December 2008

منظمة الأغذية والزراعة للأمم المتحدة | 联合国粮食及农业组织 | Food and Agriculture Organization of the United Nations | Organisation des Nations Unies pour l'alimentation et l'agriculture | Продовольственная и сельскохозяйственная организация Объединенных Наций | Organización de las Naciones Unidas para la Agricultura y la Alimentación

COMMISSION ON PHYTOSANITARY MEASURES

Fourth Session

Rome, 30 March – 3 April 2009

Adoption of International Standards – Under the Regular Process

Agenda Item 9.2 of the Provisional Agenda

I. Introduction

1. This document presents four annexes that the Standards Committee (SC) has recommended for adoption by the Commission on Phytosanitary Measures (CPM).

2. The annexes are as follows:
- Annex 1: Amendments to ISPM No. 5 (*Glossary of phytosanitary terms*).
- Annex 2: Appendix to ISPM No. 5 (Glossary of phytosanitary terms) on Terminology of the Convention on Biological Diversity (CBD) in relation to the Glossary of phytosanitary terms.
- Annex 3: Revision of ISPM No. 15 (Guidelines for regulating wood packaging material in international trade). It is recommended that the title be changed to: Regulation of wood packaging material in international trade.
- Annex 4: A new ISPM on Categorization of commodities according to their pest risk.

3. In May 2008, the Standards Committee Working Group (SC-7) approved seven draft ISPMs for member consultation through the regular standard setting process. The drafts were sent in June 2008 for a 100-day period of member consultation.

4. During the consultation period, five regional workshops on draft ISPMs supported the preparation of member comments in the Asia, English-speaking Africa, Latin America, Near East and Pacific regions.

5. Technical, editorial and translation comments were received from 38 individual countries and the European Commission and its Members States.

6. The IPPC Secretariat also received comments from four Regional Plant Protection Organizations (RPPOs): Comité Regional De Sanidad Vegetal Del Cono Sur (COSAVE), European and Mediterranean Plant Protection Organization (EPPO), Organismo Internacional Regional De Sanidad Agropecuaria (OIRSA) and Pacific Plant Protection Organisation (PPPO). In addition, the Secretariat received comments from international organizations: the Secretariat of the Convention on Biological Diversity (CBD) and International Atomic Energy Agency (IAEA).

7. In total, the IPPC Secretariat received approximately 2300 comments on the seven draft standards during the consultation period.

8. After the consultation period, taking into account the volume and complexity of the comments, the availability of stewards, the priority of topics and the consideration of the SC, the Secretariat decided that two draft ISPMs should be processed through the extended time schedule.

9. The SC discussed five draft documents (ISPMs and amendments to existing ISPMs) and recommended four of them (as presented in Annexes 1 to 4) for adoption by the CPM. The SC discussed the draft ISPM *Structure and operation of post-entry quarantine facilities* and decided that it should be redrafted.

10. Members are invited to refer to the report of the November 2008 meeting of the SC (https://www.ippc.int/id/13402), which contains an overview of the main points of discussion for each draft ISPM in order to inform members of the outcome of their input and comments in the redrafting of the standards.

II. Guidelines for submitting comments on ISPMs presented for adoption

11. In accordance with adopted procedures, contracting parties wishing to make comments on the draft standards at the CPM should send these comments to the IPPC Secretariat at least 14 days before the CPM. Contracting parties are reminded that:

- Members should endeavour to provide only substantive comments at meetings of the CPM.
- Members should indicate which comments are strictly editorial (i.e. they do not change the substance of the text) and could be incorporated by the Secretariat as considered appropriate and necessary.
- The electronic format/template for member comments should preferably be used for submitting comments and can be found on the IPP (https://www.ippc.int/id/202724) or requested from the IPPC Secretariat.

12. In accordance with the decision of CPM-3 (2008) on provisions for the availability of standard setting documents, comments that were received during the June-September 2008 consultation are available on the IPP (https://www.ippc.int/id/207742).

13. In consultation with the Informal Working Group on Strategic Planning and Technical Assistance (SPTA) and the CPM Bureau, the IPPC Secretariat has reduced the number of interpreted sessions planned for CPM-4 in order to reduce costs. Members therefore should note that the CPM will need to take into account the volume and complexity of comments. If substantial comments and changes are suggested, in some cases CPM-4 may not have time to consider all of the comments. If this arises one or more drafts will need to be returned directly to the SC.

III. Amendments to ISPM No. 5: *Glossary of phytosanitary terms* (Annex 1)

14. In 2006, CPM-1 established the Technical Panel on the Glossary (TPG). The TPG reviews annually suggestions for new or revised definitions in ISPM No. 5 (*Glossary of phytosanitary terms*).

15. The TPG met in Rome (Italy) in October 2007 to review proposals for definitions of new terms, and revision and deletion of existing terms. Proposed amendments to the *Glossary of phytosanitary terms* suggested by the TPG were subsequently reviewed by the SC-7 in May 2008 and sent for member consultation in June 2008.

16. Over 50 comments were compiled and submitted for review by the TPG at its meeting held in Copenhagen (Denmark) in October 2008. These comments were further considered by the SC-7 and the SC in November 2008. The SC recommended that proposed new/revised definitions and deletions be presented to the CPM for adoption. Explanations are provided as information to support the proposals, but only the terms and definitions are proposed for adoption.

17. The CPM is invited to:

1. *Adopt* the amendments to ISPM No. 5 (*Glossary of phytosanitary terms*), contained in Annex 1.

IV. Appendix to ISPM No. 5 on Terminology of the Convention on Biological Diversity (CBD) in relation to the Glossary of phytosanitary terms (Annex 2)

18. An explanatory document on the terminology of the CBD in relation to the Glossary was developed by the Technical Panel on the Glossary (TPG) in 2006. In May 2007, the SC requested the TPG to reformat the document as a supplement to ISPM No. 5 (*Glossary of phytosanitary terms*). The TPG, at its meeting in October 2007 in Rome (Italy), reformatted the document as requested. The draft was reviewed by the SC-7 at its meeting in May 2008 and sent for member consultation in June 2008.

19. Over 100 comments were compiled and submitted for review by the TPG at its meeting in Copenhagen (Denmark) in October 2008. In response to several comments, the TPG proposed that the document be recommended for adoption as an appendix instead of a supplement to ISPM No. 5. The SC-7 and SC reviewed the redrafted document at their meetings in November 2008. The SC made minor adjustments to the draft and recommended it for adoption as an appendix to ISPM No 5 by the CPM.

20. The CPM is invited to:

1. *Adopt* the appendix to ISPM No. 5 on *Terminology of the Convention on Biological Diversity (CBD) in relation to the Glossary of phytosanitary terms*, contained in Annex 2.

V. Revision of ISPM No. 15: Regulation of wood packaging material in international trade (Annex 3)

21. ISPM No. 15 was adopted by ICPM-4 in 2002, and modifications to Annex I were adopted by CPM-1 in 2006. The revision of ISPM No. 15 was added to the standard setting work programme in 2006. The Technical Panel on Forest Quarantine (TPFQ) initiated the revision of the standard during its meeting in June 2006 in New York (United States) and continued the revision at its meeting in July 2007 in Moscow (Russia). A revised draft was reviewed by the SC-7 in May 2008 and sent for member consultation in June 2008.

22. Over 440 comments were received. Based on the volume and complexity of the comments, the Secretariat considered it appropriate to process the draft through the extended time schedule. However, the steward reviewed the comments and modified the draft in time for the SC-7 to review it in November 2008. The SC-7 considered the urgent need for the revised ISPM and decided to discuss the draft. A revised draft was subsequently submitted to the SC in November 2008. The SC adjusted the draft and recommended it for adoption by the CPM. The SC discussed the use of existing wood packaging material in international trade and agreed that, at import, contracting parties should accept formerly produced wood packaging material carrying a mark in accordance with former versions of this standard.

23. The ISPM No.15 mark is available for use by all contracting parties to the IPPC and FAO members, according to the relevant IPPC and FAO principles and standards. FAO has filed applications to register the symbol in many countries either as a certification mark or as a trade mark, however the IPPC Secretariat has limited resources to continue registering the symbol. In order to help ensure the symbol is protected from unauthorized use, contracting parties are requested to assist in the registration process where possible (see also CPM-4 agenda item 9.6).

24. The CPM is invited to:

1. *Adopt* the revision of ISPM No 15 as ISPM No. 15 (2009): *Regulation of wood packaging material in international trade*, contained in Annex 3.

2. *Agree* that material treated and marked under the previously adopted ISPM No. 15 does not need to be re-treated or re-marked.

3. *Agree* that contracting parties should endeavour to ensure the ISPM No. 15 symbol is registered either as a certification mark or as a trade mark within their jurisdiction.

VI. New ISPM: Categorization of commodities according to their pest risk (Annex 4)

25. The topic of "classification of commodities according to their level of processing, intended use and phytosanitary risk" was added to the standard setting work programme in 2004. An expert working group was held in February 2005 in Buenos Aires (Argentina). In May 2006, the SC decided that further work was needed and a second smaller expert working group was held in September 2006 in Kleinmachnow (Germany).

26. The draft was reviewed by the SC in May 2007 and sent for member consultation in June 2007. As a result of member comments, the SC requested additional input from the Technical Panel on Phytosanitary Treatments (TPPT) and from an FAO expert in industrial food processing. The text was redrafted by the steward and presented to the SC-7 in May 2008. It was sent for a second round of member consultation in June 2008.

27. Over 320 comments were received, then compiled and submitted for review by the steward and SC-7, and a revised draft was submitted to the SC in November 2008. The SC adjusted the draft as appropriate and recommended it for adoption by the CPM.

28. The CPM is invited to:

1. *Adopt* as an ISPM: *Categorization of commodities according to their pest risk*, contained in Annex 4.

AMENDMENTS TO ISPM No. 5 (*GLOSSARY OF PHYTOSANITARY TERMS*)

Members are asked to consider the following proposals made by the Standards Committee (SC) after recommendations by the Technical Panel for the Glossary (TPG) in relation to additions and revisions in ISPM No. 5 (*Glossary of phytosanitary terms*, 2008). A brief explanation is given for each proposal. For revised terms and definitions, explanations of the changes made to the last approved definition are also given.

1. NEW TERMS AND DEFINITIONS

1.1 Incidence (of a pest)

Background

A definition of *prevalence (of a pest)* was sent for member consultation in 2004, redrafted several times by the TPG and the SC, and sent again for consultation in 2007 as part of the *Amendments to ISPM No. 5*. Many comments supported that the term to be defined should be *incidence*, rather than *prevalence*. In November 2007, the SC agreed to the following TPG suggestions, based on comments received:

- that the definition be withdrawn from the amendments to the glossary to be presented for adoption by CPM-3 (2008)
- that a definition of *incidence* be proposed to the SC in May 2008 prior to member consultation.

