time, of a <b>pest</b> in an <b>area</b> , including where appropriate its distribution, as <b>officially</b> determined using expert judgement on the basis of current and historical <b>pest records</b> and other information [CEPM, 1997; revised ICPM, 1998]
<b>PFA</b>	<b>Pest Free Area</b> [FAO, 1995; revised ICPM, 2001]
<b>phytosanitary action</b>	An <b>official</b> operation, such as <b>inspection</b> , <b>testing</b> , <b>surveillance</b> or <b>treatment</b> , undertaken to implement <b>phytosanitary measures</b> [ICPM, 2001; revised ICPM, 2005]
<b>Phytosanitary Certificate</b>	<b>Certificate</b> patterned after the model <b>certificates</b> of the <b>IPPC</b> [FAO, 1990]
<b>phytosanitary certification</b>	Use of <b>phytosanitary procedures</b> leading to the issue of a <b>Phytosanitary Certificate</b> [FAO, 1990]
<b>phytosanitary import requirements</b>	Specific <b>phytosanitary measures</b> established by an importing country concerning <b>consignments</b> moving into that country [ICPM, 2005]
<b>phytosanitary legislation</b>	Basic laws granting legal authority to a <b>National Plant Protection Organization</b> from which <b>phytosanitary regulations</b> may be drafted [FAO, 1990; revised FAO, 1995]
<b>phytosanitary measure</b> (agreed interpretation)	Any <b>legislation</b> , <b>regulation</b> or <b>official</b> procedure having the purpose to prevent the <b>introduction</b> and/or <b>spread</b> of <b>quarantine pests</b> , or to limit the economic impact of <b>regulated non-quarantine pests</b> [FAO, 1995; revised IPPC, 1997; ISPM, 2002]
<i>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).</i>	
<b>phytosanitary procedure</b>	Any <b>official</b> method for implementing <b>phytosanitary measures</b> including the performance of <b>inspections</b> , <b>tests</b> , <b>surveillance</b> or <b>treatments</b> in connection with <b>regulated pests</b> [FAO, 1990; revised FAO, 1995; CEPM, 1999; ICPM, 2001; ICPM, 2005]

<b>phytosanitary regulation</b>	<b>Official</b> rule to prevent the <b>introduction</b> and/or <b>spread</b> of <b>quarantine pests</b> , or to limit the economic impact of <b>regulated non-quarantine pests</b> , including establishment of <b>procedures</b> for <b>phytosanitary certification</b> (see Glossary Supplement No. 2) [FAO, 1990; revised FAO, 1995; CEPM, 1999; ICPM, 2001]
<b>phytosanitary security</b> (of a consignment)	Maintenance of the <b>integrity</b> of a <b>consignment</b> and prevention of its <b>infestation</b> and <b>contamination</b> by <b>regulated pests</b> , through the application of appropriate <b>phytosanitary measures</b> [CPM, 2009]
<b>place of production</b>	Any premises or collection of <b>fields</b> 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]
<b>plant pest</b>	See <b>pest</b>
<b>plant products</b>	Unmanufactured material of <b>plant</b> origin (including <b>grain</b> ) and those manufactured products that, by their nature or that of their processing, may create a risk for the <b>introduction</b> and <b>spread</b> of <b>pests</b> [FAO, 1990; revised IPPC, 1997; formerly <b>plant product</b> ]
<b>plant protection organization</b> (national)	See <b>National Plant Protection Organization</b>
<b>plant quarantine</b>	All activities designed to prevent the <b>introduction</b> and/or <b>spread</b> of <b>quarantine pests</b> or to ensure their <b>official control</b> [FAO, 1990; revised FAO, 1995]
<b>planting</b> (including replanting)	Any operation for the placing of <b>plants</b> in a <b>growing medium</b> , or by grafting or similar operations, to ensure their subsequent growth, reproduction or propagation [FAO, 1990; revised CEPM, 1999]
<b>plants</b>	Living plants and parts thereof, including <b>seeds</b> and <b>germplasm</b> [FAO, 1990; revised IPPC, 1997]
<b>plants for planting</b>	<b>Plants</b> intended to remain <b>planted</b> , to be <b>planted</b> or <b>replanted</b> [FAO, 1990]
<b>plants <i>in vitro</i></b>	A <b>commodity class</b> for plants growing in an aseptic medium in a closed container [FAO, 1990; revised CEPM, 1999; ICPM, 2002; formerly <b>plants in tissue culture</b> ]
<b>point of entry</b>	Airport, seaport or land border point <b>officially</b> designated for the importation of <b>consignments</b> , and/or entrance of passengers [FAO, 1995]
<b>post-entry quarantine</b>	<b>Quarantine</b> applied to a <b>consignment</b> after <b>entry</b> [FAO, 1995]
<b>PRA</b>	<b>Pest Risk Analysis</b> [FAO, 1995; revised ICPM, 2001]
<b>PRA area</b>	<b>Area</b> in relation to which a <b>Pest Risk Analysis</b> is conducted [FAO, 1995]
<b>practically free</b>	Of a <b>consignment</b> , <b>field</b> , or <b>place of production</b> , without <b>pests</b> (or a specific <b>pest</b> ) 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 <b>commodity</b> [FAO, 1990; revised FAO, 1995]
<b>pre-clearance</b>	<b>Phytosanitary certification</b> and/or <b>clearance</b> in the <b>country of origin</b> , performed by or under the regular supervision of the <b>National Plant Protection Organization</b> of the country of destination [FAO, 1990; revised FAO, 1995]
<b>predator</b>	A <b>natural enemy</b> that preys and feeds on other animal <b>organisms</b> , more than one of which are killed during its lifetime [ISPM No. 3, 1996]
<b>process load</b>	A volume of material with a specified loading configuration and treated as a single entity [ISPM No. 18, 2003]
<b>processed wood material</b>	Products that are a composite of <b>wood</b> constructed using glue, heat and pressure, or any combination thereof [ISPM No. 15, 2002]
<b>prohibition</b>	A <b>phytosanitary regulation</b> forbidding the importation or movement of specified <b>pests</b> or <b>commodities</b> [FAO, 1990; revised FAO, 1995]

