Food and Agriculture Organization of the United Nations

International Plant Protection Convention

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IPPC procedure manual for standard setting

Ninth edition

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Food and Agriculture Organization of the United Nations
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International Plant Protection Convention

2024-2025 Procedure Manual

Standard Setting

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CONTENTS

LIST OF ANNEXES

List of abbreviations

ALPP	area of low pest prevalence
APPPC	Asia and Pacific Plant Protection Commission
CBD	Convention on Biological Diversity
CDC	Capacity Development Committee
CEPM	Committee of Experts on Phytosanitary Measures
CP	contracting party
CPM	Commission on Phytosanitary Measures
DP	diagnostic protocol
EDG	expert drafting group
EPPO	European and Mediterranean Plant Protection Organization
EWG	expert working group
FAO	Food and Agriculture Organization of the United Nations
IAEA	International Atomic Energy Agency
IC	Implementation and Capacity Development Committee
ICPM	Interim Commission on Phytosanitary Measures
IPP	International Phytosanitary Portal
IPPC	International Plant Protection Convention
ISPM	International Standard for Phytosanitary Measures
LOT	*List of topics for IPPC standards*
LRG	Language Review Group
NAPPO	North American Plant Protection Organization
NPPO	national plant protection organization
OCS	Online Comment System
PRA	pest risk analysis
PT	phytosanitary treatment
ROP	Rules of procedure
RPPO	regional plant protection organization
RSPM	Regional Standard for Phytosanitary Measures
SC	Standards Committee
SC-7	Standards Committee Working Group of seven members
SO	Strategic Objective
SPG	Strategic Planning Group (formerly called SPTA)
SPS Agreement	Agreement on the Application of Sanitary and Phytosanitary Measures
SPTA	Strategic Planning and Technical Assistance (now called SPG)
SSP	Standard setting procedure
TFT	Task Force on Topics
TP	technical panel
TPCS	Technical Panel on Commodity Standards
TPDP	Technical Panel on Diagnostic Protocols
TPG	Technical Panel for the Glossary
TPPT	Technical Panel on Phytosanitary Treatments
WTO	World Trade Organization

INTRODUCTION

The purpose of this manual is to provide, in a convenient form, the decisions, procedures and practices of the Commission on Phytosanitary Measures (CPM), its subsidiary bodies, and other relevant drafting groups of relevance to standard setting.

Procedures relevant for the work of the Implementation and Capacity Development Committee (IC) of the International Plant Protection Convention (IPPC) are compiled in a separate procedure manual available on the International Phytosanitary Portal (IPP).[1]

This edition of the manual includes decisions and procedures through to the end of November 2024. The decisions and procedures described herein are subject to future amendment and the manual will be updated annually.

For the purpose of clarity, all official text is in black font with details of the source, including resolutions of the FAO Conference, and decisions of the Interim Commission on Phytosanitary Measures (ICPM), the CPM, the CPM Bureau, the Standards Committee (SC) and technical panels (TPs).

Black text may have been edited for consistency in terminology and therefore not necessarily be identical to the original text as adopted or approved.

Text in blue font is for explanatory purposes only and should not be considered an official decision.

Many references to annexes and internal sections in this document contain hyperlinks (underlined) to help navigation in the electronic version of this document.

Footnote cues are in red text to facilitate locating them in the paragraphs.

[1] *Procedure manual for Implementation and Capacity Development* available at: https://www.ippc.int/en/publications/86954/.

1. STANDARD SETTING

The development and adoption of standards, recommendations, diagnostic protocols and phytosanitary treatments is currently the major role of the CPM and the IPPC Secretariat. FAO provides a neutral forum for members to negotiate such international instruments as the International Plant Protection Convention (IPPC). IPPC standards are recognized by the World Trade Organization (WTO) as international benchmarks for trade in plant commodities.

The WTO Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement) recognizes standards developed under the auspices of the IPPC as the only international standards for plant health. International Standards for Phytosanitary Measures (ISPMs) are adopted by the Commission and come into force once countries establish aligned requirements within their national legislation. The standards of the IPPC are recognized as the basis for phytosanitary measures applied in trade by the Members of the WTO.

The standard setting work of the IPPC is led by the Commission's Standards Committee. The Standards Committee (SC) is supported by various technical panels, expert working groups, and the IPPC Secretariat.

The 1997 IPPC convention text is provided in ANNEX 1.

In November 1993, the Conference of the FAO, at its Twenty-Seventh Session, approved the first ISPM. Since then, standards covering a wide range of topics have been adopted and others are in the draft or consultation phases of the Standard setting process. Existing standards are scheduled for periodic review and are revised as necessary. Adopted ISPMs are listed in ANNEX 3 to this manual.

SSP

2. IPPC STANDARD SETTING PROCEDURE

The IPPC Standard setting procedure (SSP) forms Annex III of the Rules of procedure (ROP) of the Commission[2] (see ANNEX 2 for the CPM ROP; Annex III to the CPM ROP is reported below as adopted by the CPM and hence not included in the Annex).

The process for the development of ISPMs is divided into four stages:

- Stage 1: Developing the List of topics for IPPC standards
- Stage 2: Drafting
- Stage 3: Consultation and review
- Stage 4: Adoption and publication.

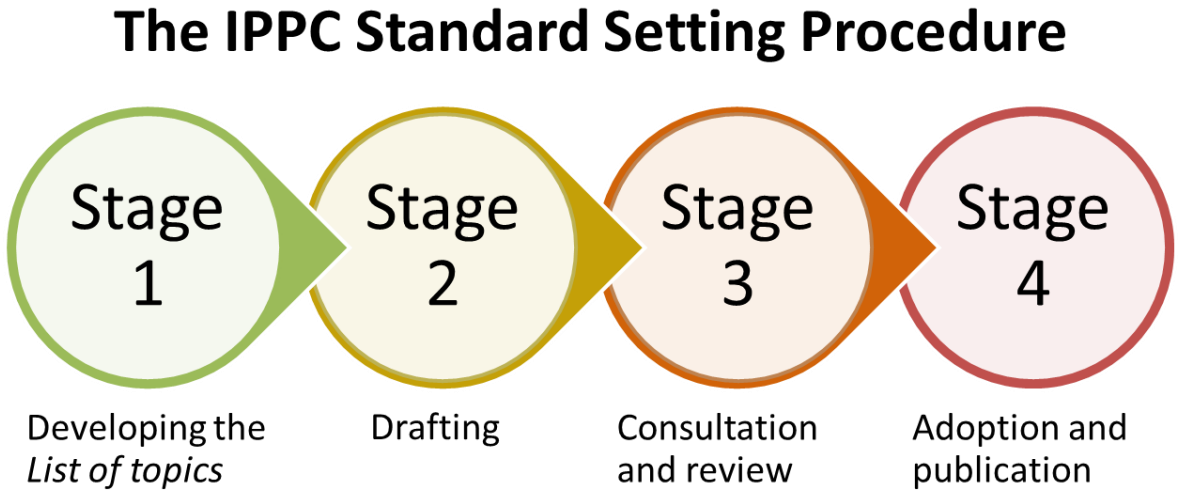

Figure 1. The four stages of the IPPC Standard setting procedure (SSP).

Figures are included in the following sections to provide a graphical representation of the steps of the SSP. Section 3 provides detailed explanations for individual steps of the SSP and flow charts showing these steps within annual timelines are contained in section 3.8.

[2] ICPM-2 (1999) adopted the Standard setting procedure as an Annex to the Rules of procedure (ROP) for the Interim Commission; ICPM-4 (2002) adopted the procedures for identifying topics and priorities for standards; CPM-1 (2006) agreed to include the SSP as Annex I when adopting the ROP of the Commission; CPM-3 (2008) modified procedures and criteria for identifying topics for inclusion in the IPPC standard setting work programme and adopted the revised Standard setting procedure as Annex I of the ROP of the Commission. CPM-7 (2012) adopted the revised Standard setting procedure; after the endorsement by CPM-8 (2013) of the ROP for CPM Bureau and the Guidelines for rotation of the CPM Chairperson and Vice-chairperson and nomination of Bureau, which became Annexes I and II, respectively, the SSP became Annex III to the ROP of the CPM. CPM-11 (2016) adopted the revised SSP (Appendix 7 of the CPM-11 report). CPM-16 (2022) adopted the revised SSP (Appendix 7 of the CPM-16 report). CPM-17 (2023) adopted the reviewed SSP (CPM 2023/08, with correction from CRP/02). CPM-18 (2024) adopted the revised SSP (Appendix 3 of the CPM-18 report).

SSP

Stage 1: Developing the *List of topics for IPPC standards*

Step 1: Call for topics

The Procedures and *Criteria for justification and prioritization of proposed topics* for inclusion in the *List of topics for IPPC standards* (LOT) were first adopted by ICPM-4 (2002) and revised by CPM-3 (2008), CPM-10 (2015) and CPM-13 (2018).[3]

CPM-13 (2018) agreed on a new process for a Call for topics: standards and implementation.[4] Changes to the Call for topics process included: (1) proposals can be submitted for standards and implementation resources; (2) a Task Force on Topics (TFT) with members from the Bureau, SC and IC reviews all topic submissions and provides recommendations to the SC and IC and ultimately the CPM. The process is described in detail in section 3.2.

CPM-19 (2025) introduced temporary changes to the IPPC Standard Setting Procedure, in particular regarding the Call for Topics: Standards and Implementation. The CPM:[5]

- agreed to pause for two years the currently agreed process of using the TFT to review new topic submissions and make recommendations to CPM on the addition of topics to the SC and IC work programme and their priority;
- agreed that topics submitted during the currently scheduled 2025 Call for Topics: Standards and Implementation, and those submitted during the one year of open call for topics, be submitted directly to both the SC and IC for their review and prioritization on a trial basis, and if supported, later recommended to CPM for addition to the work programme;
- encouraged the SC and IC to prepare for the review of topics submitted during the 2025 call for topics, by establishing appropriate structures; and
- agreed that the SC and the IC, after the 2-year trial period, would assess the new process and present results to CPM-21 (2027) with a proposal for future steps and agreed for the bureau to provide further guidance.

To implement these temporary changes, the SC May 2025 agreed the following schedule for reviewing topics in 2025: [6]

- September – secretariat compiles the information and posts it on the IPP;
- September – secretariat shares all submissions with the SC and, where a submission is relevant to a technical panel, shares the submission with that panel;
- technical panels receiving submissions provide advice to the SC on feasibility and recommend priorities;
- November – SC reviews submissions at its face-to-face meeting;
- December – SC reviews its final recommendations by SC e-decision; and
- secretariat submits SC recommendations to CPM-20 (2026).

References to the TFT in the following description of Step 1 should therefore be ignored during the two-year trial period 2025–2027.

[3] CPM-3 (2008) report, Appendix 8 and revised by CPM-10 (2015), paragraph 74 and Appendix 6 of the CPM-10 report.

[4] Report CPM-13 (2018), section 9.1, Appendixes 7, 8 and 9.

[5] CPM-19 (2025), agenda item 9.3.

[6] SC 2025-05, agenda item 9.2.

SSP

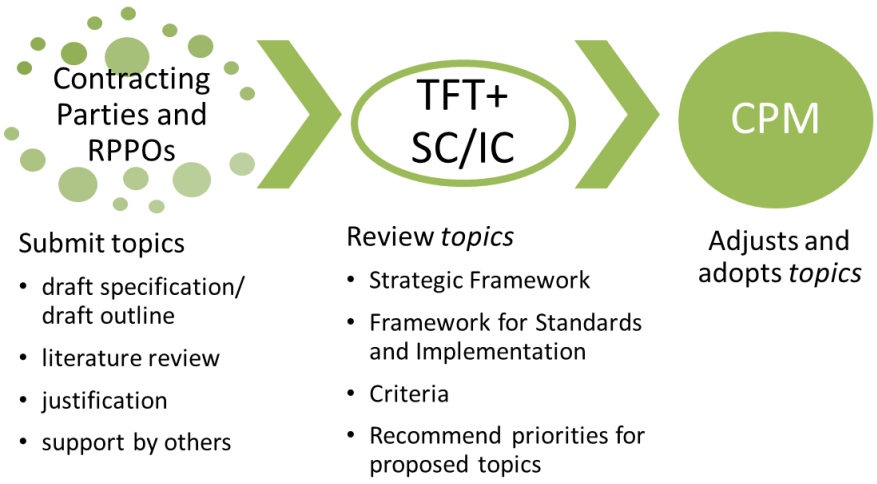

Figure 2. Procedure for stage 1, step 1: Call for topics: standards and implementation.

The IPPC Secretariat makes a Call for topics for standards and implementation[7] every two years. During this call, contracting parties (CPs) and regional plant protection organizations (RPPOs) can submit detailed proposals for new topics or for the revision of existing ISPMs to the IPPC Secretariat. Submissions should be accompanied with a draft specification, a literature review and justification that the proposed topic meets the CPM-approved criteria for topics (available in the *IPPC procedure manual for standard setting*). To indicate a global need for the proposed topic, submitters are encouraged to gain support from CPs and RPPOs in other regions.

The submissions are reviewed by the Task Force on Topics (TFT), which makes recommendations to the Standards Committee (SC) and the Implementation and Capacity Development Committee (IC) respectively.

A separate call for submissions for subjects for Technical Panels' work programme is made. Contracting parties and regional plant protection organizations submit detailed proposals for subjects, which should follow the relevant submission documentation requirements. These are evaluated by the relevant technical panel.

The SC reviews the submissions, taking into account the IPPC Strategic Framework[8], the *Criteria for justification and prioritization of proposed topics*, and the recommendation of the TFT and technical panels.

The SC reviews the List of Topics (LOT) (including subjects). The SC recommends to the CPM topics and commodities as subjects and their priority for addition to the work programme. The SC includes other subjects into the work programme and recommends them to the CPM for noting.[9]

The CPM reviews, changes and adopts the LOT, including assigning a priority for each topic.

A revised LOT is made available.[10]

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[7] This is a call for ISPMs (including annexes not covered by a Technical Panel) and revisions of ISPMs, see the *Hierarchy of terms for standards* in the *IPPC Procedure manual for standard setting.*

[8] IPPC Strategic Framework available on the IPP at: https://www.ippc.int/en/strategic-objectives/ippc-strategic-framework/.

[9] CPM-18 (2024), Appendix 3, based on CPM 2024/08, CPM 2024/INF/09 and CPM 2024/INF/20.

[10] The *List of topics for IPPC standards* is maintained as an online database on the IPP and regularly updated by the Secretariat: https://www.ippc.int/en/core-activities/standards-setting/list-topics-ippc-standards/list.

Step 2: Annual review of the *List of topics for IPPC standards*

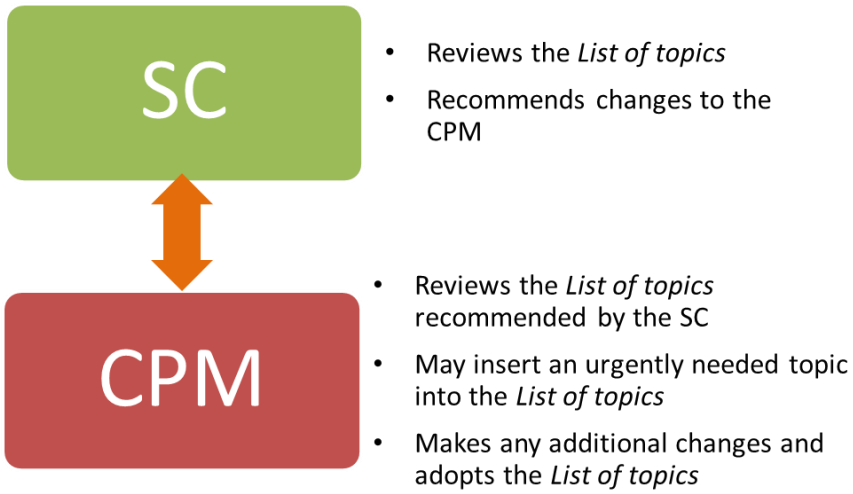

Figure 3. Procedure for stage 1, step 2: Annual review of the *List of topics for IPPC standards*.

Annually the SC reviews the LOT and recommends changes (including deletions, or changes in priority) to the CPM. In exceptional circumstances, in response to a specific need, the SC may recommend an addition to the LOT.

The CPM reviews the LOT recommended by the SC. The CPM changes and adopts the LOT, including assigning a priority for each topic. A revised LOT is made available.

In any year, when a situation arises in which an ISPM or a revision to an ISPM is required urgently, the CPM may add such a topic into the LOT.

Stage 2: Drafting

Step 3: Development of a specification

The SC should be encouraged to assign a lead steward and assistant(s) for each topic. These assistants could be from outside the SC, such as potential SC replacement members, former SC members, technical panel (TP) members or expert working group members.

The SC reviews the draft specification. The SC should endeavour to approve draft specifications for consultation at the SC meeting following the CPM session when new topics have been added to the LOT.

SSP

Figure 4. Procedure for stage 2, step 3: Development of draft specification.

Once the SC approves the draft specification for consultation, the IPPC Secretariat makes it publicly available. The IPPC Secretariat solicits comments through the IPPC Online Comment System (OCS) from CPs and RPPOs. The length of the consultation for draft specifications is 90 days. The IPPC contact point submits comments to the IPPC Secretariat using the OCS.[11]

The IPPC Secretariat compiles the comments received, makes them publicly available and submits them to the Steward and the SC for consideration. The specification is revised and approved by the SC, and made publicly available.

Step 4: Preparation of a draft ISPM[12]

An expert drafting group (EDG) (i.e. expert working group (EWG) or TP) drafts or revises the draft ISPM in accordance with the relevant specification. The SC may request the IPPC Secretariat to solicit comments from scientists around the world to ensure the scientific quality of draft DPs. The resulting draft ISPM is recommended to the SC.

The SC or the SC working group established by the SC (SC-7) reviews the draft ISPM at a meeting (for a diagnostic protocol (DP) or phytosanitary treatment (PT), the SC reviews it electronically) and decides whether to approve it for consultation, to return it to the Steward or an EDG or to put it on hold. When the SC-7 meets, comments from any SC members should be taken into account.

[11] The IPPC Secretariat is using the IPPC Online Comment System (OCS) for submitting comments on draft specifications and draft ISPMs for consultation periods. The OCS is available at: https://ocs-new.ippc.int.

[12] This procedure refers to "draft ISPMs" and "standards" to simplify wording, but also applies to any part of an ISPM, including annexes, appendixes or supplements.

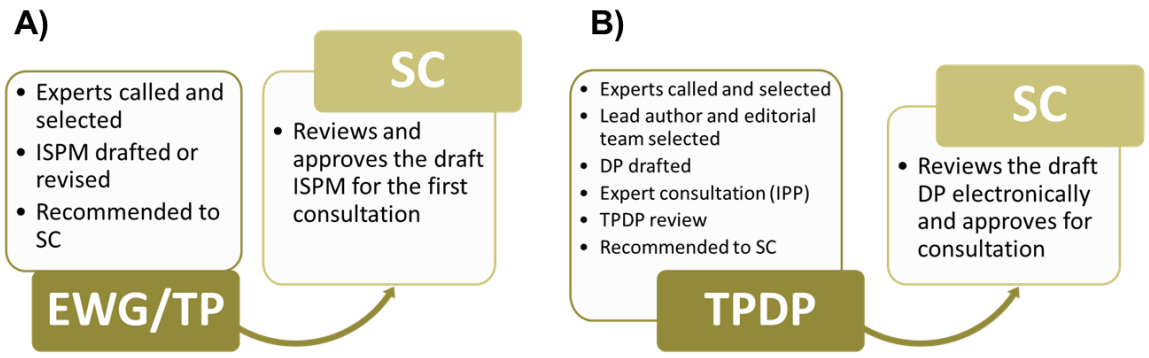

Figure 5. Procedure for stage 2, step 4: A) preparation of draft ISPM or PT; B) preparation of draft DP.

Stage 3: Consultation and review

Draft ISPMs are submitted to at least two consultation periods except for draft DPs and draft PTs (annexes to ISPM 27 and ISPM 28) which are submitted to one consultation period unless decided otherwise by the SC.

For DPs only, an additional consultation period may be opened in January–May, in addition to the consultation period in July–September (see section 3.4).

Step 5: First consultation

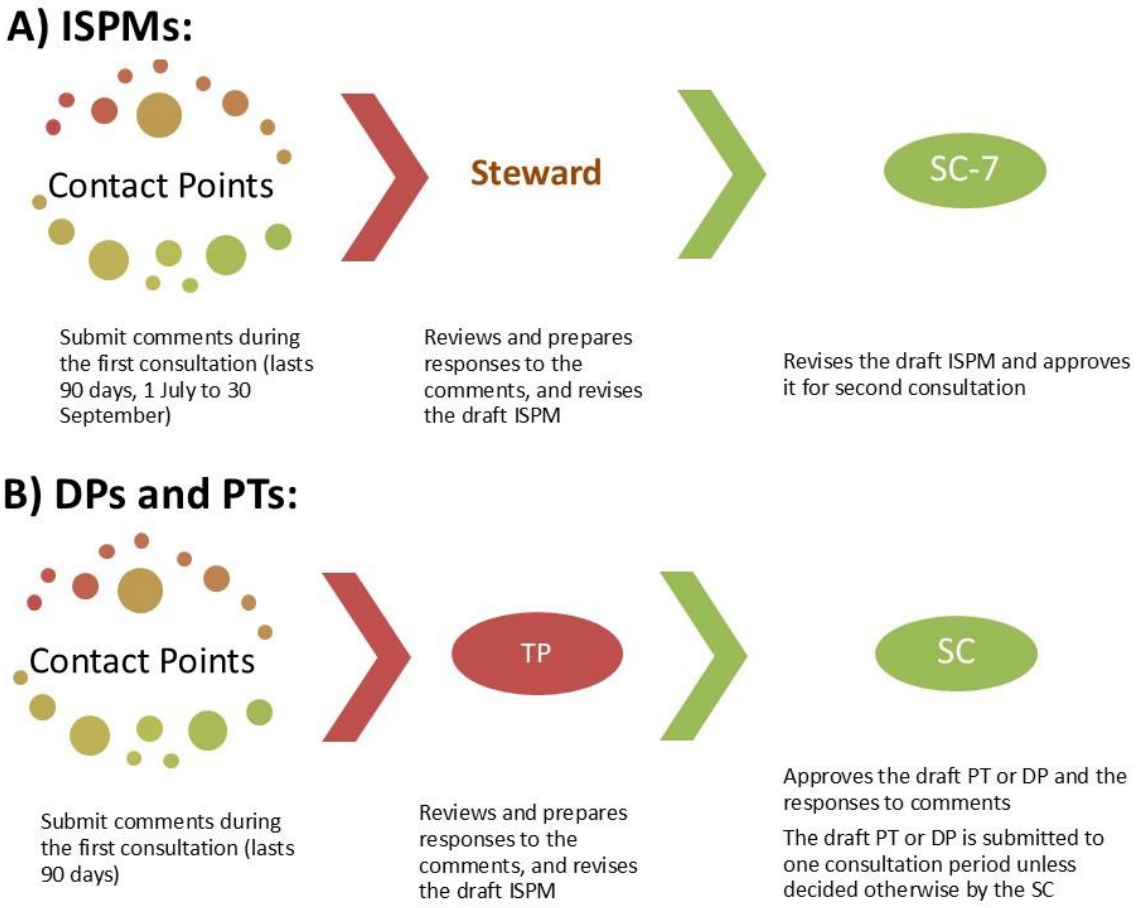

Figure 6. Procedure for stage 3, step 5: First consultation. A) process followed for draft ISPMs, B) process followed by draft DPs and PTs which are submitted to one consultation period unless decided otherwise by the SC.

Once the SC approves the draft ISPM for the first consultation, the IPPC Secretariat makes it publicly available. The IPPC Secretariat solicits comments through the OCS from CPs and RPPOs. The IPPC contact point submits comments to the IPPC Secretariat using the OCS.

International organizations, national plant protection services of non-CPs, and other entities can submit discussion papers on the draft ISPM to the IPPC Secretariat.

The length of the first consultation for draft ISPMs is 90 days. The IPPC Secretariat compiles the comments and discussion papers received, makes them publicly available and submits them to the Steward for consideration.

The Steward reviews the comments and discussion papers, prepares responses to the comments received through the OCS, revises the draft ISPM and submits them to the IPPC Secretariat.[13] These are made available to the SC. Taking the comments into account, the SC-7 or TP (for draft DPs or draft PTs or draft Commodity Standards or Glossary terms) revises the draft ISPM and recommends it to the SC.

For draft ISPMs other than draft DPs and draft PTs, responses to the major issues raised in the comments are recorded in the report of the SC-7 meeting. Once the SC-7 recommends the draft ISPM to the SC, the IPPC Secretariat makes it publicly available.

For draft PTs, the SC may recommend them for adoption by the CPM if no significant or major technical comments are made during the first consultation.

For draft PTs or draft DPs, once the SC has approved them and the responses to comments, the drafts and responses to comments are made publicly available. A summary of the major issues discussed by the SC for the draft DP or draft PT is recorded in the report of the following SC meeting.

Alternatively to approving the draft ISPM, the SC may for example return it to the Steward or an EDG, submit it for another round of consultation or put it on hold.

Step 6: Second consultation

Once the SC or SC-7 approves the draft ISPM for the second consultation, the IPPC Secretariat solicits comments through the OCS from CPs and RPPOs. The IPPC contact point submits comments to the IPPC Secretariat using the OCS.

International organizations, national plant protection services of non-CPs, and other entities can submit discussion papers on the draft ISPM to the IPPC Secretariat.

The length of the second consultation is 90 days. The IPPC Secretariat compiles the comments received and discussion papers, makes them publicly available and submits them to the Steward for consideration.

The Steward reviews the comments and discussion papers, prepares responses to the comments received through the OCS, revises the draft ISPM and submits the revised draft ISPM to the IPPC Secretariat. These are made available to the SC and the revised draft ISPM, other than draft PTs, is made available to CPs and RPPOs.

The SC reviews the comments, the Steward's responses to the comments and the revised draft ISPM. For draft ISPMs other than draft PTs, the SC provides a summary of the major issues discussed by the SC. These summaries are recorded in the report of the SC meeting.

For draft PTs, once the SC has approved them and the responses to comments, the drafts and responses to comments are made publicly available. A summary of the major issues discussed by the SC for the draft PT is recorded in the report of the following SC meeting.

[13] See *Responsibilities, duties and tasks of the lead steward* and section 3.4.2 on how to respond to comments.

Alternatively to recommending the draft ISPM to the CPM, the SC may for example return it to the Steward or an EDG, submit it for another round of consultation, or put it on hold.

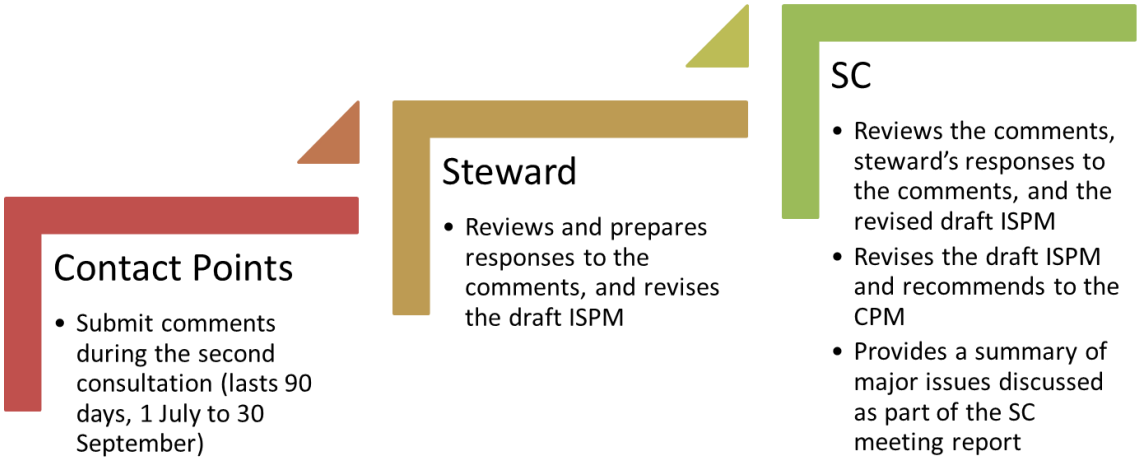

Figure 7. Procedure for stage 3, step 6: second consultation of draft ISPMs and draft PTs. Note that in the case of PTs, the TPPT reviews comments and revises the draft to be presented to the SC.

Stage 4: Adoption and publication

Step 7: Adoption

- For draft ISPMs other than draft DPs:

Following recommendation by the SC, the draft ISPM is included on the agenda of the CPM session. The IPPC Secretariat should make the draft ISPM presented to the CPM for adoption available in the languages of the Organization as soon as possible and at least six weeks before the opening of the CPM session.[14]

If all CPs support the adoption of the draft ISPM, the CPM should adopt the ISPM without discussion.

If a CP does not support the adoption of the draft ISPM, the CP may submit an objection.[15] An objection must be accompanied by technical justification and suggestions for improvement of the draft ISPM which are likely to be acceptable to other CPs and be submitted to the IPPC Secretariat no later than three weeks before the CPM session. Concerned CPs should make every effort to seek agreement before the CPM session. The objection will be added to the CPM agenda and the CPM will decide on a way forward.

[14] Draft ISPMs approved by the SC to go to the CPM for adoption are available in the SC November meeting report in English.

[15] An objection should be a technically supported objection to the adoption of the draft standard in its current form and sent through the official IPPC contact point (refer to the *Criteria to help determine whether a formal objection is* technically *justified* as approved by CPM-8 (2013), recorded in the *IPPC Procedure manual for standard setting*). To submit the objection, CPs should use the online form and the templates posted in languages on the IPP (https://www.ippc.int/en/publications/85331/) as decided by the Bureau 2017-06 and the SC 2017-11.

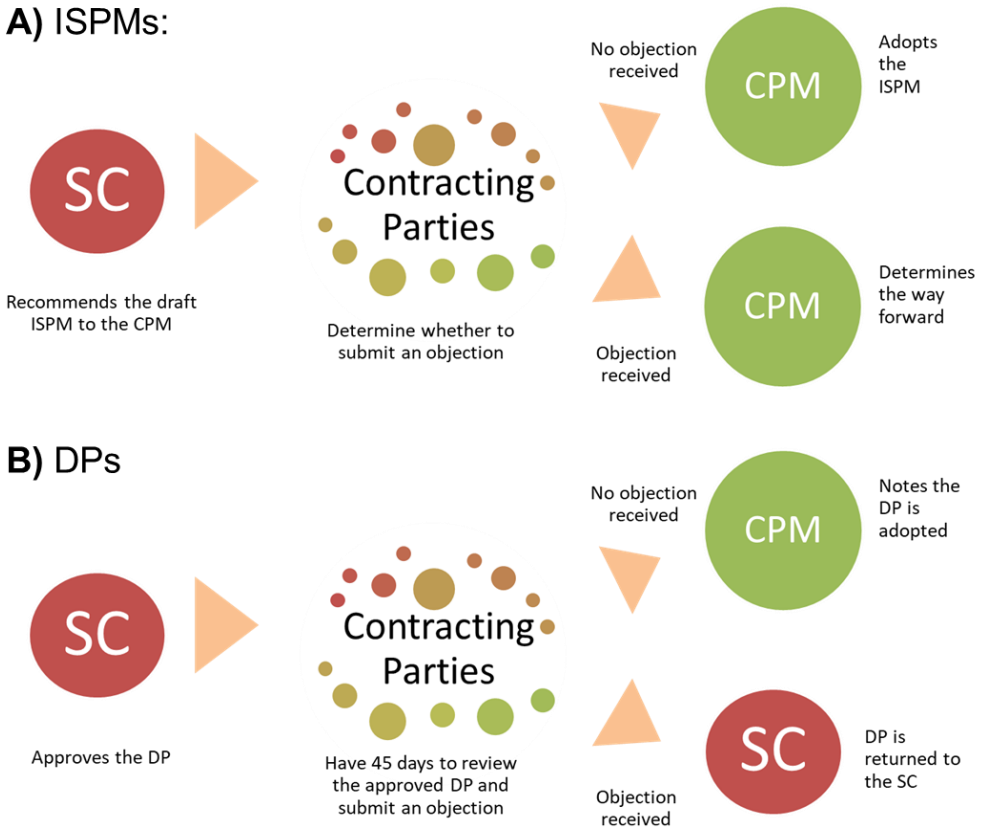

Figure 8. Procedure for stage 4, step 7: Adoption of A) ISPMs other than DPs, B) DPs.

When the need for a minor technical update to an adopted ISPM is identified by a TP or the SC, the SC can recommend the update for adoption by the CPM. The IPPC Secretariat should make the update to the adopted ISPM available in the languages of the Organization as soon as possible and at least six weeks prior to the opening of the CPM meeting. Minor technical updates to adopted ISPMs presented to the CPM are subject to the objection process as described above.

- For draft DPs:

The CPM has delegated its authority to the SC to adopt DPs on its behalf. Once the SC approves the DP, the IPPC Secretariat makes it available on defined dates twice a year[16] and CPs are notified.[17] CPs have 45 days to review the approved DP and submit an objection, if any, along with the technical justification and suggestions for improvement of the approved DP. If no objection is received, the DP is considered adopted. DPs adopted through this process are noted by the CPM and attached to the report of the CPM meeting. If a CP has an objection, the draft DP should be returned to the SC.