During member consultation in 2007, some comments proposed that the terms *incidence*, *prevalence* and *tolerance level* should be explained in a separate document (either a supplement to ISPM No. 5 or an explanatory document). The SC agreed with the TPG proposal that the need for such explanation be considered once the definitions have been adopted.

The following points may be considered when adopting the definition below:

- The concept of *prevalence* is rarely used independently in ISPMs. It is used in the context of *area of low pest prevalence*, which is appropriately defined in the IPPC, clearly expressing that the pest occurs at low level.
- The terms *prevalence* and *incidence* are used loosely in plant protection, sometimes interchangeably. *Prevalence* (in isolation) is a term that applies more to epidemiology and is used and defined more frequently in the context of human or animal health than in plant protection.
- There is no need for a definition of *prevalence*, but there is a need to define *incidence.* Use of the term *incidence* is more appropriate for plant protection, where it has several uses, in particular in relation to sampling and inspection. It is proposed that in the context of the IPPC *prevalence* be used solely in relation to *areas of low pest prevalence*, and that *incidence* should be used in other cases.
- *Incidence* is not linked to a particular moment in time.
- Although the proportion of units affected by a pest is the most common case for expressing incidence, there might be a need in some circumstances to express the incidence by a number of units affected by a pest, e.g. five plants infected in a 1 ha field. The wording proposed is therefore *proportion or number*.
- *Population* is used in its statistical sense. *Other defined population* is intended to cover cases other than those mentioned in the definition (sample, consignment or field).
- *Population* is broad enough to also apply to situations in aquatic environments.
- The definition as proposed below could also express the incidence of plants that are pests.

[1] **Proposed definition for CPM adoption**

incidence (of a pest)	Proportion or number of units in which a pest is present in a sample, **consignment**, **field** or other defined population

1.2 Tolerance level

Background

A definition of *tolerance level* was sent for member consultation in 2004, redrafted several times by the TPG and the SC, and sent again for consultation in 2007 as part of the *Amendments to ISPM No. 5*. It attracted comments in particular because it used the word *prevalence* (see also section 1.1).

The TPG considered the comments, and eventually the draft definition was withdrawn from the amendments to the glossary presented to the SC in November 2007. It was decided that new definitions for incidence and tolerance level would be proposed to the SC in May 2008 prior to member consultation. In November 2007, the SC agreed to the following TPG suggestions, based on comments received:

- that the definition be withdrawn from the amendments to the glossary to be presented for adoption by CPM-3 (2008)
- that a definition of *tolerance level* be proposed to the SC in May 2008 prior to member consultation.

During member consultation in 2007, some comments proposed that the terms *incidence*, *prevalence* and *tolerance level* should be explained in a separate document (either a supplement to ISPM No. 5 or an explanatory document). The SC agreed with the TPG proposal that the need for such explanation be considered once the definitions have been adopted.

The following points may be considered when adopting the definition below:

- The term *tolerance* is used in various contexts, and the definition below, specific to IPPC use, applies to pests. The term *tolerance level* was proposed. The definition applies to pests and this is reflected in the term, which is qualified with *(of a pest)*.
- In relation to pests, the term has a very wide application and the definition should be kept broad so as not to restrict its meaning and use.
- In order to keep the definition broad and not limit usage of the term, the definition uses *pest* (and not *regulated pest*) and *action* (and not *phytosanitary action*, which would limit it to regulated pests).
- The definition creates a link with *incidence* (see section 1.1).
- The proposed definition is applicable to both field situations and consignments.

[2] **Proposed definition for CPM adoption**

tolerance level (of a pest)	**Incidence** of a **pest** specified as a threshold for action to control that **pest** or to prevent its **spread** or **introduction**

1.3 Phytosanitary security (of a consignment)

Background

The term and definition were sent for member consultation in 2006 as part of the amendments to the glossary. CPM-2 decided that "The new proposed term and definition for *phytosanitary security (of a consignment)* was referred back to the SC for further work, in particular consideration of transit and the relationship to regulated pests." (Also to be considered were comments submitted during CPM-2 by several countries.)

The following points may be considered when adopting the definition below:

- Some comments suggested that it should refer to maintenance "through the application of appropriate measures". The TPG noted that the use of the term *integrity* in the definition established a link with phytosanitary measures, but there was no harm in repeating this.
- There is no need to mention transit specifically; the definition applies to all situations, including transit, shipping etc., and there is no need to enumerate them.
- The IPPC, in article IV 2.(g), states that the responsibilities of National Plant Protection Organizations shall include ensuring that the phytosanitary security of consignments after certification but prior to export is maintained. The TPG noted that the definition of phytosanitary security should apply in a broader range of circumstances than just prior to export and that the definition as proposed does not imply any additional obligations for National Plant Protection Organizations.

[3] **Proposed definition for CPM adoption**

phytosanitary security (of a **consignment**)	Maintenance of the **integrity** of a **consignment** and prevention of its **infestation** and **contamination** by **regulated pests**, through the application of appropriate **phytosanitary measures**

Note: the use of *security* in ISPM No. 10 in relation to consignments corresponds to a different meaning, and this could be corrected when ISPM No. 10 is reviewed.

1.4 Corrective action plan (in an area)

Background

After member consultation in 2006, the SC asked the TPG to consider the need for a definition of corrective action plan. The TPG thought a definition would be useful.

The following points may be considered when adopting the definition below:

- The definition applies to areas and this is reflected in the term, which is qualified with *(in an area)*.
- Corrective actions plans are linked to "an area officially delimited for phytosanitary purposes" (wording used in the definition of *buffer zone*, where the phrase covers pest free areas, areas of low pest prevalence, pest free places of production, pest free production sites), and this wording was introduced in the definition.
- Application of corrective action plans refers to detection of a pest or exceeding a specified pest level.
- A corrective action plan may need to be agreed with the importing country; it responds to an event that may be expected, and it therefore has to be documented.
- The TPG discussed whether faulty procedures or programme failure would trigger the implementation of corrective action plans. It was recognized that it is really faulty implementation of agreed procedures that would do this.

[4] **Proposed definition for CPM adoption**

corrective action plan (in an area)	Documented plan of **phytosanitary actions** to be implemented in an **area** officially delimited for phytosanitary purposes if a **pest** is detected or a specified pest level is exceeded or in the case of faulty implementation of officially established procedures

Notes:

- The use of "corrective actions" in ISPM No. 7 is confusing because it relates to phytosanitary actions and not to a corrective action plan. This should be corrected when ISPM No. 7 is reviewed.
- The use of "emergency action plan" in section 2.1 of ISPM No. 22 should be replaced with "corrective action plan". This should be corrected when ISPM No. 22 is reviewed.

2. REVISED TERMS AND DEFINITIONS

2.1 Compliance procedure (for a consignment)

Background

A revised definition of *compliance procedure (for a consignment)* was sent for member consultation in 2006 as part of the amendments to the glossary. The SC sent back the definition to the TPG, asking the TPG to consider whether the definition should be related to a consignment or should be broader, and provided alternative rewordings.

The following points may be considered when adopting the definition below:

- There are two meanings of compliance: a very general meaning linked to compliance with a treaty, and a more restricted meaning related to compliance with phytosanitary import requirements. In ISPMs, the term is used in the latter context and therefore always in relation to consignments.
- A broader definition proposed by the SC In May 2007 referred to compliance for consignments moving within a country. In the framework of the IPPC, compliance is with import requirements, and there is no need to address compliance with national requirements, which is not an IPPC issue.
- The definition uses the wording "with phytosanitary import requirements or phytosanitary measures related to transit", recognizing the fact that compliance procedure also applies to consignments in transit. Either one or the other applies and there is no need to use additional wording such as "if appropriate".

[5] **Proposed definition**

compliance procedure (for a **consignment**)	**Official** procedure used to verify that a **consignment** complies with **phytosanitary import requirements** or **phytosanitary measures** related to **transit**

2.2 Intended use

Background

In discussing the member comments received in 2007 on the draft ISPM on classification of commodities, in relation to consistency of use of terminology, the TPG identified a change needed in the adopted definition of intended use. The intended use, when considered during a commodity-based PRA, does not necessarily refer to regulated articles (because the PRA sets out to determine if the commodity should be regulated), and the definition was amended to read "or other articles".

[6] **Proposed definition**

intended use	Declared purpose for which **plants**, **plant products** or other articles are imported, produced or used

2.3 Reference specimen

Background

ICPM-7 adopted the definition of *reference specimen(s)* as part of the revised ISPM No. 3 (2005), and decided that the glossary working group should review the new and revised definitions in the standard, taking into account comments submitted at the ICPM. A modified definition was submitted for consultation in 2006 but, on the basis of comments received, the TPG felt that there was no need for a specific definition of reference specimens in relation to biological control agents, and recommended deletion of the term and definition from the glossary (the alternative being to widen the definition to cover other uses, such as diagnostics). Deletion was proposed to CPM-2, which requested the SC to consider the expansion of the definition to cover all types of reference specimens.

The following points may be considered whenadopting the definition below:

- There are different types of specimen: "type specimen", "reference specimen" or "evidence specimen".
- The definition should not apply to "type specimen", i.e. a unique specimen, authoritatively identified and intended for taxonomic studies, which has no specific IPPC meaning.
- In the framework of the IPPC and in ISPMs, specimens are either *reference specimens*, kept to compare with future new samples, or *evidence specimens* kept for evidence purposes or trace-back in case of dispute. The definition covers only a reference specimen, i.e. a specimen used operationally by an NPPO for the purpose of identification, verification or comparison with future findings.
- The definition covers adequately the use of the term in ISPM No. 3 (in relation to identification of future individuals).
- The location where a reference specimen is kept must be accessible to the people that need to access it. The previous definition contained "publicly available"; this would not be the case for all reference specimens. On the other hand, the definition should be kept open, and should not mention that access could be restricted to the NPPO only.
- Reference specimens may be maintained in many different ways, depending on the type of pest, exact purpose for its maintenance, etc. One way to maintain a reference specimen is in a culture. The TPG decided to remove the reference to a culture from the definition.

[7] **Proposed definition for CPM adoption**

reference specimen	Specimen from a population of a specific **organism** conserved and accessible for the purpose of identification, verification or comparison.

DRAFT APPENDIX TO ISPM NO. 5
(GLOSSARY OF PHYTOSANITARY TERMS)

Appendix No. --

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

[2] TERMINOLOGY OF THE CONVENTION ON BIOLOGICAL DIVERSITY IN RELATION TO THE GLOSSARY OF PHYTOSANITARY TERMS

[3] 1. Introduction

[4] 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.

[5] 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.

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

[7] 2. Presentation

[8] 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.

