Outline: IPPC Guide to support the implementation of ISPM 15 (2017-043)

Status box

This status box is not an official part of the Guide and will be modified by the IPPC Secretariat	
Submission number:	2017-043
Date of this document	2021-02-03
Document category	Outline for a new IPPC Guide
Title	IPPC Guide to support the implementation of ISPM 15 (2017-043)
Current document stage	Approved Outline (2021-02-03)
Major stages	2019-06: Call for experts, technical materials and contributions to ISPM 15 Implementation Resource 2020-06: Implementation and Capacity Development Committee (IC) recommends merging the following three topics on the List of Implementation and Capacity Development Topics: - ISPM 15 treatment: Dielectric heat treatments, Guide (2012-015) - ISPM 15 treatment: Approval and monitoring of Heat treatment and dielectric heat treatment facilities, Guide (2017-043) - ISPM 15 Implementation guidelines for non-compliance, Guide (2018-012) 2020-06: Funding is secured and the ISPM 15 guide is added to the IPPC Secretariat workplan 2020-09: Implementation and Capacity Development Committee (IC) selects experts to participate in the working group to develop the guide 2020-11: 1st working group meeting (VM01) 2020-12: 2nd working group meeting (VM02) 2021-02: 3rd working group meeting (VM03): Approval of Outline
Implementation Committee leads	Ms Faith NGUNDE (Africa region representative to the IC) Ms Stephanie BLOEM (RPPO representative to the IC)
IPPC Secretariat lead	IFU: Ms Barbara PETERSON
Working Group experts	Membership list of the Working Group for the development of a Guide to support implementation of ISPM 15 (2017-043)
Notes	

1. Title

[1] IPPC Guide to support the implementation of ISPM 15 (2017-043)

2. Type of implementation resource

New implementation resource:

[2] ✓ Guide and possible supplemental resources (such as a factsheet, brochure, etc.)

3. Convention articles, ISPMs and CPM recommendations to be addressed by the proposed implementation resource

[3] ✓ ISPM (ISPM 15 Regulation of wood packaging material in international trade)

Scope

[4] This IPPC guide will be a comprehensive manual that will improve understanding of ISPM 15 *Regulation of wood packaging material in international trade* and support the implementation of this standard. It will provide information on the phytosanitary measures that are currently approved in ISPM 15 to manage pest risks associated with wood packaging material (WPM) moving in international trade and will describe the procedures needed to produce compliant WPM. The manual will provide specific information on treatment options for WPM and the process for approval of new treatments. It will offer guidance to assist NPPOs with the review and approval of ISPM 15 treatment facilities and treatment providers; monitoring treatments; and establishing procedures for manufacturing and producing ISPM 15 compliant WPM. The guide will also describe import controls, the process for identifying ISPM 15 non-compliant WPM and reporting these non-compliances. The guide will incorporate relevant materials that are already available, and replace the ISPM 15 Explanatory Document. Relevant ISPMs should be referenced. Definitions, case studies, flowcharts, diagrams and examples should also be included where appropriate.

Background / Purpose

[5] Several documented studies and pest risk assessments conducted by NPPOs have shown that untreated WPM can harbour pests which when moved to new areas may cause economic and environmental harm. ISPM 15 describes phytosanitary measures to manage the risk of pest movement in WPM including: the removal of bark; the application of a treatment, and; the identification of compliant WPM with an internationally recognized mark. ISPM 15 also requires that the application of these measures occur within an official certification system and proposes the adoption of import controls to monitor compliance.

[6] Several NPPOs have identified the need for additional guidance for the review and approval of ISPM 15 treatment facilities, treatment providers and wood packaging manufacturers, and for monitoring ISPM 15 treatments. The purpose of this guide is to provide comprehensive support to NPPOs on how to approve and oversee ISPM 15 wood packaging manufacturers, treatment facilities and treatment providers and how to apply heat (both conventional heat and dielectric heat) and fumigation treatments (both methyl bromide and sulfuryl fluoride) to WPM.