<b>protected area</b>	A <b>regulated area</b> that an <b>NPPO</b> has determined to be the minimum <b>area</b> necessary for the effective protection of an <b>endangered area</b> [FAO, 1990; omitted from FAO, 1995; new concept from CEPM, 1996]
<b>provisional measure</b>	A <b>phytosanitary regulation</b> or procedure established without full <b>technical justification</b> owing to current lack of adequate information. A <b>provisional measure</b> is subjected to periodic review and full technical justification as soon as possible [ICPM, 2001]
<b>quarantine</b>	<b>Official</b> confinement of <b>regulated articles</b> for observation and research or for further <b>inspection, testing</b> and/or <b>treatment</b> [FAO, 1990; revised FAO, 1995; CEPM, 1999]
<b>quarantine area</b>	An <b>area</b> within which a <b>quarantine pest</b> is present and is being <b>officially controlled</b> [FAO, 1990; revised FAO, 1995]
<b>quarantine pest</b>	A <b>pest</b> of potential economic importance to the <b>area endangered</b> thereby and not yet present there, or present but not widely distributed and being <b>officially controlled</b> [FAO, 1990; revised FAO, 1995; IPPC 1997]
<b>quarantine station</b>	<b>Official</b> station for holding <b>plants</b> or <b>plant products</b> in <b>quarantine</b> [FAO, 1990; revised FAO, 1995; formerly <b>quarantine station or facility</b> ]
<b>raw wood</b>	<b>Wood</b> which has not undergone processing or <b>treatment</b> [ISPM No. 15, 2002]
<b>re-exported consignment</b>	<b>Consignment</b> 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 <b>country of re-export</b> ) [FAO, 1990; revised CEPM, 1996; CEPM, 1999; ICPM, 2001; ICPM, 2002]
<b>reference specimen</b>	Specimen, from a population of a specific <b>organism</b> , conserved and accessible for the purpose of identification, verification or comparison. [ISPM No. 3, 2005; revised CPM, 2009]
<b>refusal</b>	Forbidding <b>entry</b> of a <b>consignment</b> or other <b>regulated article</b> when it fails to comply with <b>phytosanitary regulations</b> [FAO, 1990; revised FAO, 1995]
<b>Regional Plant Protection Organization</b>	An intergovernmental organization with the functions laid down by Article IX of the <b>IPPC</b> [FAO, 1990; revised FAO, 1995; CEPM, 1999; formerly <b>plant protection organization (regional)</b> ]
<b>regional standards</b>	<b>Standards</b> established by a <b>Regional Plant Protection Organization</b> for the guidance of the members of that organization [IPPC, 1997]
<b>regulated area</b>	An <b>area</b> into which, within which and/or from which <b>plants, plant products</b> and other <b>regulated articles</b> are subjected to <b>phytosanitary regulations</b> or <b>procedures</b> in order to prevent the <b>introduction</b> and/or <b>spread</b> of <b>quarantine pests</b> or to limit the economic impact of <b>regulated non-quarantine pests</b> (see Glossary Supplement No. 2) [CEPM, 1996; revised CEPM, 1999; ICPM, 2001]
<b>regulated article</b>	Any <b>plant, plant product</b> , storage place, packaging, conveyance, container, soil and any other <b>organism</b> , object or material capable of harbouring or spreading <b>pests</b> , deemed to require <b>phytosanitary measures</b> , particularly where international transportation is involved [FAO, 1990; revised FAO, 1995; IPPC, 1997]
<b>regulated non-quarantine pest</b>	A <b>non-quarantine pest</b> whose presence in <b>plants for planting</b> affects the <b>intended use</b> of those <b>plants</b> 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]
<b>regulated pest</b>	A <b>quarantine pest</b> or a <b>regulated non-quarantine pest</b> [IPPC, 1997]
<b>release (into the environment)</b>	Intentional liberation of an <b>organism</b> into the environment (see <b>introduction</b> and <b>establishment</b> ) [ISPM No. 3, 1996]
<b>release (of a consignment)</b>	Authorization for <b>entry</b> after <b>clearance</b> [FAO, 1995]
<b>replanting</b>	See <b>planting</b>