[9] 3. Terminology

[10] 3.1 "Alien species"

[row1] *CBD definition*	*Explanation in IPPC context*
[row2] A species, subspecies or lower taxon, introduced outside its natural past[1] or present distribution; includes any part, gametes, seeds, eggs, or propagules of such species that might survive and subsequently reproduce	An **alien**[2] **species (CBD)** is an individual[3] or population, at any life stage, or a viable part of an **organism** that is non-indigenous to an **area** and that has **entered**[4] by human agency[5] into the **area**

[11] *Notes:*

[12] [1] The qualification concerning "past and present" distribution is not relevant for IPPC purposes, since the IPPC is concerned only with existing situations. It does not matter that the species was present in the past if it is present now. The word "past" in the CBD definition presumably allows for the re-introduction of a species into an area where it has recently become extinct and thus a reintroduced species would presumably not be considered an alien species.

[13] [2] "Alien" refers only to the location and distribution of an organism compared with its natural range. It does not imply that the organism is harmful.

[14] [3] The CBD definition emphasizes the physical presence of individuals of a species at a certain time, whereas the IPPC concept of occurrence relates to the geographical distribution of the taxon in general.

[15] [4] For CBD purposes, an alien species is already present in the **area** that is not within its native distribution (see **Introduction** below). The IPPC is more concerned with organisms that are not yet present in the area of concern (i.e. quarantine pests). The term "alien" is not appropriate for them, and terms such as "exotic", "non-indigenous" or "non-native" have been used in ISPMs. To avoid confusion, it would be preferable to use only one of these terms, in

which case "non-indigenous" would be suitable, especially as it can accompany its opposite "indigenous". "Exotic" is not suitable because it presents translation problems.

[16] [5] 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 **quarantine pest**.

[17] ### 3.2 "Introduction"

[row1] *CBD definition*	*Explanation in IPPC context*
[row2] The movement by human agency, indirect or direct, of an alien species[6] outside of its natural range (past or present). This movement can be either within a country or between countries or areas beyond national jurisdiction[7]	The **entry** of a **species** into an **area where it is non-indigenous**, through movement by human agency, either directly from an area where the species is indigenous, or indirectly[8] (by successive movement from an area where the species is indigenous through one or several areas where it is not)

[18] *Notes:*

[19] [6] The CBD definition suggests that **introduction (CBD)** concerns an **alien species (CBD)**, and thus a species that has already entered the area. However, it may be supposed, on the basis of other documents made available by CBD, that this is not so, and that a non-indigenous species entering for the first time is being **introduced (CBD)**. For CBD, a species can be **introduced (CBD)** many times, but for IPPC a species, once established, cannot be **introduced** again.

[20] [7] The issue of "areas beyond national jurisdiction" is not relevant for the IPPC.

[21] [8] In the case of indirect movement, it is not specifically stated in the definition whether all the movements from one **area** to another must be **introductions (CBD)** (i.e. by human agency, intentional or unintentional), or whether some can be by natural movement. This question arises, for example, where a species is **introduced (CBD)** into one **area** and then moves naturally to an adjoining **area**. It seems that this may be considered as an indirect **introduction (CBD)**, so that the species concerned is an **alien species (CBD)** in the adjoining area, despite the fact that it **entered** it naturally. In the IPPC context, the intermediate country, from which the natural movement occurs, has no obligation to act to limit the natural movement, though it may have obligations to prevent intentional or unintentional **introduction (CBD)** if the importing country concerned establishes corresponding **phytosanitary measures**.

[22] ### 3.3 "Invasive alien species"

[row1] *CBD definition*	*Explanation in IPPC context*
[row2] An alien species whose introduction and/or spread threaten[9] biological diversity[10, 11]	An **invasive**[12] **alien species (CBD)** is an **alien species (CBD)** that by its **establishment** or **spread** has become injurious to **plants**[13], or that by **risk analysis (CBD)**[14] is shown to be potentially injurious to **plants**

[23] *Notes:*

[24] [9] The word "threaten" does not have an immediate equivalent in IPPC language. The IPPC definition of a **pest** uses the term "injurious", while the definition of a **quarantine pest** refers to "economic importance". ISPM 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).

[25] [10] **Invasive alien species (CBD)** threaten "biological diversity". This is not an IPPC term, and the question arises whether it has a scope corresponding to that of the IPPC. "Biological diversity" would then have to be given a wide meaning, extending to the integrity of cultivated plants in agro-ecosystems, non-indigenous **plants** that have been imported and **planted** for forestry, amenity or habitat management, and indigenous **plants** in any **habitat**, whether "man-made" or not. The **IPPC** does protect **plants** in any of these situations, but it is not clear whether the scope of the CBD is as wide; some definitions of "biological diversity" take a much narrower view.

[26] [11] On the basis of other documents made available by CBD, **invasive alien species** may also threaten "ecosystems, habitats or species".

[27] [12] The CBD definition and its explanation concern the whole term **invasive alien species** and do not address the term "invasive" as such.

[28] [13] The context of the IPPC is the protection of **plants**. It is clear that there are effects on biological diversity that do not concern **plants**, and so there are **invasive alien species (CBD)** that are not relevant to the **IPPC**. The IPPC is also concerned with **plant products**, but it is not clear to what extent the CBD considers **plant products** as a component of biological diversity.

[29] [14] For the IPPC, **organisms** that have never entered the **endangered area** can also be considered as potentially injurious to **plants**, as a result of **pest risk analysis**.

[30] ### 3.4 "Establishment"

[row1] *CBD definition*	*Explanation in IPPC context*
[row2] The process[15] of an alien species in a new habitat successfully producing viable offspring[16] with a likelihood of continued survival	The **establishment** of an **alien species (CBD)** in a **habitat** in the **area** it has **entered**, by successful reproduction

[31] *Notes:*

[32] [15] **Establishment (CBD)** is a process, not a result. It seems that a single generation of reproduction can be **establishment (CBD)**, provided the offspring have a likelihood of continued survival (otherwise there would be a comma after "offspring"). The CBD definition does not express the **IPPC** concept of "perpetuation for the foreseeable future".

[33] [16] It is not clear how far "offspring" applies to **organisms** that propagate themselves vegetatively (many **plants**, most fungi, other micro-organisms). By using "perpetuation", the **IPPC** avoids the question of reproduction or replication of individuals altogether. It is the species as a whole that survives. Even the growth of long-lived individuals to maturity could be considered to be perpetuation for the foreseeable future (e.g. plantations of a non-indigenous **plant**).

[34] ### 3.5 "Intentional introduction"

[row1] *CBD definition*	*Explanation in IPPC context*
[row2] Deliberate movement and/or[17] release by humans of an alien species outside its natural range	Deliberate movement of a non-indigenous species into an **area**, including its **release** into the environment[18]

[35] *Notes:*

[36] [17] The "and/or" of the CBD definition is difficult to understand.

[37] [18] Under most phytosanitary import regulatory systems the intentional introduction of regulated pests is prohibited.

[38] ### 3.6 "Unintentional introduction"

[row1] *CBD definition*	*Explanation in IPPC context*
[row2] All other introductions which are not intentional	**Entry** of a non-indigenous species with a traded **consignment**, which it **infests** or **contaminates**, or by some other human agency including **pathways** such as passengers' baggage, vehicles, artificial waterways[19]

[39] *Notes:*

[40] [19] The prevention of unintentional introduction of regulated pests is an important focus of phytosanitary import regulatory systems.

[41] ### 3.7 "Risk analysis"

[row1] *CBD definition*	*Explanation in IPPC context*
[row2] 1) the assessment of the consequences[19] 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[20]	**Risk analysis (CBD)**[21] is: 1) evaluation of the probability of **establishment** and **spread**, within an **area**[22], of an **alien species (CBD)** that has entered that **area**, 2) evaluation of the associated potential undesirable consequences, and 3) evaluation and selection of measures to reduce the risk of such **establishment** and **spread**

[42] *Notes:*

[43] [20] It is not clear what kinds of consequences are considered.

[44] [21] It is not clear at what stages in the process of **risk analysis (CBD)** socio-economic and cultural considerations are taken into account (during assessment, or during management, or both). No explanation can be offered in relation to

ISPM 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).

[45] [22] This explanation is based on the IPPC definitions of **pest risk assessment** and **pest risk management**, rather than on that of **pest risk analysis**.

[46] [23] It is unclear whether **risk analysis (CBD)** may be conducted prior to **entry**, in which case the probability of **introduction** may also need to be assessed, and measures evaluated and selected to reduce the risk of i**ntroduction**. 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**.

[47] **4. Other concepts**

[48] 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.

[49] **5. References**

[50] *Convention on Biological Diversity*, 1992. CBD, Montreal.

[51] *Glossary of terms* http://www.cbd.int/invasive/terms.shtml, accessed November 2008.

INTERNATIONAL STANDARDS FOR PHYTOSANITARY MEASURES

Revision of ISPM No. 15

[1]

REGULATION OF WOOD PACKAGING MATERIAL IN INTERNATIONAL TRADE

(200-)

[2]

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[3] **INTRODUCTION**

[4] **SCOPE**

[5] This standard describes phytosanitary measures that reduce the risk of introduction and spread of quarantine pests associated with the movement in international trade of wood packaging material made from raw wood. Wood packaging material covered by this standard includes dunnage but excludes wood packaging made from wood processed in such a way that it is free from pests (e.g. plywood).

[6] The phytosanitary measures described in this standard are not intended to provide ongoing protection from contaminating pests (e.g. certain termites, powder post beetles, mould fungi, snails, weed seeds) or other organisms (e.g. spiders).

[7] **ENVIRONMENTAL STATEMENT**

[8] Pests associated with wood packaging material are known to have negative impacts on forest health and biodiversity. Implementation of this standard is considered to reduce significantly the spread of pests and subsequently their negative impacts. Treatments included in this standard are known to deplete the ozone layer (methyl bromide) and consume energy (heat treatment). However, these negative effects are considered by the Commission on Phytosanitary Measures (CPM) to be balanced by reduction in the global movement in quarantine pests achieved by this standard. Alternative measures that are more environmentally friendly are being pursued.