[7] Furthermore, harmonized guidance is needed to assist NPPOs in determining what should be considered and reported as true non-compliances for ISPM 15 versus other reasons for quarantine action. This will lead to consistency in the proper interpretation and implementation of ISPM 15 and will provide data that can be used to measure and track implementation of this standard.

[8] The working group will also be asked to recommend any supplemental resources / additional activities (e.g. global workshop, e-learning, a guide for treatment providers) that might be shared with the IPPC community to enhance the implementation of ISPM 15.

Content for the proposed implementation resource

1. Background

1.1. Introduction to ISPM 15 and how implementation of this standard facilitates safe trade and prevents the introduction and spread of pests

1.2. Describe the role and responsibilities of the NPPO and the various models of NPPO involvement in the production of ISPM 15 compliant WPM (e.g. programme delivery is exclusively by the NPPO, third party delivery of some elements with NPPO oversight, etc.)

1.3. Describe the WPM supply chain (i.e. the lifecycle of WPM, including origin, production, movement in trade, repair and disposal; include certification, where applicable)

1.4. Identify the key stakeholder groups involved in the WPM supply chain and describe their roles and responsibilities

1.5. Identify other national agencies involved in ISPM 15 compliance (for example, customs) and describe their roles and responsibilities

1.6. Describe best practices for NPPOs to collaborate with agencies and stakeholder groups involved in the WPM supply chain (e.g. communication, training, compliance agreements, MOUs, other resources)

2. Regulated articles *(link to Appendix 1, examples of WPM including pallets, custom-made crates, dunnage, etc.)*

3. Exempt articles *(examples of exempted articles could also be provided in an Appendix)*

4. Phytosanitary measures to manage pest risks associated with WPM moving in international trade

4.1. Debarking

4.2. Approved treatments *(reference ISPM 15, ISPM 28 (PT 22 and PT 23), ISPM 42 and ISPM 43)*

4.2.1. Heat treatments for WPM (very general introduction and provide link to Annex 1)

4.2.2. Fumigation treatments for WPM *(Provide a very general introduction to fumigation of WPM and a link to Annex 2. Clarify that fumigants must be approved prior to use (e.g. national pesticide registration requirements) and consider CPM Recommendation R-03: Replacement or reduction of the use of methyl bromide as a phytosanitary measure.*

4.3 Process for approval of new treatments (*reference ISPM 15, ISPM 28 and the IPPC Procedure for the development of phytosanitary treatments*) Consider including a chart

and also the roles of the Standards Committee (SC), Technical Panel on Phytosanitary Treatments (TPPT), and stakeholders during country consultation.

4.4. Alternative or bilateral arrangements *(see ISPM 15 Section 3.3; consider including a statement indicating why alternative arrangements are not recommended for WPM)*

5. ISPM 15 symbol and mark *(reference the ISPM 15 FAQ)*

5.1. Purpose and use of the ISPM 15 mark

5.2. Description of the ISPM 15 mark, its components and how to apply it *(link to Appendix 2, examples of compliant marks and some examples of non-compliant marks)*

5.3. Management of the ISPM 15 marks *(i.e. authorizing use of the mark and controlling its use)*

6. Establishment of national requirements

6.1 National registration of ISPM 15 mark *(process for registration and clarification that it is actually the symbol component of the mark that is registered, reference the ISPM 15 FAQ)*

6.2. National legislation or regulations to govern the production and importation of ISPM 15 compliant WPM, including approval for use of specific fumigants *(Section 9.1 of the ISPM 15 Explanatory document contains some information).*