When a technical revision[18] is required for an adopted DP, the SC can adopt the updates to adopted DPs via electronic means. The revised DPs shall be made publicly available as soon as the SC adopts them. DPs revised through this process are noted by the CPM and attached to the report of the CPM meeting.

[16] 1 July and 30 January as decided by SC 2017-05 and SC 2024-11, respectively.

[17] For translation of DPs, contracting parties would follow the mechanism for requesting the translation for DPs into FAO languages posted on the IPP (https://www.ippc.int/en/core-activities/standards-setting/notification-period-dps/mechanism-translate-diagnostic-protocols-languages/).

[18] A technical revision for DPs has been defined by the SC. See section 7.3 (TPDP) for more detail.

Step 8: Publication

The adopted ISPM is made publicly available.

CPs and RPPOs may form a Language Review Group (LRG) and, following the CPM-agreed LRG process[19], may propose modifications to translations of adopted ISPMs.

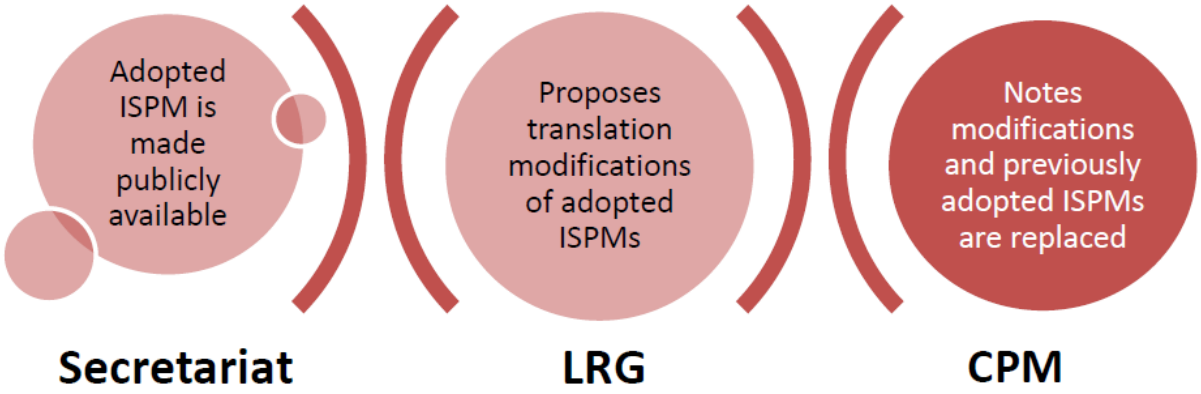

Figure 9. Procedure for stage 4, step 9: Publication and Language review.

[19] The LRG process is available here: https://www.ippc.int/en/core-activities/governance/standards-setting/ispms/language-review-groups/.

3. THE IPPC STANDARD SETTING PROCESS EXPLAINED

3.1 General considerations on standard setting[20]

All ISPMs shall be developed following the same IPPC SSP. Some slight variations should continue to apply to DPs and PTs, as follows:

- Steps in the SSP are not restricted to any specific time of the year, although first and second consultation would be at defined times.
- The SC can make decisions electronically.
- Unlike other draft ISPMs, DPs and PTs are not considered by the SC-7, but are considered and resolved by the relevant technical panel (TP)21. The SC approves these drafts for consultation by e-decision and these are made available to IPPC contracting parties only after approval, because they are not SC meeting documents (see Provisions for the availability of standard setting documents).

As part of the standard setting process, the following items should be considered when developing specifications and drafting standards, when providing and considering comments and when adopting standards. These general considerations, although not presented as part of the SSP, form an integral part of the Standard setting process. They are taken into account in order to ensure that:

- The SSP follows a transparent process (including, for example, publishing relevant documents as laid out in Provisions for the availability of standard setting documents, consulting with contracting parties, etc.).
- The ISPMs are of high quality and science based.
- The ISPMs are developed according to the Commission-agreed priorities.
- All contracting parties have a chance to be involved and to participate in the process, which includes appropriate funding mechanisms for participation in meetings. Domestic stakeholders are involved by the means of the contracting parties.
- The SSP follows a consistent process.
- The standard setting programme is implemented using the available IPPC standard setting resources and national or regional funding mechanisms.
- The ISPMs are presented to the Commission for adoption after all stages are completed and when no extensive discussion is needed.
- The hierarchical relationship between all groups, panels and committees involved in the Standard setting process is clear.
- The Standard setting procedures and processes facilitate the development and adoption of standards; they are flexible and periodically reviewed.
- Unnecessary bureaucratic steps, which reduce efficiency without improving output, are avoided.

3.1.1 Financial considerations for standard setting[22]

The ICPM-2 (1999) *noted*:

- Whenever possible, SC members and those participating in standard setting activities should voluntarily fund their travel and subsistence to attend meetings. Members may request financial assistance from the FAO for meetings other than those associated with the Commission meeting,

[20] CPM-3 (2008), Paragraph 92.1, Appendix 9 and *Improvements to the Standard setting process* adopted by CPM-7 (2012), Appendix 4, Decision 7.

[21] Note that DPs are usually not submitted to the second consultation period.

[22] ICPM-2 (1999), Appendix VII.

with the understanding that the priority for financial assistance is given to representatives from developing countries.

- The financial resources made available to the Secretariat for the work programme, including savings realized by members and others voluntarily accepting costs for participation in the SC or activities associated with standard setting, be directed as far as possible to expanding the work programme for the establishment of standards and assisting the participation of developing member countries.
- Extra budgetary funds be made available for developing countries to participate in ad hoc Open-ended Discussion groups.
- Sponsors and donors be encouraged to make contributions to the work programme.

Rules for directed financial assistance for standard setting (sponsorship of standards)[23]

The provision of external resources for standard setting should:

- be applied only for standards that are approved as priorities by the Commission
- not create an undue resource drain on the work programme of the Secretariat
- not displace core programme priorities
- follow the normal procedures, policies and practice of standard setting with no modifications according to the preferences of the funding entity.

Provision of resources

Funding for standard setting meetings may be provided from sources other than the regular programme of the IPPC (FAO). As recommended by ICPM-2 (1999), whenever possible, those participating in standard setting activities voluntarily fund their travel and subsistence to attend meetings. Participants may request financial assistance, with the understanding that resources are limited and the priority for financial assistance is given to developing country participants. Please refer to the *Criteria used for prioritizing participants to receive travel assistance to attend meetings organized by the IPPC Secretariat* posted on the International Phytosanitary Portal (IPP).

The criteria for funding posted on the IPP are updated annually.

3.1.2 Transparency

The ICPM-2 (1999) determined that[24]:

- maximum practical transparency be encouraged in the Standard setting procedure
- the Commission should encourage the wide use of electronic communication and the Internet in the Standard setting procedure.

Recommendations for an improved transparency to and from the SC

To improve the transparency[25]:

- All consultation comments should be published on the IPP.
- The IPPC Secretariat should produce and make accessible a generic summary of SC reactions to classes of comments made during consultation periods.
- Members of the SC should report back to countries in their regions.

[23] ICPM-4 (2002), Appendix XI.

[24] ICPM-2 (1999), Appendix VII.

[25] ICPM-6 (2004), Appendix IX, paragraph 6. See also *Provision for the availability of standard setting documents*.

- Guidelines for members of the SC have been developed to incorporate guidance on this reporting function of SC members (see section 5).

Recommendation on the use of modern communications

Email, teleconferencing and other modern communication methods should be used where possible to advance discussion on standards. However, face-to-face meetings of experts should be continued with email communications used to supplement these meetings, not replace them.[26]

3.1.3 Role of regional plant protection organizations in standard setting

Areas of cooperation between regional plant protection organizations (RPPOs) and the IPPC Secretariat in the Standard setting process include the following[27]:

- participation in the development of standards, such as identifying topics for standards and providing comments during the consultation periods
- identification of regional standards that should be proposed as the basis for future ISPMs
- action as collaborators and assistance in hosting standard setting meetings, as appropriate
- preparation of draft explanatory documents on ISPMs according to paragraph 111 of the Report of the Sixth Session of the ICPM under the auspices of the IPPC Secretariat
- provision of technical and administrative support to Standards Committee members
- participation of RPPO observers in the Standards Committee meetings.

3.1.4 Provisions for the availability of standard setting documents

CPM-3 (2008) adopted provisions for the availability of standard setting documents.[28] CPM-4 (2009) and CPM-11 (2016) modified these slightly.[29]

[26] ICPM-6 (2004), Appendix IX, paragraph 7.

[27] CPM-12 (2012), paragraph 51.6 and Appendix 9.

[28] CPM-3 (2008), paragraph 99.1 and Appendix 12.

[29] CPM-4 (2009), paragraph 126.6; CPM-11 (2016), paragraph 62.4.

Table 1. Provisions for the availability of standard setting documents

	Type of document	Level of access[39]	Notes
Expert drafting groups (EWGs, TPs)	Working documents	Relevant expert drafting group	
	Reports	Not restricted (public)	Once approved by the expert drafting group
Standards Committee: input	Agenda and list of participants	Contracting parties, RPPOs and SC	A simplified public agenda is posted for all standard setting meetings on the IPP calendar
	List of SC documents	Contracting parties, RPPOs and SC	Indicating who has access to each document
	Draft ISPMs and draft specifications presented to the SC	Contracting parties, RPPOs and SC	Duly marked as a draft and numbered as an identifiable version
	Draft PTs and DPs presented to the SC	SC only	Posted in SC e-decision forum
	Summary of the discussions and decisions on SC e-decision forums	Not restricted (public)	Reported in the following SC meeting report
	Compiled consultation comments on draft specifications and draft ISPMs	Not restricted (public)	
	Detailed stewards' responses to consultation comments on draft ISPMs (other than DPs or PTs)	SC only	
	SC responses to consultation comments on DPs and PTs	Not restricted (public)	TPDP or TPPT provide initial responses, SC reviews and approves the final responses
	Summary of major issues from consultation discussed (for both draft ISPMs and draft specifications)	Not restricted (public)	Part of the SC or SC-7 reports
	Other SC documents	Contracting parties, RPPOs and SC, or SC only	This will be determined on a case by case basis by the SC
Standards Committee: output	All documents approved by the SC during its meetings	Not restricted (public), when annexed to the SC report	Documents approved to be processed further are included as annexes to the SC report, and are therefore available without restriction
	SC report	Not restricted (public)	
Others	Proposals for topics for inclusion in the *List of topics for IPPC standards*	Not restricted (public)	Available on the Call for topics website
	Any document whose access is restricted according to the above	Group concerned	In this case, an SC member or a contracting party could request access to the document. This document would be made available with the prior agreement of the SC and, if applicable, of the person or group preparing the document.

General Considerations

3.2 Topics

3.2.1 Submission of topics

Detailed proposals for new topics or for the revision of existing ISPMs are submitted during the Call for topics: Standards and Implementation through the online submission form or by email to the IPPC Secretariat (IPPC@fao.org) within the deadlines established by the IPPC Secretariat that year. CPM-13 (2018) adopted changes to the Call for topics process as detailed below and they also requested a Task Force on Topics (TFT) to be established to review submissions of topics and provide relevant recommendations to both the SC and the IC. The submission form for topics for IPPC standards is available on the IPP[31] and attached as ANNEX 7. Submissions should address the *Criteria for justification and prioritization of the proposed topic* (see below), and, where possible, information should be provided to support the justification and assist the prioritization. Submissions should preferably be made in an electronic format. All submissions for standard topics should be accompanied by a draft specification.

CPM-11 (2016) agreed that a combined Call for topics: Standards and Implementation should be made.[32] CPM-11 (2016) also agreed that any submission in response to a Call for topics should clearly define the problem needing resolution in sufficient detail to determine how it fits into the Framework for standards and implementation and the cost/benefit of the development of the standard or tool.[33]

CPM-13 (2018)[34] confirmed the title of the Call: "Call for topics: standards and implementation", agreed to the proposed process for the Call for topics (Figure 10) as well as to the revised Criteria for the Justification and Prioritization of Proposed Topics and that the call be made every two years.

CPM-13 (2018) requested the Bureau to establish the Task Force on Topics and agreed to the Terms of reference and Rules of procedure for the Task Force on Topics.

Note: CPM-19 (2025) agreed to pause for two years the process of using the TFT to review new topic submissions and agreed that, during, this two-year period topics would be submitted directly to both the SC and the IC for review and prioritization and, if supported, then recommended to CPM for addition to the work programme (see section 2).

Topics

[31] https://www.ippc.int/en/core-activities/standards-and-implementation/call-for-topics-standards-and-implementation/.

[32] CPM-11 (2016), paragraph 33.4.

[33] CPM-11 (2016), paragraph 33.6.

[34] CPM-13 (2018), paragraph 61.

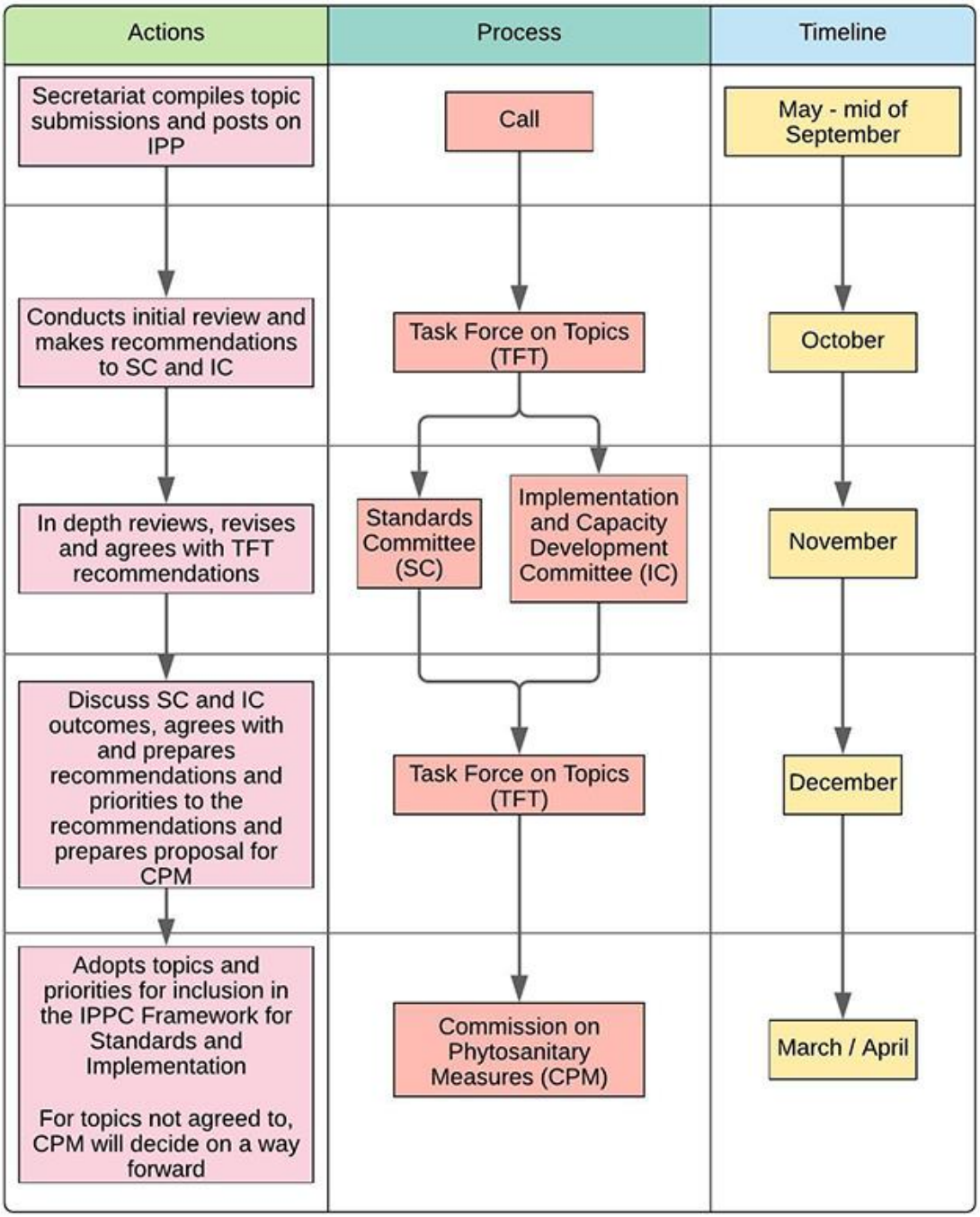

Figure 10. The process of the Call for topics: standards and implementation.[35]

Topics for standards or implementation resources are submitted using the submission form available on the Call for topics website (and attached as ANNEX 7).

[35] As adopted by CPM-13 (2018). The call to be issued every two years.

Topics for diagnostic protocols are submitted using a separate, simplified submission form, which along with the criteria for the prioritization of diagnostic protocols is included in section 7.3.

Detailed data for phytosanitary treatments are called for separately from the Call for topics and using a different submission form (see section 7.6). The submission form for phytosanitary treatments is posted on the IPP and the prioritization criteria for proposed phytosanitary treatments and score definitions are also given in section 7.6.

3.2.2 Criteria for justification and prioritization of proposed topics[36]

Priority will be given to topics with the largest global impact.

Core criteria (must provide information. It is expected that all submissions meet the following core criteria):

(1) Contribution to the purpose of the IPPC as described in article I.1.

(2) Linkage to IPPC Strategic Objectives (SOs) and Organizational results demonstrated.

(3) Feasibility of implementation at the global level (consider ease of implementation, technical complexity, capacity of national plant protection organization(s) (NPPO(s)) to implement, relevance for more than one region).

(4) Clear identification of the problems that need to be resolved through the development of the standard or implementation resource.

(5) Availability of, or possibility to collect, information in support of the proposed standard or implementation resource (e.g. scientific, historical, technical information, experience).

Supporting criteria (provide information as appropriate)

Practical

(1) Is there a regional standard and/or implementation resource on the same topic already available and used by NPPOs, RPPOs or international organizations?

(2) Availability of expertise needed to develop the proposed standard and/or implementation resource.

Economic

(1) Estimated value of the plants protected.

(2) Estimated value of trade including new trade opportunities affected by the proposed standard and/or implementation resource (e.g. volume of trade, value of trade, the percentage of gross domestic product of this trade) if appropriate.

Environmental

(1) Utility to reduce the potential negative environmental consequences of certain phytosanitary measures, for example reduction in global emissions for the protection of the ozone layer.

(2) Utility in the management of non-indigenous species which are pests of plants (such as some invasive alien species).

(3) Contribution to the protection of the environment, through the protection of wild flora, and their habitats and ecosystems, and of agricultural biodiversity.

Strategic

(1) Extent of support for the proposed standard and/or implementation resource (e.g. one or more NPPOs or RPPOs have requested it, or one or more RPPOs have adopted a standard on the same topic).

[36] Initially adopted by CPM-3 (2008) (paragraph 89.3 and Appendix 8), revised by CPM-10 (2015) (Paragraph 74 and Appendix 6), and CPM-13 (2018) (paragraph 61.5 and Appendix 8).

(2) Frequency with which the issue to be addressed, as identified in the submission emerges as a source of trade disruption (e.g. disputes or need for repeated bilateral discussions, number of times per year trade is disrupted).
(3) Relevance and utility to developing countries.
(4) Coverage (application to a wide range of countries/pests/commodities).
(5) Complements other standards and/or implementation resources (e.g. potential for the standard to be used as part of a systems approach for one pest, complement treatments for other pests).
(6) Conceptual standard and/or implementation resource to address fundamental concepts (e.g. treatment efficacy, inspection methodology).
(7) Urgent need for the standard and/or implementation resource.

3.2.3 List of topics for IPPC standards

The *List of topics for IPPC standards* (LOT) constitutes the standard setting work programme, and contains all currently open topics for the development or revision of standards, including information on stewardship, drafting body, priority and status.[37]

At ICPM-6 (2004) the IPPC Secretariat introduced a paper on the priorities for standards, suggesting that priority will continue to be given to work that has already been started in order to finalize existing draft standards.

The ICPM-6 (2004) e*ndorsed* the action of the Secretariat in facilitating wherever possible the completion of standards that are already at an advanced stage of development.[38]

The LOT is maintained by the Secretariat as an online database on the IPP. Only proposed changes are presented to the CPM.[39]

CPM-7 (2012) requested the LOT be presented to the CPM in order of priority.[40]

The LOT database is reviewed and updated on the IPP in all languages twice a year. This occurs after the SC November meeting (before CPM) and after the SC-7 May meeting (after CPM).

Suggested deadlines for updating are:

- 30 January (after November SC and before CPM)
- 30 May (after CPM and May SC).

3.2.4 Hierarchy of terms for standards

A hierarchy of terms to clarify the different types of items on which expert drafting groups work was adopted by CPM-3 2008.[41]

The Technical Panel for the Glossary (TPG), Technical Panel on Diagnostic Protocols (TPDP), Technical Panel on Commodity Standards (TPCS) and Technical Panel on Phytosanitary Treatments

[37] The following statuses are used by the Secretariat to indicate progression of topics in the SPP: 00, pending; 01, topic added to the LOT; 02, draft specification to consultation; 03, specification approved; 04, draft ISPM under development; 05, draft DP to expert consultation; 06, draft ISPM to first consultation; 07, draft ISPM to second or subsequent consultation; 08, draft ISPM recommended for adoption; 09, ISPM adopted.

[38] ICPM-6 (2004), paragraphs 47 and 50.

[39] CPM-7 (2012), paragraph 58. The *List of topics for IPPC standards* is available at https://www.ippc.int/core-activities/standards-setting/list-topics-ippc-standards.

[40] CPM-7 (2012), paragraph 59.3.

[41] CPM-3 (2008), paragraph 89.1 and Appendix 7.

(TPPT) are currently the only technical panels allowed to work on "subjects", which do not have specifications.

Table 2. Hierarchy of terms for standards

Term	Use	Example
Technical area	The Commission establishes a Technical Panel (TP) to work on a specified technical area (reflected in the title of the TP and described in its specification)	Technical Panel on: Diagnostic Protocols (TPDP) Phytosanitary Treatments (TPPT) Glossary (TPG) Commodity Standards (TPCS)
Topic	Calls for topics are made biennially and a topic is added to the *List of topics for IPPC standards* by the Commission	Revision to ISPM 15 Areas of low pest prevalence for fruit flies
Subject	Subjects require approval by the SC. The concept of subject applies only to TPs. The lists of subjects may be revised by the Commission.	Individual treatment within an approved topic Individual diagnostic protocols for a specific pest within an approved topic New glossary term Individual commodity standard within an approved topic

3.2.5 Framework for standards and implementation

CPM-11 (2016) *adopted* the Framework for standards and implementation and agreed that it is a working document which will be periodically updated, provides transparency of existing or proposed standards and tools for implementation and assists with the identification of gaps and suggested it would be a means of capturing agreed priorities for standards and implementation facilitation tools that are separately approved by the CPM.[42]

CPM-13 (2018) *requested* that the Task Force on Topics use the Framework for standards and implementation when reviewing submissions in response to the Call for topics for standards and implementation.[43]

The SC and IC in their 2019-05 meetings have agreed to a new format for the Framework for standards and implementation, proposed by the Framework champions and aligned to the IPPC Strategic Framework 2020–2030 Key Result Areas. This Framework will be presented to CPM-15 (2020) for approval.

The Framework for standards and implementation is maintained publicly on the IPP.[44]

[42] CPM-11 (2016), paragraph 28.

[43] CPM-13 (2018), paragraph 61.7.

[44] Framework for standards and implementation is available at https://www.ippc.int/en/core-activities/standards-and-implementation/ippc-framework-for-standards-and-implementation/.

3.3 Drafting of standards

Drafting of standards involves expert drafting groups (TPs or EWGs), the SC, stewards of ISPMs and the IPPC Secretariat. More detailed information about, and guidelines for, these standard setting groups can be found in sections 5, 6 and 7. The SC oversees the Standard setting process and the Secretariat provides administrative and technical support.

Section 4 provides additional detail on content and structure of ISPMs and other standard setting documents.

3.3.1 Expert drafting groups

The various draft documents are drafted by different bodies.

Draft specifications: Initial drafts should accompany submissions for topics for the LOT. The Steward of the topic and the SC review and revise the specification, taking CP comments into account. Specifications are published on the IPP after being approved by the SC.

Draft ISPMs (except annexes to ISPM 27 and ISPM 28): ISPMs are drafted by expert working groups (EWGs) based on tasks identified in the relevant specification. EWGs usually only meet once during the development of the standard (see section 6 for details of the composition and operation of EWGs). The draft ISPM developed by the EWG is reviewed and revised by the stewards of the ISPM and the SC (and SC-7), taking consultation comments into account.

Draft DPs (annexes to ISPM 27: *Diagnostic protocols for regulated pests*): DPs are drafted by experts (DP authors) selected by the TPDP and under the guidance of the TPDP discipline lead. The TPDP approves draft DPs for expert consultation and also reviews and revises DPs after consultations (see section 7.3 for additional information).

Draft PTs (annexes to ISPM 28: *Phytosanitary treatments for regulated pests*): PTs submitted including relevant technical information are reviewed by the TPPT, who also revise them taking consultation comments into account (see section 7.6 for additional information).

Draft Commodity Standards (annexes to ISPM 46: *Commodity-specific standards for phytosanitary measures*): Draft commodity standards are developed by TPCS using guidance provided in ISPM 46 (*Commodity – specific standards for phytosanitary measures*) (see section 7.4 for additional information).

ISPM 5 (*Glossary of phytosanitary terms*): New definitions and revisions for definitions of phytosanitary terms are drafted and reviewed by the TPG (see section 7.5 for additional information).

Resources for expert drafting groups

In addition to this procedure manual, the IPPC Secretariat has compiled other documents that should be consulted by expert drafting groups while developing or revising a standard, for example:

- Annotated template for draft ISPMs (revised in 2024), available at https://www.ippc.int/en/publications/93109/
- Annotated template for draft specifications (revised in 2024), available at https://www.ippc.int/en/publications/93111/
- Annotated template for draft PTs (revised in 2024), available at https://www.ippc.int/en/publications/93110/
- *IPPC style guide* (revised in 2024) available at: https://www.ippc.int/en/publications/132/
- *Explanatory document on ISPM 5* (also known as "Annotated Glossary", revised in 2024), available at: https://www.ippc.int/en/publications/87049/
- TPDP *Instructions to authors of diagnostic protocols for regulated pests* (revised in 2019), available at: https://www.ippc.int/en/publications/83612/.

3.3.2 Guidelines for a consistent ISPM terminology[45]

BACKGROUND

This section deals with *terms used in the International Plant Protection Convention* (hereinafter "Convention") *and International Standards for Phytosanitary Measures* (ISPM), in short the "ISPM terminology". Among these, terms deemed particularly important or specific have been assigned an agreed meaning (definition) by the Commission on Phytosanitary Measures (CPM) and are listed in ISPM 5 (*Glossary of Phytosanitary Terms*; hereinafter "Glossary"). Glossary terms thus form a subset of the ISPM terminology.

It aims at facilitating the drafting work of the Standards Committee (SC) and expert drafting groups (EDGs) and at improving transparency.[46]

PURPOSE

The purpose of using common, consistent ISPM terminology is to ensure the generic, global understanding of the Convention and of ISPMs. The common understanding of terms is a fundamental requirement for the meaningful use of the Convention and ISPMs, particularly when parts of the Convention or ISPMs are quoted in national legislation, bilateral negotiations or agreements.

Using the Glossary terms in national and international matters is beneficial in that the terms themselves have international standing, as they come from an internationally agreed ISPM (ISPM 5), and their meaning is clearly stated.

GUIDELINES

For each concept[47], use only one term

This universal practice is instrumental in ensuring consistency in legal texts, standards and glossaries. It also facilitates the accurate and consistent translation of ISPMs into all FAO and other languages.

Examples:

"*Pest risk (for quarantine pests)*" is defined in ISPM 5 as: **"***The probability of introduction and spread of a pest and the magnitude of the associated potential economic consequences.***"**

Thus, in situations where "pest risk" covers the concept in question, this term should be used. Using any other term (like e.g. "phytosanitary risk") would confuse the reader, triggering questions like *"Is a different meaning intended?"* and "*What is the intended meaning?*".

Consistency in the use of a term for a particular concept should also be applied even where a term is not included in ISPM 5. For example, *"oversee"* has often been used in ISPMs to describe a certain relation between a national plant protection organization (NPPO) and producers. That term should therefore be used in all similar and appropriate cases, instead of another term, e.g. "supervise".[48]

continued …

[45] TPG 2016-12 developed these guidelines, SC approved via e-decision (SC 2018-05; Appendix 9).

[46] The document builds upon the current practice of the SC and the Technical Panel for the Glossary (TPG), as well as on the Explanatory Document of ISPM 5 the "Annotated Glossary", the ISO standard 704:2009(E) and the mini-seminar provided for the TPG by the FAO Terminology Service in 2014.

[47] "concept" means the mental representation of any object or idea (e.g. a tree, irradiation, health, verification). A term, then, is a brief communicative representation of the concept. For further description, see ISO 704:2009(E).

[48] In the annually updated TPG documents "General recommendations on use of terms in ISPMs" (section 3.3.3) and the "Annotated Glossary", lists of some preferred non-defined terms and terms to avoid are being maintained.

… continued

Similarly important, a term should only be used for one concept. As an example, the ISPM 5 term "*Endangered area"*, defined as *"An area where ecological factors favour the establishment of a pest whose presence in the area will result in economically important loss"*, should not be used in ISPMs in any other meaning, i.e. not for an area prone to e.g. soil erosion or urban development.

In short, the fundamental consistency principle may be expressed as *"one concept, one term"*.

Only define terms actually used in international phytosanitary documents, in particular the Convention or ISPMs

The sole purpose of ISPM 5 definitions is to ensure a common, agreed upon understanding of certain terms used in the phytosanitary community, particularly in the Convention and ISPMs. Defining terms requires global agreement which is a resource-intensive process involving several groups, including the TPG, the SC, the IPPC Secretariat, contracting parties and CPM. Furthermore, once a definition has been agreed upon, the definition should apply to any national and international phytosanitary use of that term. Therefore, it is appropriate that terms are only being defined when really necessary.

Develop a definition only where a certain term is used with a specific IPPC meaning

When a specific IPPC meaning is required of a term, then the term should be defined and included in ISPM 5. This is, for example, when the intended meaning differs from the term's ordinary or dictionary meaning, or where only one particular meaning among several ordinary meanings is required for IPPC purposes.

Examples:

The ISPM 5 definition of "*area*" ("*an officially defined country, part of a country or all or parts of several countries*") assigns to that term a specific IPPC meaning, in that the particular piece of land must be defined by the NPPO, and that it can stretch to any size from part of one country to several countries.

Thus, as defined, "*area*" is not any piece of land defined by anyone, and it is not necessarily smaller than a district or other administrative unit. Also, it should not be used in other meanings, such as "*domain*".

In contrast, "*confidence level*" and "*genotype*" are used in ISPMs in their ordinary meaning within statistics and genetics, respectively. As this is sufficiently clear and appropriate, no ISPM 5 definitions are needed.

Occasionally, the CPM removes terms and definitions from ISPM 5. This does not preclude their future use in their ordinary or dictionary meaning. For example, "*organism*", "*beneficial organism*" and "*legislation*" have been removed from ISPM 5 but continue to be used in ISPMs in their ordinary meaning within biology or law, respectively.

The definition should be as short as possible but as complex as necessary

A defined term is merely a "shortcut" to a concept. Definitions should not provide all details or aspects. In particular, definitions should not be understood to carry any requirements, but simply express the intended meaning, when a particular term is used. Requirements and the further deliberation of concepts belong in ISPMs.

Similarly, definitions are not meant to contain encyclopedic information, explanations or examples. Such detail extends far beyond the purpose of the Glossary, and may be looked up elsewhere.

Examples:

The ISPM 5 definition of "*pest free area*" (defined as "*an area in which a specific pest is absent as demonstrated by scientific evidence and in which, where appropriate, this condition is being officially maintained*") explains the prerequisites for using that term for a particular area, but does not oblige any NPPO to create such an area or explain how an NPPO would create it. Several ISPMs are dedicated to provide such requirements and details.

A qualifier to a term may be used to delimit the definition to that specific association

Example:

The term "*introduction (of a pest)*" delimits the definition of "*introduction*" to when associated with the term "*pest*", so that "*introduction*" can otherwise be used in ISPMs in any other ordinary sense, e.g. as in "introducing a new treatment" etc.

Where a term is used in an ISPM in a meaning specific to that ISPM, it should be defined in that ISPM and not in the Glossary

Defining a term within a specific ISPM would not affect its use in other ISPMs, where it would retain its ordinary or dictionary meaning.

Example:

Definitions of "*natural host*", "*conditional host*" and "*non-natural host*" have been agreed within and for one ISPM only, as the CPM felt the definitions may not be appropriate in other ISPMs.

3.3.3 General recommendations on consistency

General recommendations on consistency have been developed by the Technical Panel for the Glossary (TPG, see section 7.5) and are reviewed annually. They should be consulted when drafting ISPMs and are included in the *IPPC style guide*.

The SC (May 2013) encouraged the implementation of those recommendations by expert drafting groups and others directly involved in drafting ISPMs.