[9] **REFERENCES**

[10] *Agreement on the Application of Sanitary and Phytosanitary Measures*, 1994. World Trade Organization, Geneva.
[11] *Consignments in transit*, 2006. ISPM No. 25, FAO, Rome.
[12] *Export certification system*, 1997. ISPM No. 7, FAO, Rome.
[13] *Glossary of phytosanitary terms*, 2008. ISPM No. 5, FAO, Rome.
[14] *Guidelines for a phytosanitary import regulatory system*, 2004. ISPM No. 20, FAO, Rome.
[15] *Guidelines for inspection*, 2005. ISPM No. 23, FAO, Rome.
[16] *Guidelines on notification of non-compliance and emergency action*, 2001. ISPM No. 13, FAO, Rome.
[17] ISO 3166-1-alpha-2 code elements (http://www.iso.org/iso/english_country_names_and_code_elements).
[18] *International Plant Protection Convention*, 1997. FAO, Rome.
[19] *Phytosanitary treatments for regulated pests*, 2007. ISPM No. 28, FAO, Rome.
[20] *Replacement or reduction of the use of methyl bromide as a phytosanitary measure*, 2008. IPPC Recommendation, FAO, Rome.
[21] *The Montreal Protocol on Substances that Deplete the Ozone Layer*, 2000. Ozone Secretariat, United Nations Environment Programme. ISBN: 92-807-1888-6 (http://www.unep.org/ozone/pdfs/Montreal-Protocol2000.pdf).

[22] **DEFINITIONS**

[23] Definitions of phytosanitary terms used in the present standard can be found in ISPM No. 5 (*Glossary of phytosanitary terms*, 2008).

[24] **OUTLINE OF REQUIREMENTS**

[25] Approved phytosanitary measures that significantly reduce the risk of pest introduction and spread via wood packaging material consist of the use of debarked wood (with a specified tolerance for remaining bark), the application of approved treatments and application of the recognized mark (as prescribed in Annexes 1 and 2). Wood packaging material subjected to the approved treatments shall be identified by application of the mark referred to in Annex 2. The approved treatments, the mark and its use are described.

[26] The National Plant Protection Organizations (NPPOs) of exporting and importing countries have specific responsibilities. Treatment and application of the mark must always be under the authority of the NPPO. NPPOs that authorize the use of the mark should supervise (or, as a minimum, audit or review) the application of the treatments, use of the mark and its application, as appropriate, by producer/treatment providers and should establish inspection and/or monitoring and auditing procedures. Specific requirements apply to wood packaging material that is repaired or remanufactured. NPPOs of importing countries should accept the approved phytosanitary measures as the basis for authorizing entry of wood packaging material

without further wood packaging material-related phytosanitary import requirements and may verify on import that the requirements of the standard have been met. Where wood packaging material does not comply with the requirements of this standard, NPPOs are also responsible for measures implemented and notification.

[27] **REQUIREMENTS**

[28] **1. Basis for Regulation**

[29] Wood originating from living or dead trees may be infested by pests. Wood packaging material is frequently made of raw wood that may not have undergone sufficient processing or treatment to remove or kill pests and therefore becomes a pathway for the introduction and spread of quarantine pests. Dunnage in particular has been shown to present a high risk of introduction and spread of quarantine pests. Furthermore, wood packaging material is very often reused, repaired or remanufactured (as described in section 4.3). The true origin of any piece of wood packaging material is difficult to determine, and thus its phytosanitary status cannot easily be ascertained. Therefore the normal process of undertaking risk analysis to determine if measures are necessary, and the strength of such measures, is frequently not possible for wood packaging material. For this reason, this standard describes internationally accepted measures that may be applied to wood packaging material by all countries to reduce significantly the risk of introduction and spread of most quarantine pests that may be associated with that material.

[30] **2. Regulated Wood Packaging Material**

[31] These guidelines cover all forms of wood packaging material that may serve as a pathway for plant pests posing a pest risk mainly to living trees. They cover wood packaging material such as crates, boxes, packing cases, dunnage[1], pallets, cable drums and spools/reels, which can be present in almost any imported consignment, including consignments that would not normally be subject to phytosanitary inspection.

[32] **2.1 Exemptions**

[33] The following articles are of sufficiently low risk to be exempted from the provisions of this standard:

- wood packaging material made entirely from thin wood (6 mm or less in thickness)
- wood packaging made wholly of processed wood material, such as plywood, particle board, oriented strand board or veneer that has been created using glue, heat or pressure, or a combination thereof
- barrels for wine and spirit that have been heated during manufacture
- gift boxes for wine, cigars and other commodities made from wood that has been processed and/or manufactured in a way that renders it free of pests
- sawdust, wood shavings and wood wool
- wood components permanently attached to freight vehicles and containers.

[34] **3. Phytosanitary Measures for Wood Packaging Material**

[35] This standard describes phytosanitary measures (including treatments) that have been approved for wood packaging material and provides for the approval of new or revised treatments.

[36] **3.1 Approved phytosanitary measures**

[37] The approved phytosanitary measures described in this standard consist of phytosanitary procedures including treatments and marking of the wood packaging material. The application of the mark renders the use of a phytosanitary certificate unnecessary as it indicates that the internationally accepted phytosanitary measures have been applied. These phytosanitary measures should be accepted by all National Plant Protection Organizations (NPPOs) as the basis for authorizing the entry of wood packaging material without further specific requirements.

[38] The treatments described in Annex 1 are considered to be significantly effective against most pests of living trees associated with wood packaging material used in international trade. These treatments are combined with the use of debarked wood for construction of wood packaging, which also acts to reduce the likelihood of reinfestation by pests of living trees. These measures have been adopted based on consideration of:

- the range of pests that may be affected
- the efficacy of the treatment
- the technical and/or commercial feasibility.

[39] There are three main activities involved in the production of approved wood packaging material (including

[1] Consignments of wood (i.e. timber/lumber) may be supported by dunnage that is constructed from wood of a similar type and quality as the consignment. In such cases, the dunnage may be considered as part of the consignment and may not be considered as wood packaging material in the context of this standard.

dunnage): treating, manufacturing and marking. These activities can be done by three separate entities, or one entity can do several or all of these activities. For ease of reference, this standard refers to producers (those that manufacture the wood packaging material and/or apply the mark to appropriately treated wood) and treatment providers (those that apply the approved treatments and/or apply the mark to appropriately treated wood).

[40] Wood packaging material subjected to these approved measures shall be identified by application of an official mark in accordance with Annex 2. This mark consists of a dedicated symbol used in conjunction with codes identifying the specific country and producer and/or treatment provider responsible for the treatment applied and the wood packaging material. Hereafter, all components of such a mark are referred to collectively as "the mark". The internationally recognized, non-language-specific mark facilitates identification of treated wood during inspection prior to export, at the point of entry, or elsewhere. NPPOs should accept the mark as referred to in Annex 2 as the basis for authorizing the entry of wood packaging material without further specific requirements.

[41] Debarked wood must be used for the construction of wood packaging material, in addition to application of one of the adopted treatments, both specified in Annex 1.

[42] **3.2 Approval of new or revised treatments**

[43] As new technical information becomes available, existing treatments may be reviewed and modified, and new alternative treatments and/or treatment schedule(s) for wood packaging material may be adopted by the Commission on Phytosanitary Measures (CPM). ISPM No. 28 (*Phytosanitary treatments for regulated pests*, 2007) provides guidance on the IPPC's process for approval of treatments. If a new treatment or a revised treatment schedule is adopted for wood packaging material and incorporated into this ISPM, material treated under the previous treatment and/or schedule does not need to be re-treated or re-marked.

[44] **3.3 Alternative bilateral arrangements**

[45] Alternative arrangements for wood packaging material may be established bilaterally between countries. In such cases, the mark shown in Annex 2 must not be used unless all requirements of this standard have been met.

[46] **4. Responsibilities of NPPOs**

[47] To meet the objective of preventing the introduction and spread of pests, exporting and importing contracting parties and their NPPOs have responsibilities (as outlined in Articles I, IV and VII of the IPPC). In relation to this standard, specific responsibilities are outlined below.

[48] **4.1 Regulatory considerations**

[49] Treatment and application of the mark (and/or related systems) must always be under the authority of the NPPO. NPPOs that authorize use of the mark have the responsibility for ensuring that all systems authorized and approved for implementation of this standard meet all necessary requirements described within the standard, and that wood packaging material (or wood that is to be made into wood packaging material) bearing the mark has been treated and/or manufactured in accordance with this standard. Responsibilities include:

- authorization, registration and accreditation, as appropriate
- monitoring treatment and marking systems implemented in order to verify compliance (further information on related responsibilities is provided in ISPM No. 7: *Export certification system*, 1997)
- inspection, establishing verification procedures and auditing where appropriate (further information is provided in ISPM No. 23: *Guidelines for inspection*, 2005).

[50] The NPPO should supervise (or, as a minimum, audit or review) the application of the treatments, and authorize use of the mark and its application as appropriate. To prevent untreated or insufficiently/incorrectly treated wood packaging material bearing the mark, treatment should be carried out prior to application of the mark.

[51] **4.2 Application and use of the mark**

[52] The specified marks applied to wood packaging material treated in accordance with this standard must conform to the requirements described in Annex 2.

[53] **4.3 Treatment and marking requirements for wood packaging material that is reused, repaired or remanufactured**

[54] NPPOs of exporting countries have responsibility for ensuring and verifying that systems related to export of wood packaging material that bears the mark described in Annex 2 and that is repaired or remanufactured comply fully with this standard.

[55] **4.3.1 Reuse of wood packaging material**

[56] A unit of wood packaging material that has been treated and marked in accordance with this standard and that has not been repaired, remanufactured or otherwise altered does not require re-treatment or re-application of the mark throughout the service life of the unit.

[57] **4.3.2 Repaired wood packaging material**

[58] Repaired wood packaging material is wood packaging material that has had one or more components removed and replaced but without being completely dismantled. NPPOs of exporting countries must ensure that when marked wood packaging material is repaired, only treated wood is used for the repair, or wood constructed or fabricated from processed wood material (as described in section 2.1). Where treated wood is used for the repair each added component must be individually marked in accordance with this standard. In some situations, a single unit of wood packaging may eventually bear numerous marks and it may be difficult to attribute responsibility for the unit to the appropriate origin. In such cases, the NPPO of an exporting country may require the repaired wood packaging material to have previous marks obliterated, the unit to be re-treated, and the mark then applied in accordance with Annex 2.

[59] In circumstances where there is any doubt that all components of a unit of repaired wood packaging material have been treated in accordance with this standard, the NPPO of the exporting country should require the repaired wood packaging material to be re-treated, destroyed, or otherwise prevented from moving in trade as wood packaging material compliant with this standard. In the case of re-treatment, any previous applications of the mark must be permanently obliterated (e.g. by covering with paint or grinding). After re-treatment, the mark must be applied anew in accordance with this standard.

[60] **4.3.3 Remanufactured wood packaging material**

[61] If a unit of wood packaging material is fully dismantled in the course of having components replaced, the unit is considered to be remanufactured. In this process, various components (with additional reworking if necessary) may be combined and then reassembled into further wood packaging material. Remanufactured wood packaging material may therefore incorporate both new and previously used components.

[62] Remanufactured wood packaging material must have any previous applications of the mark permanently obliterated (e.g. by covering with paint or grinding). Remanufactured wood packaging material must be re-treated and the mark must then be applied anew in accordance with this standard.