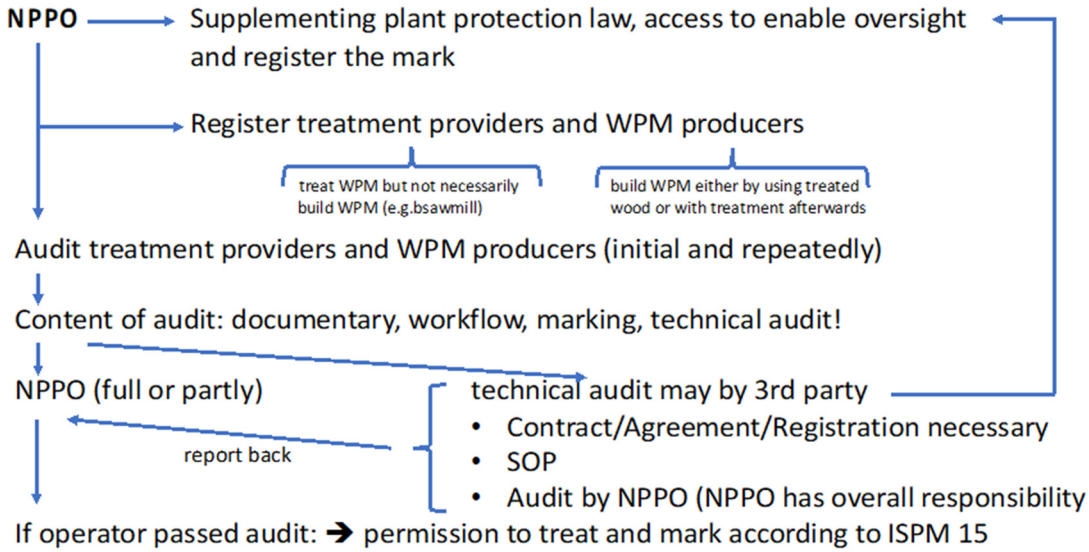
6.3. Infrastructure needs

6.4 NPPO best practices to report on ISPM 15 implementation *(e.g. registered companies, inspection of non-agricultural consignments, verifying and maintaining country information: https://www.ippc.int/en/countries/all/ispm15/)*

7. Procedures for production of compliant WPM (This section may need to be modified further to ensure that each of the ISPM 15 delivery models described in Section 1.2 is covered.)

7.1 Approval of treatment facilities, treatment providers and WPM manufacturers *(include a flowchart, the example below, which was proposed by IFQRG, could be used as a base and elaborated upon)*

II Flowchart



7.2. Accreditation and the role of third parties *(describe the responsibilities of the third party and the verification procedures carried out before export)*

7.3. Audits *(link to Appendix 3, sample audit checklists)*

7.4. Registration of approved treatment facilities, treatment providers and WPM manufacturers *(link to Appendix 4, sample compliance agreements)*

7.5. Non-compliance and de-registration of treatment facilities, treatment providers and WPM manufacturers

7.6. Accreditation and the role of third parties *(describe the responsibilities of the third party and the verification procedures carried out before export)*

8. Reusing, repairing and remanufacturing WPM

8.1. Reused WPM

8.2. Repaired WPM

8.3 Remanufactured WPM

8.4. Oversight of WPM repair and remanufacture

9 Procedures for Import

9.1. Import controls *(including inspection / verification of compliance with phytosanitary import requirements).*

9.2 Evaluating mark authenticity, explain presence of multiple marks and clarify that marks do not expire

9.3. Presence of bark *(link to Appendix 5, examples of bark on WPM, Appendix 1 of ISPM 39 may be relevant)*

9.4. Presence of live pests *(link to Appendix 6, lists of pests in association with WPM)*

9.4.1. Pests that may indicate failure of ISPM 15 certification *(i.e. primary wood pests, which would indicate treatment failure or fraud)*

9.4.2. Secondary invaders (secondary infestation) *(e.g. even a few specimens of bark beetles can be a reason for rejection of the packaging, but is it a failure of the HT treatment or secondary infestation?)*