3.3.4 Environmental and biodiversity concerns

CPM-3 (2008) adopted action items regarding the Strategic Planning Group's (SPG's) response to the independent evaluation of the working of the IPPC and its institutional arrangements. This included the addition of a statement regarding biodiversity consideration in all standards as appropriate (new standards as they are developed and old standards as they are revised).

When new ISPMs are being drafted, or existing ones revised, consideration of environmental and biodiversity concerns should be included in the specification, where appropriate.[49]

The task of considering these issues is a task in specifications[50]:

"Consider whether the ISPM could affect in a specific way (positively or negatively) the protection of biodiversity and the environment. If this is the case, the impact should be identified, addressed and clarified in the draft ISPM."

SC November 2013 agreed to a guidance document on environmental considerations for expert drafting groups. This document is included in the *IPPC style guide*.

[49] CPM-3 (2008), paragraph 55.2, Appendix 2.

[50] SC 2009-05, paragraph 37.

3.3.5 Implementation issues

Considering that expert drafting groups could give useful input on the potential implementation issues of a new standard being drafted, the SC November 2011 a*greed* to add the following task to specifications:

"Consider implementation of the standard by contracting parties including potential operational and technical implementation issues. Recommend, if appropriate, the development of supplementary material to aid implementation by contracting parties."

Implementation issues considered by the expert drafting groups would be reported in their reports and reviewed by the SC when receiving the draft standard. The SC would then communicate and collaborate with the groups of the IPPC Secretariat working on the Implementation Review and Support System and capacity development on implementation issues.

3.3.6 CPM Recommendations

Although not considered standards, the development of CPM Recommendations is managed by the Standard Setting Unit of the IPPC Secretariat. Therefore, the procedure for development of a CPM Recommendation is included in this manual.

CPM Recommendations are decisions and agreements made by the CPM, according to existing procedures and are intended to promote or achieve the objectives of the IPPC.[51] These decisions and agreements may consist of directions, guidance, or calls to action to the contracting parties or the Secretariat or both, on matters that may not be appropriately or effectively expressed as an ISPM, on which phytosanitary measure(s) are based.

CPM Recommendations are adopted when the CPM agrees or decides on matters relevant to the ongoing activities of all contracting parties in the area of plant protection, in accordance with and within the context of the IPPC.

Adopted CPM Recommendations are posted on the IPP.

CPM-19 (2025) noted that translations of CPM recommendations adopted from 2024 onwards would be subject to language review using the same procedure used for ISPMs.[52]

Criteria for CPM Recommendations[53]

The following are the main criteria to be considered when reviewing proposed topics for CPM Recommendations:

- In all cases, the proposed topic should address issues that fit within the legal framework of the Convention, its International Standards for Phytosanitary Measures (ISPMs), or strategic goals.
- And as much as possible, the proposed topic should:
  - address important issues related to plant health, either to promote action on a specific phytosanitary issue or to address a more generalized issue;
  - be relevant to the needs of the contracting parties, or at least a majority of the parties;
  - cover issues or actions that contracting parties or national or regional plant protection organizations have some influence, authority or competence to address;

[51] As noted by CPM-4. See 2009 CPM-4 report, section 13.9, paragraph 193.3; CPM-10 in 2015 adopted a revised process for adopting CPM Recommendations.

[52] Agreed by CPM-19 (2025), decision point 50.

[53] Agreed by CPM-12 (2017).

- offer "guidance" that is not possible or appropriate to offer, at the moment, in the form of a standard; and
- provide practical guidance and support for improving the implementation of the convention, a specific ISPM or set of ISPMs.

Process for developing and adopting CPM Recommendations[54]

The adopted process for developing and adopting CPM Recommendations is as follows:

(1) A contracting party (CP), a Regional Plant Protection Organization, a Focus Group or other subsidiary body, or the IPPC Secretariat, may propose a topic for a CPM Recommendation and present it to the CPM. The rationale or justification for the development of a CPM Recommendation should also be provided. An initial draft of the proposed CPM Recommendation may also be presented to the CPM for consideration in conjunction with this.

(2) The need for a new CPM Recommendation should be discussed and agreed by the CPM.

(3) A draft (or where necessary a revised draft) CPM Recommendation should then be prepared by the IPPC Secretariat or the proponent of the draft CPM Recommendation by 15 May and circulated for comments, along with the rationale or justification for its need, for a period of three months during the same period as for consultations on draft ISPMs. Only one consultation period is anticipated for draft CPM Recommendations.

(4) Comments are collected and compiled using the IPPC Online Comment System (OCS) and compiled comments are published on the International Phytosanitary Portal (IPP).

(5) The proponent of the draft CPM Recommendation will revise draft CPM Recommendation as necessary based on comments received, and then submit the revised draft to the CPM Bureau for consideration, further revision if necessary and a decision on presentation to the CPM for adoption

(6) Following approval by the Bureau, the draft CPM Recommendation is included on the agenda of the CPM session.

(7) The draft CPM Recommendation is submitted to the CPM for adoption available in the languages of the Organization as soon as possible and at least six weeks before the opening of the next CPM session.

(8) Contracting Parties may submit objections on draft CPM Recommendations to the IPPC Secretariat no later than three weeks before the start of the CPM session. If any CP does not support the adoption of the draft CPM Recommendation, the CP may submit a formal written objection. The scope for an objection to a draft CPM Recommendation is broader than for an objection to a draft ISPM due to the nature of the guidance contained in a CPM Recommendation. As some content of CPM Recommendations may not be technical in nature, an objection may be accompanied by either a technical justification or an alternative explanation, and suggestions for improvement of the draft CPM Recommendation which are likely to be acceptable to other CPs, and be submitted to the IPPC Secretariat no later than three weeks before the CPM session. Concerned CPs should make every effort to seek agreement before the CPM session. The objection will be added to the CPM agenda and the CPM will be asked to decide on a way forward.

(9) If all CPs support the adoption of the draft CPM Recommendation, the CPM should adopt it without discussion.

(10) If the draft CPM Recommendation is not adopted and needs further review or revision, the CPM may decide to send it to an appropriate CPM body or group, or the original proponent, for further revision, or to a second round of consultation. The revised CPM Recommendation would then be sent to the next CPM for consideration and adoption.

(11) Adopted CPM Recommendations are numbered and formatted by the IPPC Secretariat and posted on the IPP.

[54] Adopted by CPM-9 (2014); revised by CPM-10 (2015); revised by CPM-19 (2025), Appendix 5.

The process for developing and adopting CPM Recommendations is more flexible than for ISPMs.

Format of CPM Recommendations

The format for CPM Recommendations is as follows:[55]

- Title: [A title which provides an indication of the subject matter, e.g. role of IPPC contact points]
- Background: [Information to provide context and a reference to the CPM report paragraph and appendix where the text can also be found.]
- Addressed to: [Contracting parties or national plant protection organizations or the secretariat or a combination of these, depending on the subject matter.]
- Recommendation: [The text of the recommendation should have action verbs, such as note, agree, decide, urge in the part of the recommendation which enunciates it. It may have subheadings to indicate a separation between different elements of the recommendation, as appropriate.]
- Recommendation(s) superseded by the above: [The recommendation should identify when a previous recommendation or decision is superseded by the present one or should state that the recommendation was repealed and provide the CPM reference.

[55] CPM-4 (2009), agenda item 13.9, Appendix 22.

3.4 Consultation

During the consultation stage, CPs and RPPOs review and comment on the draft standard. Comments from first consultation on the draft standard are considered first by the Steward, second by the SC-7 and the draft is revised accordingly.

International organizations, national plant protection services of non-CPs, and other entities can submit discussion papers on the draft ISPM to the IPPC Secretariat.

Afterwards the draft is submitted to a second round of consultation and then to the SC. The SC will revise the draft and decide whether to recommend it to the CPM for adoption.

A draft ISPM (including PTs) is normally submitted to two consultations, although additional consultations can be held if deemed necessary.[56]

Draft DPs are normally only submitted to one consultation, after having been subjected to expert consultation.

For DPs only, the SC in November 2024 agreed that an additional consultation period may be opened in January–May, in addition to the consultation period in July–September.[57]

Specific note regarding the *Amendments to the Glossary* in relation to the second consultation[58]:
In May 2013, the SC agreed that the *Amendments to the Glossary* follow the same process as the regular ISPMs, but that the SC-7, when considering the *Amendments to the Glossary* after the first consultation, could consider separating them in two sets: one going for second consultation (terms and definitions for which comments were made), and one going directly to the SC in November (terms and definitions for which no comments were made).[59]

3.4.1 The Online Comment System

The Online Comment System (OCS) is a simple, efficient and user-friendly system for defined stakeholders to apply, share, and publish comments on documents; and for secretariats to compile comments in an easy and efficient manner.

Through the OCS, IPPC contact points can submit comments on draft documents, with the support of up to four optional reviewers, designated by the same contact point.

The IPPC Secretariat posts standards open for consultation in the Online Comment System (OCS)[60] at the beginning of the consultation period, and informs IPPC contact points that the draft standards for consultation are available. The secretariat also posts the drafts on the IPP for wider distribution.

In November 2025, the SC agreed that for documents authored by the IPPC Secretariat, the secretariat should ensure that comments are not visible to other users during OCS consultation periods. This default setting must be checked and confirmed before each consultation. Countries retain the option to share comments at regional workshops if they create a subreview. [61]

Consultation

[56] The possibility to send a draft ISPM to another round of consultation is foreseen in step 5 and step 6 of the Standard setting process (2016).

[57] SC 2024-11, decision 21; CPM-19 (2025), decision 22.

[58] SC 2013-05, agenda item 9.5.

[59] Editorial changes made to align the text to the IPPC Standard setting procedure, 2016.

[60] https://www.ippc.int/online-comment-system/.

[61] SC 2025-11, agenda item 7.8.

Draft ISPMs and draft PTs for first consultation are posted on the IPP in three languages (English, French and Spanish), while for second consultation they are made available in English only.

Draft DPs for consultation are posted in English only.

3.4.2 Guidelines for the submission of comments

Submitting comments following the guidelines below helps ensure the maximum benefit from the consultation process and faster compilation of comments:

- Contracting parties must submit national comments through their IPPC contact point in the OCS in order for them to be considered by the SC.
- IPPC contact points are provided 90 days to review the draft standards, consult on their content and compile and submit comments to the Secretariat.
- Compiled comments will be made available by the Secretariat.
- IPPC contact points should submit comments for each standard using the Online Comment System (OCS) (https://ocs-new.ippc.int). Comments must be submitted through the IPPC official contact point.
- In addition, at its May 2011 meeting, the Standards Committee (SC) reviewed the classification of comments and their definitions. The SC developed a document to give guidance and to explain the different categories of comments, and these categories had been used in the OCS. The classification of comments and their definitions are below:[62]
  - EDITORIAL: This type of comment clarifies or simplifies the text without changing the meaning. This includes spelling or grammatical corrections, suggestions of different but equivalent words, and simplification of sentence structure.
  - SUBSTANTIVE: This type of comment takes into account conceptual changes and the addition of new aspects or ideas. It may contain additions or extensions as well as changes, reorganization of the text or deletions resulting in alteration of the content of a sentence /paragraph /section of the draft. Such comments should be addressed by the Steward in the revision process in some way.
  - TECHNICAL: This type of comment takes into account scientific corrections and technical adjustments. It aims at further clarification and improvement of the standard and sometimes at conformity with other standards from the technical viewpoint. These comments are incorporated unless there is disagreement or some misunderstanding.
  - TRANSLATION: This type of comment corrects points that are considered to be inaccurately translated into another language version of the text. These comments are considered by the TPG and forwarded to FAO Translation services.
- With the OCS, IPPC contact points can share comments with other contact points. If a contracting party wishes to support some or all of the comments submitted by another contracting party or RPPO, they should accept these comments as their own comments in the OCS, and then submit them. The name of the country will still appear in the comments compiled for the SC.[63]
- Comments should be supported by an explanation of their purpose. Alternative text should be proposed where appropriate. It is essential that care is taken to ensure all comments and rationales are clear.

[62] Text based on discussion paper 2011_SC_May_38.

[63] Comments from RPPOs are considered to represent the views of the Organization and may be based on consultation within the Organization. Such comments, however, are not considered to represent the views of individual contracting parties unless specifically indicated as such by the contracting party or parties.

- Note that paragraphs in the draft standards are numbered. It is essential to ensure that the paragraph numbers used when submitting comments correspond to those of the draft standard as sent for consultation as these numbers will be used to compile the comments for the SC.
- Due to the short time available between the end of the consultation period and the SC meeting, and to avoid misinterpretation in translation, countries submitting comments in a language other than English are encouraged to send an English translation as well.

Note: International organizations, national plant protection services of non-CPs, and other entities can submit discussion papers on the draft ISPM to the IPPC Secretariat.

Comments on implementation issues are requested for all standards that are submitted for consultation.[64]

3.4.3 IPPC regional workshops[65]

IPPC regional workshops provide a forum for countries within a region to discuss issues related to draft ISPMs and to prepare and share comments to use as a basis for their national comments. These regional workshops are funded through the IPPC Multi-Donor Trust Fund, as decided by the Commission, or by specific donations.

ICPM-6 (2004) recommended that as many as possible regional technical consultations on draft ISPMs (now called IPPC regional workshops) should be conducted and the Commission should investigate potential mechanisms to expand these consultations as well as seek to build opportunities for regional consultations through the trust fund or voluntary contributions. RPPOs should play a role, as appropriate, in such regional workshops within their region.[66]

CPM-8 (2013) noted lessons learned and actions proposed for improvement of the IPPC regional workshops, which aimed at future workshops addressing a broader set of content beyond the review of draft ISPMs to strengthen contracting parties' capacities on IPPC related issues.

CPM-11 (2016) noted that the IPPC regional workshops are a valuable and essential tool for developing phytosanitary capacity for contracting parties and that the change of content in the IPPC regional workshops has been a successful strategy to increase and align the knowledge on IPPC related issues in all regions.[67]

During CPM-13 (2018), the CPM *requested* the Bureau to develop a process for formalizing the objectives, structure and funding of IPPC regional workshops, as forums convened jointly by the IPPC Secretariat, RPPOs and FAO regional offices, to progress outcomes of the Convention, including consultation on standard setting, capacity building and emerging risks, within the regional context and with regard to regional needs and priorities. The Bureau in June 2018 agreed to guidelines for IPPC regional workshops.[68]

Consultation

[64] SC 2016-05, paragraphs 63 and 64.

[65] CPM-8 (2013) noted the name change, formerly "regional workshops on draft ISPMs" (CPM-8 (2013), paragraph 129.3).

[66] ICPM-6 (2004), Appendix IX, 4.

[67] CPM-11 (2016), paragraph 111.2.

[68] The full guidelines are available in the *IPPC procedure manual for implementation and capacity development* available at: https://www.ippc.int/en/core-activities/capacity-development/procedures/.

Guidelines for IPPC regional workshops[69]

Revised by the IPPC Secretariat and the IC Team on the revision of the Guidelines for IPPC Regional Workshops at the request of the IC.

About these guidelines

These guidelines are designed to support organizing committees of International Plant Protection Convention (IPPC) regional workshops (RW) in understanding the key steps for efficiently organising these events.

The guidelines include a list of roles and responsibilities for each party involved in the IPPC RWs. Additionally, the guidelines outline the process for coordinating comments on draft International Standards for Phytosanitary Measures (ISPMs), Commission on Phytosanitary Measures (CPM) Recommendations, as well as implementation and capacity development documents. This process is instrumental for fostering effective consultation at the regional level to facilitate productive discussions during these workshops.

Introduction to the IPPC regional workshops

The IPPC RWs[70] play a vital role in enhancing regional and, subsequently, global phytosanitary efforts for ensuring healthy plants and safe trade in plants and plant products. Usually, seven IPPC RWs are organised annually during the IPPC consultations, in the following regions:

- Africa,
- Asia,
- The Caribbean,
- Europe and Central Asia,
- Latin America,
- Near East and North Africa,
- South-West Pacific.

The main objectives of IPPC RWs are:

- Providing a forum for countries within the region to prepare, analyse, and discuss comments on draft ISPMs, ISPM specifications, CPM recommendations, and draft implementation and capacity development documents;
- Enhancing phytosanitary capacity, promoting technical resources to support IPPC and ISPMs implementation, and raising awareness about the IPPC Community's activities; and
- Facilitating the exchange of information, sharing phytosanitary best practices, and disseminating national and regional implementation experiences.

The IPPC Secretariat develops and ensures the proper delivery of technical content of the workshops, ensuring quality control and consistency across all seven IPPC RWs.

Some regions may extend the workshop by additional day(s), based on regional requirements and requests, such as field visits, capacity development exercises, or discussions of phytosanitary issues of regional significance.

The IPPC RWs are ideally conducted in a face-to-face format, and physical attendance is encouraged. However, upon agreement within the organising committees, the workshops may incorporate a hybrid/

[69] Revised as noted by CPM-18 (2024), CPM 2024/41_02. Available at: https://www.ippc.int/en/publications/87113/

[70] IPPC regional workshops: https://www.ippc.int/en/events/regional-ippc-workshops/

remote modality to enhance participation and allow speakers unable to attend in person to deliver presentations remotely. In exceptional circumstances, a virtual meeting can be organised.

Main organisational aspects

Each IPPC RW has unique organizational, logistical, and funding circumstances. Efforts should be made to find a balance between addressing global and regional phytosanitary issues.

The workshop is at least three days long. The global agenda for the RWs is provided by the IPPC Secretariat. Each organising committee may discuss and adapt the global agenda to the needs of the region by adjusting allocation of time for each agenda item, or by including additional agenda items on relevant regional issues.

The agenda includes the following:

- Updates from the IPPC Secretariat and CPM subsidiary bodies;
- Discussion of, as relevant, general, substantive, and technical comments on draft ISPMs, ISPM specifications, CPM recommendations, and implementation and capacity development documents submitted to current IPPC consultation;
- Raising awareness about available implementation and phytosanitary capacity development resources;
- Raising awareness of activities related to the IPPC community, such as IPPC Observatory surveys and studies; and
- Exchanging information, phytosanitary best practices, and implementation challenges at national and regional levels.

The IPPC Secretariat coordinates the organization of the IPPC RWs by collaborating with organising committees of each region.

These workshops are named “IPPC Regional Workshop” to maintain consistency and enhance the visibility of the IPPC globally. When Contracting Parties (CP), RPPOs, or institutions provide substantial financial support, an agreed name may be insert after IPPC, e.g. IPPC- [agreed name] Regional Workshop.

The organisation of the workshops includes the following steps:

(1) Establishing a regional workshop organising committee for each IPPC RW, which may include:

a) An IPPC Secretariat representative;

b) One or more representative from Regional Plant Protection Organisation(s) (RPPO);

c) One or more representative from the FAO regional and sub-regional offices;

d) The regional representative from the CPM Bureau;

e) One or more regional representative from the Standards Committee (SC);

f) One or more regional representative from the Implementation and Capacity Development Committee (IC);

g) One or more representative from the host country/organization; and,

h) Representative(s) from other organizations supporting the workshop that may be invited at the discretion of the organising committee.

(2) Efforts should be made to ensure that at least one regional SC and one regional IC member are present at each workshop;

(3) Each organising committee member and workshop participant is encouraged to securing funding for their attendance of the workshop;

(4) The IPPC Secretariat may financially support one participant per CP. This support follows the World Bank criteria used for prioritizing participants to receive travel assistance,[71] along with other costs subject to the availability of funds.

Coordination of comments on draft ISPMs, ISPM Specifications, CPM Recommendations, and implementation, and capacity development documents for consultation at regional level

IPPC RWs serve, among other objectives, as platforms for discussing and providing regional comments on draft ISPMs, ISPM specifications, CPM recommendations and implementation and capacity development documents. Therefore, to facilitate productive discussions, the Online Comment System (OCS) responsible person should ensure that comments of the CPs and RPPOs are shared with the organising committee at least 7 days prior to the scheduled workshop.

Coordination of the comments on IPPC documents involves the following steps:[72]

(1) The IPPC Secretariat opens the consultation period and posts draft ISPMs, ISPM specifications, CPM recommendations and implementation, and capacity development documents in English, French and Spanish on July 1;

(2) Each IPPC RW organising committee appoints an OCS responsible person, usually from the respective RPPO(s), to coordinate the comments and include them in the OCS on behalf of the region;

(3) The IPPC Secretariat, in coordination with organising committees ensures that the OCS responsible persons from the regions have access to OCS with a dedicated OCS account for the IPPC workshops of the given region;

(4) Each OCS responsible person accesses the dedicated OCS account for the workshop of the region, creates a sub-review for each draft ISPM, ISPM specification, CPM recommendations and implementation, and capacity development documents, if applicable, and invites the Official Contact Points (OCPs) of respective CPs and RPPOs to review the documents and to provide comments. The invitation is automatically sent to the respective invitees;

   a. Each OCS responsible person then sends a follow up email to OCPs of respective CPs and RPPOs, with instructions and timelines for providing comments, indicating that comments should be provided ideally 15 days, or at least 7 days prior to the scheduled regional workshop;

   b. CPs or RPPOs should provide their comments to the dedicated sub-review created by the OCS responsible person;

   c. The OCS responsible person sends follow-up notifications, through OCS or via email, to remind and encourage CPs and RPPOs to provide their comments by the set deadline.

(5) During the IPPC RW, the OCS responsible person logs into OCS and projects their screen with the comments from the sub-review.[73] Throughout the discussions, the OCS responsible person makes real time edits, accepts, edits, deletes, or merges comments based on the discussion outcomes with the consent of the workshop participants;

(6) Before closing of the IPPC RW, the OCS responsible person downloads the OCS output for each draft ISPM, ISPM specifications, CPM recommendation, and implementation, and capacity development document under consultation and shares the reports with the IPPC RW organising committee and participants;

(7) If the region agrees, the OCS responsible person publishes the regional comments in the OCS;

[71] Criteria developed based on the World Bank data on Gross National Income Level and the size of the economy of the country, for prioritizing participants for travel assistance to attend meetings organized by the IPPC Secretariat (updated yearly): https://www.ippc.int/en/publications/1036/

[72] Countries not participating in the IPPC RWs can submit their country comments independently, as a national comment, through their Official Contact Points in OCS.

[73] Only the comments submitted through sub-reviews are considered during the workshop discussions.

After the IPPC RWs, the OCPs of CPs or RPPOs can submit additional comments, if any, in the OCS, before the closure of the consultation period.

Roles and responsibilities of the parties involved in organization and delivery of IPPC regional workshops

	ROLE	RESPONSIBILITES
1.	IPPC Secretariat	The IPPC Secretariat leads the overall organization of the IPPC RWs by establishing, coordinating, and collaborating with organising committees of each region. The IPPC Secretariat is responsible for: ***Agenda*** 1) Developing a draft global agenda through a consultation process with the CPM Bureau, the SC, the IC, and the Technical Consultation of Regional Plant Protection Organizations (TC-RPPOs). 2) Circulating the draft global agenda within the IPPC Secretariat and to all regional workshop organising committees for further consultation and to adapt to the needs and contexts of the regions. ***Organising committee*** 3) Initiating the establishment of an organising committee for each IPPC RW. 4) Establishing strong collaboration with co-organizers in the regions and discussing all logistical and financial arrangements well in advance, setting timelines, coordinating, and organising the necessary organising committee meetings. 5) Coordinating the organization of the IPPC RWs at the IPPC Secretariat level, including joint work and collaboration between all units of the secretariat, and between administrative and professional staff. 6) After the IPPC RW, organising a meeting of the organising committee, to reflect and evaluate the organisation of the workshop. ***Invitation letter*** 7) Preparing invitation letter to include details about the IPPC, draft ISPMs, ISPM specifications, CPM recommendations, implementation and capacity development documents, and IPPC governance, of which the IPPC RW participants should be aware. The invitation letter should be sent at least 30 days prior to the scheduled regional workshop. 8) Ensuring that additional details for the regional workshops as well as the logistical details are added to the invitation letter by the organising committee of each regional workshop. 9) Coordinating with regions that wish to send their own invitation letter, ensuring that the IPPC Secretariat invitation letter is annexed to the regional letter. A copy of the regional letter should be sent to the IPPC Secretariat. In addition, along with a list of intended recipients. ***Budget estimation*** 10) Coordinating budget estimation with the members of the IPPC RW organising committees, if applicable. ***Technical content of the IPPC RW*** 11) Developing and ensuring the correct delivery of technical content of the workshops, ensuring quality control and consistency across all seven IPPC RWs. Preparing relevant PowerPoint presentations, training materials and videos. 12) Coordinating preparation of presentations by resource persons and providing guidelines and the IPPC Secretariat templates upon request.

		13) If applicable, in consultation with the IPPC RWs organising committees, coordinating/providing the PowerPoint presentations that need translation into one of the UN languages. 14) Organising internal meetings for all IPPC Secretariat staff to become familiar with the IPPC RWs content, PowerPoint presentations. 15) If applicable, in consultation with the IPPC RWs organising committees, coordinating/providing the draft ISPMs, ISPM specifications, CPM recommendations, and implementation and capacity development documents that need translation into one of the UN languages, in parallel with the IPPC Secretariat translation of these documents into French and Spanish, before the opening of consultation period on 1 July. ***Posting content on IPPC RW*** 16) Posting all PowerPoint presentations on the IPP in PDF format, including other relevant documents to the IPPC RWs, at least two weeks prior to the first scheduled IPPC RW. ***Registration*** 17) Providing on the IPP a platform for registration for the IPPC RWs, if applicable. ***Travel arrangements*** 18) Coordinating travel arrangements for participants that are eligible for partial or full travel assistance from the IPPC Secretariat by 1 July. ***Online Comment System*** 19) Ensuring that each OCS responsible person has access to OCS with a dedicated OCS account for the IPPC RW of the given region. 20) Organising virtual training on OCS for OCS responsible persons across all seven IPPC RWs, who subsequently deliver virtual training courses to OCPs and workshop participants of the CPs and RPPOs. 21) Providing OCS training materials to OCS responsible persons such as PowerPoint presentation with guidance and other materials, to be shared with OCPs and workshop participants of CPs or RPPOs to ensure provision of comments. 22) Ensuring that the participants attending IPPC RW, either the OCP of CPs or RPPO staff, have access to OCS. ***Pre-workshop meetings with the participants*** 23) If applicable, organising pre-workshop meetings with the participants across all IPPC RWs to brief and provide guidance on logistics. ***Statistics on comments submitted through OCS*** 24) Tracking all comments submitted through OCS to generate global statistics based on the reports of draft ISPMs, ISPM specifications, CPM Recommendations, and implementation and capacity development documents with regional comments. ***Final evaluation survey*** 25) Developing and delivering a final evaluation survey in Arabic, English, French, Spanish, and Russian to collect feedback from participants to be used for improving the content and organization of the regional workshops. ***Attends and facilitates the IPPC RWs*** 26) Attending the IPPC RWs and facilitating the delivery of the regional workshops in collaboration with the chairperson. 27) Participating in press release related to the IPPC RWs, if applicable.

		28) Communicating the role and responsibilities of the host country/organization selected for the delivery of the next year's IPPC RWs. ***News coverage*** 29) Developing and publishing a news item(s) about the workshops on the IPP no later than a month after the last workshop. ***IPPC RW reports*** 30) Formatting the report and ensuring publication of the IPPC RWs reports on the IPP no later than three months after the workshop and sharing them with participants. ***Update on IPPC RWs to CPM*** 31) Providing a summary of the workshops and information from the evaluation to CPM. 32) Acknowledging contributions and support provided to the organisation of the workshops. ***Follow up survey to gather potential topics for next year's IPPC RWs*** 33) Developing and delivering a follow up survey designed to collect ideas and proposals from the OCPs of relevant CPs or RPPOs for potential topics to be included in the next year's workshop no later than three months after the IPPC RWs. ***Keeps records of misconduct*** 34) Recording the cases of misconduct, lack of interest, and disengagement to be referred in case of a need to prioritise provision of travel assistance for the next workshops.
2.	Organising committee members	IPPC RW organising committee members are also the co-organizers of the IPPC RWs. IPPC RW organising committees are the core bodies coordinating the organization and the delivery of the IPPC RWs. IPPC RWs organising committees may decide to invite organisations supporting the workshops with technical, financial, and/or logistical support, to be co-organisers and members of the organising committees. The contributions may include, but are not limited to: 1) Providing funds or assisting in mobilizing resources***. 2) If applicable, liaising with OCPs of CPs to provide comment on the draft agenda. 3) If applicable, translating draft ISPMs, ISPM specifications, CPM recommendations, and implementation and capacity development documents, and/or workshop PowerPoint presentations into one of the UN languages relevant to the region. 4) If applicable, providing facilities needed for the workshop. 5) If applicable, during the workshop, providing simultaneous interpretation into one of the UN languages relevant to the region. 6) Providing additional logistical arrangements, as agreed with the IPPC Secretariat. ****FAO regional or subregional offices are encouraged to support the funding of the IPPC RWs, as the agenda of the regional workshops includes many topics of common interest to the IPPC community and FAO.*
3.	IPPC Official Contact Point (OCP)	The IPPC OCP is responsible for: ***Prior to the IPPC RW:***

		1) Nominating an individual(s) with the appropriate expertise and knowledge, as well as a sufficient level of proficiency in English, or another UN language in which the regional workshop is held. 2) Mobilizing resources (full or at least partial) to cover the costs of the designated participant's attendance at the workshop. 3) Ensuring that the regional workshop participant has credentials to access OCS. 4) Ensuring that the participant selected to represent the NPPO in the workshop has analysed the draft ISPMs, ISPM specifications, CPM Recommendations, and implementation and capacity development documents before attending the workshop, has completed all pre-workshop exercises, including the OCS training course, and is prepared to actively participate in the discussions. 5) Ensuring the CPs' comments on the draft ISPMs, ISPM specifications, CPM recommendations, and implementation and capacity development documents are entered into the OCS before the workshop. ***After the IPPC RW:*** 6) If applicable, providing additional CPs/NPPO's comments on draft ISPMs, ISPM specifications, CPM recommendations, and implementation and capacity development documents to the IPPC Secretariat, by 30 September of each year, or at least submitting one general comment for each draft document. 7) Sharing the key takeaways from the regional workshop discussions with relevant people from NPPO, or any other relevant national authorities. 8) Completing IPPC survey designed for identifying potential topics to be included in the next year's workshop, in consultation with the workshop participant, and/or relevant NPPO staff, if applicable.
	Workshop participant	Workshop participant is responsible for: ***Prior to the IPPC RW:*** 1) Following up on the mobilization of resources (full or at least partial) to cover the costs associated with their participation in the workshop. 2) Analysing draft ISPMs, ISPM specifications, CPM Recommendations, and implementation and capacity development documents available, with relevant national stakeholders, and working towards agreed country comments, before attending the workshop. 3) Reviewing other relevant RW materials, such as presentations. 4) Requesting OCS credentials, in case they do not have access to OCS. 5) Providing comments on the draft ISPMs, ISPM specifications, CPM recommendations, and implementation, and capacity development documents in the OCS sub-review for their respective region before attending the workshop. 6) Participating in the virtual training course on OCS organized by the OCS responsible persons of each workshop region, and practicing using the OCS before attending the workshop. Guidelines with instructions on how to use the OCS are available on the dedicated IPP page.[74]

[74] IPPC Online Comment System (OCS): https://www.ippc.int/en/online-comment-system/

		7) Conducting all pre-training activities and preparing all the requested information to be shared and discussed during the workshop. ***During the workshop:*** 8) Attending all sessions in the program and the workshop and actively contributing to the discussions. 9) Completing the final evaluation survey for the workshop. ***After the workshop:*** 10) Sharing information and results of the workshop within the NPPOs or any other relevant national authorities or stakeholders after the workshop. Providing national comments in the OCS, if any, before the closure of the consultation period. 11) If applicable, reflecting on their participation, assisting the IPPC OCP to complete the IPPC survey designed for identifying potential topics to be included in the next year's workshop.
4.	Standards Committee Steward for draft ISPMs	The SC steward for draft ISPMs is responsible for: 1) Preparing a concise PowerPoint presentation with essential information on the draft ISPM or specification, identifying the key issues discussed during the development of the draft. The finalised presentation should be provided to the IPPC Secretariat by 15 June. If the steward attends the workshop, he/she delivers the presentation related to the relevant draft ISPM or specification, participates in, and facilitates discussions. If the steward does not attend the workshop, the presentation should be delivered by an alternative presenter as agreed by the organising committee.
5.	Standards Committee representative	Designated to attend the workshop, as agreed by the SC. The SC representative is responsible for: 1) Delivering PowerPoint presentations related to the draft ISPMs and participating in discussions related to the standard setting procedures, if the SC steward does not attend the workshop, or is not able to deliver the presentation. 2) Delivering an update on the activities of the SC, and, if relevant, of the Technical Panels. 3) Facilitating and participating in technical discussion(s) on relevant draft ISPMs and specifications.
6.	Implementation and Capacity Development Committee representative	Designated to attend the workshop, as agreed by the IC. The IC representative is responsible for: 1) Delivering PowerPoint presentations related to implementation and capacity development documents, activities and exercises, or any other topics they are involved in. 2) Delivering an update on the activities of the IC. 3) Facilitating and participating in discussions related to implementation and capacity development, or any other topics in which they are involved.
7.	CPM Bureau representative	Designated to attend the workshop as agreed by the CPM Bureau. The CPM Bureau representative is responsible for: 1) Delivering PowerPoint presentations as agreed by respective IPPC RW organising committees and participating in the discussions.