[63] **4.4 Transit**

[64] Where consignments moving in transit have wood packaging material that does not meet the requirements for approved phytosanitary measures, the NPPO(s) of the country(ies) of transit may require measures to ensure that wood packaging material does not present an unacceptable risk. Further guidance on transit arrangements is provided in ISPM No. 25 (*Consignments in transit*, 2006).

[65] **4.5 Procedures upon import**

[66] Since wood packaging materials are associated with most shipments, including those not considered to be the target of phytosanitary inspections in their own right, cooperation by NPPOs with organizations not usually involved with phytosanitary import requirements is important. For example, cooperation with Customs organizations is important to ensure effectiveness in detecting potential non-compliance of wood packaging material.

[67] **4.6 Phytosanitary measures for non-compliance at point of entry**

[68] Relevant information on non-compliance and emergency action is provided in sections 5.1.6.1 to 5.1.6.3 of ISPM No. 20 (*Guidelines for a phytosanitary import regulatory system*, 2004), and in ISPM No. 13 (*Guidelines on notification of non-compliance and emergency action*, 2001). Taking into account the

frequent re-use of wood packaging material, NPPOs should consider that the non-compliance identified may have arisen in the country of production, repair or remanufacture, rather than in the country of export or transit.

[69] Where wood packaging material does not carry the required mark, or there is evidence of a treatment failure, the NPPO should respond accordingly and, if necessary, an emergency action may be taken. This action may take the form of detention while the situation is being addressed then, as appropriate, removal of non-compliant material, treatment[2], destruction (or other secure disposal) or reshipment. Further examples of appropriate options for actions are provided in Appendix 1. The principle of minimal impact should be pursued in relation to any emergency action taken, distinguishing between the consignment traded and the accompanying wood packaging material. In addition, if emergency action is necessary, relevant aspects of the IPPC Recommendation on *Replacement or reduction of the use of methyl bromide as a phytosanitary measure* (2008) should be followed.

[70] The NPPO of the importing country should notify the exporting country, or the manufacturing country where applicable, in cases where live pests are found. NPPOs are also encouraged to notify cases of missing marks and other cases of non-compliance.

[2] This need not necessarily be a treatment approved in this standard.

[71] **ANNEX 1**

[72] **APPROVED TREATMENTS ASSOCIATED WITH WOOD PACKAGING MATERIAL**

[73] **Use of debarked wood**

[74] Irrespective of the type of treatment applied, wood packaging material must be made of debarked wood. For this standard, any number of visually separate and clearly distinct small pieces of bark may remain if they are:

- less than 3 centimetres in width (regardless of the length) or
- greater than 3 centimetres in width, with the total surface area of an individual piece of bark less than 50 square centimetres.

[75] For methyl bromide treatment the removal of bark must be carried out before treatment because the presence of bark on the wood affects the efficacy of the methyl bromide treatment. For heat treatment, the removal of bark can be carried out before or after treatment.

[76] **Heat treatment (treatment code for the mark: HT)**

[77] Wood packaging material must be heated in accordance with a specific time–temperature schedule that achieves a minimum temperature of 56 °C for a minimum duration of 30 continuous minutes throughout the entire profile of the wood (including at its core). Various energy sources or processes may be suitable to achieve these parameters. For example, kiln-drying, heat-enabled chemical pressure impregnation, microwave or other treatments may all be considered heat treatments provided that they meet the heat treatment parameters specified in this standard.

[78] Appendix 2 contains further guidelines for carrying out effective heat treatment.

[79] **Methyl bromide treatment (treatment code for the mark: MB)**

[80] Use of methyl bromide should be in accordance with the IPPC Recommendation (*Replacement or reduction of the use of methyl bromide as a phytosanitary measure*, adopted at CPM-3). NPPOs are encouraged to promote the use of alternative treatments approved in this standard.[3]

[81] The wood packaging material must be fumigated with methyl bromide in accordance with a schedule that achieves the minimum concentration-time product[4] (CT) over 24 hours at the temperature and final residual concentration specified in Table 1. This CT must be achieved throughout the wood, including at its core, although the concentrations would be measured in the ambient atmosphere. The final minimum temperature must be not less than 10 °C and the minimum exposure time must be not less than 24 hours. Monitoring of gas concentrations must be carried out at a minimum at 2, 4 and 24 hours (in the case of longer exposure times and weaker concentrations, additional measurement should be recorded at the end of fumigation).

[82] **Table 1**: Minimum CT over 24 hours for wood packaging material fumigated with methyl bromide

[row1]	**Temperature**	**CT (g·h·m^3) over 24 h**	**Minimum final concentration (g/m^3) after 24 h**
[row2]	21 °C or above	650	24
[row3]	16 °C or above	800	28
[row4]	10 °C or above	900	32

[83] One example of a schedule that may be used for achieving the specified requirements is shown in Table 2.

[84] **Table 2**: Example of a treatment schedule that achieves the minimum required CT for wood packaging material treated with methyl bromide (initial doses may need to be higher in conditions of high sorption or

[3] In addition, contracting parties to the IPPC may also have obligations under the Montreal Protocol on Substances that deplete the Ozone Layer.

[4] The CT product utilized for methyl bromide treatment in this standard is the sum of the product of the concentration (g/m^3) and time (h) over the duration of the treatment.

leakage)

	Temperature	Dosage (g/m^3)	Minimum concentration (g/m^3) at:			
			2 h	4 h	12 h	24 h
[row2]	21 °C or above	48	36	31	28	24
[row3]	16 °C or above	56	42	36	32	28
[row4]	10 °C or above	64	48	42	36	32

[85] NPPOs should ensure that the following factors are appropriately addressed by those involved in the application of methyl bromide treatment under this standard:

1. Fans are used as appropriate during the gas distribution phase of fumigation to ensure that equilibrium is reached and should be positioned to ensure that the fumigant is rapidly and effectively distributed throughout the fumigation enclosure (preferably within one hour of application).
2. Fumigation enclosures are not loaded beyond 80% of their volume.
3. Fumigation enclosures are well sealed and as gas tight as possible. If fumigation is to be carried out under sheets, these must be made of gas-proof material and sealed appropriately at seams and at floor level.
4. The fumigation site floor is either impermeable to the fumigant or gas-proof sheets must be laid on the floor.
5. Methyl bromide is applied through a vaporizer ('hot gassing') in order to fully volatilize the fumigant prior to its entry into the fumigation enclosure.
6. Methyl bromide treatment is not carried out on wood packaging material exceeding 20 cm in cross section. Wood stacks need separators at least every 20 cm to ensure adequate methyl bromide circulation and penetration.
7. When calculating methyl bromide dosage, compensation is made for any gas mixtures (e.g. 2% chloropicrin) to ensure that the total amount of methyl bromide applied meets required dosage rates.
8. Initial dose rates and post-treatment product handling procedures take account of likely methyl bromide sorption by the treated wood packaging material or associated product (e.g. polystyrene boxes).
9. The measured temperature of the product or the ambient air (whichever is the lower) is used to calculate the methyl bromide dose, and must be at least 10 °C (including at its core) throughout the duration of the treatment.
10. Wood packaging material to be fumigated is not wrapped or coated in materials impervious to the fumigant.
11. Records of methyl bromide treatments are retained by treatment providers, for a period of length determined and as required by the NPPO, for auditing purposes.

[86] NPPOs should recommend that measures be taken to reduce or eliminate emissions of methyl bromide to the atmosphere where technically and economically feasible.

[87] **Adoption of alternative treatments and revisions of approved treatment schedules**

[88] As new technical information becomes available, existing treatments may be reviewed and modified, and alternative treatments and/or new treatment schedule(s) for wood packaging material may be adopted by the Commission on Phytosanitary Measures. If a new treatment or a revised treatment schedule is adopted for wood packaging material and incorporated into this ISPM, material treated under the previous treatment and/or schedule does not need to be re-treated or re-marked.

[89] **ANNEX 2**

[90] **THE MARK AND ITS APPLICATION**

[91] A mark indicating that wood packaging material has been subjected to approved phytosanitary treatment in accordance with this standard comprises the following required components:

- the symbol
- a country code
- a producer/treatment provider code
- a treatment code using the appropriate abbreviation according to Annex 1 (HT or MB).

[92] **Symbol**

[93] The design of the symbol (which may have been registered under national, regional or international procedures, as either a trademark or a certification/collective/guarantee mark) must resemble closely that shown in the examples illustrated below and must be presented to the left of the other components.

[94] **Country code**

[95] The country code must be the International Organization for Standards (ISO) two-letter country code (shown in the examples as "XX"). It must be separated by a hyphen from the producer/treatment provider code.

[96] **Producer/treatment provider code**

[97] The producer/treatment provider code is a unique code assigned by the NPPO to the producer or treatment provider of the wood packaging material who applies treatments and marks or is responsible to the NPPO for ensuring that appropriately treated wood is used and properly marked (shown in the examples as "000"). The number and order of digits and/or letters are assigned by the NPPO.

[98] **Treatment code**

[99] The treatment code is an IPPC abbreviation as provided in Annex 1 for the approved measure used and shown in the examples as "YY". The treatment code must appear after the combined country and producer/treatment provider codes.

[100]

[row1]	**Treatment code**	**Treatment type**
[row2]	HT	Heat treatment
[row3]	MB	Methyl bromide

[101] **Application of the mark**

[102] The size, font types used, and position of the mark may vary, but its size must be sufficient to be both visible and legible to inspectors without the use of a visual aid. The mark must be rectangular or square in shape and contained within a border line with a vertical line separating the symbol from the code components. To facilitate the use of stencilling, small gaps in the border, the vertical line, and elsewhere among the components of the mark, may be present.

[103] No other information shall be contained within the border of the mark. If additional marks (e.g. trademarks of the producer, logo of the authorizing body) are considered useful to protect the use of the mark on a national level, such information may be provided adjacent to but outside of the border of the mark.

[104] The mark must be:

- legible
- durable and not transferable
- placed in a location that is visible when the wood packaging is in use, preferably on at least two opposite sides of the wood packaging unit.

[105] The mark must not be hand drawn.

[106] The use of red or orange should be avoided because these colours are used in the labelling of dangerous goods.