9.4.3. Contaminating pests *(i.e. hitchhikers)*

9.4.4. Data collection and monitoring *(recommend what information should be collected, linked to Section 10.3)*

10. Measures for Non-Compliance at Point of Entry

10.1. Non-compliance for ISPM 15 (describe what constitutes non-compliance with ISPM 15, include examples and provide guidance on differentiating ISPM 15 non-compliance from other types of non-compliance; e.g. while some pests may require action if detected, pest interceptions do not always represent non-compliance with ISPM 15)

10.2. Enforcement options

10.2.1. Actions in response to ISPM 15 non-compliance

10.2.2. Quarantine actions for other reasons

10.3. Reporting non-compliances, including what information / data elements should be included in the notification (*reference Section 5 of ISPM 13 and Section 8 of the ISPM 15 Explanatory Document*). A flowchart could also be developed to illustrate the reporting channels from the port/place of detection → NPPO head office → NPPO of the country of production → investigation → corrective actions (*if appropriate*) → reporting.

ANNEX I: Guide to Heat Treatment (HT) and Dielectric Heating (DH) *(Author(s)should consider using Annex 1 of the Explanatory Document as a starting point. This information should be reviewed and updated to align with ISPM 15 and information on DH should be added, as appropriate.)*

1. **Scope**
2. **Background information on heat treatment, kiln-drying and dielectric heat**
3. **Heat treatment and dielectric heat as phytosanitary processes** *(Any information that is common to both HT and DH could be covered here and differences could also be highlighted.)*
4. **Definition of terms used in conventional and dielectric heating technologies**
5. **Technical requirements for ISPM 15 heat treatment** *(Any information that is unique to HT could be included here. Different heat technologies and energy sources may be included provided they are used to meet the treatment schedules specified in ISPM 15.)*

5.1. The heat chamber
5.2. Loading a heat chamber (*consider assembled wood packaging, lumber, wood packaging components, etc.*)
5.3. Air Circulation (*also discuss minimum airspeeds*)
5.4. Venting
5.5. Humidification and dehumidification

6. **Technical requirements for dielectric heat treatment** *(Describe the differences between RF and microwave heat types and the associated operational requirements. Any information that is unique to DH could be included in this section.)*

   6.1. General guidance (treatment application, measuring Commodity Temperature during dielectric heating, calibration of components of the temperature measurement system, temperature mapping and routine temperature measurement, methods of applying dielectric heat, treating lumber versus pallets)
   6.2. Considerations

7. **Verification of conventional and dielectric heat treatments (HT and DH)** *(Is it possible to cover both HT and DH verification in a single section?)*

   7.1. Heat chamber controllers
   7.2. Types of temperature monitoring systems (e.g. monitoring wood core temperatures vs. air chamber temperatures)
   7.3. Temperature measurement (Types of sensors: wood temperature, air temperature, relative humidity, etc. used to measure commodity temperature)
   7.4. Calibration and verification of temperature sensors and other components of the temperature monitoring system (*e.g. number of temperature sensors, calibration frequency / volume of HT chamber: the number of probes should be correlated with the volume of the HT chamber, how to address uncertainty in the measurement system*).
   7.5. Number of temperature sensors and placement of sensors
   7.6. Measurement of temperatures in the cold spots and temperature mapping

8. **Additional resources on heat treatments**

ANNEX II: Guide to fumigation treatments - methyl bromide and sulfuryl fluoride

(Author(s)should consider using Annex 2 of the Explanatory Document as a starting point. This information should be reviewed and updated to align with ISPM 15 and guidance on SF should be added.