8.	The Online Comment System (OCS) responsible person	The OCS responsible person is selected by the organising committee and is responsible for: ***Prior to the workshop:*** 1) Creating a sub-review for each draft ISPM, ISPM specifications, CPM recommendations, and implementation and capacity development documents. 2) Participating in the virtual IPPC training course on OCS designed for OCS responsible persons. 3) Organising and delivering a virtual training course on how to insert comments to the OCPs of the CPs and RPPOs and sharing PowerPoint presentation containing OCS guidance and other materials. 4) Encouraging that OCPs of CPs or RPPOs provide comments through the dedicated sub-reviews in OCS prior to the workshop, gathering comments during the workshop, and providing support to submit comments after the workshop. 5) Sharing the received comments with the IPPC Secretariat and with the relevant organising committee at least a week prior to the scheduled IPPC RW. ***During the workshop:*** 6) Logging into OCS and projecting their screen with the comments from the respective sub-review. Throughout the discussions, the OCS responsible person is responsible for making real time edits, accepting, editing, deleting, or merging comments based on the discussion outcomes with the consent of the workshop participants. 7) Downloading the OCS outputs for each draft ISPMs, ISPM specifications, CPM recommendations, and implementation and, capacity development documents under consultation and sharing the OCS outputs with the regional workshop organising committee and the workshop participants before closing of the regional workshop.
9.	Host country/ organization	The host country/ organization contributions may include, but are not limited to: 1) Providing a venue for the workshop. 2) Providing at least one large screen needed to display the PowerPoint presentations, the OCS, or other documents. A minimum of two screens are needed if the PowerPoint presentations or other documents are presented in another UN language, in addition to English. 3) If applicable, during the workshop, providing simultaneous interpretation into one of the UN languages relevant to the region. 4) Providing a good internet connection to the workshop participants; 5) Organize a field visit with provision of the transportation, if applicable. 6) Providing coffee breaks during workshops. 7) Providing lunches during the workshop, and an official dinner, though not obligatory.
10.	A chairperson and a rapporteur	The chairperson and a rapporteur are to be elected by the workshop participants. The role of the chairperson is to lead the workshop agenda, facilitate discussions and keep the conversation focused, balanced and timely. The role of the rapporteur is to review the workshop draft report jointly with the chairperson and the IPPC Secretariat and to ensure that the report is an accurate record of the discussions and decisions of the workshop.

		The report should be produced, during or shortly after the workshop, and be posted on the IPP within three months after the workshop.
11.	Report writer	The organising committee is responsible for appointing a report writer. The report writer is usually provided by RPPO(s)/ any other relevant organization to IPPC RW. The responsibilities of the report writer include: 1) Summarizing discussions by accurately recording the key points and decisions, noting action items taken during the workshop. 2) Coordinating review of the report by rapporteur and chairperson of IPPC RW, integrating comments and feedback received on the report. 3) Organising the report of the workshop as per the IPPC RW agenda, and finalising by organising proofreading and sharing the final draft of the report with the IPPC RW organizing committee. 4) Coordinating the adoption of the report. 5) Sharing the report with the organising committee no later than two months after the IPPC RW for formatting and posting on the IPP and sharing with participants.
12.	Resource persons	Resource persons may be invited by the organising committees to provide additional expertise for discussions on specific agenda items. These include ~~e~~xperts from their regions or other regions, and they may participate in discussions related to their area of expertise. A resource person should not influence decisions on other regional issues, particularly comments on draft ISPMs, ISPM specifications, CPM recommendations, and implementation and capacity development documents.
13.	Observers	The organising committee may agree to the participation of observers from relevant international organizations and NPPOs outside the region. Observers are invited to IPPC RWs to contribute by sharing relevant information and experience, but should not influence discussions on any regional issues, particularly comments on draft ISPMs, ISPM specifications, CPM recommendations, and implementation and capacity development documents.

3.5 Adoption of standards

ISPMs (other than DPs) are adopted by the CPM, on recommendation from the SC and if no objection is received until three weeks prior to the opening of the session.

There should be no drafting of International Standards for Phytosanitary Measures (ISPMs) at the annual CPM meeting.[75]

DPs are approved by the SC and submitted to a 45-day notification period, during which CPs may submit objections. The notification period for approved DPs is twice a year on defined dates (currently 30/01–15/03 and 01/07–15/08).[76] If no objection is received during the notification period, the DP is adopted and presented to the following CPM meeting for noting. If objections are received, the TPDP is consulted and the SC decides whether they are technically justified, and decides on further steps.

CPM Recommendations are adopted by the CPM (see section 3.3.6).

3.5.1 Objections

Following stage 4, step 7 of the Standard setting process (2016), CPs may submit objections no later than three weeks before the CPM session.

An objection must be accompanied by technical justification and suggestions for improving the draft ISPM that are likely to be acceptable to other CPs. Concerned CPs should make every effort to seek agreement before CPM. The objection will be added to the CPM agenda, and the CPM will decide on a way forward.

Should CPs wish to submit an objection, they should follow the procedure outlined in *Current objections to the adoption of ISPMs*.

CPM-19 (2025) confirmed that the process of objections allows for the submission of improvements to the text by CPs and regions.[77]

Regarding technical issues that are not formal objections regarding draft ISPMs presented for adoption by the CPM, the SC had concluded that the current process for objections was adequate, as it already accommodated a means to submit proposed improvements.[78]

For DPs, CPs may submit objections during the 45-day notification period.

CPM-8 (2013) approved the *Criteria to help determine if an objection is technically justified.*[79]

A. General criteria

For all draft ISPMs, an objection should be considered technically justified in cases such as:

- parts of the draft ISPM conflict with the provisions of the IPPC
- parts of the draft ISPM are inconsistent with adopted ISPMs
- there are technical inaccuracies present in the draft ISPM
- it is supported by scientific justification or other technical evidence

Adoption

[75] Adopted by CPM-7 (2012), Appendix 4 (Decision 1 on "CPM Decision on improving the Standard setting process").

[76] SC 2024-11, decision 22.

[77] Adopted by CPM-19 (2025), decision point 23.

[78] SC 2024-11, decision 52; CPM-19 (2025), agenda item 9.1.3.

[79] CPM-8 (2013), paragraph 79 and Appendix 4.

- parts of the draft ISPM conflict with technical provisions of other international agreements which the SC considers relevant to plant health.

B. Criteria for draft phytosanitary treatments

For PTs, an objection could be considered technically justified if any of the following apply:

- it refers to inconsistencies in the degree to which the treatment supports efficient phytosanitary measures in a wide range of circumstances
- the level of efficacy of the treatment is not experimentally supported (quantified or expressed statistically)
- it considers the potential effects on the product quality and intended use of the regulated article
- it provides technical information demonstrating the treatment is not feasible and applicable for use primarily in international trade or for other purposes (e.g. to protect endangered areas domestically, or for research). This may include factors noted in ISPM 28, which provides some guidance on what may constitute a technical justification.

C. Criteria for draft diagnostic protocols

For DPs, an objection could be considered technically justified if any of the following apply:

- it refers to inaccuracies in any of the technical information
- it refers to inaccuracies in the description of the pest, including signs and symptoms associated with the pest and methods of detecting the pest in a commodity
- it refers to the meeting of the requirements of the protocol for the diagnosis of the pest as described in ISPM 27, such as minimum requirements, reliability and flexibility for use in a wide range of circumstances, etc.
- it refers to whether the methods take into account the expertise needed, the availability of equipment and the practicability (e.g. ease of use, speed and cost).

3.6 Publication of standards

After adoption by the CPM, the IPPC Secretariat publishes the ISPM in all language versions on the IPP. ISPMs in languages for which LRGs are available are submitted to the language review process (see section 3.6.2) and revised versions published when they become available.

3.6.1 Distribution of ISPMs

All adopted ISPMs are published in Adobe Acrobat PDF format on the IPP.[80] Given the lead times on final translation and resource constraints, some language versions may be available before others. Due to their technical nature and length, DPs are no longer being translated into all FAO languages and are only made available in English.[81]

The use of electronic means for distributing ISPMs should be promoted. Contact points should be notified when electronic versions are available and should be encouraged to make use of electronic versions wherever possible. Contact points with adequate electronic communication systems should be encouraged to make use of the electronic version of the ISPM and circulate it internally in electronic form.[82]

Since 31 December 2012, all IPPC communications are paperless (i.e. electronic only). Individual contracting parties may request the Secretariat in writing, explaining their exceptional circumstances, to provide paper copies of IPPC communications and documents.[83]

3.6.2 Language Review Groups

Procedure to correct errors in International Standards for Phytosanitary Measures (ISPMs) in language versions other than English after adoption.[84]

Representatives from national plant protection organizations (NPPOs) and regional plant protection organizations (RPPOs) from each FAO language group, other than English, are invited to organize a Language Review Group (LRG) to consider the preferred use of terminology and to identify editing and formatting errors resulting from translation. Each LRG should identify a Coordinator for communications with the Secretariat, describe how they will organize communications within the group (e.g. teleconference, exchange of documents, etc.), explain its structure and respond to queries from members on how to join the LRG. Each LRG should invite a representative from the appropriate FAO language translation group and the respective TPG member(s) for that language to participate in order to ensure a clear understanding of the LRG issues.

Once established and recognized by the Secretariat, each LRG is invited to review adopted ISPMs and submit comments, in track changes, on terminology preferences, editorial and formatting mistakes to the Secretariat through their identified coordinator no later than three months after they have been advised that the adopted ISPMs are posted on the IPP (www.ippc.int); this time begins for the specified language once the ISPM has been posted on the IPP in that language.

FAO Translation services may participate as a member of the LRG but any official communication on proposed changes to the ISPMs should come from the LRG Coordinator to the IPPC Secretary (ippc@fao.org) in order to maintain version control of the standards.

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[80] On the Adopted standards page: https://www.ippc.int/en/core-activities/standards-setting/ispms/.

[81] DPs 1–16 are available in all FAO languages on the Adopted Standards page on the IPP.

[82] ICPM-7 (2005), Appendix II.

[83] CPM-6 (2011), paragraph 127.

[84] Appendix 12 to CPM-12 (2017) report (replaces procedure adopted at CPM-6 (2011), Appendix III, modified at CPM-8 (2013) and previously adopted at CPM-5 (2010), Appendix 9).

If no comments are submitted, the version adopted at the CPM meeting would remain the final version.

If comments are submitted by the LRG Coordinators through the above process, the Secretariat will forward the comments, in track changes, to the FAO Translation services.

The FAO Translation services will review the proposed changes. If all proposed changes are acceptable by the FAO Translation services, the track change version of the ISPM produced by the LRG will be forwarded to the Secretariat. If FAO Translation services disagree with any of the LRG proposed changes, they will document the reasons and consult with the LRG to discuss and seek consensus. If consensus cannot be achieved, the FAO Translation service will make the final decision and provide explanations in writing and the Secretariat will make them available to IPPC contracting parties.

Comments regarding the translation of glossary terms will be transmitted to the Technical Panel for the Glossary (TPG) through the SC as they may result in consequential changes to numerous ISPMs. Formatting issues would be addressed by the Secretariat.

The secretariat will post the modified ISPMs on the IPP and notify all CPs. The CPM agenda will include a standing item for noting that the specific standards were adjusted.

The CPM will note that the specific standards were adjusted and revoke previously adopted versions of the ISPMs.

Note: the secretariat will process only LRG reviewed standards received within the established deadline.[85]

In general, language review occurs in the year of adoption for the ISPM in question. More information on language review groups can be found on the IPP.[86]

Advice from the FAO Legal Office, since adoption of the above language-review procedure, is that when a standard adjusted by LRGs is *noted* by the CPM there is no need for the CPM to also explicitly *revoke* and *replace* the previous version, as the act of adjusting implies replacement.[87]

The procedure for language review of adopted CPM Recommendations is the same as that for adopted ISPMs.[88]

[85] CPM-7 (2012), paragraph 57.3.

[86] https://www.ippc.int/core-activities/governance/standards-setting/ispms/language-review-groups.

[87] FAO Legal Office, 2024-07-10.

[88] As noted by CPM-19 (2025), agenda item 10 (see section 3.3.6 of this manual).

3.7 Revision and amendment of standards

There are several ways to add to or change information in an ISPM. In general, a revision affects the entire document and is of a substantive nature whereas an ink amendment is not substantive and affects only a specific part or parts of the document. Revisions of ISPMs are therefore required to undergo the entire Standard setting process (including topic submission, drafting, consultation and review).

Criteria for the formation, content and subsequent change of supplements, annexes and appendixes in ISPMs are covered in section 4.1.

3.7.1 Ink amendments

Ink amendments are proposed as a result of consistency reviews by the TPG (consistency of specific terms in adopted ISPMs) or an EWG (necessary consequential changes identified during the drafting or revision of a standard).

The process for ink amendments was developed by the TPG[89] and reviewed by the SC and FAO Legal Office, who advised that consistency changes could be regarded as "ink amendments", as long as "consistency" is interpreted strictly so that no changes in the content of standards arise and agreed that the recommended process was appropriate.

CPM-04 (2009) agreed, with the proviso that it is limited to consistency issues and not substantive or stylistic issues, to the use of the following process for achieving consistency in the terminology of ISPMs:

- the TPG (or EWG) will tabulate the consistency changes in the form of amended text (sentence or paragraph) next to the original text. The interpretation of consistency will be strict so that no changes in content are introduced into the adopted standards. A rationale for the changes will also be included in this table. The TPG (or EWG) could achieve this through desk reviews by individual members followed by a special meeting of the TPG (or EWG) to confirm the consistency of the resultant draft tables;
- the SC will review the tables, amend if necessary and approve the consistency changes;
- the tables of consistency changes will be presented to the CPM. The CPM will note the "ink amendments";
- the Secretariat will insert the changes into the standards concerned and publish it on the IPP as soon as possible.

It was also indicated that this expedited process for minor adjustments should be used with the least possible use of resources, and should only be for technical improvements, not for editorial changes. Editorial changes and errors should be brought to the attention of the Secretariat, who will archive them for future revisions of the relevant standard.

Details of how this process is applied by the TPG to the consistency review across standards in relation to a specific term are outlined in section 7.5.3.

Advice from the FAO Legal Office is that when an ink-amended standard is *noted* by the CPM there is no need for the CPM to also explicitly *revoke* and *replace* the previous version, as the act of amendment implies replacement.[90]

[89] TPG 2008-10 discussed methods of incorporating consistency changes into adopted standards as a consequence of the consistency review of ISPMs 2002–2006 (Specification 32).

[90] FAO Legal Office, 2024-07-10.

CPM-11 (2016) noted the process for translating and incorporating ink amendments previously noted in English to the other official language versions of ISPMs.[91]

This decision entails the translation of ink amendments and their incorporation into the other official language versions of ISPMs. Where resources permit, initial translation is provided by the TPG members following the SC May meeting each year, for subsequent checking by the FAO Translation Office.

3.7.2 Procedures for urgent alteration or suspension of ISPMs after adoption

Procedures for urgent alteration or suspension of ISPMs after adoption were adopted at ICPM-6 (2004), which[92]:

- *Noted* that emergency suspension or withdrawal of an approved ISPM or elements of an ISPM, as had occurred in the case of the original ISPM 15 logo, was an extremely unlikely event.
- *Noted* that each situation needed to be evaluated on a case by case basis and that it was impossible to predict the circumstances where emergency suspension and/or withdrawal of an ISPM may be needed.
- *Noted* that the Commission functions within the framework of the FAO and therefore the FAO had the responsibility and mandate for the governance of the Commission (decision making and financial), and to protect the interest of Parties under exceptional and urgent circumstances.
- *Noted* that under this mandate the FAO had the responsibility to act quickly in cases where a risk was posed to the ability of the FAO to carry out its core responsibilities and requirements under the FAO Constitution and Basic Texts governing its operations.
- *Noted* the importance of promoting transparency and consultation between the FAO and the appropriate bodies established under the IPPC with respect to any such possible action, but also that circumstances may arise (for example with some types of legal action) where there were requirements for confidentiality and it may not be possible to provide at a certain stage full details to the Commission.
- *Agreed* that, where recommendations relating to the emergency suspension or withdrawal of an approved ISPM were being considered by the FAO:
    - As far as possible any recommendations should be discussed and endorsed by an emergency meeting of the Commission Bureau.
    - The Commission should be informed of any recommendations and justifications as soon as possible.

3.7.3 Mechanism for revising and revoking standards

The SC in November 2014 agreed on a mechanism for the replacement of standards modified through revision or ink amendment with the aim of clarifying which version in each language for each ISPM is the one in force. To facilitate the future revocation of previous versions, the secretariat proposed that[93]:

- The year of adoption and publication date will be contained on the cover page of ISPMs but not associated with the title.
- The year of adoption will not be quoted when referencing an ISPM in texts.
- The year of adoption will change when a supplement, annex or appendix is revised or added and adopted (except for ISPM 27 (*Diagnostic protocols for regulated pests*) and ISPM 28 (*Phytosanitary treatments for regulated pests*).
- Diagnostic protocols and phytosanitary treatments will continue to be published separately, the appendixes in ISPM 27 and ISPM 28 listing the annexes were deleted.

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[91] CPM-11 (2016), paragraph 48.1.

[92] ICPM-6 (2004), paragraph 89.

[93] SC 2014-11, agenda item 4.3.

- ISPMs should be mentioned collectively in the *References* section of other ISPMs.
- Previous versions of ISPMs that have been revoked will be marked with "REVOKED" across all pages (as resources allow).
- Direct quotations from ISPMs should be avoided where possible.
- Cross-references to section numbers in ISPMs should be avoided.

The same principle applies to ISPM 46 (*Commodity-specific standards for phytosanitary measures*) as to ISPM 27 and ISPM 28: the year of adoption of ISPM 46 does not change when an annex is revised or added and adopted.

For the Mechanism to simplify future revision and adoption, the SC[94]:

(1) *noted* that ISPMs will not be individually mentioned any more in the *References* section of ISPMs, however a generic text referring to all ISPMs collectively will be added in the *References* section.

(2) *noted* that the date of adoption will not be indicated every time an ISPM is quoted in the text of another ISPM.

(3) *noted* that in future revisions of ISPMs that direct quotations from ISPMs and cross-references to sections of other ISPMs will be avoided.

(4) *requested* the Secretariat to add the following task to all current specifications for a revision to an ISPM where drafting has not begun: "review all references to the ISPM under revision in other ISPMs to ensure that they are still relevant and propose consequential changes if necessary".

(5) *noted* when revisions of ISPMs are prepared for first consultation that consequential changes to other ISPMs will also be presented.

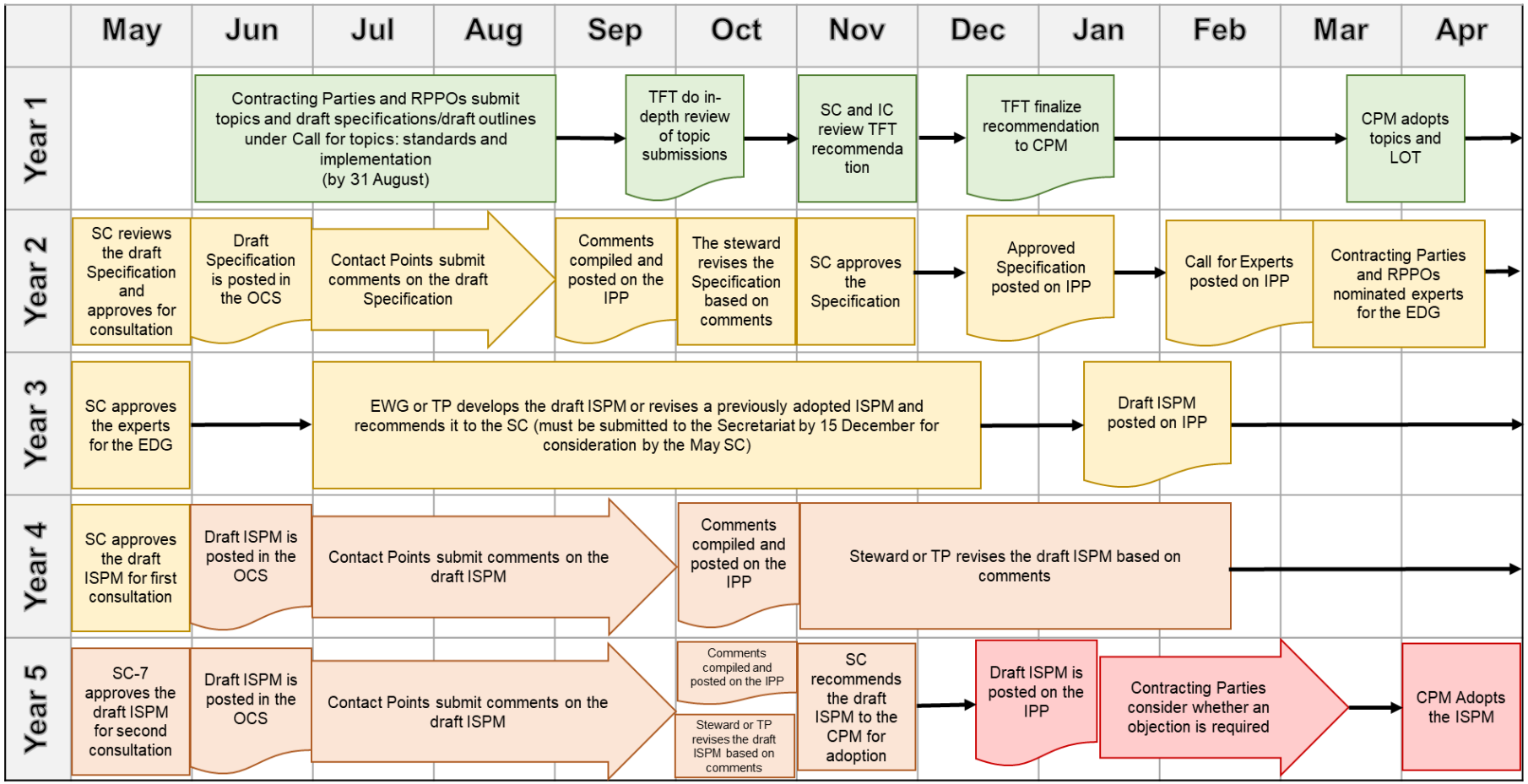
(6) *noted* when revisions of ISPMs are presented to the CPM for adoption that the consequential changes will also be presented as ink amendments.

(7) *noted* that upon adoption of a revised ISPM, the CPM will be requested to revoke the previous version of the ISPM and the newly adopted revision will replace the previous version.

[94] SC 2014-11, agenda item 4.3.

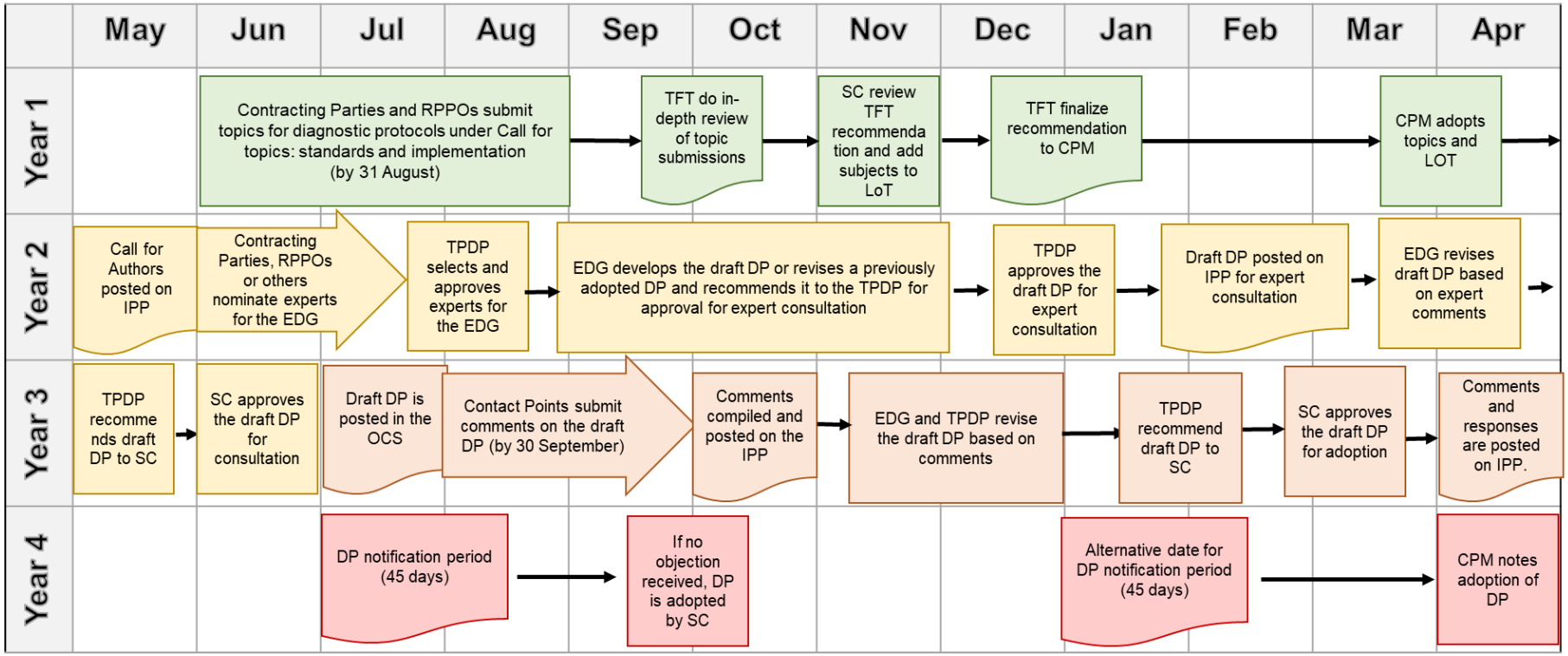
3.8 Timeline flow charts for the Standard setting process

Flow chart 1A: The Standard setting process for ISPMs (except for DPs)

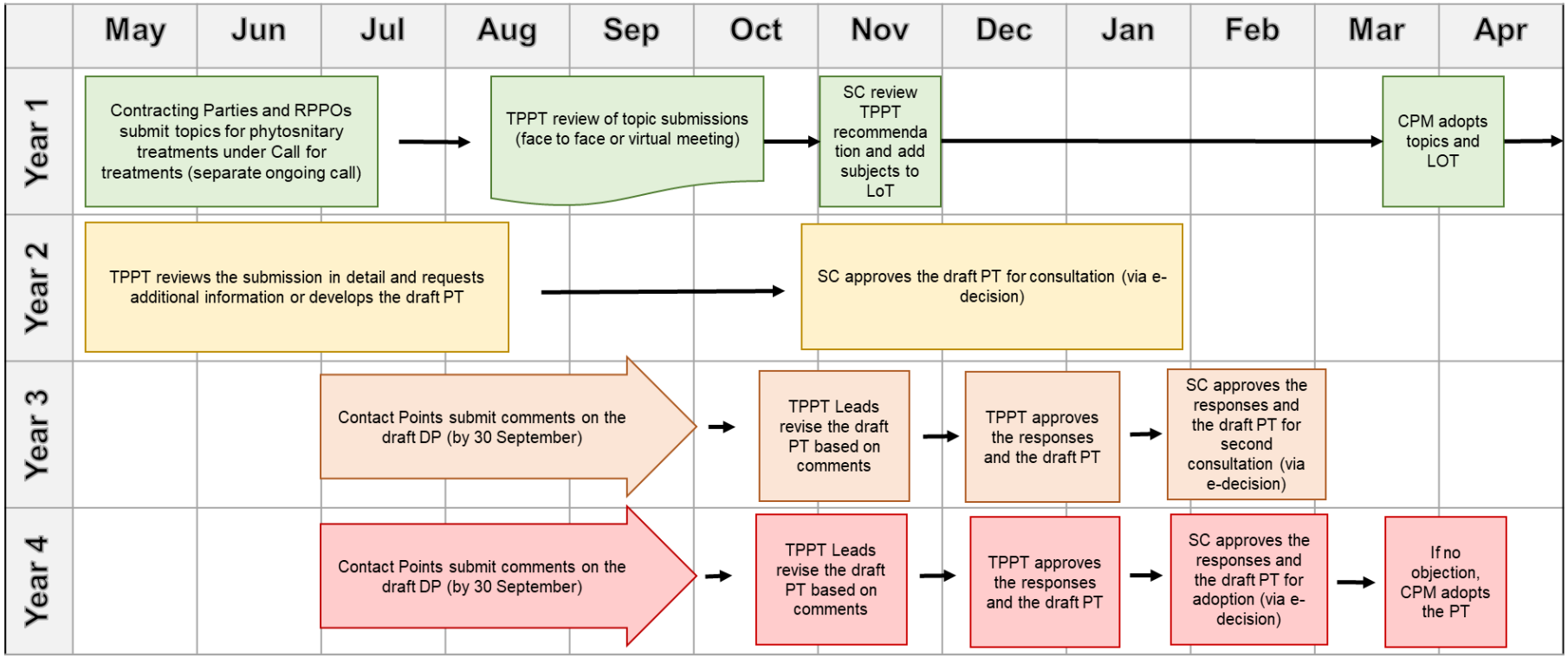


SSP Flow charts

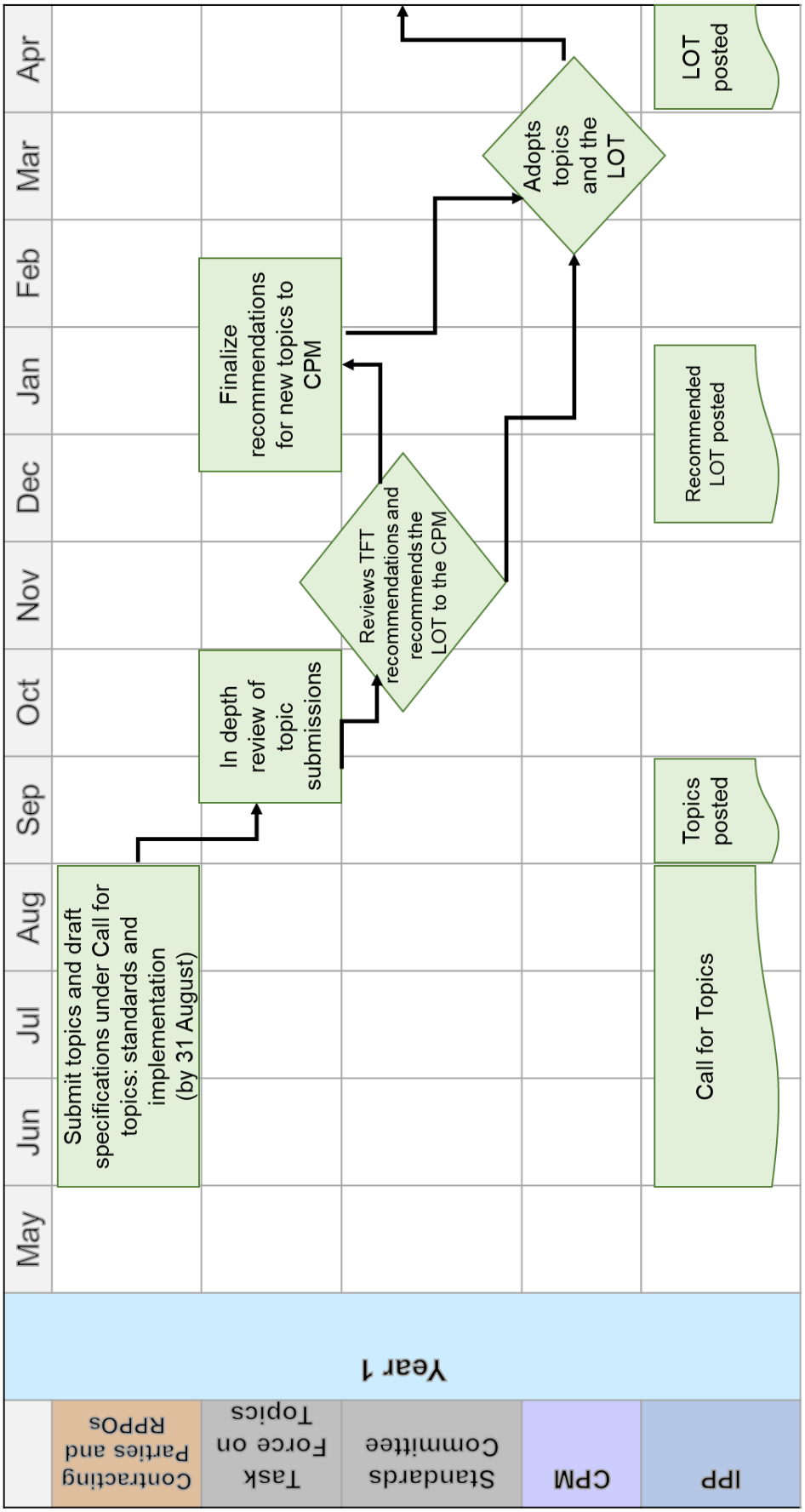
Flow chart 1B: The Standard setting process for DPs