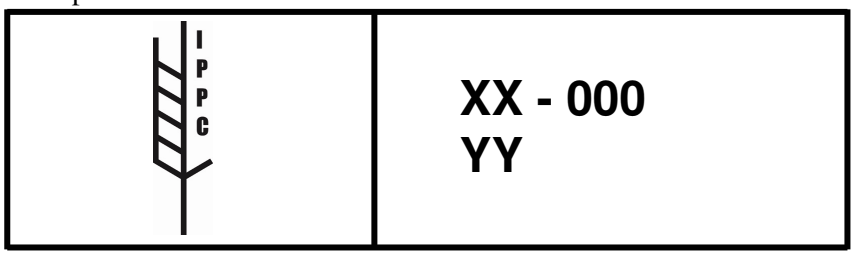
[107] Where various components are integrated into a unit of wood packaging material, the resultant composite unit should be considered as a single unit for marking purposes. On a composite unit of wood packaging material made of both treated wood and processed wood material (where the processed component does not require treatment), it may be appropriate for the mark to appear on the processed wood material components to ensure that the mark is in a visible location and is of a sufficient size. This approach to the application of the mark applies only to composite single units, not to temporary assemblies of wood packaging material.

[108] Special consideration of legible application of the mark to dunnage may be necessary because treated wood for use as dunnage may not be cut to final length until loading of a conveyance takes place. It is important that shippers, authorized by the NPPO, ensure that all dunnage used to secure or support commodities is treated and displays the mark described in this annex, and that the marks are clear and legible. Small pieces of wood that do not include all the required elements of the mark should not be used for dunnage. Options for marking dunnage appropriately include:

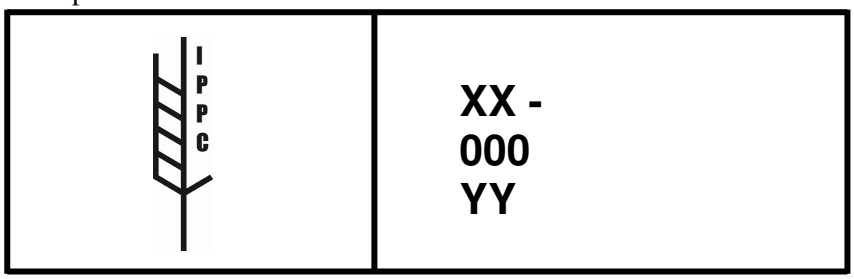
- application of the mark to pieces of wood intended for use as dunnage along their entire length at very short intervals (NB: where very small pieces are subsequently cut for use as dunnage, the cuts should be made so that an entire mark is present on the dunnage used.)
- additional marking of treated dunnage in a visible location after cutting.

[109] The examples below illustrate some acceptable variants of the required components of the mark that is used to certify that the wood packaging material that bears such a mark has been subjected to an approved treatment. No variations in the symbol should be accepted. Variations in the layout of the mark should be accepted provided that they meet the requirements set out in this annex.

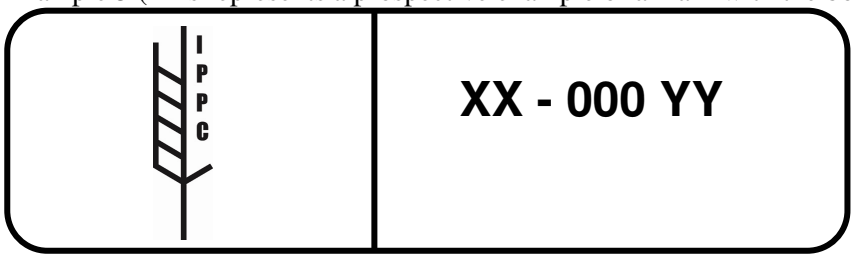
[110] Example 1



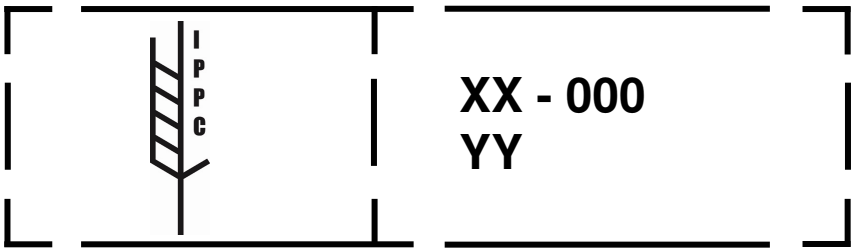
[111] Example 2



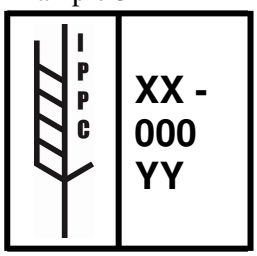
[112] Example 3 (This represents a prospective example of a mark with the border with rounded corners.)



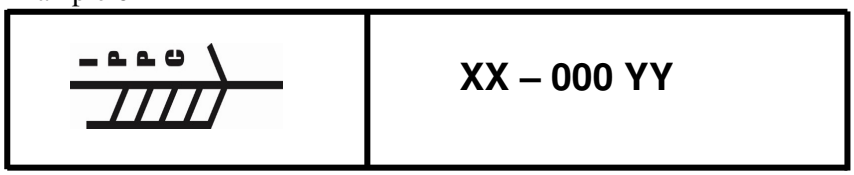
[113] Example 4 (This represents a prospective example of a mark applied by stencilling; small gaps may be present in the border, and the vertical line, and elsewhere among the components of the mark.)



[114] Example 5



[115] Example 6



[116] **APPENDIX 1**

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

[118] **EXAMPLES OF METHODS OF SECURE DISPOSAL OF NON-COMPLIANT WOOD PACKAGING MATERIAL**

[119] Secure disposal of non-compliant wood packaging material is a risk management option that may be used by the NPPO of the importing country when an emergency action is either not available or is not desirable. The methods listed below are recommended for the secure disposal of non-compliant wood packaging material:

1. incineration, if permitted
2. deep burial in sites approved by appropriate authorities (NB: the depth of burial may depend on climatic conditions and the pest intercepted, but is recommended to be at least 2 metres. The material should be covered immediately after burial and should remain buried. Note, also, that deep burial is not a suitable disposal option for wood infested with termites or some root pathogens.)
3. processing (NB: Chipping should be used only if combined with further processing in a manner approved by the NPPO of the importing country for the elimination of pests of concern, e.g. the manufacture of oriented strand board.)
4. other methods endorsed by the NPPO as effective for the pests of concern
5. return to exporting country, if appropriate.

[120] In order to minimize the risk of introduction or spread of pests, secure disposal methods where required should be carried out with the least possible delay.

[121] **APPENDIX 2**

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

[123] **GUIDELINES FOR HEAT TREATMENT**

[124] Guidelines for heat treatment will be developed and added to this appendix in the future when adopted by the CPM.

INTERNATIONAL STANDARDS FOR PHYTOSANITARY MEASURES

ISPM No. --

[1] ## *CATEGORIZATION OF COMMODITIES ACCORDING TO THEIR PEST RISK*

(200-)

[2]

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[3] **INTRODUCTION**

[4] **SCOPE**

[5] This standard provides criteria for National Plant Protection Organizations (NPPOs) of importing countries on how to categorize commodities according to their pest risk when considering import requirements. This categorization should help in identifying whether further risk analysis is required or not.

[6] The first stage of categorization is based on whether the commodity has been processed and, if so, the method and degree of processing to which the commodity has been subjected before export. The second stage of categorization of commodities is based on their intended use after import.

[7] Contaminating pests or storage pests that may become associated with the commodity after processing are not considered in this standard.

[8] **REFERENCES**

[9] *Glossary of phytosanitary terms*, 2008. ISPM No. 5, FAO, Rome.
[10] *Guidelines for a phytosanitary import regulatory system*, 2004. ISPM No. 20, FAO, Rome.
[11] *Guidelines for inspection*, 2005. ISPM No. 23, FAO, Rome.
[12] *Guidelines for phytosanitary certificates*, 2001. ISPM No. 12, FAO, Rome.
[13] *Guidelines for regulating wood packaging material in international trade*, 2002. ISPM No. 15, FAO, Rome.
[14] *International Plant Protection Convention*, 1997. FAO, Rome.
[15] *Pest risk analysis for quarantine pests including analysis of environmental risks and living modified organisms*, 2004. ISPM No. 11, FAO, Rome.
[16] *Pest risk analysis for regulated non-quarantine pests*, 2004. ISPM No. 21, FAO, Rome.
[17] *Regulated non-quarantine pests: concept and application*, 2002. ISPM No. 16, FAO, Rome.

[18] **DEFINITIONS**

[19] Definitions of phytosanitary terms used in the present standard can be found in ISPM No. 5 (*Glossary of phytosanitary terms*, 2008).

[20] **OUTLINE OF REQUIREMENTS**

[21] The concept of categorization of commodities according to their pest risk considers whether the product has been processed, and if so, the method and degree of processing to which it has been subjected and the commodity's intended use and consequent potential of this pathway for the introduction and spread of regulated pests.

[22] This allows pest risks associated with specific commodities to be assigned to categories. The objective of such categorization is to provide importing countries with criteria to better identify the need for a pathway-initiated pest risk analysis (PRA) and to facilitate the decision-making process regarding the possible establishment of import requirements.

[23] Four categories are identified, which group commodities according to their level of pest risk (two for processed commodities, two for unprocessed commodities). Lists of the methods of processing and the associated resultant commodities are provided.

[24] **BACKGROUND**

[25] As a result of the method of processing to which they have been subjected, some commodities moving in international trade remove the probability of entry of pests and so should not be regulated (i.e. phytosanitary measures are not required). Other commodities, after processing, may still present a pest risk and so may be subject to appropriate phytosanitary measures.

[26] Some intended uses of commodities (e.g. planting) have a much higher probability of introducing pests than others (e.g. processing) (see ISPM No. 11: *Pest risk analysis for quarantine pests including analysis of environmental risks and living modified organisms*, 2004, section 2.2.1.5).

[27] The concept of categorization of commodities according to their pest risk firstly considers if the commodity is processed or not and if so, the effect of the method and degree of processing to which a commodity has been subjected. Secondly, it considers the intended use and consequent potential as a pathway for introduction of regulated pests.

[28] The objective of this standard is to categorize commodities according to their pest risk to provide National Plant Protection Organizations (NPPOs) of importing countries with criteria to better identify whether there is a need for a pathway-initiated PRA and facilitate the decision-making process.

[29] Article VI.1b of the IPPC states: "*Contracting parties may require phytosanitary measures for quarantine pests and regulated non-quarantine pests, provided that such measures are … limited to what is necessary to protect plant health and/or safeguard the intended use ….*" This standard is based on the concepts of intended use of a commodity and the method and degree of its processing, which are also addressed in other ISPMs as outlined below.