<b>required response</b>	A specified level of effect for a <b>treatment</b> [ISPM No. 18, 2003]
<b>restriction</b>	A <b>phytosanitary regulation</b> allowing the importation or movement of specified <b>commodities</b> subject to specific requirements [CEPM, 1996, revised CEPM, 1999]
<b>RNQP</b>	<b>Regulated non-quarantine pest</b> [ISPM No. 16, 2002]
<b>round wood</b>	<b>Wood</b> not sawn longitudinally, carrying its natural rounded surface, with or without bark [FAO, 1990]
<b>RPPO</b>	<b>Regional Plant Protection Organization</b> [FAO, 1990; revised ICPM, 2001]
<b>sawn wood</b>	<b>Wood</b> sawn longitudinally, with or without its natural rounded surface with or without bark [FAO, 1990]
<b>Secretary</b>	<b>Secretary</b> of the <b>Commission</b> appointed pursuant to Article XII [IPPC, 1997]
<b>seeds</b>	A <b>commodity class</b> for seeds for <b>planting</b> or intended for planting and not for consumption or processing (see <b>grain</b> ) [FAO, 1990; revised ICPM, 2001]
<b>SIT</b>	<b>sterile insect technique</b> [ISPM No. 3, 2005]
<b>spread</b>	Expansion of the geographical distribution of a <b>pest</b> within an <b>area</b> [FAO, 1995]
<b>standard</b>	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]
<b>sterile insect</b>	An insect that, as a result of a specific treatment, is unable to reproduce [ISPM No. 3, 2005]
<b>sterile insect technique</b>	Method of <b>pest control</b> using area-wide <b>inundative release</b> of <b>sterile insects</b> to reduce reproduction in a field population of the same species [ISPM No. 3, 2005]
<b>stored product</b>	Unmanufactured <b>plant product</b> intended for consumption or processing, stored in a dried form (this includes in particular <b>grain</b> and dried <b>fruits</b> and <b>vegetables</b> ) [FAO, 1990]
<b>suppression</b>	The application of <b>phytosanitary measures</b> in an infested <b>area</b> to reduce <b>pest</b> populations [FAO, 1995; revised CEPM, 1999]
<b>surveillance</b>	An <b>official</b> process which collects and records data on <b>pest occurrence</b> or absence by <b>survey</b> , <b>monitoring</b> or other procedures [CEPM, 1996]
<b>survey</b>	An <b>official</b> procedure conducted over a defined period of time to determine the characteristics of a <b>pest</b> population or to determine which species <b>occur</b> in an <b>area</b> [FAO, 1990; revised CEPM, 1996]
<b>systems approach(es)</b>	The integration of different risk management measures, at least two of which act independently, and which cumulatively achieve the appropriate level of protection against <b>regulated pests</b> [ISPM No. 14, 2002; revised ICPM, 2005]
<b>technically justified</b>	Justified on the basis of conclusions reached by using an appropriate <b>pest risk analysis</b> or, where applicable, another comparable examination and evaluation of available scientific information [IPPC, 1997]
<b>test</b>	<b>Official</b> examination, other than visual, to determine if <b>pests</b> are present or to identify <b>pests</b> [FAO, 1990]
<b>tolerance level (of a pest)</b>	<b>Incidence</b> of a <b>pest</b> specified as a threshold for action to control that <b>pest</b> or to prevent its <b>spread</b> or <b>introduction</b> [CPM, 2009]
<b>transience</b>	Presence of a <b>pest</b> that is not expected to lead to <b>establishment</b> [ISPM No. 8, 1998]
<b>transit</b>	See <b>consignment in transit</b>
<b>transparency</b>	The principle of making available, at the international level, <b>phytosanitary measures</b> and their rationale [FAO, 1995; revised CEPM, 1999; based on the World Trade Organization Agreement on the Application of Sanitary and Phytosanitary Measures]