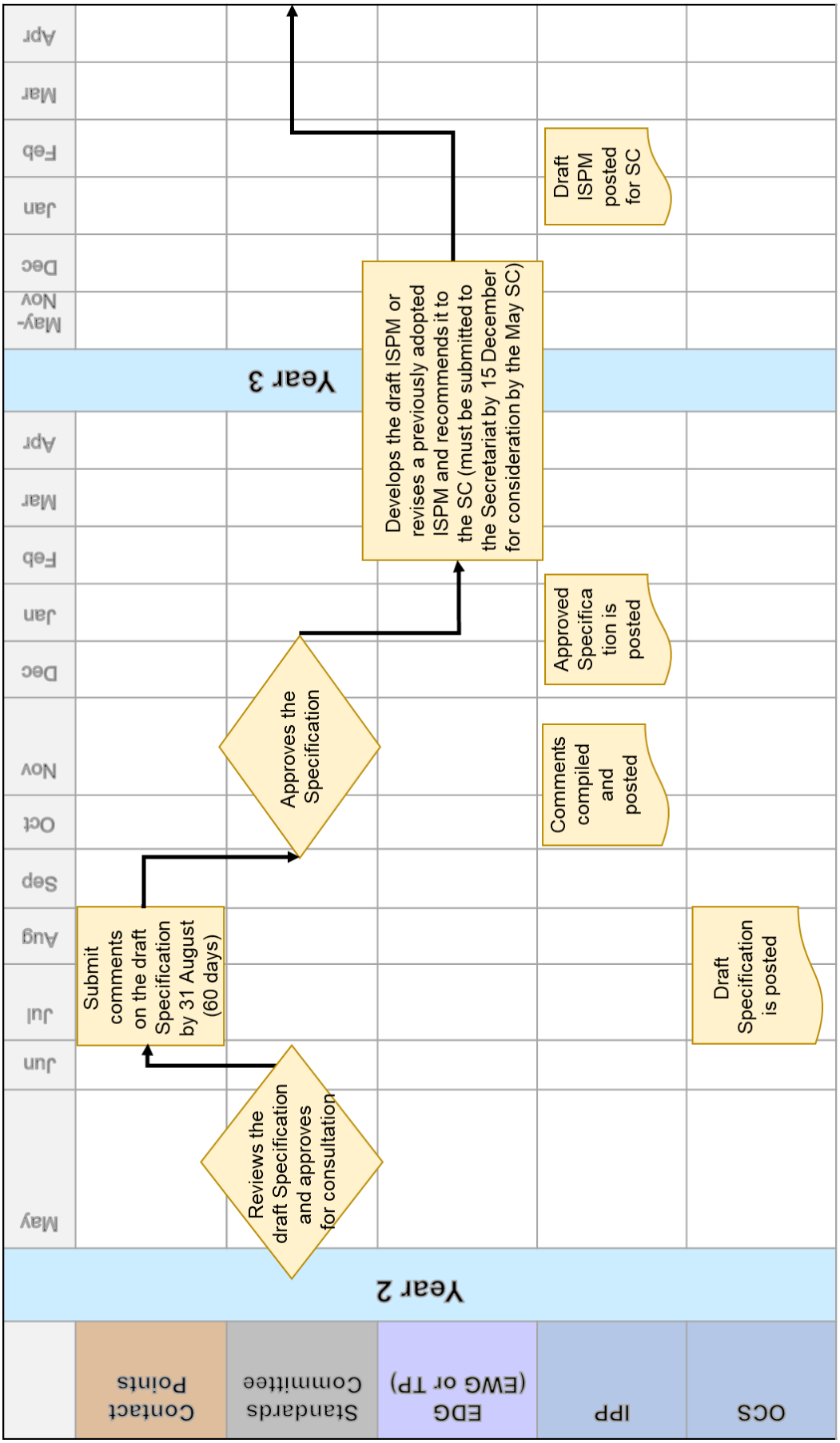
Flow chart 1C: The Standard setting process for PTs



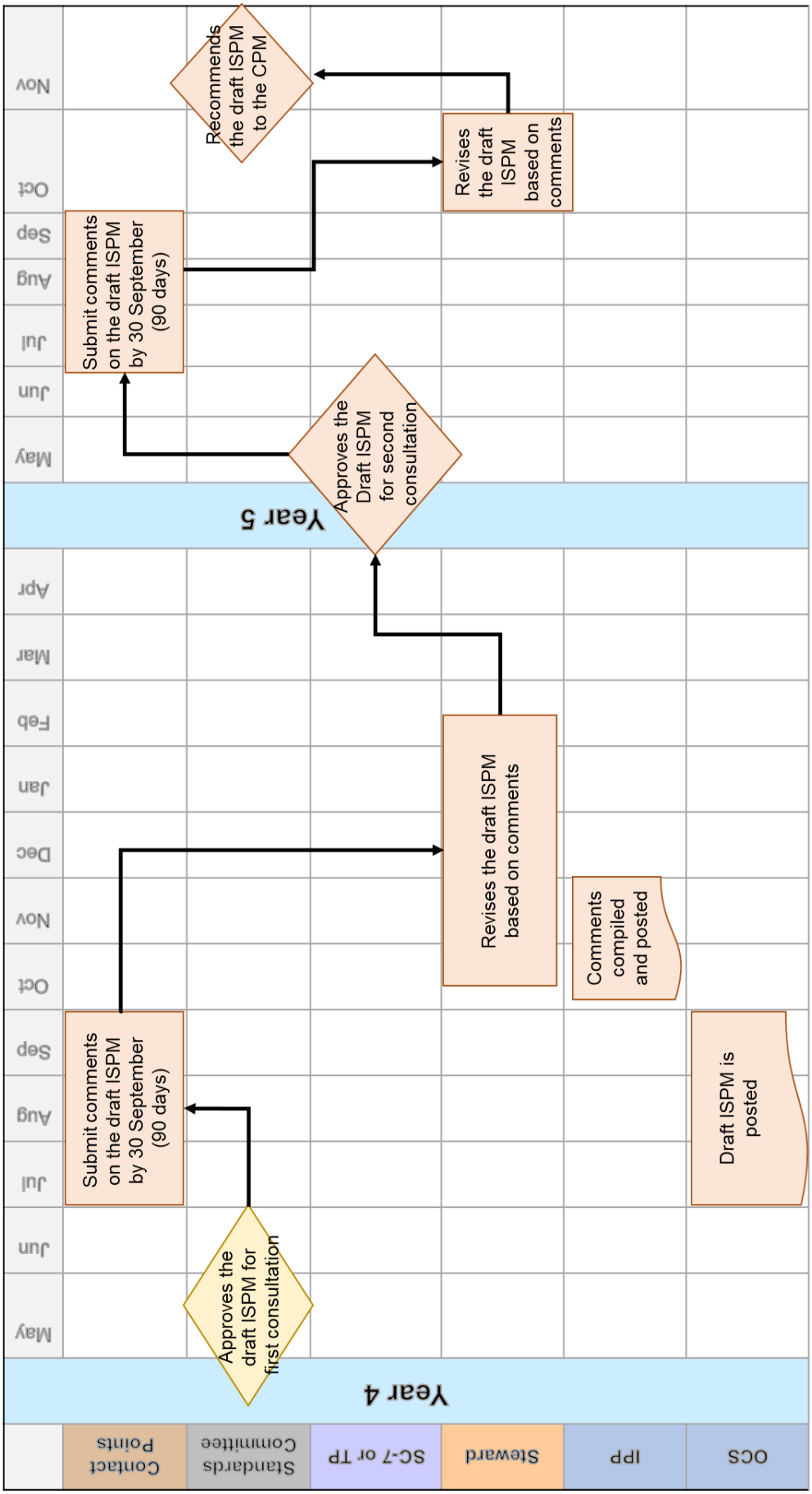
SSP Flow charts



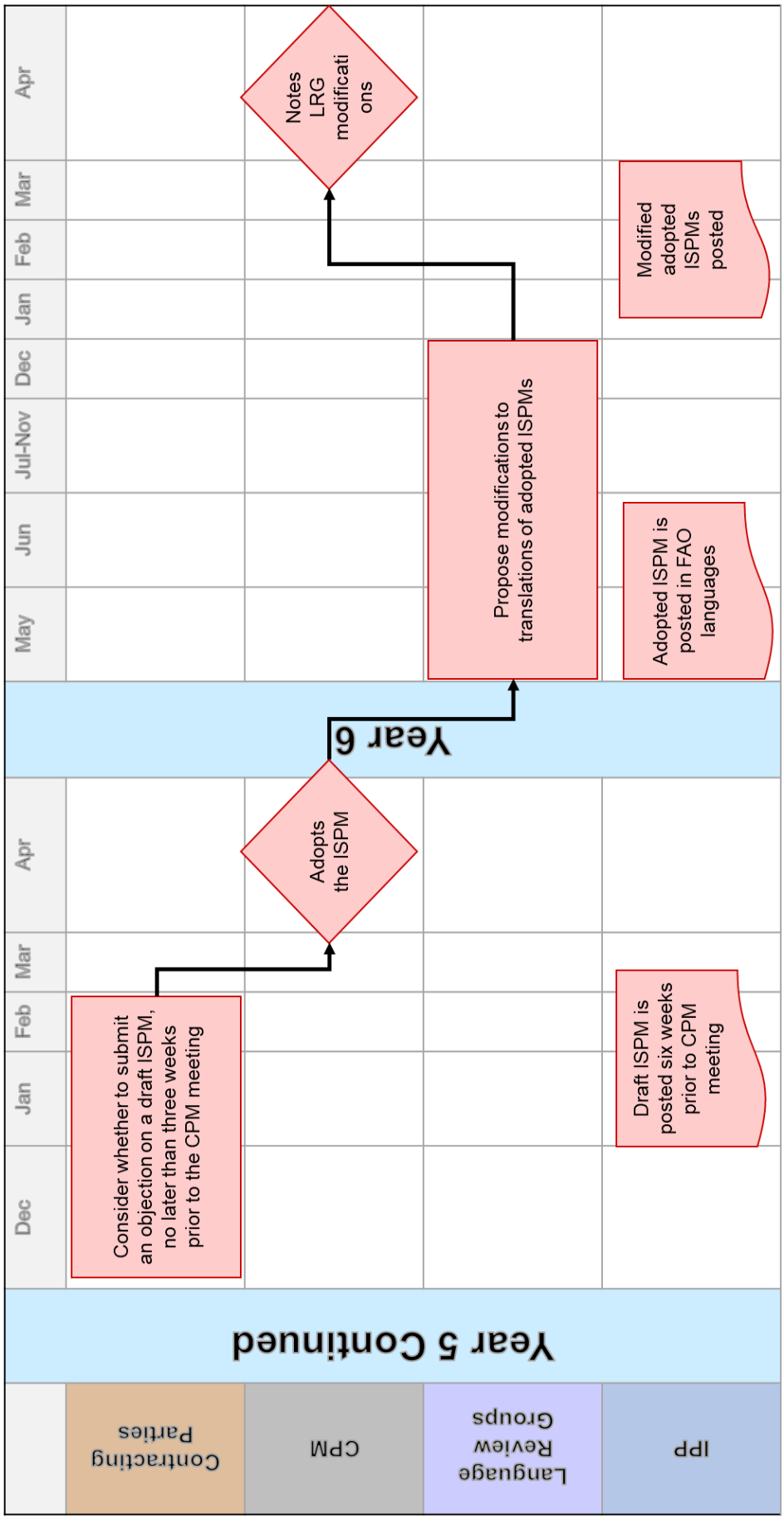
Flow chart 2: Stage 1 of the Standard setting process: Developing the *List of topics for IPPC Standards*



Flow chart 3: Stage 2 of the Standard setting process: Drafting



Flow chart 4: Stage 3 of the Standard setting process: Consultation and review



Flow chart 5: Stage 4 of the Standard setting process: Adoption

4. CONTENT OF ISPMS AND STANDARD SETTING DOCUMENTS

The content and structure of an ISPM follow a recommended format. The Introduction section includes the scope of the standard (that explains what is covered in the ISPM), references and definitions. It also contains the Outline of Requirements which is a summary of the substance of the standard (analogous to the abstract of a scientific paper). The Background section explains the rationale and history for the development of the standard. Another standard section outlines what impact the standard will have on biodiversity and the environment. The section on Requirements will provide the main text of the standard; it may be divided into generic and specific requirements, but there is no predetermined structure. The standard may have component documents such as supplements, annexes or appendixes (in that order).

An Annotated template for draft ISPMs[95] is available to provide guidance on content and structure of draft ISPMs.

4.1 Recommendations on use of supplements, annexes and appendixes in ISPMs

Criteria for the formation, content and subsequent change of supplements, annexes and appendixes in ISPMs were adopted by the CPM-1 (2006).[96]

Supplement

Criteria for the formation, content and subsequent change of supplements

A supplement is an official part of a standard (prescriptive) and this should be stated in the header.

- Supplements are the mechanism that the CPM uses in certain situations to add conceptual information that is supplemental to a standard and that provides additional text without changing existing text. This is different from amendments or revisions to a standard.
- Supplements to an ISPM are numbered sequentially with Arabic numerals.
- Supplements are the first component document to follow the body of the standard.
- Glossary (ISPM 5) supplements are used to clarify and explain complex phytosanitary terms and definitions which cannot be understood from a normal concise definition.
- Text from supplements may be integrated into the standard according to the decision of the CPM. In this case, the integrated text should be clearly indicated by a symbol or other means, and the standard should carry the date of adoption of the supplement by the CPM.
- Glossary supplements are attached to the end of the section containing terms and definitions, and are numbered sequentially with Arabic numbers in the order of adoption of the supplement by the CPM.
- The date of adoption by the CPM should be indicated in the amended or revised supplement.

Annex

Criteria for the formation, content and subsequent change of annexes

An annex is an official part of a standard (prescriptive) and this should be stated in the header.

- An annex adds technical information to the standard. It is referred to in the main text of the standard.
- Annexes to an ISPM are numbered sequentially with Arabic numerals.
- Annexes follow the body of the standard and follow supplements, if present.

[95] Annotated template for draft ISPMs available at: https://www.ippc.int/en/publications/81325/.

[96] CPM-1 (2006), Appendix XIII, 1-2.

- Information in annexes does not affect the principles incorporated in the primary standard. They do not normally include conceptual information of relevance to the standard.
- Annexes may provide technical guidelines for phytosanitary treatments or procedures, including treatments, treatment schedules and diagnostic protocols. They may include tables and figures.
- Annexes may contain information that may need to be amended or revised to ensure that the specific information provided is consistent with and reflects current scientific knowledge and other relevant information. The circumstances under which amendments and revisions become necessary may include:
  - the approval of new guidelines, treatments or procedures
  - a change in existing methods
  - as a result of experiences with implementation of a particular standard.
- New annexes or amendments and revisions to existing annexes may be proposed following the *Procedures for identifying topics and priorities for standards* (Report of ICPM-4, 2002, Appendix XIV). (See also ANNEX 7)
- Amendment or revision of annexes may be made without modifying the standard.
- The date of adoption by the CPM should be indicated in the amended or revised annex.

Recommendations on the use of annexes[97]

Technical annexes (such as DPs, PTs, treatment schedules, e.g. wood packaging) should be used as much as possible, where appropriate. Annexes should be open to revision separately to the main standard. Revision of annexes could be by a fast track procedure special process.

Annexes should only contain highly specific information that may need to be changed over time and that does not affect the principles incorporated in the primary standard.

Appendix

Criteria for the formation, content and subsequent change of appendixes

- Appendixes are not official parts of standards (for information only, not prescriptive) and this should be stated in the header.
- Appendixes to an ISPM are numbered sequentially with Arabic numerals.
- Appendixes should be the last component document in a standard.
- Appendixes provide references or further information relevant to the standard.
- The date of adoption by the CPM should be indicated in the amended or revised appendix.

4.2 Adding or changing information in an ISPM and component documents

There are several ways to add or change information in an ISPM (supplements, annexes and appendixes).[98] ISPMs may be:

- amended
- revised or
- have supplements, annexes and/or appendixes added to them.

Supplements, annexes and appendixes may be:

- amended or
- revised or

[97] ICPM-6 (2004), Appendix IX, 8.

[98] CPM-1 (2006), Appendix XIII, 1-2.

- eliminated.

In general, a revision affects the entire document whereas an amendment affects a specific part or parts of the document.

For additional information see also section 3.7.

4.3 Administrative guidelines for the structure of standard setting documentation

For guidance on use, types, format and style of standards, refer to the *IPPC style guide*.[99]

4.4 Other documents related to ISPMs

See ANNEX 8 for a categorization of all IPPC related documents, including the clearances required for them under the IPPC framework.

ICPM-6 (2004) noted that there is a demand for explanatory documents, manuals and similar documents to help countries implement provisions of the IPPC and ISPMs.

ICPM-6 (2004)[100]:

- *Endorsed* a policy to allow explanatory documents, training guides and similar documents to be developed and distributed under the auspices of the Secretariat.
- *Decided* that these documents be reviewed by experts acting under the auspices of the Secretariat before publication, but that the draft documents would be made available to the SC which may comment in the reviewing process.
- *Decided* that these documents would be published under the name of the author acting under the auspices of the Secretariat, with a clear disclaimer that these cannot be taken as an official legal interpretation of the IPPC or its related documents, and are produced for public information purposes only.
- *Decided* that these documents be placed on the IPP.

Explanatory documents

A programme of development of explanatory documents on ISPMs started in 2004. Explanatory documents are reviewed by the SC and posted on the IPP.[101]

Explanatory documents are developed or reviewed by experts and distributed under the auspices of the Secretariat. The SC provides comments and approval via SC e-decisions. The documents are published under the name of the author with a clear disclaimer that they cannot be taken as an official legal interpretation of the IPPC or its related documents, and are produced for public information purposes only.

As of December 2024, explanatory documents have been developed for ISPM 5 (*Glossary of phytosanitary terms*) (the Annotated Glossary), ISPM 15 (*Regulation of wood packaging material in international trade*), ISPM 17 (*Pest reporting*), ISPM 18 (*Guidelines for the use of irradiation as a phytosanitary measure*), ISPM 20 (*Guidelines for a phytosanitary import regulatory system*) and ISPM 31 (*Methodologies for sampling consignments*) and ISPM 31 (*Methodologies for sampling of consignments*).

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[99] The *IPPC style guide* is available at: https://www.ippc.int/en/publications/132/.

[100] ICPM-6 (2004), paragraph 111.

[101] Explanatory documents available on IPP at: https://www.ippc.int/en/about/core-activities/standards-setting/explanatory-documents-international-standards-phytosanitary-measures/.

The SC agreed that the *Explanatory document on ISPM 5* ("Annotated Glossary") should remain under the auspices of the TPG, be updated when the TPG identifies the need, and that a revision should be published every three years; *agreed* to continue with the present system of the production of explanatory documents with increased input from SC members and the relevant stewards identifying authors for these papers, with minimal Secretariat involvement.[102]

Further detailed information and a list of current explanatory documents are contained in ANNEX 5.

Position papers

These are documents prepared to clarify for instance a technical panel's position on a subject matter. They serve to outline the references and sources that the panel bases its decisions on, in order to appropriately understand how the decisions were taken and how the specific position was reached.

The SC in its May 2014 meeting agreed that TP position papers be posted publicly after they are approved by the SC.[103]

Training guides and manuals

Guides, manuals and other documents to assist in implementation of the Convention and ISPMs are produced under the supervision of the IC and covered in detail in the *IPPC procedure manual for implementation and capacity development.*[104]

[102] SC 2013-05, paragraph 54.

[103] SC 2014-05, paragraph 150.

[104] *IPPC Procedure manual for implementation and capacity development* available on IPP at: https://www.ippc.int/en/publications/86954/.

5. STANDARDS COMMITTEE

The First Session of the CPM (CPM-1, 2006) established the Standards Committee (SC) as its subsidiary body on standard setting.[105] The SC is composed of 25 members drawn from the seven FAO regions (Africa, Asia, Europe, Latin America & Caribbean, Near East, North America, and Southwest Pacific). Each region determines its own procedures to select nominees for the SC. The FAO Asia region nominations are channelled through their Bureau member with the FAO regional Chair in copy. The FAO North America region nominations are channelled through their Bureau member with the Co-Chairpersons and the Executive Director of the North American Plant Protection Organization (NAPPO) in copy. Nominations for FAO Europe come through the Director-General of the European and Mediterranean Plant Protection Organization (EPPO) with the FAO regional Chair in copy. Other regions follow the FAO process (summarized in Figure 11) in nominating their SC representatives.

The CPM should allow, and the regions should encourage, staggering the terms of SC membership to ensure continuity of expertise. The SC should also consider this same principle for other groups working under the SC.[106]

In order to be appointed as an SC member, the nominee and his/her supervisor must sign a statement of commitment form (available in ANNEX 6).

The SC selects from within its members a subgroup of seven experts, one from each FAO region, to form the SC Working Group of seven members (SC-7), who undertake detailed work on draft standards, particularly those coming from first consultation (see section 5.3).

The SC should consult with external experts on technical subjects as needed.[107]

The SC's role is to address standard setting and the feasibility of implementation.[108]

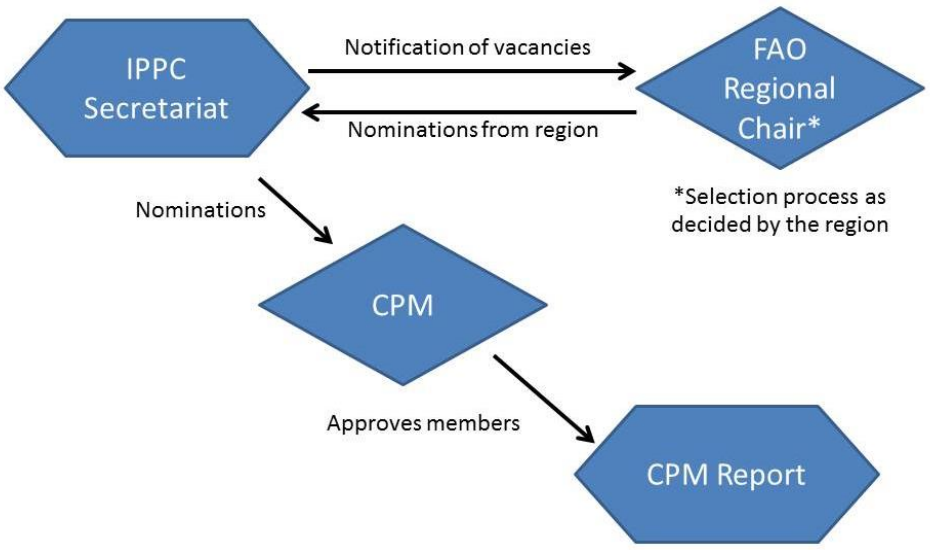

Figure 11. The processes of nomination of members to subsidiary bodies (including the SC).

[105] CPM-1 (2006) paragraph 20.1. The SC had been established by the ICPM-4 (2002) to replace the former Interim Standards Committee and its predecessor, the Committee of Experts on Phytosanitary Measures (CEPM).

[106] Adopted by CPM-7 (2012), Appendix 4 (Decision 21).

[107] Adopted by CPM-7 (2012), Appendix 4 (Decision 23).

[108] Decided by the Bureau June 2012 (section 6.8), noted by SC November 2012 (agenda item 3.1.3).

5.1 Terms of reference for the Standards Committee[109]

[adopted by CPM-1 (2006); aligned by the Standards Committee (November 2008), as requested by CPM-3 (2008); Rules of Procedure revised by SC 2012-11 and adopted by CPM-8 (2013), Appendix 3; Rule 6 of the Rules of Procedure amended by CPM-11 (2016). IPPC Secretariat adjusted wording to be in line with the CPM-11 revised standard setting procedure. SC revised to align with IC ToR and RoP, CPM-13 (2018) adopted]

Scope

The SC manages the standard-setting process and assists in the development of International Standards for Phytosanitary Measures (ISPMs) which have been identified by the Commission as priority standards.

Objective

The main objective of the SC is to prepare draft ISPMs according to the standard-setting procedures in the most expeditious manner for adoption by the Commission.

Structure of the Standards Committee

The SC consists of 25 members drawn from each of the FAO regions. The distribution for each region will be:

- Africa (4 members)
- Asia (4)
- Europe (4)
- Latin America and the Caribbean (4)
- Near East (4)
- North America (2)
- Southwest Pacific (3)

A representative of the Implementation and Capacity Development Committee may also participate.

Temporary or permanent working groups, and drafting groups consisting of SC members, may be established by the SC as required. SC working groups are selected by the SC from its membership.

Seven SC members are selected by the SC to form the SC-7 and are guided by the terms of reference and rules of procedure for this group which are approved by the SC.

The functions and working procedures of the SC-7 and other SC working groups are determined by the SC.

Functions of the Standards Committee

The SC serves as a forum for:

- examination and approval or amendment of specifications
- review of specifications
- designation of members of SC working groups and identification of tasks of the groups
- establishment and disestablishment of expert working groups and SC working groups as appropriate

[109] Adopted by the CPM-1 (2006) and aligned by the SC 2008-11, Appendix 4, as requested by the CPM-3 (2008).

- approval of the work programmes of technical panels, and review, guidance and supervision of their activities and outcomes of their meetings
- selection of membership of expert drafting groups as required and in accordance with the appropriate terms of reference and/or rules of procedure for these groups
- review of draft ISPMs
- approval of draft standards to be submitted to contracting parties, NPPOs, RPPOs and relevant international organizations under the member consultation procedure
- establishment of open-ended discussion groups where appropriate
- revision of draft ISPMs in cooperation with the IPPC Secretariat taking into account comments of contracting parties, NPPOs, RPPOs and relevant international organizations
- approval of final drafts of ISPMs for submission to the Commission
- review of existing ISPMs and identification and review of those requiring reconsideration
- identification of priorities for ISPMs under development
- ensuring that language used in draft ISPMs is clear, simple and focused
- assigning stewardship for each ISPM
- Work in close collaboration with the CPM Subsidiary Body "Implementation and Capacity Development Committee" (IC) to help make standard setting and implementation complementary and effective.
- Other functions related to standard setting as directed by the Commission

These functions may be executed during face to face meetings and between meetings, via electronic means, as determined by the SC.[110]

IPPC Secretariat

The Secretariat provides administrative, technical and editorial support as required by the SC. The Secretariat is responsible for reporting and record keeping regarding the standard-setting programme.

5.2 Rules of procedure for the Standards Committee[111]

In order to be appointed as an SC member, the nominee must sign a statement of commitment form (available in ANNEX 6). The CPM should allow, and the regions should encourage, staggering the terms of SC membership to ensure continuity of expertise. The SC should also consider this same principle for other groups working under the SC.[112]

[110] The SC (2008) discussed issues related to electronic communication for SC business. The issues include selection of experts, approval of explanatory documents, finalizing specifications, adjustment of stewards and deciding on other tasks as appropriate. The SC discussed what type of work could be handled electronically outside of the meeting. The SC considered that development of specifications via electronic means could be done partially through electronic means, but that discussion in the SC is also valuable. The length of time for responses was changed from two weeks as previously agreed to three weeks. The SC agreed to these new procedures (SC November 2008, Appendix 4).

[111] Adopted by the CPM-1 (2006); aligned by the SC 2008-11 (Appendix 4), as requested by the CPM-3 (2008); revised by SC 2012-11 and adopted by CPM-8 (2013), Appendix 3; Rule 6 of the Rules of procedure amended by CPM-11 (2016); Rule 7 of the Rules of procedure amended by CPM-18 (2024), Appendix 3, based on CPM 2024/08.

[112] Adopted by CPM-7 (2012), Appendix 4 (Decision 21).

Rule 1. Membership

Rule 1. Membership

Members should be senior officials of national plant protection organizations (NPPO), designated by contracting parties, and have qualifications in a scientific biological discipline (or equivalent) in plant protection, and experience and skills particularly in the:

- practical operation of a national or international phytosanitary system
- administration of a national or international phytosanitary system, and
- application of phytosanitary measures related to international trade.

Contracting parties agree that SC members dedicate the necessary time to participate in a regular and systematic way in the meetings.

Each FAO region may devise its own procedures for selecting its members of the SC. The IPPC Secretariat is notified of the selections that are submitted to the CPM for confirmation.

The SC is responsible for selecting the SC-7 members from within its membership. Members selected for the SC-7 will meet the above-mentioned qualifications and experience.

Rule 2. Replacement of members

Each FAO region shall, following its own procedures, nominate potential replacements for members of the SC and submit them to the CPM for confirmation. Once confirmed, potential replacements are valid for the same periods of time as specified in Rule 3. These potential replacements should meet the qualifications for membership set forth in these Rules. Each FAO region shall identify a maximum of two potential replacements. Where a region nominates two, it should indicate the order in which they would serve as replacements under this Rule.

A member of the SC will be replaced by a confirmed potential replacement from within the same region if the member resigns, no longer meets the qualifications for membership set forth in these Rules, or fails to attend two consecutive meetings of the SC.

The national IPPC contact point should communicate to the Secretariat any circumstances where a member from its country needs to be replaced. The Secretariat should inform the relevant FAO regional chair.

A replacement will serve through the completion of the term of the original member, and may be nominated to serve additional terms.

Rule 3. Period of membership

Members of the SC shall serve for terms of three years. Members may serve no more than two terms, unless a region submits a request to the CPM for an exemption to allow a member from within its region to serve an additional term. In that case, the member may serve an additional term. Regions may submit requests for additional exemptions for the same member on a term-by-term basis. Partial terms served by replacements shall not be counted as a term under these Rules.

Rule 4. Chairperson

The Chairperson and Vice-Chairperson of the SC are elected by the SC from its membership and serve for three years, with a possibility of re-election for one additional term of three years. The Chairperson and Vice-Chairperson may serve in these capacities only when a member of the SC. The Chairperson, or in the absence of the Chairperson, the Vice-Chairperson, shall preside at meetings of the SC and shall exercise such other functions as may be required to facilitate the work of the SC. A Vice-Chairperson acting as a Chairperson shall have the same powers and duties as the Chairperson.

The Chairperson shall direct the discussions in SC meetings, and at such meetings ensure observance of these Rules, accord the right to speak, put questions and announce decisions. He/she shall rule on points of order and, subject to these Rules, shall have complete control over the proceedings at any meetings. He/she may, in the course of the discussion of an item, propose to the SC the limitation of the time to be allowed to speakers, the number of times each member may speak on any question, the closure of the list of speakers, the suspension or adjournment of the meeting, or the adjournment or closure of the debate on the item under discussion. The Chairperson, in the exercise of his/her functions, remains under the authority of the SC.

Rule 5. Sessions

Meetings of the SC are normally held at FAO Headquarters in Rome. The SC meets at least once per year.

Depending on the workload and resources available, the SC or the Secretariat, in consultation with the Bureau of the CPM, may request additional meetings of the SC. In particular, the SC may need to meet after the CPM meeting in order to prepare draft standards for member consultation.

Depending on the workload and resources available, the SC, in consultation with the Secretariat and the Bureau of the CPM, may authorize the SC-7 or extraordinary working groups of the SC to meet.

A session of the SC shall not be declared open unless there is a quorum. The presence of a majority of the members of the SC is necessary to constitute a quorum.

Some tasks, as agreed by the SC, may be undertaken between meetings via electronic means, and should be reported on in the report of the next session of the SC.

Rule 6. Approval

Approvals relating to specifications or draft standards are sought by consensus. Final drafts of ISPMs which have been approved by the SC are submitted to the CPM without undue delay.

Situations where consensus is required but cannot be reached shall be described in the meeting reports detailing all positions maintained and presented to the CPM for discussion and appropriate action.

Rule 7. Observers

A contracting party to the IPPC or RPPO may request to send up to two observers to attend a SC meeting. This request should be communicated by the official IPPC contact point to the IPPC Secretariat at least thirty days prior to the starting date of the meeting and the decision to attend is made by the SC Chair and the IPPC secretariat. In response to this request, the observers will be invited to attend, depending whether logistical arrangements can be made. In case the number of observers has to be limited, replacement members might be given a priority during the decision making.[113]

A representative of the IC may attend as an observer.

Such observers may i) participate in the discussions, subject to the approval of the Chairperson and without the right to participate in decision-making process; ii) receive the documents other than those of a sensitive nature, and, iii) submit written statements on particular items of the agenda.

Rule 8. Reports

SC meeting records shall be kept by the Secretariat. The report of the meetings shall include:

- approval of draft specifications for ISPMs
- finalization of specifications with a detailed explanation including reasons for changes

[113] CPM-18 (2024), Appendix 3, based on CPM 2024/08 and CPM 2024/INF/09.

- reasons why a draft standard has not been approved
- a generic summary of SC reactions to classes of comments made in member consultation
- draft standards that are sent for member consultation and draft standards recommended for adoption by the CPM.

The Secretariat shall endeavour to provide to CPM Members upon request the rationale of the SC for accepting or not accepting proposals for modifications to specifications or draft standards.

A report on the activities of the SC shall be made by the Chairperson of the SC to the annual session of the CPM.

Reports of SC meetings shall be adopted by the SC before they are made available to Members of the CPM and RPPOs.

The role of the rapporteur is outlined in Functions of the Standards Committee Chairperson, Vice-Chairperson and Rapporteur (in session and inter-sessionally).

Rule 9. Language

The business of the SC shall be conducted in the languages of the organization.

Rule 10. Amendments

Amendments to the Rules of Procedures and the Terms of Reference may be promulgated by the CPM as required.

5.3 Standards Committee Working Group

The Standards Committee Working Group (SC-7) supports the work of the SC by reviewing draft ISPMs after the first consultation. They may also be asked by the SC to discuss other issues. The SC-7 usually meets once a year, preferably directly after the SC May meeting.