[30] Method and degree of processing:

- ISPM No. 12 (*Guidelines for phytosanitary certificates*, 2001), section 1.1, states: *"Importing countries should only require phytosanitary certificates for regulated articles. …*
  "Phytosanitary certificates may also be used for certain plant products that have been processed where such products, by their nature or that of their processing, have a potential for introducing regulated pests (e.g. wood, cotton). …
  "Importing countries should not require phytosanitary certificates for plant products that have been processed in such a way that they have no potential for introducing regulated pests, or for other articles that do not require phytosanitary measures."
- ISPM No. 15 (*Guidelines for regulating wood packaging material in international trade*, 2002), section 2, states: *"Wood packaging made wholly of wood-based products such as plywood, particle board, oriented strand board or veneer that have been created using glue, heat and pressure, or a combination thereof, should be considered sufficiently processed to have eliminated the risk associated with the raw wood. It is unlikely to be infested by raw wood pests during its use and therefore should not be regulated for these pests."*
- ISPM No. 23 (*Guidelines for inspection*, 2005), section 2.3.2, states: *"Inspection can be used to verify the compliance with some phytosanitary requirements."* Examples include degree of processing.

[31] Intended use:

- ISPM No. 11 (*Pest risk analysis for quarantine pests including analysis of environmental risks and living modified organisms*, 2004), sections 2.2.1.5 and 2.2.3. When analysing the probabilities of transfer of pests to a suitable host and of their spread after establishment, one of the factors to be considered is the intended use of the commodity.
- ISPM No. 12 (*Guidelines for phytosanitary certificates*, 2001), section 2.1. Different phytosanitary requirements may apply to the different intended end uses as indicated on the phytosanitary certificate.
- ISPM No. 16 (*Regulated non-quarantine pests: concept and application*, 2002), section 4.2. Risk of economically unacceptable impact varies with different pests, commodities and intended use.
- ISPM No. 21 (*Pest risk analysis for regulated non-quarantine pests*, 2004), which uses extensively the concept of intended use.

[32] Method and degree of processing together with intended use:
- ISPM No. 20 (*Guidelines for a phytosanitary import regulatory system*, 2004), section 5.1.4, indicates that PRA may be done on a specific pest or on all the pests associated with a particular pathway (e.g. a commodity). A commodity may be classified by its degree of processing and/or its intended use.
- ISPM No. 23 (*Guidelines for inspection*, 2005), section 1.5. One of the factors to decide the use of inspection as a phytosanitary measure is the commodity type and intended use.

[33] **REQUIREMENTS**

[34] The use of the categories by NPPOs in determining any phytosanitary regulations should take into account, in particular, the principles of technical justification, pest risk analysis, managed risk, minimal impact, harmonization and sovereignty.

[35] When the import requirements for a commodity need to be determined, the importing country may categorize the commodity according to its pest risk. Such categorization may be used to distinguish groups of commodities for which further analysis is required from those that do not have the potential to introduce and spread regulated pests. In order to categorize the commodity, the following should be considered:
- method and degree of processing
- intended use of the commodity.

[36] Having evaluated the method and degree of processing taking into consideration the intended use, the NPPO of the importing country makes a decision on the import requirements for the commodity.

[37] This standard does not consider cases of deviation from intended use (e.g. grain for milling used as seed for sowing).

[38] **1. Elements of Categorization of Commodities according to their Pest Risk**

[39] To identify a commodity's associated pest risk, the method and degree of processing to which a commodity has been subjected should be considered before its intended use. The method and degree of processing, by itself, could significantly change the nature of the commodity, so that it does not remain capable of being infested with pests. Such a commodity should not be deemed to require phytosanitary certification[1].

[40] However, if, after processing, a commodity may remain capable of being infested with pests, the intended use should then be considered.

[41] **1.1 Method and degree of processing before export**

[42] The primary objective of the processes addressed in this standard is to modify a commodity for other than phytosanitary purposes, but processing may also have an effect on any associated pest, and hence affect the potential of the commodity to be infested with quarantine pests.

[43] The NPPOs of the importing countries need to know the method of processing undertaken in order to categorize the commodity. In some cases it is also necessary to know the degree of processing (e.g. temperature and heating duration) that affects the physical or chemical properties.

[44] The NPPOs of the importing countries may request information to the NPPOs of exporting countries about the method and degree of processing and its verification, if appropriate (e.g. when the degree of processing is not evident).

[45] Based on the method and degree of processing, commodities can be broadly divided into three types as follows:

[1] The presence of contaminating pests, as defined in ISPM No. 5 (*Glossary of phytosanitary terms*, 2008), or infestation by other pests that may become associated with the commodity after processing (e.g. storage pests) is not considered in the pest risk categorization process outlined in this standard. However, it is important to note that the methods of processing described in this standard will, in most cases, render the commodity free of pests at the time of processing, but that some such commodities may have the capacity to become subsequently contaminated or infested. Common contaminating pests may be detected during inspection.

- processed to the point where the commodity does not remain capable of being infested with pests
- processed to a point where the commodity remains capable of being infested with quarantine pests
- not processed.

[46] If an assessment of the method and degree of processing concludes that a commodity does not remain capable of being infested with quarantine pests, there is no need to consider intended use and the commodity should not be regulated. However, if an assessment of the method and degree of processing concludes that a commodity remains capable of being infested with quarantine pests, the intended use should then be considered.

[47] For non-processed commodities the intended use should always be considered.

[48] **1.2 Intended use of the commodity**

[49] Intended use is defined as the declared purpose for which plants, plant products or other regulated articles are imported, produced or used (ISPM No. 5: *Glossary of phytosanitary terms*, 2008). The intended use of a commodity may be for:

- planting
- consumption and other uses (e.g. crafts, decorative products, cut flowers)
- processing.

[50] The intended use may affect a commodity's pest risk, as some intended uses may allow for the establishment or spread of regulated pests. Some intended uses of the commodity (e.g. planting) are associated with a higher probability of a regulated pest establishing than others (e.g. processing). This may result in the application of different phytosanitary measures for a commodity based on its intended use (e.g. soybean seed for sowing and soybean grain for human consumption). Any phytosanitary measures applied should be proportional to the pest risk identified.

[51] **2. Commodity Categories**

[52] NPPOs may categorize a commodity by taking into account if it has been processed or not. If it has been processed, then the method and degree of processing should be considered.

[53] Each commodity category is described below, along with guidance on the need for phytosanitary measures.

[54] The analytical process outlined in this ISPM is illustrated in the flow chart of Appendix 1.

[55] **Category 1.** Commodities have been processed to the point where they do not remain capable of being infested with pests. Hence, no phytosanitary measures should be applicable. Annex 1 provides examples of processes and the resultant commodities that can meet the criteria for category 1. Furthermore, Appendix 2 provides some illustrative examples of commodities meeting the criteria for category 1.

[56] **Category 2.** Commodities have been processed but remain capable of being infested with some quarantine pests. The intended use may be, for example, consumption or further processing. The NPPO of the importing country may determine that a PRA is necessary. Annex 2 provides examples of processes and the resultant commodities that can meet the criteria for category 2.

[57] Although commodities in category 2 have been processed, the processing method may not completely eliminate all quarantine pests. If it is determined that the method and degree of processing do not eliminate the pest risk of quarantine pests, consideration should then be given to the intended use of the commodity in order to evaluate the probability of establishment and spread of the quarantine pests. In this case, a PRA may be needed to determine this.

[58] To facilitate the categorization, exporting countries should, on request, provide detailed information on method or degree of processing (such as temperature, exposure time, size of particles) in order to assist importing countries in determining to which category the commodity should be assigned.

[59] In cases where the evaluation of the effect of the method and degree of processing has determined that the processed commodity presents no pest risk and therefore should not be subject to phytosanitary measures, the commodity should be reclassified into category 1.

[60] **Category 3.** Commodities have not been processed and the intended use is, for example, consumption or processing. PRA is necessary to identify the pest risks related to this pathway.

[61] Examples of commodities in this category include fresh fruits and vegetables for consumption and cut flowers.

[62] Because commodities in categories 2 and 3 have the potential to introduce and spread quarantine pests, determining phytosanitary measures may be required based on the result of a PRA. The phytosanitary measures determined through a PRA may differ depending on the intended use of the commodity (e.g. consumption or processing).

[63] **Category 4.** Commodities have not been processed and the intended use is planting. PRA is necessary to identify the pest risks related to this pathway.

[64] Examples of commodities in this category include propagative material (e.g. cuttings, seeds, seed potatoes, plants in vitro, micropropagative plant material and other plants to be planted).

[65] Because commodities in this category 4 are not processed and their intended use is for propagation or planting, their potential to introduce or spread regulated pests is higher than that for other intended uses.

[66] **ANNEX 1**

[67] **METHODS OF COMMERCIAL PROCESSING WITH RESULTANT COMMODITIES THAT DO NOT REMAIN CAPABLE OF BEING INFESTED WITH PESTS**

[68]

[row1]	COMMERCIAL PROCESS	DESCRIPTION	EXAMPLE OF RESULTANT COMMODITY	ADDITIONAL INFORMATION
[row2]	Artificial drying/ dehydration	Removal of moisture for preservation, or to decrease weight or volume	Dehydrated fruit, vegetables	
[row3]	Carbonization	Anoxic combustion of an organic material to charcoal	Charcoal	
[row4]	Cooking (boiling, heating, microwaving, including rice parboiling)	Preparing food items for consumption by heating, primarily transforming the physical structure of items	Cooked items	Frequently involves chemically transforming a food, thus changing its flavour, texture, appearance, or nutritional properties
[row5]	Dyeing	Colouring of textile fibres and other materials by which the colour becomes an integral part of the fibre or material under the influence of pH and temperature changes plus interaction with chemical products	Dyed vegetable fibres and textiles	
[row6]	Extraction	Physical or chemical process to obtain specific components from plant-based raw materials, usually through mass-transfer operations	Oils, alcohol, essences, sugar	Normally done under high temperature conditions
[row7]	Fermentation	Anaerobic or anoxic process changing food/plant material chemically, often involving micro-organisms (bacteria, moulds or yeasts) and e.g. converting sugars to alcohol or organic acids	Wines, liquors, beer and other alcoholic beverages, fermented vegetables	May be combined with pasteurization
[row8]	Malting	A series of actions allowing the germination of cereal seeds to develop enzymatic activity to digest starchy materials into sugars in order to encourage yeast fermentation	Malted barley	
[row9]	Multi-method processing	A combination of multiple types of processing such as heating, high pressure.	Plywood, particle board, wafer board	
[row10]	Pasteurization	Thermal processing in order to kill undesirable or harmful micro-organisms	Pasteurized juices, alcoholic beverages (beer, wine)	Often combined with fermentation and followed by refrigeration (at 4 °C) and proper packaging and handling. Process time and temperature depends on type of product.
[row11]	Preservation in liquid	Process of preserving plant material in a suitable liquid medium (e.g. in syrup, brine, oil, vinegar or alcohol) of a particular pH, salinity, anaerobic or osmotic state	Preserved fruits, vegetables, nuts, tubers, bulbs	Proper conditions of pH, salinity, etc. must be kept