1. **Introduction**

2. **Relationship between pest biology and fumigants - methyl bromide / sulfuryl fluoride**

3. **General guidance on fumigants - methyl bromide / sulfuryl fluoride**

   3.1. Penetration of wood
   3.2. Measuring the dose
   3.3. Applying and monitoring the fumigants

4. **Considerations for fumigation – methyl bromide / sulfuryl fluoride**

   4.1. Gas concentration
   4.2. Fumigation time
   4.3. Relationship between concentration, time and temperature
   4.4. Numeric value and conversion method as used in fumigation
   4.5. Infiltration of fumigant
   4.6. Temperature during fumigation
   4.7. CT product
   4.8. Diffusion of fumigant
   4.9. Sorption and desorption

5. Types of fumigation

5.1. Warehouse or chamber fumigation
5.2. Tarpaulin fumigation
5.3. Other types (e.g. ship holds, freight containers, if relevant)

6. Verification of methyl bromide fumigation / sulfuryl fluoride fumigation of WPM

7. Additional resources on fumigation

APPENDIX 1: Examples of wood packaging material (*regulated and exempt articles*, *including photos*)

APPENDIX 2: Examples of compliant and non-compliant ISPM 15 marks

APPENDIX 3 Sample checklists (e.g. for treatments, audits, etc.)

APPENDIX 4: Sample compliance agreements for authorized treatment facilities, treatment providers, WPM manufacturers, etc.

APPENDIX 5: Examples of bark on wood packaging material

APPENDIX 6: List examples of insect species that should not be found alive in ISPM 15 compliant wood and list examples of potential secondary invaders (like termites, carpenter bees, snails) and "green wood" pests (e.g., some insects, deep-wood fungi) that may trigger quarantine actions, but do not indicate non-compliance with ISPM 15.

APPENDIX 7: Case Studies (submitted by WG members or NPPOs)

Key references and other supporting materials

- ISPM 15 / Explanatory Document (by Shane Sela, lead author, Thomas Schroeder, Matsui Mamoru and Michael Ormsby)
- ISPM 15 Frequently Asked Questions
- ISPM 15 Workshops and Symposia
- International Forestry Quarantine Research Group (IFQRG) Reports
- Country implementation of ISPM 15 (NPPOs)
- Policy study on ISPM 15 implementation challenges (STDF/PG/460)
- Review of heat treatment of wood and wood packaging (NAPPO 2015)
- ST 05: Review of heat treatment of wood and wood packaging (NAPPO 2014)
- Dielectric heating as a treatment for wood packaging material (IPPC Fact sheet)
- USDA-APHIS Treatment Manual
- ISPM 15 Implementation in Australia (NPPO Australia, 2014)
- Variation in Inspection Efficacy by Member States of Wood Packaging Material Entering the European Union, D. Eyre, et.al., Journal of Economic Entomology, 2018
- D-13-01: Canadian Heat Treated Wood Products Certification Program (NPPO Canada)
- D-13-02: Requirements for the Evaluation and Recognition of Third Party Auditors (NPPO Canada)
- PI-007 - The Technical Heat Treatment Guidelines and Operating Conditions Manual (NPPO Canada)

Import / Export ISPMs that support the implementation of ISPM 15

- ISPM 7 Phytosanitary certification system
- ISPM 23 Guidelines for inspection
- ISPM 20 Guidelines for a phytosanitary import regulatory system
- ISPM 13 Guidelines for the notification of noncompliance and emergency action

Other ISPMs relevant to phytosanitary treatments of wood packaging

- ISPM 28 Phytosanitary treatments for regulated pests
    - PT 22: Sulphuryl fluoride fumigation treatment for insects in debarked wood
    - PT 23: Sulphuryl fluoride fumigation treatment for nematodes and insects in debarked wood
- ISPM 42 Requirements for the use of temperature treatments as phytosanitary measures
- ISPM 43 Requirements for the use of fumigation as a phytosanitary measure
- R-03: Replacement or reduction of the use of methyl bromide as a phytosanitary measure

Other ISPMs of possible relevance to this guide

- ISPM 39 International movement of wood *(Appendix 1)*

Technical Panel on Phytosanitary Treatments (TPPT) and Procedure for the development of phytosanitary treatments

- IPPC Procedure manual for standard setting *(Section 7.6)*