Terms of reference[114]

Scope

The SC-7 working group of the SC supports the work of the SC in the detailed consideration of documents.

Structure of the SC-7 Working Group of the Standards Committee

The SC-7 consists of seven members.

Functions of the SC-7

The SC-7:

- examines all of the substantive comments (including proposed amendments) identified by the stewards;
- reviews and revises draft ISPMs prepared by the stewards in response to comments and proposes revisions to the SC;
- drafts SC responses to substantive comments not incorporated into the draft ISPMs as identified by the steward;
- proposes which changes to draft ISPMs should be considered further by the SC;
- explains the proposed revisions to draft ISPMs to the SC as required; and
- carries out other functions regarding draft standards and specifications as directed by the SC.

[114] SC 2008-11, Appendix 8.

IPPC Secretariat

The Secretariat provides administrative, technical and editorial support as required by the SC-7. The Secretariat is responsible for record keeping regarding the work of the SC-7 and for the drafting of a report from the SC-7 meeting which is not held in conjunction with a SC meeting.

The Secretariat provides expertise in the use of the English language, if required.

Rules of procedure

Rule 1. Membership

Members should be selected from members of the SC, representing seven FAO regions.

Contracting parties agree that SC-7 members dedicate the necessary time to participate in a regular and systematic way in the SC-7 meetings.

The SC is responsible for selecting the SC-7 members. The IPPC Secretariat is notified of the selections.

Rule 2. Temporary replacement of members

Temporary replacement members of the SC-7 for specific meetings are selected by the SC members of each FAO region and the SC-7 member notifies the Secretariat well in advance of the meeting.

Rule 3. Period of membership

Terms of membership shall correspond to the terms of membership of the SC as outlined in Rule 3 of the *Terms of reference* and *Rules of procedure for the SC*.

Membership of the SC-7 lapses with membership of the SC or upon resignation.

Rule 4. Chairperson

The Chairperson of the SC-7 is elected by the members of the SC-7 at the beginning of each meeting.

Rule 5. Sessions

Meetings of the SC-7 are normally held at the FAO Headquarters in Rome or wherever the SC meets.

The SC-7 meets at least once per year. Depending on the workload and resources available, the SC, in consultation with the Secretariat and the Commission Bureau, may authorize the SC-7 to hold an additional meeting.

A session of the SC-7 shall not be declared open unless there is a quorum of at least five members.

Rule 6. Observers

Observers are limited to the Chairperson of the SC, stewards and subject experts who are invited by the Secretariat. Stewards and subject experts are invited to attend specified sessions of the SC-7 meeting. The SC-7 recommends experts to be invited if necessary. In cases when the SC-7 meets instead of the SC, members of the SC may participate as observers on request to the Secretariat.

Rule 7. Decision making

Decisions are taken through consensus. If no consensus is possible the matter is referred to the SC.

Rule 8. Reports

The Chairperson of the SC-7 will provide a verbal report to the SC on the activities of the SC-7 and in cases when the SC-7 do not meet in conjunction with a meeting of the SC, a full report of the meeting will be prepared by the Secretariat and adopted by the SC-7.

The secretariat notes that SC-7 meeting reports are developed and published alongside SC meeting reports on the IPP.

In addition, the draft standards that are sent for second consultation are annexed to the report.

Rule 9. Records

Records shall be kept by the Secretariat. The record of the meetings shall include:

- SC-7 revisions to steward's draft ISPMs responding to comments; and
- SC-7 revisions to steward's draft summaries of responses to comments.

Rule 10. Language

The working language of the SC-7 should be English.

Rule 11. Amendments

Amendments to the Rules of procedure and the Terms of reference may be promulgated by the SC as required.

5.4 Guidelines on the duties of the Standards Committee

The SC approved these guidelines in November 2006, noting that, where necessary, the guidelines can be modified using the SC's normal procedures.[115]

SC and SC-7 members should seek technical advice from experts in advance of meetings, including from technical panel members, to prepare appropriately. This facilitates the timely development of ISPMs.

Purpose of the Standards Committee

The SC is an integral component of the Standard setting process with the purpose of assisting the production of draft standards that are of sufficient quality to be adopted by the Commission as International Standards for Phytosanitary Measures (ISPMs). The SC does not write standards but prepares draft ISPMs according to the Standard setting procedure, monitors each standard's development and ensures they have a consistent quality. The SC may also be assigned additional tasks by the Commission.

The SC ensures that the standards:

- fulfil the specification for the standard
- fall within the scope of the IPPC
- are technically based
- have scientific integrity
- follow the principles and policies of the Commission, including the General considerations for standard setting
- are presented in the required format for standards
- are written in a simple, clear and focused language.

The Commission has decided that the SC should be made up of experts from different regions. The Commission intends that the committee include a diversity of global views on any subject it deals with. These views are used in the production of internationally harmonized standards. They encompass, for example, the views of different geographic regions of the world, developing and developed countries, tropical and temperate regions, continental and island nations, highly and sparsely populated countries, countries with intensive agricultural or forestry interests, etc. The choice of experts on a regional basis is a pragmatic choice to obtain a range of views that can produce internationally acceptable standards.

The primary purpose of the SC is to ensure that ISPMs help to protect plant health on a global scale. The SC members that are selected are expected to act as individual experts, not as country

[115] SC 2006-11, paragraph 104; modified by the SC 2008-11, Appendix 5.

representatives. However, the views of the expert are usually those characteristic of the region the expert comes from.

In addition to assisting with the development of standards, the SC serves as a forum for other functions as directed by the Commission. These types of functions could include the review of procedural and administrative documents to ensure they are consistent with the Standard setting process and are feasible.

Structure of the SC

The membership of the SC is outlined in the *Terms of reference* and *Rules of procedure for the SC*. The whole body is referred to as the SC and this body selects its own Chairperson and Vice-Chairperson. In addition, the SC members from each FAO region select a member to form the SC-7 who, in turn, select their own Chairperson. The SC oversees the work of expert drafting groups in particular through the use of specifications. The SC may decide to break into smaller working groups as necessary in order to deal with a heavy workload, maintaining the diversity of global views. Holding additional meetings of the SC should be done in consultation with the Commission Bureau and IPPC Secretariat. The Commission establishes the *Terms of reference* and *Rules of procedure for the SC*, and the SC determines the working procedures of the SC working groups.

Decision making

The SC is responsible to collectively make decisions presented for consideration to the Commission. These are recorded in the report of the SC. The SC may agree to use electronic means for consultation on specific issues between meetings. The views of the SC members collected at SC meetings and recorded in SC reports on these issues should be taken into consideration. Some decisions, such as those outlined in the IPPC Standard setting procedure, may be taken between sessions by e-decision without prior agreement.

5.5 Duties and associated tasks of SC members[116]

During the Standard setting process, SC members have a number of duties directly concerned with draft standards by virtue of their membership of the SC. These duties are listed in point A below. Normally, however, SC members also undertake any one or several of a number of other roles within the standard drafting procedure. The duties of these roles are described in points D and E below. The other duties of SC members are listed in the following sections.

A. Basic duties directly related to the evaluation of draft standards

The basic duties of the SC member include:

- Examination of draft standards from expert drafting groups. Prior to the meeting, the SC member reads the drafts, considers the reports of expert drafting groups and prepares comments. The SC member presents any comments or changes to the drafts to the SC meeting, usually held in May.
- Examination of comments on draft standards after consultation. The SC member reviews the comments (except those relating to editing and translation), discusses them with the SC and proposes appropriate changes to the drafts.
- Making of consequential proposals to:
  - send draft standards for consultation
  - approve standards and recommend them to the Commission for adoption
  - initiate a further round of consultation
  - send drafts back for redrafting by the Steward or an expert drafting group.

[116] SC 2006-11, paragraph 104, modified by the SC 2008-11, Appendix 5.

B. Time requirements

The participation as a SC member may involve a considerable time input. The estimate of this time input would be, as a minimum:

- 3–4 weeks for meetings (depending on involvement in the SC-7 and travel distance)
- 2 weeks to review draft standards
- 2 weeks to review comments.

This may be increased if the SC member participates in IPPC regional workshops on draft standards and/or is a steward of an ISPM(s).

SC members should have the required time available to participate in SC meetings. In addition to this time commitment, member governments should ensure that their members can attend SC meetings.

C. Regional communication

SC members are requested, where possible, to assist with the communication of information regarding the draft standards to countries within their region. This could be done by discussing the issues with other regional experts, attending IPPC regional workshops on draft standards, or contributing to supplementary written information on the draft standards. SC members should also respond to concerned official contact points about comments that were not incorporated into draft ISPMs.

SC members also inform experts nominated for expert drafting groups from their region if they were not selected.

If a region considers it valuable, the region should be encouraged to assign one or more members of the SC from its region to help play a lead role in facilitating the communication between the SC and NPPO and RPPO within their region.[117]

D. Duties of SC members in an expert drafting group when they are a steward

It is intended that most expert drafting groups will have a steward that is a SC member. The functions of a steward are described in detail in *Guidelines on the role of lead and assistant stewards.* A brief summary of these duties are:

- participate in the selection of experts
- explain the Standard setting process and the specification to the expert drafting group
- assist in the development of discussion papers
- assist the Secretariat in the organization and running of the meeting
- explain the main points of the draft standard to the SC and answer questions
- assist in the analysis of comments.

E. Duties of SC members in an expert drafting group when they are not a steward

The Commission recommends that each expert drafting group have one SC member within the group. The SC member can be a basic member of the group (see *Guidelines for the operation of expert working groups)* or can be a steward (see *Guidelines on the role of lead and assistant stewards*). The SC member may assist with the expert drafting group more than an ordinary member because of their experience. The duties of an SC member of the expert drafting group who is not a steward may include:

- Prior to the meeting of the expert drafting group:
  - assist with the arrangements for the meeting
  - offer their advice to others organizing the meeting.
- During the expert drafting group meeting:

[117] Adopted by CPM-7 (2012), Appendix 4 (Decision 18).

- explain the Standard setting process, if necessary
- act as the chairperson or rapporteur if required
- participate as an expert
- assist the Steward as required.

- At the SC meeting:
  - act as a backup to the steward to explain the draft standard and the main discussion points during the expert drafting group meeting

Frequently, the SC member is the Steward for the standard.

F. Examination of specifications for standards

The SC member carefully reviews the specifications for standards that are prepared by, or under the auspices of, the Secretariat.

The SC member reviews specifications by:

- discussing to ensure the specification will produce a globally acceptable standard
- ensuring the specification accurately describe the title and the scope and purpose of the intended standard
- ensuring the tasks and other elements of the specification are correctly identified
- proposing modifications if necessary
- assisting in the analysis of comments.

G. Examination of procedural and administrative documents

The Commission adopts procedural and administrative documents (e.g. terms of reference and rules of procedure of various groups). These are reviewed by the SC to ensure they are consistent with the Standard setting process and feasible. They are then amended if necessary and forwarded to the Commission.

H. Other administrative duties

These include:

- approval of the membership of expert drafting groups
- approval of stewards for expert drafting groups
- approval of subjects for specific standards as proposed by technical panels
- establishment of open-ended discussion groups
- review of priorities for ISPMs proposed by the TFT, SPG (formerly SPTA) with the opportunity to add other priorities
- undertaking other duties as requested by the Commission.

5.6 Functions of the Standards Committee Chairperson, Vice-Chairperson and Rapporteur (in session and inter-sessionally)[118]

The SC has agreed on the functions of the SC Chairperson, Vice-Chairperson and Rapporteur.

Chairperson

The Chairperson of the SC is elected in accordance with the *Terms of reference* and *Rules of procedure for the SC*. The main functions of the Chairperson are to:

- manage the SC during meetings and inter-sessionally

[118] SC 2008-11, Appendix 3.

- provide guidance on the affairs of the SC
- help ensure participation of SC members and facilitate dialogue and understanding among SC members
- help the Secretariat to prepare the agenda and report of the meetings
- represent the SC at IPPC meetings
- upon request by the Secretariat, represent the Secretariat at other meetings
- assist the Secretariat to liaise with technical panels to identify and resolve overlaps in their work programmes and functions
- report to the Commission on SC activities and provide the SC with guidance on how to implement Commission decisions
- finalize decisions taken via electronic means and address cases of lack of consensus during SC discussions via electronic means.

Vice-Chairperson

The Vice-Chairperson of the SC is elected in accordance with the *Terms of reference* and *Rules of procedure for the SC*. The main function of the Vice-Chairperson is to assist and replace the SC Chairperson as necessary.

Rapporteur

The Rapporteur of an SC meeting is elected by the SC members participating in that meeting. The main functions of the Rapporteur are to:

- ensure that the report prepared by the Secretariat is an accurate record of the discussions and decisions of the meeting
- assist the Secretariat in drafting, reviewing and finalizing the SC meeting report
- facilitate the SC email discussions in relation to points of the SC reports.

5.7 Guidelines on the role of lead and assistant steward(s) [119]

The first guidelines on the role of a steward were drafted[120] in response to recommendations from ICPM-6 (2004) on an expanded role of stewards: "They should be invited to relevant SC meeting to assist the work of the SC on the standard that the Steward is responsible for and that the Secretariat should supply editorial expertise to assist stewards in carrying out their role".[121] These guidelines were revised in response to changes in the responsibilities of stewards based on the new Standard setting process adopted at CPM-7 (2012) and the decision to encourage the SC to assign a lead steward and one or two assistant stewards for each topic.

A. Selection of lead and assistant steward(s)

Lead stewards are senior plant health officers or scientists who are familiar with the IPPC Standard setting process. Proposed lead stewards should recognize that considerable time may be required. Stewards should be Standards Committee (SC) members or a former SC member or, for Technical Panels (TPs), a TP member could also be considered.

Assistant stewards should also be senior plant health officers or scientists who are familiar with the IPPC Standard setting process. Proposed assistant stewards should recognize that considerable time may be required. More than one assistant steward may be assigned. These assistants may be from outside the

[119] Approved by SC 2013-11 (Appendix 5).

[120] Approved SC 2006-11, paragraph 104, revised SC 2008-11.

[121] ICPM-6 (2004), Appendix IX, paragraph 5.

SC such as potential replacement members, former SC members, TP members or expert working group (EWG) members.

For TPs, the SC should endeavour to select replacement stewards in time to allow for overlap at one meeting with the outgoing steward.

B. Role of the lead steward

The role of the lead steward is to oversee an EWG or a TP and lead the development of the associated draft standard(s), from the moment the lead steward is assigned to the adoption the standard. The lead steward is the SC representative and has the responsibility to liaise between the expert drafting group and the SC. The functions of a lead steward vary according to the nature and complexity of the TP or draft standard and the requirements stated in the specification. The lead steward should assist the Secretariat to ensure that the expert drafting group follows the IPPC Standard setting process.

The lead steward is expected to attend the EWG or TP meeting when the draft ISPM is first discussed. The lead steward is invited to meetings where draft specification or draft ISPM will be discussed (i.e. SC, SC-7, EWG, TP and CPM[122] meetings). At meetings when the lead steward is not a member, but the draft specification or draft ISPM will be discussed, and if the Steward's participation is deemed necessary by the SC or IPPC Secretariat, funding will be based on the *IPPC Criteria for funding*. If attending the meeting is not possible, the lead steward should consider attending virtually or request the assistant steward attend in his or her place.

The lead steward may seek assistance from the assistant steward with any of the following responsibilities.

Time commitment

The estimated time requirements for the involvement of a lead steward in a single standard is at least eight weeks, including, but not limited to, the following activities:

- reading documents;
- revising the draft specification;
- developing discussion papers;
- attending expert drafting group meetings;
- preparing a presentation for IPPC regional workshops;
- responding to comments and revising the draft ISPM;
- attending SC or SC-7 meetings and briefing SC members as appropriate.

Contracting parties (and the regional plant protection organizations (RPPOs) they are members of) are encouraged to support the production of standards by supporting the work of lead stewards whenever possible.

Upon request of the lead steward, the Secretariat will communicate to the FAO representative of the Steward's respective country the responsibilities and time needed for the stewardship.

C. Role of the Assistant Steward(s)

The role of the assistant steward is to assist the lead steward in his or her responsibilities on all aspects of draft ISPM development as described in these guidelines as requested by the lead steward.

[122] Note that the lead steward is not required to attend the CPM meeting when the draft ISPM is presented for adoption because no discussion is expected to take place.

The assistant steward is not expected to attend meetings. However, if, at any time, the lead steward is not able to attend a meeting or if he/she is no longer available, the assistant steward may be asked to undertake the lead steward role during a meeting.

The assistant steward should provide written comments, if any, at appropriate times to assist the lead steward in the Standard setting process (e.g. ideas for inclusion in the draft standard should be submitted prior to meeting of the drafting group).

The SC reviews the assignment of lead and assistant stewards and may decide that an assistant steward should become the lead steward.

Communication will normally be by email, conference calls or e-decisions or other virtual means and the assistant steward should have access to all documents related to the EWG or TP that he/she is assigned. The assistant steward may also be invited to participate in drafting group meetings virtually if possible.

D. Responsibilities, duties and tasks of the lead steward

Developing the draft specification

A draft specification and literature review must be included with each topic submission. The SC should endeavour to submit draft specifications for consultation immediately after new topics have been added to the LOT by the CPM. In cases where the specification is considered by the SC to require revision, the lead steward is responsible for revising the specification.

Responding to comments on a specification or draft standard

The lead steward should review comments according to the following:

- Sufficient time should be allocated when reviewing comments.
- Lead stewards must respond to all English-language comments. It is the decision of the lead steward to respond to comments in languages other than English.
- The following terminology should be used when responding to comments and the terms should be entered at the beginning of each steward's response:
  - NOTED: for comments that have been acknowledged and do not require any further action or reasoning.[123]
  - INCORPORATED: for comments that have been incorporated exactly as written.
  - MODIFIED: for comments that have been incorporated, but not exactly as written. When a comment has been incorporated not exactly as written, the Steward's response should provide the reasoning for this decision and be brought to the attention of the SC or SC-7.
  - CONSIDERED BUT NOT INCORPORATED: for comments that have not been incorporated. When a comment has been considered but not been incorporated, the Steward's response should provide the reasoning for this decision and be brought to the attention of the SC or SC-7.[124]
  - FOR CONSIDERATION BY SC or SC-7: for comments that require consideration or review by the SC or SC-7. This term also should be used to indicate a comment that was incorporated, but should be brought to the attention of the SC or SC-7.
- Every comment must receive a steward's or TP's response.

[123] 2024-05 the SC agreed the option "noted" be included in the response options when addressing consultation comments on draft ISPMs, including draft amendments to ISPM 5.

[124] 2015-09 the IPPC Secretariat added "but not incorporated" to clarify that "considered" means that the comment was not incorporated.

- To assist the SC or SC-7, the lead steward may prepare a list of the comments that require SC or SC-7 review. This list should identify (by comment number) every comment that has been identified as CONSIDERED and FOR CONSIDERATION BY SC or SC-7.
- Responses to comments on draft ISPMs (other than diagnostic protocols (DPs) and phytosanitary treatments (PTs)) are developed by the lead steward who also revises the draft ISPM accordingly and submits the Steward's response to the Secretariat. TP or EWG members could be consulted as needed.
- For DPs and PTs, responses to comments on draft ISPMs and the revised draft ISPM are developed by the TP lead, in consultation with the lead steward. They must be approved by the panel and submitted by the lead steward to the Secretariat as the TP's responses to comments.
- The lead steward should also consider and incorporate editorial comments as appropriate.

Prior to the EWG or TP meeting

The lead steward may be asked to:

- provide guidance to the Secretariat and SC in relation to the selection of experts for the EWG or TP;
- liaise with the Secretariat to ensure that discussion papers are produced for the required meeting.

The lead steward may also prepare a draft standard prior to the EWG or TP meeting. This draft standard should be submitted by the lead steward to the Secretariat at least six weeks before the EWG or TP meeting, to allow sufficient analysis and review by all meeting participants.

During the EWG or TP meeting

The lead steward is expected to:

- explain the Standard setting process;
- explain the requirements of the specification to the participants and have a good understanding of the history, background, important discussion points and previous decisions on the specification and topic for the standard. If some issues are unclear, the lead steward should discuss the matters with the Secretariat, assistant steward or members of the SC;
- assist the Secretariat in revising the draft standard;
- assist the Secretariat in drafting the meeting report.

After the EWG or TP meeting, the lead steward is responsible for reviewing the meeting report. The lead steward should submit the draft standard to the Secretariat by the due date determined by the Secretariat for review at the May SC meeting. If a draft ISPM is presented to the November SC meeting, the deadlines will be established by the Secretariat.

At the meeting when the SC approves the draft ISPM for the first consultation

If not an SC member, the lead steward should be invited to attend the SC meeting. The lead steward is expected to give a verbal summary of the draft standard to date, such as the history, background, important discussion points and previous decisions on the specification and topic for the standard, and the outcomes of the EWG or TP meeting at which the draft standard was drafted. If the lead steward cannot attend the meeting, he/she should provide documentation about the standard and consider attending virtually, request the assistant steward attend in his or her place or brief an SC member.

When the SC does not approve the draft standard for the first consultation and returns it to the lead steward, the lead steward should consider all comments received during the meeting and revise the draft standard. The lead steward should re-submit the draft standard to the Secretariat by the due date determined by the Secretariat for review at the next SC meeting.

Before regional workshops on the IPPC

Lead stewards should prepare a presentation on the draft standard and submit it to the Secretariat by 15 June. Attendance is not required at regional workshops and any travel costs would be incurred by the lead steward's NPPO or RPPO.

Prior to the SC-7 meeting

See also the section above on responding to comments.

The Steward's responses to comments, the revised draft ISPM and the Steward's summary should be submitted to the Secretariat by 1 February.

If not an SC-7 member, the lead steward should be invited to attend the relevant sessions of the SC-7 meeting when the draft standard will be discussed. If attending the meeting is not possible, the lead steward should provide documentation to assist with the discussion on the comments and consider attending virtually, request the assistant steward attend in his or her place or brief an SC member. When the SC-7 does not recommend the draft standard to the SC and returns it to the lead steward, the lead steward should consider all comments received during the meeting and revise the draft standard. The lead steward should submit the draft standard to the Secretariat by the due date determined by the Secretariat for review at the next SC meeting.

After the second (or more) consultation period closes

See also the section above on responding to comments.

The lead steward reviews and responds to the comments and revises the draft ISPM. Then, the lead steward submits the Steward's responses to comments, the revised draft ISPM and the Steward's summary to the Secretariat at least two weeks prior to the SC meeting when the SC recommends the draft ISPM to the CPM for adoption.

At the meeting when the SC recommends the draft ISPM to the CPM for adoption

If not an SC member, the lead steward may be invited to attend the SC meeting. If attending the meeting is not possible, the lead steward should consider attending virtually or request the assistant steward attend in his or her place.

When the SC does not recommend the draft standard to the CPM for adoption and returns it to the lead steward, the lead steward should consider all comments received during the meeting and revise the draft standard. The lead steward should submit the draft standard to the Secretariat by the due date determined by the Secretariat for review at the next SC meeting.

At the meeting when the CPM adopts the ISPM

Attendance is not required at the CPM meeting and any travel costs would be incurred by the lead steward's NPPO or RPPO.

5.8 E-decisions: IPPC SC procedures for conducting discussions and making decisions by electronic means[125]

The SC supports the use of systems to facilitate electronic discussion and decision-making and recognizes that they are necessary in the context of reduced resources. Among other discussions e-decisions are used to approve DPs and PTs for consultation and adoption (as appropriate), as this allows the SC member to consult with relevant experts in their region during the discussion.

[125] Revised by SC 2023-11 and adopted by CPM-18 (2024), Appendix 3, based on CPM 2024/08; SC 2010-11, Appendix 5, modified by SC 2022-11; previously ICPM-6 (2004); SC 2005-11, section 19.2; CPM-3 (2008); SC 2009-11; SC 2005-11.

Initiation of electronic discussion and decision-making

Issues for electronic communication do not need to be first identified at a face-to-face meeting of the SC.

To initiate a discussion via electronic means, an SC member may submit the proposed topic and a proposed timeline for discussion to the Secretariat. In consultation with the SC Chairperson, the Secretariat communicates the topic for discussion and the timeline to the SC. If a decision is needed as a result of the discussion, the SC Chairperson will provide a summary of the discussion and a proposed decision to the SC to be taken.

Types of discussion and decisions that the SC can make by electronic means

The types of discussions and decisions listed below may be made through the use of electronic communication:

- approval of selected nominations for expert drafting groups
- approval of subjects (diagnostic protocols, phytosanitary treatments, and terms) to be included in the work programme of technical panels
- comment on explanatory documents in the reviewing process
- clearance of draft ISPMs for the first consultation (Step 4)
- consideration of comments (Step 5)
- determining how to proceed with draft ISPMs that are modified as a result of comments (Step 6)
- development and approval of draft specifications for consultation
- adjustments to stewards (of specifications, draft ISPMs and technical panels)
- any other tasks decided by the CPM or the SC during a face-to-face meeting
- exceptional cases determined in consultation with the Secretariat and the SC Chairperson.

Rules for agreement

If there are no objections by the deadline, the SC is considered to be in agreement and a course of action in line with the decision should be taken.

If one or more SC members raise objection before the deadline, there is no consensus.

If there is no consensus, the SC Chairperson should summarize the issues and try to reformulate the proposed decision and submit for another round of consultation among SC members in order to try to reach consensus.

When selecting experts for EWGs, the SC members express their preference from the list of nominated experts by considering the expertise of the nominees and the regional representation. The secretariat compiles this information into a list, ranked in order of SC preference, and the maximum number of experts allowed by the specification are then selected based on that ranking. If the selection of the last position in the EWG is inconclusive those candidates receiving an equal amount of support are then subjected to a poll. If there is still no consensus, the SC Chairperson should communicate what he or she feels are the main points to the SC and the SC is asked to make the ultimate decision.

When selecting experts for Technical Panels, the Secretariat opens a forum. The selection is only confirmed if all the SC agrees (confirmed via poll). The SC members express their preference from the list of nominated experts by considering the expertise of the nominees and the regional representation.

If there is still no consensus, the SC chair should communicate what he or she feels are the main points to the SC and the SC is asked to make the ultimate decision at the next face-to-face meeting.

Time frame for response

Normally three weeks (except in urgent cases and for simple decisions).

At its May 2011 meeting[126], the SC decided that the combined duration of a forum followed by a poll would be three weeks (two-week forum, one-week poll) and that three weeks would be allowed if a poll was used alone. The SC also agreed that, in exceptional circumstances, this duration could be shortened by the Secretariat in consultation with the Chairperson.

Secretariat email notice to SC members

At its May 2011 meeting the SC also decided that the SC members would receive email notice of forums and polls (including the passage from a forum to a poll), and would continue receiving automatic notification emails when members have contributed in a forum or in a poll.

Communication of decisions made electronically

Final decisions taken during discussions via electronic means should be communicated to all SC members so that they are aware of the final outcome.

A summary of SC e-decisions is presented in every SC meeting and included as an appendix to the report.

[126] SC 2011-05, agenda item 4.2.

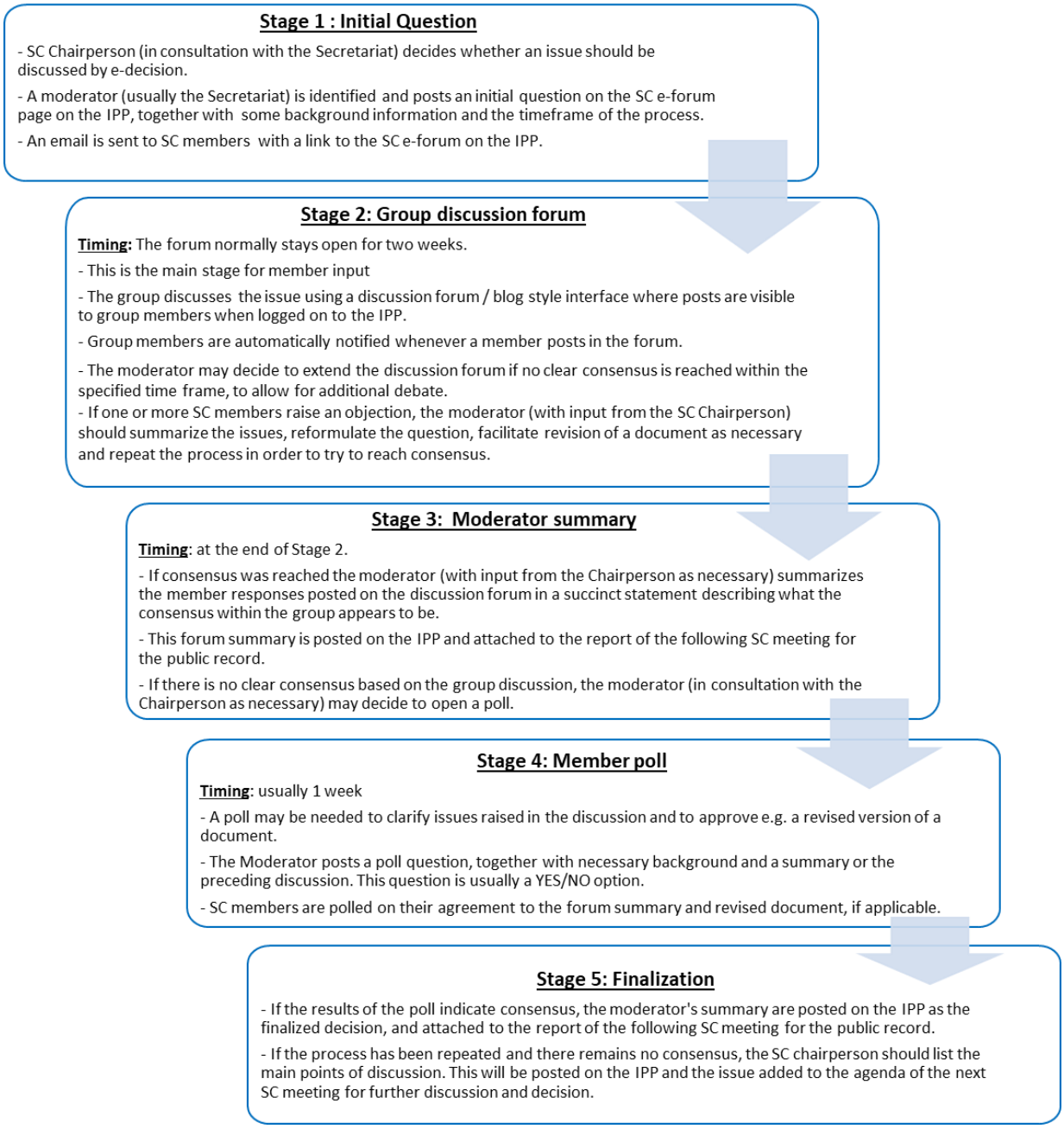

Figure 12. Process for an electronic decisions mechanism, to implement the SC procedures for electronic discussion and decision-making.[127]

[127] Modified from SC 2010-11, Appendix 6.

5.9 Deadlines for posting meeting papers and reports for SC meetings

The following due dates apply for posting meeting papers and reports for SC meetings (refer also to ANNEX 9 to this manual)[128]:

Draft ISPMs for May SC and SC-7: 1 March[129]

SC-7 revised draft ISPMs for November SC: two weeks before SC meeting[130]

- All discussion papers and documents: two weeks before the meeting
- Meeting reports: eight weeks after the meeting.

5.10 SC terminology

Many SC recommendations will be directed at the CPM. In that context, at the CPM Bureau meeting in March 2015, FAO Legal Office explained the differences between "endorse, adopt and approve" as follows[131]:

The main difference is in the ownership of the product. "***Endorse***" means to support someone else's instrument, which remains the instrument of that person, i.e. ownership is not transferred. When a body "***adopts***" an instrument, the instrument becomes the ownership of that body. It is the term used for high level instruments. "***Approve***" is a middle ground, and may be used in lieu of *adopt* depending on the level of the instrument.

As examples, it was noted that: standards are adopted; trust fund budgets are adopted or approved; programmes are adopted or approved; work plans are adopted or approved; trust fund financial report is noted (as done by others); procedures are adopted; CPM Recommendations are adopted; activities are endorsed.

During SPG 2012[132] FAO Legal Office clarified that the term "***noted***" did not mean formally adopted, nor approved, nor endorsed (which are the terms in use for formal CPM documents). The FAO Legal Office explained that the meaning of "noted" is only to notice or observe with care, not implying adoption, endorsement or approval. It was mentioned as an example that the CPM adopts ISPMs and then notes the following year that ISPMs have been reviewed by the Language Review Groups.

5.11 Interpretation during SC meetings

The CPM agreed that the need to have interpretation into any specific FAO language should be expressed by a request of a Standards Committee member to the IPPC Secretariat in writing (with confirmation) and no less than 90 days before the meeting of the Standards Committee[133].

[128] 2011-06 Bureau report, Appendix 3.

[129] Draft ISPMs are posted on 1 July in the OCS for first consultation.

[130] Draft ISPMs are posted on 1 July in the OCS for second consultation.

[131] Bureau 2015-03, section 5.

[132] SPG 2012, paragraph 193.

[133] CPM-6 (2011).