[row1]	COMMERCIAL PROCESS	DESCRIPTION	EXAMPLE OF RESULTANT COMMODITY	ADDITIONAL INFORMATION
[row12]	Pureeing (including blending)	Making homogenized and spreadable fruit and/or vegetable tissues, e.g. by high-speed mixing, screening through a sieve or using a blender	Pureed items (fruits, vegetables)	Normally combined with pulping of fruits or vegetables and methods to preserve the puree (e.g. pasteurization and packing)
[row13]	Quick freezing	Cooling quickly, ensuring that the temperature range of maximum ice crystallization is passed as quickly as possible to preserve the quality of fruits and vegetables	Frozen fruits and vegetables	*Code of hygienic practice for refrigerated packaged foods with extended shelf-life*, 1999, CAC/RCP 46, Codex Alimentarius, FAO, Rome, recommends that for long-term storage products should be kept at a temperature as low as possible (−18 °C for cold storage; −12 °C for display)
[row14]	Roasting	Process of drying and browning foods by exposure to dry heat	Roasted peanuts, coffee and nuts	
[row15]	Sterilization	Process of applying heat (vapours, dry heat or boiling water), irradiation or chemical treatments in order to destroy pests and micro-organisms	Sterilized substrates, juices	Sterilization may not change the condition of the commodity in an evident way, but eliminates pests
[row16]	Sterilization (industrial)	Thermal processing of foods that leads to shelf-stable products in containers by destruction of all pathogenic, toxin-forming and spoilage organisms	Canned vegetables, soups; UHT (ultra-high temperature) juices	Process time and temperature for canned products depends on type of product, treatment and geometry of container. Aseptic processing and packaging involves industrial sterilization of a flowing product and then packaging in sterile environment and package.
[row17]	Sugar infusing	Action of coating and infusing fruits with sugar	Crystallized fruit, fruit infused with sugar, nuts coated with sugar	Usually combined with pulping, boiling, drying
[row18]	Tenderizing	Process to rehydrate dried or dehydrated items by the application of steam under pressure or submerging in hot water	Tenderized fruits	Usually applied to a dried commodity. Can be combined with sugar infusing.

[69] **ANNEX 2**

[70] **METHODS OF COMMERCIAL PROCESSING WITH RESULTANT COMMODITIES THAT REMAIN CAPABLE OF BEING INFESTED WITH QUARANTINE PESTS**

[71]

[row1]	COMMERCIAL PROCESS	DESCRIPTION	EXAMPLE OF RESULTANT COMMODITY	ADDITIONAL INFORMATION
[row2]	Chipping (of wood)	Wood reduced to small pieces	Chipped wood	
[row3]	Chopping	To cut into pieces	Chopped fruit, nuts, grains, vegetables	
[row4]	Crushing	Breaking plant material into pieces by application of mechanical force	Herbs, nuts	Usually applied to dried products
[row5]	Natural drying/ dehydration	Removal of moisture for preservation, or to decrease weight or volume	Dehydrated fruit, vegetables	
[row6]	Painting (including lacquering, varnishing)	To coat with paint	Wood and canes, fibres	
[row7]	Peeling and shelling	Removal of the outer or epidermal tissues or pods	Peeled fruits, vegetables, grains, nuts	
[row8]	Polishing (of grain and beans)	To make smooth and shiny by rubbing or chemical action removing the outer layers from grains	Polished rice, cocoa beans	
[row9]	Post-harvest handling	Operations such as grading, sorting, washing or brushing, and/or waxing fruits and vegetables	Graded, sorted, washed, or brushed and/or waxed fruit and vegetables	Usually carried out in packing houses

[72]

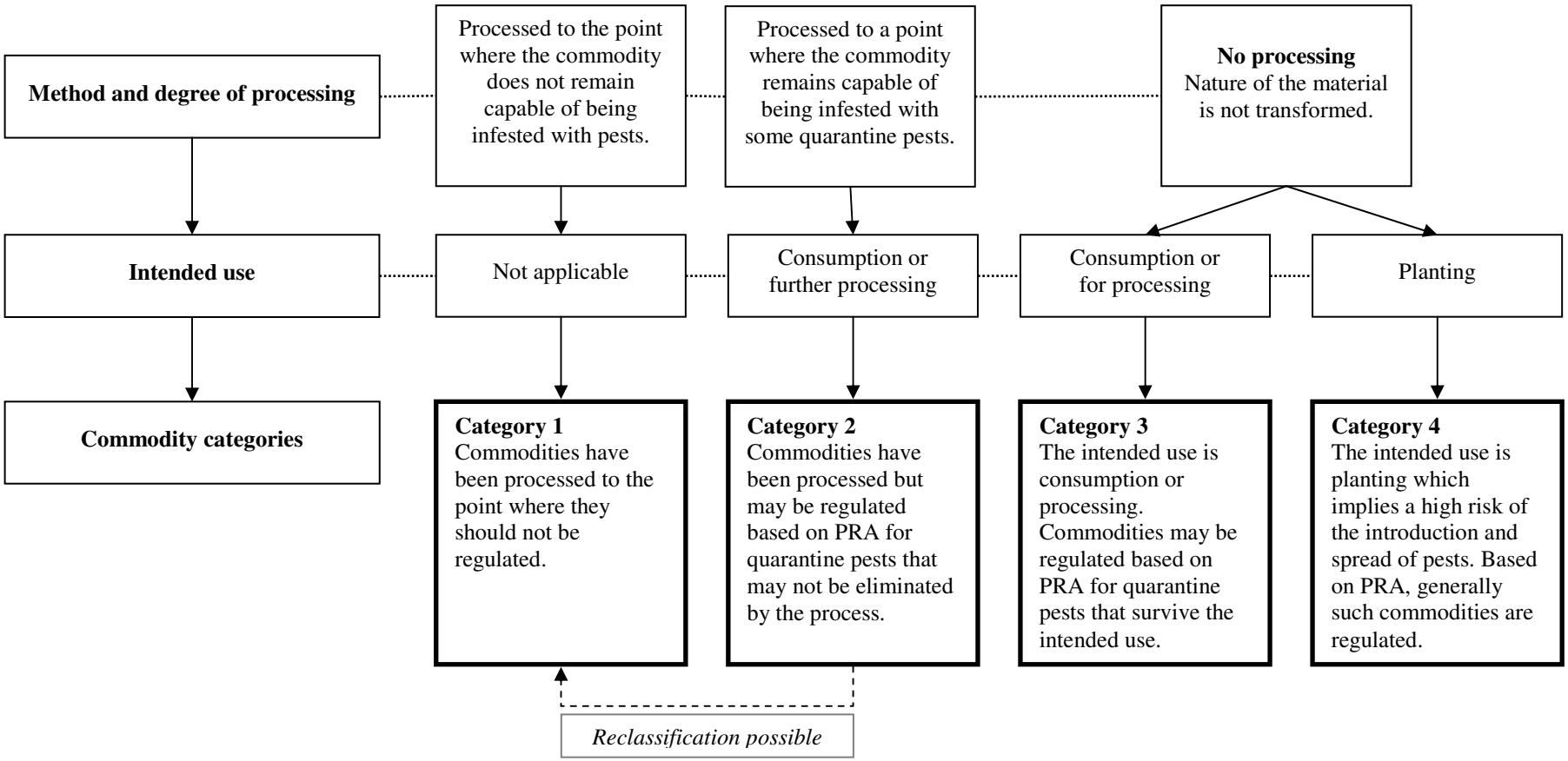
APPENDIX 1

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

[74]

FLOW CHART ILLUSTRATING CATEGORIZATION OF COMMODITIES ACCORDING TO THEIR PEST RISK

[75]



[76]

APPENDIX 2

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

[78]

ILLUSTRATING EXAMPLES FOR COMMODITIES FALLING UNDER CATEGORY 1

[79]

[row1]	**Extracts**	**Fibres**	**Foodstuffs ready for consumption**	**Fruits and vegetables**	**Grain and oilseed products**	**Liquids**	**Sugars**	**Wood products**	**Other**
[row2]	– Brewer's malt – Extracts (e.g. vanilla) – Fruit pectin – Guar bean derivative – Hop extract – Hydrolyzed vegetable protein – Margarine – Soybean lecithin – Starch (potato, wheat, maize, cassava) – Yeast extract	– Cardboard – Cellulose cotton piece goods – Cotton cloth – Cotton lint – Paper – Plant fibre cloth and threads – Plant fibre for industrial production – Semi-processed plant fibres and its materials (e.g. sisal, flax, jute, sugarcane, bamboo, juncus, vimen, raphia) – Waste paper	– Cacao powder – Cakes and biscuits – Catsup (ketchup) – Chocolate – Condiments – Dessert powder – Dips – Food colouring – Food flavouring – Food seasoning – Food supplements – French fries (frozen) – Frozen food – Fruit sauces – Jelly (jam, marmalade) – Mashed potatoes (dried) – Nut butter – Pastes (e.g. cocoa, quince, peanut butter) – Pie filling – Relish – Salad dressing – Sandwich spread – Sauce, sauce mix – Seasoning, seasoning mix – Soup (dried) – Vegetable flavouring	– Candied – Canned – Concentrates – Dehydrated (artificially) – Freeze-dried – Frozen – Fruit pie filling – Glaceed – Hydrolyzed – In syrup – Pickled – Pomace – Precooked or cooked – Pulped – Shredded	– Baby cereal – Bakery mixes – Bread products – Breakfast cereals – Bulgur wheat (parboiled, dried and ground) – Cassava products (tapioca, fermented and/or fried derivatives for food) – Cooked cereal – Corn chip pellets – Farina – Flour and industrial products made of cereal or oilseeds (and leguminous derivatives) for food and feed – Hominy, corn grits – Rice (parboiled) – Soy corn, corn soy blend, soy flour whey, soy meal, soy pellets, soy proteins	– Alcohols – Coconut water (packed) – Corn soy milk – Fruit drink juices (fruit and vegetable including concentrates, frozen, nectar) – Oils – Soft drinks – Soup – Vinegar – Wood turpentine	– Beet sugar – Corn starch glucose – Corn syrup – Dextrine – Dextrose – Dextrose hydrate – Fructose – Granulated (sugar) – Glucose – Maltose – Maple sugar – Maple syrup – Molasses – Sucrose – Sugar – Sweetener – Syrup – Treacle	– Charcoal – Ice lolly sticks – Laminated beams – Match sticks – Plasterboard – Plywood boxes – Toothpicks – Wood flour – Wood pulp – Wood resin	– Brewer's yeast – Coffee (roasted) – Dietary formula – Enzymes – Gum turpentine – Humate – Minerals – Rubber (crepe, gums) – Scents – Shellac – Tea – Vitamins