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<b>treatment</b>	<b>Official</b> procedure for the killing, <b>inactivation</b> or removal of <b>pests</b> , or for rendering <b>pests</b> infertile or for <b>devitalization</b> [FAO, 1990, revised FAO, 1995; ISPM No. 15, 2002; ISPM No. 18, 2003; ICPM, 2005]
<b>treatment schedule</b>	The critical parameters of a <b>treatment</b> which need to be met to achieve the intended outcome (i.e. the killing, <b>inactivation</b> or removal of <b>pests</b> , or rendering <b>pests</b> infertile, or <b>devitalization</b> ) at a stated <b>efficacy</b> [ISPM No. 28, 2007]
<b>visual examination</b>	The physical examination of plants, <b>plant products</b> , or other <b>regulated articles</b> using the unaided eye, lens, stereoscope or microscope to detect <b>pests</b> or <b>contaminants</b> without <b>testing</b> or processing [ISPM No. 23, 2005]
<b>wood</b>	A <b>commodity class</b> for round wood, sawn wood, wood chips or dunnage, with or without bark [FAO, 1990; revised ICPM, 2001]
<b>wood packaging material</b>	<b>Wood</b> or wood products (excluding paper products) used in supporting, protecting or carrying a <b>commodity</b> (includes <b>dunnage</b> ) [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 a 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<sup>1</sup> 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.

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<sup>1</sup> 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 TO SUPPLEMENT No. 2

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.

## APPENDIX 1

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

## 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 No. 5 (*Glossary of phytosanitary terms*, 2008, 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”

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

#### Notes:

<sup>1</sup> 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.

<sup>2</sup> “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.

<sup>3</sup> 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.

<sup>4</sup> 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.

<sup>5</sup> A species that is non-indigenous and has entered an **area** through natural means is not an **alien species (CBD)**. It is simply extending its natural range. For **IPPC** purposes, such a species could still be considered as a potential

\* 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).



**quarantine pest.****3.2 “Introduction”**

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

*Notes:*

<sup>6</sup> 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.

<sup>7</sup> The issue of “areas beyond national jurisdiction” is not relevant for the IPPC.

<sup>8</sup> 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”**

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

*Notes:*

<sup>9</sup> 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 No. 11 (*Pest risk analysis for quarantine pests, including analysis of environmental risks and living modified organisms*, 2004) makes it clear that **quarantine pests** may be “injurious” to **plants** directly, or indirectly (via other components of ecosystems), while Supplement No. 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).

<sup>10</sup> **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.

<sup>11</sup> On the basis of other documents made available by CBD, **invasive alien species** may also threaten “ecosystems, habitats or species”.

<sup>12</sup> The CBD definition and its explanation concern the whole term **invasive alien species** and do not address the term “invasive” as such.

<sup>13</sup> 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.

<sup>14</sup> 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”**

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

*Notes:*

<sup>15</sup> **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”.

<sup>16</sup> 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”**

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

*Notes:*

<sup>17</sup> The “and/or” of the CBD definition is difficult to understand.

<sup>18</sup> Under most phytosanitary import regulatory systems the intentional introduction of regulated pests is prohibited.

**3.6 “Unintentional introduction”**

<i>CBD definition</i>	<i>Explanation in IPPC context</i>
All other introductions which are not intentional	<b>Entry</b> of a non-indigenous species with a traded <b>consignment</b> , which it <b>infests</b> or <b>contaminates</b> , or by some other human agency including <b>pathways</b> such as passengers’ baggage, vehicles, artificial waterways <sup>19</sup>

*Notes:*

<sup>19</sup> The prevention of unintentional introduction of regulated pests is an important focus of phytosanitary import regulatory systems.

**3.7 “Risk analysis”**

<i>CBD definition</i>	<i>Explanation in IPPC context</i>
1) the assessment of the consequences <sup>20</sup> 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 <sup>21</sup>	<b>Risk analysis (CBD)</b> <sup>22</sup> is: 1) evaluation of the probability of <b>establishment</b> and <b>spread</b> , within an <b>area</b> <sup>23</sup> , of an <b>alien species (CBD)</b> that has entered that <b>area</b> , 2) evaluation of the associated potential undesirable consequences, and 3) evaluation and selection of measures to reduce the risk of such <b>establishment</b> and <b>spread</b>

*Notes:*

<sup>20</sup> It is not clear what kinds of consequences are considered.

<sup>21</sup> 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 No. 11 (*Pest risk analysis for quarantine pests, including analysis of environmental risks and living modified organisms*, 2004) or Supplement No. 2 of ISPM No. 5 (*Glossary of phytosanitary terms*, 2008).

<sup>22</sup> This explanation is based on the IPPC definitions of **pest risk assessment** and **pest risk management**, rather than on that of **pest risk analysis**.

<sup>23</sup> 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**

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

*Glossary of terms* <http://www.cbd.int/invasive/terms.shtml>, accessed November 2008.