6. EXPERT WORKING GROUPS

Once the SC approves a specification and resources are identified to hold an expert working group (EWG) meeting to develop the draft ISPM, the IPPC Secretariat opens a Call for experts according to the approved specification. To be nominated as an expert, the nominee is requested to sign a statement of commitment (ANNEX 6). The EWG then meets and produces a draft ISPM and a meeting report. After the SC approves it, the draft ISPM is submitted for first consultation. As outlined in section 3.2, DPs and PTs are drafted by other drafting groups (see sections 7.3 and 7.6, respectively).

Contracting parties are encouraged to host EWG meetings. The meetings should be held in an area that is affected by the issues that the ISPM will seek to address. Hosting normally entails funding the arrangements (conference facilities and coffee breaks), a field trip (normally half day), as well as an official dinner.

6.1 Guidelines for the composition and organization of expert working groups[134]

Criteria for the composition of an EWG

An EWG:

- should have 6–10 members;
- should have members representing a wide geographic area (including proportional developing country participation);
- should allow a participant from the host country to participate regardless of the EWG composition;
- should have a member from the SC if possible (e.g. steward);
- may be attended by any member of the Commission Bureau;
- may be attended by IC representatives;
- may include – subject to SC approval – representatives of industry or other organizations to attend as invited experts, but not to participate as members or in the decision-making process; and
- should only allow observers from the host country as agreed in advance with the IPPC Secretariat in consultation with the steward of the EWG.

Members of EWG should:

- have necessary qualifications (scientific expertise, subject matter experience or experience in phytosanitary risk management); and
- be available to participate and contribute to the proceedings (e.g. provide discussion papers).

Procedure for nomination and selection of EWG members (see Figure 13):

- nominations are requested at the time of adoption of the LOT or specifications for standards are suggested at the Commission or later when the specifications are put on the IPP;
- governments, NPPOs or RPPOs nominate experts;
- SC designates members of the EWG and submits a list to the Commission Bureau and IPPC Secretariat for confirmation; and
- lists of EWG members, and representatives of industry or others, are added to the IPP.

Expert Working Groups

[134] ICPM-5 (2003), Appendix XV. Revised by SC 2023-11 and adopted by CPM-18 (2024), Appendix 3, based on CPM 2024/08.

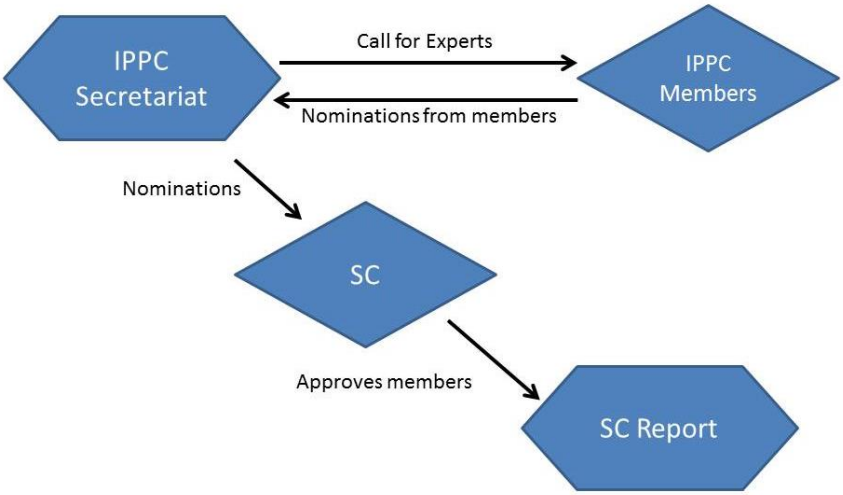

Figure 13. Process of a Call for experts for EWGs and TPs.

Criteria for the organization of EWG meetings

- EWG members from developed countries should, wherever possible, be funded by their governments or employers for all costs connected to their participation.
- EWG meetings should usually be organized to minimize incurring costs (e.g. administrative, accommodation, travel).

ICPM-5 (2003) noted the need for flexibility and agreed that deviations from the procedures may be necessary on a case-by-case basis for administrative contingencies.[135]

6.2 Guidelines for the operation of expert working groups[136]

Introduction

These guidelines have been prepared to aid those assisting, involved in organizing or attending an EWG meeting. The guidelines cover most of the requirements and procedures for the successful operation of an EWG. They are general guidelines so not all parts apply to every EWG meeting and some very specific requirements of some groups may not be included.

Funding

The main funding for EWG meetings comes from the IPPC budget. This is normally supplemented by member countries or organizations covering participants' expenses [travel and daily subsistence allowance (DSA)]. In some instances, member countries or organizations have funded, or partially funded, an EWG on a specific subject. A member country, organization or agency offering such funding or providing any level of assistance in operating an EWG is referred to as a collaborator in this document.

Participation of the IPPC Secretariat is funded by the FAO.

[135] ICPM-5 (2003), paragraph 106.

[136] ICPM-7 (2005), Appendix VI. Revised by SC 2023-11 and adopted as modified by CPM-18 (2024), Appendix 3, based on CPM 2024/08 and CPM 2024/INF/20.

Organization

EWG meetings can only be organized for those topics which have been adopted under the topics and priorities for standards at the Commission meeting. The organization of EWG meetings is normally done by the IPPC Secretariat with varying levels of assistance from a collaborator.

Meetings held at the FAO Headquarters in Rome or other FAO Offices

The IPPC Secretariat in general uses FAO offices to make logistical arrangements, including travel and DSA.

For a meeting at the FAO Headquarters in Rome, the IPPC Secretariat does not make hotel bookings, but names and addresses of accommodation are provided on the IPP (www.ippc.int).[137]

Meetings held outside of FAO offices

Meetings held outside the FAO offices are usually arranged with the assistance of a collaborator. The collaborator may take various levels of involvement. A commonly operated system is where FAO enters into a letter of agreement with the collaborator (after agreeing on a budget) and transfers the funds needed for the meeting. The letter of agreement generally covers participants' expenses (travel and DSA) and may cover other items as appropriate. The collaborator is expected to make arrangements for participants' expenses, meeting rooms, photocopying, field trip, etc.

In other cases the collaborator may fund the entire meeting (including participants' expenses, meeting room, photocopying, field trip, etc.) or part of the meeting.

Roles of meeting organizers and participants

IPPC Secretariat

The Secretariat is expected to:

- plan a meeting date and seek a collaborator
- provide resources for the meeting, if held on FAO premises
- approve budget being paid by the IPPC and, if necessary, prepare a letter of agreement
- send a letter of invitation to participants (especially for the purpose of obtaining visas) and interact with the FAO visa office if needed
- liaise with collaborator, Steward and EWG participants as appropriate
- arrange with the Steward for the production of discussion papers
- attempt to find a replacement if an EWG participant approved by the SC is not able to attend the meeting (and inform the SC of such changes)
- describe and explain the mode of operation of the EWG and the roles and responsibilities of participants
- coordinate the organization of the meeting and be responsible for the production of the draft ISPM and meeting report.

Collaborator

The collaborator is expected to:

- select location, make local arrangements, book meeting rooms and arrange for coffee breaks, official dinner (if appropriate) and field trip (if appropriate)
- assist in hotel bookings and obtaining visas
- provide, where possible, a rapporteur (who could be regarded as a resource outside of the EWG)

[137] The Secretariat maintains a local information document for participants of meetings in Rome: https://www.ippc.int/en/publications/1034/.

- arrange for local transportation as appropriate, including airport transfer and transfer from the hotel to the meeting room (or provides suitable information)
- arrange for or provide information on, as necessary, local transportation, local conditions, address of the hotel(s) and meeting venue, map, medical information, etc.
- have facilities to provide copies of working papers and of documents drafted during the meeting, as appropriate.

The collaborator has two seats in total, as observers, in the meeting. However, such participation is to be funded by the collaborator. The IPPC funding criteria will not apply.

Steward

The Steward is expected to:

- explain the requirements of the specification to the EWG at the time of its first meeting. Hence, the Steward should have a good understanding of the specification for the standard. If some issues are unclear, the Steward should discuss the matters with the Secretariat or members of the SC.
- liaise with the Secretariat to ensure that discussion papers are produced for the EWG meeting
- assist with the running of the meeting. The Steward may take the role of the Chairperson of the group or of the discussion facilitator
- assist the Secretariat to complete the draft standard
- assist the Secretariat in the preparation of the meeting report.

These duties are discussed in more detail in section 5.7: *Guidelines on the role of lead and assistant steward(s)*.

Chairperson

The EWG Chairperson is selected at the meeting. The function is that of a normal Chairperson: to keep the meeting running smoothly and ensure participation by all experts. The Chairperson is expected to:

- act as facilitator of the group in its production of draft text
- assist the Secretariat, Steward and Rapporteur to prepare the EWG report
- be involved, where appropriate, with the Steward in incorporating EWG comments into the draft standard.

Members

The members of an EWG should:

- take responsibility for their travel and accommodation arrangements and visa requirements. Experts are expected to be in attendance for the entirety of the EWG meeting and should plan to arrive before the meeting starts and depart after the meeting concludes. They should undertake whatever needs to be done in a timely manner so there are no urgent arrangements to be made by the organizers.
- prepare discussion papers, consulting with national or regional experts, as requested
- actively participate in the EWG meeting and in email discussions prior to and after the meeting, if appropriate
- study discussion papers prior to the meeting and develop specific comments and text as appropriate
- in reflecting their individual viewpoints, aim to produce a globally acceptable standard
- assist stewards as needed, particularly when reviewing country comments
- respond, as appropriate, with comments to draft ISPMs within the agreed time.

Rapporteur

Each EWG requires a rapporteur to take down the text for the draft standard and, where possible, to take notes on the meeting discussions. The Rapporteur should have facility with the English language and be able to use a computer for note taking. This is an extremely important supporting function of the EWG. Where possible the Rapporteur should not be a member of the EWG but be part of the supporting team. If a member of the EWG does have to act as Rapporteur, that expert's contribution to the meeting discussions tends to be severely restricted. The Rapporteur should, where possible, assist the Secretariat with the meeting report.

Invited experts

The SC may invite representatives of industry or other organizations to attend as invited experts.

The role of the invited experts is to provide expertise, information, data, and insights to the members of the EWG through the submission of discussion papers during the call for papers issued by the IPPC Secretariat prior to the meeting.

The invited experts may receive the documents, other than those of a sensitive nature.

The invited experts are expected to:

- take responsibility for their travel and accommodation arrangements and visa requirements;
- prepare discussion paper(s) to submit to the call for papers issued by the IPPC Secretariat and deliver a presentation at the meeting;
- provide additional information and data as requested;
- understand that information provided by invited experts may not be considered by EWG; and
- check the IPPC Secretariat website to be informed of the call for papers.

The Chairperson may restrict the participation of the invited experts in the discussion.

The invited experts may be eligible to receive travel assistance to attend meetings organized by the IPPC Secretariat. The criteria are updated annually and can be found on the IPP (https://www.ippc.int/en/publications/criteria-used-prioritizing-participants-receive-travel-assistance-attend-meetings/).

Observers from the host country

Observers from the host country are expected to:

- provide additional information and data, if requested.

Subject to the approval of the Chairperson, observers from the host country may participate in discussions without the right to participate in decision-making process.

Observers from the host country are not eligible to receive travel assistance to attend meetings under any circumstances.

Meeting resources

The usual meeting resources are required for an EWG meeting. These include:

- a quiet room large enough to accommodate the participants
- white boards, flip charts and marker pens
- computer and, preferably, a projector for the computer and an internet connection
- coffee/tea making facilities for work breaks
- copies of ISPMs, Commission reports, dictionary.

Time schedule for meeting

The meeting is scheduled by the Secretariat in coordination with interested parties and participants after the Commission has agreed to the LOT. Meeting dates are posted on the IPP. Experts are nominated by member countries and RPPOs and the specific experts for any particular EWG are selected by the SC. Following this, the nominated Secretariat person and the Steward arrange:

At least three months prior to the meeting

The Secretariat makes a call for discussion papers.

At least two months prior to the meeting

The Secretariat:

- sends the requests for discussion papers to the EWG members
- announces the meeting to participants by email, indicating the date and place of the meeting, and sends out invitations by email
- sends personal invitations required for visa applications as requested by participants.

At least one month prior to the meeting

The Secretariat:

- asks experts to exchange comments on discussion papers
- sends a personal invitation letter by email to each expert announcing the meeting (if not already done). When the meeting is in Rome, and for experts from countries not requiring a visa, paper copies of the letter of invitation may be sent only on request.
- asks experts if they have any specific needs
- forwards information provided by the collaborator.

The collaborator:

- sends a personal invitation letter
- provides information to the Secretariat

EWG members:

- undertake to obtain authorization from their authorities, if appropriate
- reply to the IPPC Secretariat and request financial assistance for their expenses, if needed, immediately after they receive a copy of their email invitation
- reply to the organizers as stated in the letter of invitation to acknowledge receipt of the invitation and inform the organizer of their attendance (this requirement facilitates the obtaining of building passes etc.)
- ensure their visa and travel arrangements are completed in time.

At least two weeks prior to the meeting

The Secretariat forwards to the EWG members:

- an agenda for the meeting
- time and venue of the meeting
- planned meeting hours.

Output of the meeting

The EWG should finish the meeting with a draft standard. Occasionally, this is not the case and further discussions via email are required. However, these should be limited to one month after the EWG meeting and the draft should then be released to the Secretariat.

Where substantial work still needs to be done on the draft standard the Secretariat, in consultation with the Steward and SC, arranges for a further meeting.

Each EWG meeting should produce a draft standard and a report (made available on the IPP) of the meeting (noting major discussion points or contentious issues). The Steward should be familiar enough with the issues of the draft standard to be able to attend a SC meeting (often the Steward is a SC member) and discuss the draft with the SC.

Post-meeting consideration of the draft ISPM

The Secretariat will distribute draft ISPMs to EWG members and request them to submit comments within the agreed period of time. The EWG members will submit their comments as appropriate to the Secretariat within this agreed time.

Guidance on drafting standards and meeting documents is available in the *IPPC style guide*.

6.3 Deadlines for posting expert working group meeting papers and reports

The following deadlines apply for posting meeting papers and reports for EDG meetings (refer also to ANNEX 9 to this manual):

- Discussion papers: two weeks prior to the meeting
- Meeting reports: eight weeks after the meeting.

7. TECHNICAL PANELS

There are currently four technical panels (TPs) under the remit of the SC.[138] Each deals with one specific technical area according to their specification in order to assist the SC. The panels normally meet once a year. Additionally, some panels meet virtually during the year.

For the selection of the TP members, the IPPC Secretariat opens a call to nominate experts in accordance with the expertise needed as stated in the approved specification for the specific TP. To be nominated as an expert, the nominee is requested to sign a statement of commitment (ANNEX 6). The process for the Call for TP experts is the same as for EWGs (see section 6.1) and summarized in Figure 13.

Contracting parties are encouraged to host TP meetings. Hosting normally entails funding the arrangements (conference facilities and coffee breaks), and funding a field trip (normally half day), as well as an official dinner.

Technical panels were established[139] to develop technical standards. Four TPs are currently established:

- Technical Panel on Diagnostic Protocols (TPDP);
- Technical Panel on Commodity Standards (TPCS);
- Technical Panel for the Glossary (TPG); and
- Technical Panel on Phytosanitary Treatments (TPPT).

TP members should work according to the specification for each TP approved by the SC and the procedures of the TP, which should be in accordance with other procedures approved by the SC.

The Technical Panel on Pest Free Areas and Systems Approaches for Fruit Flies (TPFF, Specification TP 2) and the Technical Panel on Forest Quarantine (TPFQ) was disestablished by CPM upon recommendation from the SC and after completion of their assigned tasks.

7.1 General considerations for Technical Panels

Recommendations for the use of technical panels[140]

The SC should establish TPs in specific areas to assist the work of the SC.

These TPs should work under general specifications established by the SC, according to *Terms of reference for the SC*, with membership according to current EWG membership rules. TPs should be groups responsible for the development of specific standards and also for providing advice at the request of the SC in their specific allocated subject area.

Under the direction of SC, TPs should provide the SC with: draft technical standards, advice on draft technical standards, advice on country comments and advice on topics and priorities for technical standard development in their field of activity and other tasks as requested by SC. TPs may draw on specialized expertise, the work of other working groups, other appropriate standards and the work of other relevant organizations in their work, as appropriate. The Chairperson of the TP should act as the Steward for the subject area of the TP.

Potential areas for the formation of TPs may include technical matters such as diagnostics, seed pathology, specific pest free areas, organism or commodity specific standards or treatments.

[138] The Technical Panel on Pest Free Areas and Systems Approaches for Fruit Flies (TPFFs) was disestablished by CPM-14 (2019), having fulfilled their task of reorganizing the fruit fly related standards.

[139] The ICPM-6 (2004) made provision for technical panels to develop standards under the fast-track Standard setting process (paragraph 77); the CPM-3 (2008) (paragraph 81) and the CPM-7 (2012) amended this process.

[140] ICPM-6 (2004), Appendix IX, paragraph 2.

When the specific work of a TP is completed the CPM should disestablish the group upon recommendation of the SC.

Common procedures for technical panels[141]

TPs operate under the guidance and supervision of the SC in accordance with the Terms of reference and Rules of procedure for Technical Panels.[142]

In relation to their technical areas, TPs should:

- Assist in the development of draft standards, annexes, appendixes, supplements, amendments or additions to standards in response to requests for work by the Commission and as directed by the SC. Specific guidance is provided in the specification for each TP.
- Propose topics and priorities for new or revised standards (including supplements, annexes, appendixes or other components of standards) for inclusion in the Commission work programme via the biennial Call for topics, and in accordance with the Procedure and criteria for identifying topics for inclusion in the LOT (see section 3.2 *Topics*).
- Propose subjects and priorities to the SC for new or revised standards (including supplements, annexes, appendixes or other components of standards) under any topic that is already on the LOT.
- Provide advice on work areas that need further research or investigation and propose a strategy for progression of the topic.
- Provide advice on whether the work of the technical panel overlaps with the work of other IPPC groups and ensure coordination with these groups to prevent duplication of work. Propose a mechanism for any interactions.
- Provide advice on outcomes and issues of relevant IPPC workshops or meetings or other relevant meetings and monitor technical and scientific progress in the relevant field. Where appropriate, make recommendations to the SC.
- Propose an annual work programme for the technical panel taking into account the direction given by the SC.
- Produce a report of each meeting in accordance with Rule 10 of the Terms of reference and Rules of procedure for TPs, reporting on all the elements above and presenting, as relevant, new or revised technical panel working procedures.
- Produce an executive summary of the work of the technical panel for the SC as necessary, including recommendations for action. This is reported to the SC, through the Steward, generally at the May meeting of the SC (or at the November meeting for specific topics if needed).

Work on "subjects"

The Technical Panel for the Glossary, Technical Panel on Diagnostic Protocols and Technical Panel on Phytosanitary Treatments are currently the only technical panels allowed to work on "subjects"[143].

Virtual meetings

In between annual face-to-face meetings, TPs frequently use virtual meetings for discussions. The Secretariat manages these meetings, which are usually held using Adobe Connect.

[141] The CPM-3 (2008) requested the SC to carry out pending actions as detailed in paragraph 22 of the document CPM 2008/21 to include TPs, under the guidance of the SC, to check each TP working procedure to make sure that it is not contradictory to changes in the Standard setting procedures (CPM-3 (2008), paragraph 99.6). As modified by the SC 2008-11.

[142] CPM-3 (2008), Appendix 11.

[143] See *Hierarchy of terms for standards*.

Deadlines for posting technical panel meeting papers and reports

The following deadlines apply for posting meeting papers and reports for TP meetings (refer also to ANNEX 9 to this manual):

- Discussion papers: two weeks prior to the meeting
- Meeting reports: eight weeks after the meeting.

The following deadlines apply for virtual meetings for posting papers and reports:

- Discussion papers: one week prior to the meeting
- Meeting reports: four weeks after the meeting.

7.2 Terms of reference and Rules of procedure for technical panels

These *Terms of reference* and *Rules of procedure for technical panels* were approved by CPM-3 (2008).[144]

Terms of reference

1. Scope of technical panels

Technical Panels (TPs) assist the SC in the development of ISPMs in their specified technical areas[145] on topics which have been determined by the Commission.

2. Objective

The main objective of TPs is to develop specific draft standards, annexes, supplements, amendments or additions to standards on topics in their specified technical areas requiring continuous work, as well as advising the SC on scientific or technical matters.

3. Structure of technical panels

TPs should consist of 6–10 members with the necessary scientific expertise representing a wide geographic area (including proportional developing country participation). In specific cases and depending on the technical area, a TP may consist of more or less members according to the SC's decision.

4. Functions of technical panels

TPs operate under the guidance and supervision of the SC, and serve as a forum for providing:

- draft standards, annexes, supplements, amendments or additions to standards in their specified technical areas
- advice on consultation comments in their technical area
- advice on subjects, topics and priorities for technical standard development in their technical area, and
- other tasks as requested by the SC within its mandate and to progress the objectives of the TP.

5. IPPC Secretariat

The Secretariat provides administrative, technical and editorial support as required by TPs. The Secretariat is responsible for reporting and record keeping.

6. Establishment of technical panels

TPs are established by the Commission and work on an ongoing basis until disestablished by the Commission on the recommendation of the SC.

[144] CPM-3 (2008), Appendix 11.

[145] For details on the terms "technical area", "topic" and "subject", see *Hierarchy of terms for standards*.

Rules of procedure

Rule 1. Membership

Members of TPs should have the necessary scientific expertise and subject matter experience, and should be able to participate and contribute to the proceedings. The Steward of the TP is considered a member.

Membership of TPs should be reviewed by the SC on a regular basis and may be adjusted as necessary, taking into account, in particular, changes in the needs of scientific or other expertise required and in the professional duties of the experts.

Rule 2. Procedure for nomination and selection of technical panel members

Members of TPs are nominated and selected according to the following:

- the Secretariat requests nominations as directed by the SC;
- contracting parties, NPPOs, RPPOs or, exceptionally, the IPPC Secretariat, submit nominations of experts;
- the Secretariat summarizes and comments on the nominations, and submits them to the SC and the Commission Bureau. The SC selects the members based on their demonstrated expertise and communicates this to the Secretariat; and
- the Secretariat maintains lists of Technical Panel members on the IPP.

Rule 3. Period of Membership

Members of TPs may serve for a five-year period[146], after which, with the member's agreement, the SC may extend membership for additional terms. The SC may, in accordance with Rule 1 of these Rules of procedure, change or amend the membership of TPs at any time. Membership should be reviewed regularly by the SC, and membership may be confirmed. Extension of membership does not require the application of the nomination procedure according to Rule 2. Members may at any time withdraw from the TP.

Rule 4. Chairperson

The Chairpersons of TPs are elected at each meeting by their members.

Rule 5. TP Steward

Each TP should have a TP Steward, selected by the SC. Where possible, that TP Steward should be a member of the SC. The TP Steward is responsible for liaison between the SC and the TP, ensuring the TP follows the guidance given by the SC.

Rule 6. Other stewards

Stewards assigned by the SC to work on a specific standard, annex or supplement referred to the TP may also participate in that TP meeting.

Rule 7. Observers and participation of non-members of the technical panel

TPs should not allow observers.

In specific cases, with prior agreement of the TP members and without objection of the SC, the TP may invite individuals with specific expertise to participate on an ad hoc basis at a specified meeting or part of a meeting of a TP, as invited experts.

A representative of the host country and/or organization may participate in the meeting of a TP, and assist the IPPC Secretariat in the organization and efficient running of the meeting.

[146] CPM-3 (2008) noted that the calculation for five-year terms for membership of technical panels would commence with the adoption of the Terms of reference and Rules of procedure (CPM-3 (2008), paragraph 95.2).

Decisions of TPs are taken by its members only.

The SC in November 2012 agreed that the TPDP could invite to their meetings a lead author or member of an editorial team when their DP was being reviewed.[147]

Rule 8. Sessions

TPs should meet as necessary, generally once a year. Email, teleconferencing and other modern communication methods should be used where possible to prepare and supplement face-to-face meetings of TPs.[148]

TP members should work according to the specification for each TP approved by the SC and the procedures of the TP, which are included in the *IPPC procedure manual* and which should be in accordance with other procedures approved by the SC.

Rule 9. Approval

Approvals relating to draft documents and agreement on advice provided to the SC should be by consensus and communicated to the SC by the relevant steward. If consensus is not reached, contentious issues should be bracketed in the text of the draft document, positions explained in the report and brought to the attention of the SC.

Rule 10. Reports

The report of each TP meeting should be published on the IPP. Major discussion issues should be noted in the report and the rationale for conclusions should be recorded.

The report should be presented to the SC by the TP Steward advising the SC of the specific actions that they are requested to take.

Rule 11. Working language

English should be the working language of TP meetings.

Rule 12. Amendments

Amendments to the Terms of reference and Rules of procedure, if required, should be adopted by the Commission.

[147] SC 2012-11, paragraph 120.

[148] Most TP meetings are preferentially held during the summer months in order to avoid conflicts with the peak preparation period for the Commission Meeting (Bureau June 2009, paragraph 12).

7.3 Technical Panel on Diagnostic Protocols (TPDP)

The TPDP *Instructions to authors* are posted separately on the TPDP page of the IPP.[149]

Current tasks of the TPDP

The tasks of the TPDP[150] are described in Specification TP 1 - *Technical Panel on Diagnostic Protocols.*[151]

Issues associated with technical standards

CPM-4 (2009) discussed issues associated with technical standards[152] and:

- Underlined its agreement with the statements below in accordance with ISPM 27:

> Diagnostic Protocols are developed to allow general use by competent diagnosticians in a laboratory performing pest diagnosis as part of phytosanitary measures. The methods described in diagnostic protocols provide the minimum requirements for reliable diagnosis of the specified regulated pests and include information on the specificity, sensitivity and reproducibility of these methods, where available. Methods providing other levels of specificity, sensitivity and reproducibility are also included where appropriate.
>
> DPs usually describe more than one method to take into account the capabilities of laboratories and the situations for which the methods are applied. They provide guidance, but NPPOs should determine which methods are appropriate for their circumstances.
>
> Once adopted, DPs will be reviewed regularly by the TPDP and updated to take into account advances in diagnostic methods.

- Acknowledged that DPs are based on the level of scientific knowledge available at the time of drafting. They will have been considered by appropriate experts and reviewed by a TPDP referee for consistency with the requirements of ISPM 27 prior to submission to the Standards Committee (SC).

7.3.1 TPDP working procedures[153]

Annual work programme

- The TPDP annually identifies priority subjects for diagnostic protocols (DP) taking into account guidance from the SC, and any requests for reviews and amendments to a DP that have been received by TPDP members and the criteria for prioritization of DPs (see *Criteria for the prioritization of DPs*). The TPDP submits recommendations on subjects to the SC. National plant protection organizations (NPPOs) and regional plant protection organizations (RPPOs) may also submit subjects for a DP in response to the IPPC Secretariat's biennial Call for topics to be considered for the LOT.
- The TPDP reports annually through the Steward to the SC. This report includes the achievements during the year, proposals for subjects, a proposed work programme, report on tasks assigned by the SC, such as revision of working procedures as necessary, and other items needing SC decision.

TPDP

[149] TPDP page on the IPP: https://www.ippc.int/en/core-activities/standards-setting/expert-drafting-groups/technical-panels/technical-panel-diagnostic-protocols/.

[150] Introduced into the work programme by ICPM-6 (2004).

[151] Specification approved by the SC 2004-04. First revision approved by SC 2004-11. Second revision approved by SC 2007-05. Third revision approved by SC 2011-05. Fourth revision by SC 2012-04.

[152] CPM-4 (2009), paragraph 117.

[153] Approved by the TPDP 2006-10, noted by the SC. Revised by the TPDP 2008-06 (Annex 5), noted by SC 2008-11. Revised by the TPDP 2010-07 (Annex 5), noted by the SC 2011-05. Revised by the TPDP 2012-11, noted by SC 2013-05.

7.3.2 Role of TPDP Members[154]

TPDP members:

- Track and manage preparation of DPs under their lead, including editing and ensuring compliance with ISPM 27.
- Consult and use TPDP procedures available on the TPDP work area.
- Ensure proper communication with lead authors and editorial teams, including: contact authors and editorial team once selected; inform authors and editorial teams of changes in procedures or instructions relevant to development of DPs; ensure that lead authors engage their editorial teams in the drafting process; maintain appropriate contact with lead authors and editorial teams. In case of communication problems with an expert (wrong address, no response, etc.), contact the Secretariat with details on last attempt(s).
- Identify protocols for which new lead authors or additional/replacement members of the editorial team are needed.
- Regularly update the document on the status of DPs for each DP under their lead (at dates indicated on the annual work plan) and provide updates at the TPDP meeting, including issues raised during the development of the DP.
- Act as referees for draft DPs and assemble comments using the "checklist for DP review".
- Use the "checklist for DP review" for each DP under their lead, when receiving the first draft and before presenting a draft DP to the TPDP.
- Manage the response to comments received during member consultation.
- Review published DPs in their discipline, and recommend revision as appropriate.
- On demand from the Secretariat, arrange for the preparation of a PowerPoint presentation on a draft DP for member consultation, in preparation for regional workshops for the review of draft ISPMs.
- When they leave the TPDP, transmit appropriate information to the new member for the discipline.

7.3.3 DP drafting groups

Nominations of experts for DP drafting groups

Once subjects for DPs are put on the work programme, the IPPC Secretariat issues a call requesting nominations of experts to author DPs identified as priorities and posts the call on the IPP. For seed-related DPs the Secretariat also informs the International Seed Testing Association and the International Seed Federation of the call.

- The TPDP discipline leads are encouraged to notify relevant experts of the call.
- Experts are encouraged to be nominated by NPPOs or RPPOs, but all nominations will be considered
- The CVs of nominated experts are reviewed by the discipline lead taking into account the expertise required for authors for DPs (as detailed below).
- In parallel to the call, the discipline lead may identify one expert that would be essential for the development of the DP, and contact that expert to ensure his/her commitment.
- Considering nominations from the call and possibly the experts identified in parallel, the TPDP discipline lead recommends a DP drafting group, with an expert to lead the development of a DP (lead author) and a small group of experts to assist him/her with the development (co-authors).

TPDP

[154] Approved by the TPDP 2006-10 and noted by the SC. Revised by the TPDP 2008-06 (Annex 5, noted by the SC 2008-11. Revised by the TPDP 2010-07 (Annex 5) and noted by the SC 2011-05 as part of the TPDP working procedures.

- This information, along with a summary of the expertise of each expert, is submitted to the TPDP, who agrees or amends the recommendations as appropriate. The list of DP drafting groups (with lead authors and co-authors) and referees is included in the TPDP report, which is presented to the SC.

Expertise required for experts to draft DPs

The DP drafting group should have appropriate global coverage.

Authors of existing DPs, such as regional DPs, should be included in the DP drafting group, where appropriate.

- Core expertise required:
  - diagnostic expertise with the pest.
- Additional expertise that would be helpful:
  - taxonomy and molecular diagnostics
  - practical experience related to the pest (detection, identification, isolation, etc.)
  - drafting of DPs (such as regional DPs)
  - development of novel diagnostic methods
  - experience using DPs for diagnosis of regulated pests, including in the context of international trade
- Experts associated with international seed testing organizations may be included, where considered appropriate by the TPDP.

Changes to the DP drafting group

- When an expert who has been chosen as lead author is unable to continue in this role, the TPDP discipline lead will ask a member of the DP drafting group to become the lead author. The TPDP is informed of the change of leadership.
- Where additional experts are required for the DP drafting group, the TPDP discipline lead, in consultation with the lead author, chooses from the experts nominated in the original call for authors. If no suitable experts are available, the IPPC Secretariat is requested to seek new nominations for the DP by announcing the vacancy on the IPP, with a 30 day deadline for receipt of CVs. The TPDP discipline lead or DP drafting group may also notify relevant experts of the call. The TPDP discipline lead reviews the CVs and submits a recommendation of an expert, along with a summary of their expertise to the TPDP, who reviews and approves the addition, which is included in the TPDP's annual report to the SC. In special circumstances (e.g. when the expertise was so small for the pest that the discipline lead was aware of all experts working on it), discipline leads might "hand-pick" an expert, and submit a recommendation to the TPDP.
- In its review of the status of protocol the TPDP also reviews the list of lead authors, co-authors and referees to identify those teams where additional authors or replacements are needed.
- When the lead author or a co-author is not answering, the discipline lead should request the Secretariat to contact the NPPO (date of the last attempt to contact the expert should be provided).

If, after all due contacts, the status of the lead author or co-author cannot be clarified and verified within one year of the first Secretariat's attempt, the author is withdrawn from the DP drafting group, and the Secretariat informs the discipline lead, the withdrawn author and his/her NPPO contact point.

7.3.4 Development of a draft DP

The lead author uses ISPM 27 (*Diagnostic Protocols for Regulated Pests)* and the Instructions to Authors of Diagnostic Protocols for Regulated Pests to produce a first draft. Additional guidance is provided by the TPDP discipline lead if needed. The discipline lead and the lead author should, within the first three months, agree on a time frame for the development of a draft (including appropriate

consultation of co-authors), leading to the preparation of a first draft within the first year (max. 6–12 months).

The lead author is assisted in the preparation of the DP by the DP drafting group.

- Where the subject of the DP is above species level, or the scope is unclear, the discipline lead and lead author, in consultation with the co-authors, should propose amendments to the scope of the DP. The TPDP may modify the amended scope and should inform the DP drafting group. The TPDP should report on its discussions to the SC, in the report of a meeting or by email through the Secretariat.
- Where disagreement arises within a DP drafting group during preparation of a protocol, the lead author should discuss the issues with the discipline lead. The discipline lead may discuss the issues, if necessary, with the full DP drafting group in order to resolve them. The discipline lead should decide how to proceed based on scientific evidence and present a proposal to the TPDP. Once the proposal is final, it should be reported to the DP drafting group.

Assessment of draft DPs by the TPDP

- The lead author and co-authors discuss the draft DP (possibly involving other experts).
- Once the lead author and co-authors are satisfied with the draft DP, the lead author submits it to the TPDP discipline lead.
- The TPDP discipline lead reviews the draft DP and ensures it meets all the requirements set out by ISPM 27 (*Diagnostic Protocols for Regulated Pests*) instructions previously agreed to by the TPDP including the checklist for DPs (see *Checklist for diagnostic protocol discipline leads and referees*).
- Invitation of experts to TPDP meetings.
- The SC agreed that the TPDP could invite to their meetings a member of the DP drafting group when their DP was being reviewed.[155]

Review of consultation comments on a draft DPs

- Consultation comments are compiled by the Secretariat
- Compiled consultation comments are forwarded to the TPDP discipline lead for action, and the TPDP and SC are informed that the comments are posted on the IPP
- Consultation comments are reviewed by the discipline lead, which produces an amended draft (with track changes) and includes responses to consultation comments within the compiled consultation comments. The TPDP discipline lead should consult with and may be assisted by the lead author and co-authors in this process, and should be assisted by the Steward on specific matters. The amended draft and responses to comments are circulated to all TPDP members, with a recommendation from the discipline lead and TPDP steward on how to proceed.

How to respond to consultation comments:

- **Incorporated:** for comments that have been incorporated exactly as written.
- **Modified:** for comments that have been incorporated, but not exactly as written. When a comment has been or incorporated not exactly as written, the response should provide the reasoning for this decision and be brought to the attention of the TPDP.
- **Considered, but not incorporated:** for comments that have not been incorporated. When a comment has been considered but not been incorporated, the Steward's response should provide the reasoning for this decision and be brought to the attention of the TPDP.

TPDP

[155] Agreed by the SC 2012-11, paragraph 120.

- **For consideration by the TPDP:** for comments that require consideration or review by the TPDP. This should also be used to indicate a comment that was incorporated, but should be brought to the attention of the TPDP. Note that, once the TPDP approves the revised draft and the responses to consultation comments, this comment should be removed to be presented to the SC and replaced by one of the three responses above.
- Substantial comments that have broad implications should be discussed by the TPDP, even if the discipline lead might have made a proposal for the specific DP under consideration. This process is coordinated by the discipline lead or TPDP steward. Proposed changes may be incorporated or not, or the TPDP may recommend further study, with the reasons documented.
- Whether the draft is changed or not as a result of consultation comments, the compiled comments and responses to comments are submitted to the SC.

If the draft standard is changed as a result of comments, the draft should be accompanied by recommendations on how to proceed.

Adoption of DPs:

- The CPM has delegated its authority to the SC to adopt DPs on its behalf. Once the SC approves the DP, the Secretariat makes it available and contracting parties are notified. The notification period for approved DPs is twice a year on defined dates. Contracting parties have 45 days to review the approved DP and submit an objection, if any. If no objection is received, the SC, on behalf of the CPM, adopts the DP. DPs adopted through this process are noted by the CPM at its following meeting and attached to the report of the CPM meeting (CPM-7, 2012). If objections are received, the TPDP is consulted and the SC decides whether they are technically justified, and decides on further steps.

7.3.5 Review of published DPs

- On a regular basis, the TPDP members review existing DPs in their disciplines. It was considered appropriate that adopted DPs be reviewed every five years unless a specific issue was raised. In particular, the TPDP members for the discipline should make a literature review, and bring to the attention of the TPDP any new literature that may have an impact on the DP.
- If revision is necessary, and in consultation with the lead author and co-authors, the discipline lead recommends updates to take into account newly published and/or validated methods, and modifications to methods in existing DPs. Proposals for update are presented to the TPDP. If a change is required, the TPDP makes a proposal and sends it to the SC with recommendations.
- When a technical revision is required for an adopted DP, the SC can adopt the updates to adopted DPs via electronic means. The revised DPs must be made publicly available as soon as the SC adopts them. DPs revised through this process are noted by the CPM and attached to the report of the CPM meeting (CPM-7, 2012). Criteria of the type of revisions that could be submitted to this process were suggested by the TPDP in November 2012, to be discussed by the SC.
- The following sentence of ISPM 27 Appendix 1 section 2 should be included in each DP from now on in order to be clear that adopted DPs will be reviewed and attract comments once users have started using the protocols: “A request for a revision to a diagnostic protocol may also be submitted by NPPOs, RPPOs or CPM subsidiary bodies through the IPPC Secretariat (ippc@fao.org), which will in turn forward it to the TPDP.”

Criteria for revision of DPs

The SC May 2013[156] defined the criteria for DP revision as a technical revision that should be done by the TPDP as follows:

- Editorials
- Taxonomic changes that do not affect the identification of the pest (and do not change the diagnosis)
- Addition of validation data relating to the methods already on the DP
- Improved specification of method, e.g. additional descriptors such as amount of DNA
- Pest information
- New information on distribution of official notification
- New host that may help the diagnosis reported in an official notification and does not affect the diagnosis.

Other revisions different from the above, would need to be subject to the normal DP adoption process (i.e. consultations, redrafting, SC approval, notification period, SC adoption).

DPs should be reviewed every five years.

7.3.6 Process for the expert consultation for draft diagnostic protocols on the IPP[157]

Background and aim of the system

The TPDP expert consultation system on draft diagnostic protocols is an expert comment system on the International Phytosanitary Portal (IPP) with the objective to ensure improvement on quality for the development of a draft diagnostic protocol (DP), through inputs and feedback, on a scientific basis, from a wider number of experts worldwide not part of the DP drafting group. The expert consultation system aims at a wider consultation of experts on draft protocols at earlier stages of development to ensure the quality of the protocols and to facilitate the adoption process.

Note: At any stage in the development process, the DP drafting group may also need to request comments and input from other experts.

Process for using the expert consultation system

- The discipline lead in collaboration with the author decides when a DP is ready to be subject to such a consultation.
- The discipline lead sends the draft protocol (two separate files: text and figures) to the Secretariat and asks for a specific consultation to be opened. The Secretariat should include in the draft DP a watermark or a sentence that indicates the text is an early draft under development, not for circulation / confidential document.
- The Secretariat opens the specific consultation, with a deadline for comment of 2–3 months (to be decided between the discipline lead and the Secretariat). Note: the general page of the expert consultation is public, i.e. visible to anybody, while pages for specific protocols need registration of experts wanting to comment.
- The Secretariat gives access to the discipline lead to the specific page, so that she/he may start monitoring comments during the commenting period, if wished.
- The Secretariat, discipline lead and other TPDP members advertise the specific consultation by transmitting a link to the general page of the expert consultation (see below for details). If requested by the discipline lead, the Secretariat should provide a letter inviting experts to comment, to be used by the discipline lead when requesting the participation of specific experts.

[156] SC 2013-05, agenda item 9.1.

[157] Agreed by the TPDP 2012-11, Appendix 9 of meeting report.

- An expert wishing to comment on a specific protocol sends a request to the moderator to register for that protocol. Note: such registration will allow keeping track automatically of the expert name, institution, country, expertise, and possibly to filter "spam" comments.
- The Secretariat registers the expert, who receives a link to the page for the specific protocol and a password (if not already registered on the IPP).
- The expert accesses the page for the specific protocol, and enters her/his comments as either a general post, or modified files for text/figures. All comments are centralized on the IPP.
- During the consultation period, the discipline lead has access to all comments, and can start reviewing them as needed.
- At the end of the consultation period, the Secretariat closes the consultation for the specific protocol. The Secretariat extracts comments and sends them to the discipline lead (who in turn transmits them to the authors; the discipline lead should remove the names of the commenters prior to sending comments to the authors to avoid possible disputes). The extracted comments will consist of one excel file containing details (name, institution, country, expertise) of persons having commented and comments entered as posts, as well as separate word files containing comments as track-changes in the draft DP text.
- If experts send comments directly to the lead author or discipline lead by email, instead of loading them on the IPP, the comments should be considered as others, but the discipline lead should inform the Secretariat.
- The discipline lead and authors review the comments and incorporate them as necessary. As decided at the 2010 TPDP meeting in Washington, the discipline lead or lead author are not requested to provide answers to all comments received, but they could keep track of substantial comments not integrated in the protocol. These may be included on the cover note for the draft protocol, in order to avoid the same comments being submitted again at later stages of adoption.
- The cover note of a draft protocol will indicate that such an expert consultation was held, its dates as well as all experts/institutions who have commented.

Advertizing the opening of a consultation on a draft DP (above)

Specific consultations are advertised to ensure that experts are widely aware of the draft protocols open for comment. In all cases, a link to the general page is sent, and it should be specified that access should be requested to the moderator. Advertisement is done as described below.

The discipline lead for the DP:

- Invites relevant experts to comment on the protocol via the expert consultation system on the IPP (see above).
- Identifies conferences/meetings that may provide opportunities to advertise the review process.

The Secretariat:

- Sends an email to NPPOs to announce the new consultation, and invites NPPOs to identify relevant experts/institutions, and either to forward them the link to the general consultation page or to ask the Secretariat to grant access to specified experts.
- Sends an email to RPPOs to announce a new consultation and invite them to advertise it to their relevant expert groups, as well as in their newsletters, bulletins, websites, etc.
- Posts a news item on the IPP.
- Reminds the discipline lead to invite relevant experts to comment. Note: invitations to comment should normally be sent to individual experts by the discipline lead. In specific cases, and on request from the discipline lead, the Secretariat could send a request for comments directly to the expert or through her/his NPPO.
- Reminds TPDP members to suggest to the discipline lead experts to be consulted.
- Sends an email to the contact point in observer organizations (e.g. Convention on Biological Diversity (CBD)).

TPDP members:

- Suggest to the discipline lead experts to be consulted.
- Advertise the specific consultation to relevant scientific societies etc., or suggest to the Secretariat the scientific societies etc. to be informed of the consultation, so that they can in turn inform their members (e.g. information bulletins, newsletters, websites, etc.).

7.3.7 Criteria for the prioritization of diagnostic protocols[158]

The criteria are not in order of priority.

Need for international harmonization of the diagnostic techniques for the pest (e.g. due to difficulties in diagnosis or disputes on methodology).
Relevance of the diagnosis to the protection of plants including measures to limit the impact of the pest.
Importance of the plants protected on the global level (e.g. relevant to many countries or of major importance to a few countries).
Volume/importance of trade of the commodity that is subjected to the diagnostic procedures (e.g. relevant to many countries or of major importance to a few countries).
Other criteria for topics as determined by the CPM that are relevant to determining priorities.
Balance between pests of importance in different climatic zones (temperate, tropics, etc.) and commodity classes.
Number of labs undertaking the diagnosis.
Feasibility of production of a protocol, including availability of knowledge and expertise.

[158] Approved by the TPDP 2007-09, modified and approved by the SC 2007-11, minor editorial by the TPDP in 2010 (Annex 8 of the report), submitted to, modified and supported by the SC 2011-11.

7.3.8 Submission form for topics for diagnostic protocols

The submission form is available on the Call for topics website: https://www.ippc.int/en/core-activities/standards-and-implementation/call-for-topics-standards-and-implementation/

Submission form for Diagnostic Protocols for Regulated Pests (Annexes to ISPM 27)

Please use one form per topic!

(Updated by the IPPC Secretariat 2019-08-12)

General information

Submission number	XXXX-YYY (to be completed by IPPC Secretariat)
Title of Proposal	Click or tap here to enter text.
Proposed material	Annex to ISPM 27 *(Diagnostic protocols for regulated pests)*
Submitted by: (Country or Organization)	Click or tap here to enter text.
Supported by: (Country or Organization)	Click or tap here to enter text.
Contact Person: (Contact information of an individual able to clarify issues relating to this submission):	Name: Click or tap here to enter text. Position and organization: Click or tap here to enter text. Mailing address: Click or tap here to enter text. Phone: Click or tap here to enter text. E-mail: Click or tap here to enter text.

Important information for filling out and submitting the form:

When considering submitting topics, please read through the Call for Topics webpage, where detailed explanations for completing the form and an electronic version of the form are available: https://www.ippc.int/en/core-activities/standards-and-implementation/call-for-topics-standards-and-implementation/.

Topics for Standards and Implementation resources are submitted using a different form available at: https://www.ippc.int/en/publications/87501/.

Submissions must address the Criteria for Prioritization of Diagnostic Protocols and must include a literature review providing technical information in support of the proposed topic.

The completed submission form should be submitted as Word document by the IPPC official contact point, via e-mail, to the IPPC Secretariat (ippc@fao.org) no later than 31 August 20xx (Subject line: "Call for topics XXXX").

Summary of proposal

Summary of justification for the proposal (provide an outline of the problem needing resolution in sufficient detail, **250 words max**) Click or tap here to enter text.
Proposed priority ☐ 1 (high) ☐ 2 ☐ 3 ☐ 4 (low) **Comments:** Click or tap here to enter text.

Literature review[159]

(In this section submitters are requested to provide a **summary of the topic** based on scientific and technical publications, including a referenced **list of literature reviewed**. This will help provide the scientific basis for the content of the Diagnostic Protocol and may be used by the expert drafting group during the development of the diagnostic protocol)**. (max 500 words)** Click or tap here to enter text.

Criteria for prioritization of Diagnostic Protocols:

Submissions should address the applicable criteria for justification of the proposal (as listed below). Where possible, information in support of the justification and that may assist in the prioritization should be indicated. Priority will be given to topics with the largest global impact.

	Criteria	Information provided by submitter
1	Need for international harmonization of the diagnostic techniques for the pest (e.g. due to difficulties in diagnosis or disputes on methodology)	**(max 250 words)** Click or tap here to enter text.
2	Relevance of the diagnosis to the protection of plants including measures to limit the impact of the pest.	**(max 250 words)** Click or tap here to enter text.
3	Importance of the plants protected on the global level (e.g. relevant to many countries or of major importance to a few countries).	**(max 250 words)** Click or tap here to enter text.
4	Volume/importance of trade of the commodity that is subjected to the diagnostic procedures (e.g. relevant to many countries or of major importance to a few countries).	**(max 250 words)** Click or tap here to enter text.

[159] As agreed by CPM-7 (2012) and CPM-11 (2016).

	Criteria	Information provided by submitter
5	Other criteria for topics as determined by CPM that are relevant to determining priorities[160]	**(max 250 words)** Click or tap here to enter text.
6	Balance between pests of importance in different climatic zones (temperate, tropics, etc.) and commodity classes.	**(max 250 words)** Click or tap here to enter text.
7	Number of labs undertaking the diagnosis.	**(max 250 words)** Click or tap here to enter text.
8	Feasibility of production of a protocol, including availability of knowledge and expertise.	**(max 250 words)** Click or tap here to enter text.

[160] Criteria for justification and prioritization of proposed topics, available at: https://www.ippc.int/en/publications/85790/.

7.3.9 Checklist for diagnostic protocol discipline leads and referees[161]

The comments column is intended for the reviewer to:

- give further guidance and suggestions on how the items should be modified
- help identify technical issues in the protocol that should be mentioned for countries when sending the protocol for consultation (i.e. to be included on the cover page of the protocol), especially those that raised discussion or debates during the development of the protocol.

The checklist is used at several stages:

- by the discipline lead to cross-check the draft sent by the lead author
- by the referee
- by the discipline lead before submitting the protocol to the TPDP. The completed checklist should be provided to the TPDP together with the protocol.

	Section	Issue to be considered	Y/N	Comments
	Cover note	Does the draft include a cover note in the format and content required by *Instructions to authors* (this should be in the draft at least when it is sent to the referee)		
1	**General overview**			
1.1	**ISPM 27**	Does the protocol comply with ISPM 27 – are all the sections present?		
1.2	**Formatting**	Is the draft formatted correctly – no SOP formats, no appendixes, etc.		
1.3	**Clarity**	Is the protocol clear and concise; does it provide sufficient information for diagnosis of the pest and sources of further information		
1.4	**Global relevance**	Does the protocol provide sufficient information for users globally e.g. inclusion of different types of methods (where appropriate) and their limitations and/or benefits; global rather than regional perspective, unless the organism only occurs in one region and is of concern globally)		
2.	**Pest information**			
2.1	**Length**	Does the section provide a brief summary (no more than 1 page) of the general information on a pest?		
2.2	**Reference to datasheets/databases**	Does the section refer to appropriate datasheets/databases (rather than replicating information)?		
2.3	**Geographical information**	Is any geographical information sufficiently general?		
3.	**Taxonomic information**			
3.1	**Format**	Is this presented in the correct format?		
3.2	**Accuracy**	Is the information accurate? Are appropriate references given for scientific names?		
4.	**Detection**			

[161] Approved by TPDP 2010 (Annex 7 of report), noted by the SC 2011-05.

	Section	Issue to be considered	Y/N	Comments
4.1	**Appropriate information**	Does this section contain appropriate information on methods for detection of the pest? (no information on procedures for inspectors)		
4.2	**Adequate description of the methods**	Is there enough information for the method to be used by an expert? Does the protocol refer to manufacturer's instructions when these are available?		
4.3	**Instructing NPPOs**	Make sure the protocol does not instruct the NPPO on the methods to use		
4.4	**Sensitivity, specificity, reliability**	Is there information on the sensitivity, specificity and reliability of each methods quoted, including details of the scope of any ring testing that is mentioned?		
4.5	**Confusion with other organisms**	Does the protocol provide sufficient information on organisms or symptoms that could be confused with the pest?		
4.6	**Choice of methods**	Where less commonly used methods are included, does the protocol indicate that these are for information?		
4.7	**Commercial kits/brand names**	Where commercial kits are available, is the reason for the choice of inclusion of a specific kit rather than others given? If brand names are used, are they essential? Is the approved "disclaimer" included?		
5.	**Identification**			
5.1	**Minimum requirements**	Does the protocol provide guidance on the minimum requirements for a positive diagnosis?		
5.2	**Instructing NPPOs**	Make sure the protocol does not instruct the NPPO on the methods to use		
5.3	**Specificity sensitivity and reliability**	Is there information on the sensitivity, specificity and reliability of each methods quoted, including details of the scope of any ring testing that is mentioned?		
5.4	**Combination of methods**	Where a combination of methods is required, is there an explanation of the reason for this?		
5.5	**Commercial kits/brand names**	Where commercial kits are available, is the reason for the choice of inclusion of a specific kit rather than others given? If brand names are used, are they essential? Is the approved "disclaimer" included?		
5.6	**Decision scheme**	Does the text and flow diagram (if present) clearly present the options available to NPPOs?		
5.7	**Flow diagram** **(note: detection steps might also be included)**	Does the protocol need a flow diagram (e.g. if several methods are needed for the diagnosis, and/or if many alternative methods are included)? Does it contain the minimum requirements for a positive diagnostic? Is it in line with the text? Is it accompanied by some explanation in the text, indicating the methods available and their advantages? Is it cross-referred to at the beginning of the identification section?		
6	**Records**			
6.1	**Additional requirements**	Does the protocol indicate the requirements for records or evidence in addition to that listed in ISPM 27 that are essential for the pest species?		
6.2	**Cases where other NPPOs are involved**	Does the protocol provide the specific records and evidence that should be retained in cases where other NPPOs may be involved (e.g. interceptions)		

	Section	Issue to be considered	Y/N	Comments
7.	**Contact points**			
7.1	**Suitable coverage**	Are the contact points appropriate?		
8.	**Acknowledgements**			
8.1		Do the acknowledgements reflect those involved?		
9.	**References**			
9.1	**Complete**	Are all the references in the text included in the reference list?		
9.2	**Accurate**	Do all the references contain the information required in *Instructions to authors*? (e.g. Do they have the year of publication, journal titles in full, page numbers, etc.) If more than 40 references, consider whether all are needed.		
10	**Figures and photographs**			
10.1	**Necessary**	Are all the figures necessary, or are they “nice to have”?		
10.2	**Colour photos**	Are these required or should they be posted on the IPP for additional information?		
10.3	**Line drawings/photographs**	Are line drawings sufficient for diagnosis, or are photographs required?		
10.4	**All figures**	Do the figures meet the requirements of the *Instructions to authors*		
10.4	**Separate file for figures**	Are illustrations separate from the text (2 separate files needed: Part 1 as containing only the text (as Word file); Part 2 containing all figures (including line drawings, photos, flow diagram) (as Word and PDF files)		

7.4 Technical Panel on Commodity Standards (TPCS)

The scope, purpose, tasks and expertise of the TPCS and its members are described in *Specification TP 6 – Technical Panel on Commodity Standards*.

Details of the technical panel membership may be found on the International Phytosanitary Portal (IPP) at https://www.ippc.int/en/core-activities/standards-setting/expert-drafting-groups/technical-panels/.

TPCS members are selected by the Standards Committee (SC) for a five-year term. The SC reviews the composition of the panel on a regular basis or as needed. The SC may renew individual memberships for additional terms if supported by their NPPOs.

The TPCS may invite experts, with agreement by the SC, to attend drafting meetings to provide additional expertise, information, data, and insights as needed for the development of a specific commodity standard. Expectations of the invited experts attending TPCS drafting meetings are the same as those for invited experts attending expert working groups outlined in '*Guidelines as for the operation of expert working groups*' (section 6.2).

The development of annexes to ISPM 46 (*Commodity – specific standards for phytosanitary measures*) (hereafter, commodity standards) and where appropriate, other commodity-based ISPMs, can facilitate safe trade and streamline new market access to the benefit of contracting parties.

7.4.1 TPCS working procedures for the development of commodity standards

Call for topics and subjects

The IPPC Secretariat issues a biennial *Call for Topics: Standards and Implementation* for commodity standard subjects. Proposals for commodity standards are submitted by national plant protection organizations (NPPOs) and regional plant protection organizations (RPPOs) in response to this call.

A proposal for a new or revised commodity standard requires the completion of:

- a submission form for topics for standards and implementation;
- a *submission form for information materials for commodity standards* (Annex 10) which includes a full description of the commodity, its intended use, the scope of the proposal i.e. a new commodity standard or a revision to an adopted commodity standard, and information about pests and measures that can aid the subject evaluation process;

Forms are available through the online submission process described on the *Call for Topics: Standards and Implementation*.

A specification[162] for a commodity standard is not required as the tasks for the TPCS are generally common for all. The submission form for information materials for commodity standards may also be reviewed and updated by the TPCS as needed.

Evaluation of commodity standard proposals

The TPCS evaluates proposals for commodity standards and recommends them to the SC, for inclusion in the *List of topics for IPPC standards* that is approved by the CPM each year.

Commodity standard proposals are evaluated by the TPCS by:

- considering recommendations from the Task Force on Topics (TFT) to the SC;

[162] The Technical Panel for the Glossary (TPG), Technical Panel on Diagnostic Protocols (TPDP) and Technical Panel on Phytosanitary Treatments (TPPT), Technical Panel on Commodity Standards (TPCS) are currently the only technical panels allowed to work on "subjects", which do not have specifications.

- considering guidance from the SC;
- assessing proposals and supporting information received from NPPOs and RPPOs against the *Criteria for the justification and prioritization of proposed topics*;
- assessing the scope (commodity, intended use, complexity) of the new commodity standard or scope of the revision of the commodity standard;

Commodity standard proposals are prioritized by the TPCS by assessing against the following criteria.

- the quality and quantity of evidence supporting the inclusion of pests and options for phytosanitary measures;
- trade information;
- the balance between commodity types for development (e.g. tropical and temperate fruits for consumption, seed commodities for sowing, cut flowers, plants for planting);
- the feasibility of combining different species of the same plant type (e.g. citrus) within a standard because of similarities in pest profiles and measures;
- the availability of expertise required within the TPCS to develop the commodity standard.

Once the work programme is approved by the SC, the IPPC Secretariat makes a call for information materials for a minimum of two priority commodities annually. Information materials are collected by the Secretariat and sent to the TPCS for review and development into commodity standard where appropriate.

Drafting new commodity standards

The TPCS develops draft commodity standards using guidance provided in ISPM 46 (*Commodity – specific standards for phytosanitary measures*) on the content of commodity standards, and the criteria for inclusion of pests and options for measures.

Inclusion of pests

The criteria for inclusion of a pest in a commodity standard is that it is regulated by at least one contracting party, and based on technical justification, for that specific commodity. When referring to family or genus level, a note is included to indicate that not necessarily all the speci es in the family or genus level are regulated. This is because of grouping the phytosanitary measures. The TPCS considers the information submitted by NPPOs or RPPOs that supports the regulation of a pest or pest group e.g. pest risk analysis (PRA) or comparable evaluation, but does not make a judgement on the conclusions of such analyses, nor conduct a PRA. The relevance of the list of pests in any commodity standard is assessed by users of the annex for technical justification in their own territory or PRA area.

Inclusion of phytosanitary measures

The TPCS determines which options for measures to include in a commodity standard based on the criteria listed in ISPM 46 (*Commodity – specific standards for phytosanitary measures*). The *submission form for information materials for commodity standards* (Annex 10) provided by NPPOs and RPPOs provides the basis for selection of, and confidence in the effectiveness of measures. Not all measures selected for inclusion in commodity standards are supported by research data and where data are not available, the TPCS considers the strength of historical information from use in trade to determine effectiveness.

For transparency, the TPCS retains records of the rationale for the exclusion of any pests and measures from commodity standards. These records are available in a searchable online database (when developed) or available on request.

Implementation

The TPCS develops and updates commodity standards within the framework of ISPM 46 (*Commodity-specific standards for phytosanitary measures*) and identifies potential implementation needs on related aspects. Implementation issues are referred to the Implementation and Capacity Development Committee.

Revising or amending adopted commodity standard

The TPCS will amend or revise commodity standards when:

- evidence suggests that a phytosanitary measure is no longer effective;
- there is a change in pest taxonomy;
- new pests and measures are proposed by an NPPO or RPPO for inclusion in an adopted commodity standard.

Where there is evidence that a phytosanitary measure listed in a commodity standard is no longer effective and when there is a change in pest taxonomy that does not affect options for phytosanitary measures, the TPCS will add a footnote to the commodity standard to this effect. Footnoting is a variation to the ink amendment process and is an interim solution until a commodity standard can be revised and consulted.

When new pests and measures are proposed for addition to a commodity standard, the TPCS follows the work programme evaluation process and recommends to the SC to include the revision in the *List of topics for IPPC standards*.

Stewards for commodity standards

Except for the first two commodity standards to ISPM 46 developed by the TPCS, a lead and an assistant lead are selected from the TPCS for each new draft, revision or amendment of an adopted commodity standard. The first two commodity standards are stewarded by SC members.

Please refer to the *List of topics for IPPC standards* posted on the IPP for the list of stewards and TPCS leads.

Consultation on draft commodity standards

Specifications for commodity standards are not needed and are therefore not consulted. This does not compromise quality or transparency as the tasks for the development, revision for commodity subjects are substantively the same for all commodities.

During the first consultation of a draft commodity standard, NPPOs or RPPOs may submit evidence to support the inclusion of additional pests and options for phytosanitary measures in a commodity standard. The TPCS will assess proposed additions and revise the commodity standard as appropriate for second consultation.

7.4.2 Searchable online database of pests and measures[163]

For transparency, the TPCS is tasked to develop and update the technical information in an online database that lists commodities, target pests associated with the commodity in trade, and options for phytosanitary measures, cross-referenced to relevant sources of information (e.g. PRAs). Updates will be based on NPPO or RPPO communications that include information relevant to the standard. All information received, i.e. the pests and phytosanitary measures included and excluded in each specific commodity standard are included in the database. Information is also available on request.

[163] Pending IPPC secretariat resources.

7.4.3 Reporting

The TPCS reports annually through the IPPC secretariat and TPCS stewards to the SC. The report includes TPCS achievements during the year, a proposed work programme and priority of commodity subjects, updates on tasks assigned by the SC and any items requiring a decision by the SC.

7.5 Technical Panel for the Glossary (TPG)

The Technical Panel for the Glossary (TPG) was created by CPM-1 (2006) to harmonize phytosanitary terms.[164] It meets regularly to discuss issues related to the Glossary of Phytosanitary Terms.

Current tasks of the Technical Panel for the Glossary[165]

The tasks of the TPG are described in Specification TP 5 - *Technical Panel for the Glossary*.

The TPG is responsible for reviewing and revising terms with a specific phytosanitary meaning (to be) defined in ISPM 5, which are presented to the CPM as Amendments to ISPM 5.

The TPG also reviews draft ISPMs that are submitted for first consultation for consistency in the use of terms by reviewing consultation comments that relate to phytosanitary terminology and consistency. The TPG only reviews draft ISPMs and PTs, as the SC in May 2016 agreed to exclude DPs from this review. The SC in May 2024 confirmed that the TPG is allowed to review portions of text in draft ISPMs which were not the subject of consultation comments.[166]

7.5.1 Recommendations on future revision of ISPM 5[167]

The Commission may recommend terms it wants added, deleted, or reviewed and determines priorities for the further review of the Glossary.

The Glossary should include all new terms from ISPMs and the IPPC, except any such terms which are considered to be restricted in their use only to the document concerned should be appropriately identified therein.

Terms in draft ISPMs not yet approved by the (Interim) Commission may be proposed by the Secretariat as additions to the Glossary if they have a wider application. However, in other cases, they should not be included until approval of the whole ISPM (including the terms and definitions).

The authors and bodies concerned with preparing new ISPMs should bear in mind that all defined terms will appear in the Glossary. They should consider the reasons why it is necessary to include a definition of a term, and avoid as far as possible using definitions to prescribe limits to how terms are to be used (when this is properly done by the standard itself). In some cases, an explanation of how a term should be used may be preferable to a definition.

Each term and definition in the Glossary should be followed by an indication of the body which included them or, as appropriate, made the last amendment, with the year. Up to 1993, this should be specified as the FAO, from 1994 to 1999 as CEPM, and after 1999 as the Interim Commission or Commission, in accordance with the responsible authority at the time.

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[164] The CPM-1 (2006) endorsed the addition of Technical Panel 5: Technical Panel for the Glossary, with a high priority. It requested the Standards Committee to report to the CPM-3 (2008) on the functioning of this TP, for evaluation paragraph 85.1. It replaced the Glossary Working Group (GWG) which first met in 1993 to review phytosanitary terminology being used by national and regional plant protection organizations. Additional history can be found in the Annotated Glossary (*Explanatory document on ISPM 5*): https://www.ippc.int/en/publications/87049/.

[165] Introduced into the work programme by CPM-1 (2006). Specification first approved by the SC 2006-05, with revisions approved by the SC 2013-05 and 2016-05.

[166] SC May 2024, decision 49.

[167] ICPM-2 (1999), Appendix III.

7.5.2 Process for proposals of terms to be defined or revision of terms[168]

As per the procedures of standard setting, the SC decides on the terms on which the TPG should work, based on suggestions normally made by the TPG itself or in the new drafts presented to the SC. The SC reviews the TPG proposals and decides to add them, or not, as subjects to the LOT, and requires the TPG to start working on them. Note: addition of TPG terms as subject to the LOT is decided upon by the SC, and does not require approval by the Commission.

Requests to work on new terms/definitions or to revise a definition may come from:

- the Commission
- the SC
- the TPG itself during its discussions of various agenda items
- other expert drafting groups
- CPs, RPPOs and possibly organizations (such as CBD) as part of comments on draft ISPMs
- CPs, RPPOs as part of regional workshops on draft ISPMs
- CPs, RPPOs when proposing topics for the LOT during the biennial Call for topics.

All such requests should be considered, even if they are eventually not added to the LOT.

The TPG is best placed to list requests made in comments on draft ISPMs, since it is the first group to see these comments (the Secretariat is not looking at detailed comments when compiling them).

The Secretariat is best placed to gather and compile requests from other bodies (as indicated in their reports), and send them on to TPG for consideration.

The following process is implemented:

- 1) Before the TPG meeting, the Secretariat compiles a list of requests, made from various groups since the previous TPG meeting (but not requests made as part of comments on draft ISPMs).
- 2) At its meeting, the TPG identifies requests coming from:
  - · comments on draft ISPMs
  - · its own discussions under various agenda items.
- For each request from 1 or 2 above, the TPG recommends to the SC whether to work on the term or not.
- In considering the work of TPs (i.e. currently at its May meeting), the SC reviews the requests and recommendations, and decides which terms should be added to the LOT as subjects for the TPG.
- After the SC meeting, the Secretariat adds these subjects to the LOT.

7.5.3 Process for consistency across ISPMs in relation to a specific term[169]

See also section 3.7.1 on ink amendments.

Objective

To propose corrections to adopted standards, so that they become understandable, and to provide guidance for future ISPMs, in cases where the meaning of a term is unclear and this creates severe conflicts of meaning between ISPMs.

[168] Approved by the TPG 2009-10 and noted by the SC 2010-05.

[169] Developed by TPG 2013-02, approved by SC 2013-11 (Appendix 16). Previous process approved by the TPG 2010-10 (Annex 13) and noted by the SC 2011-05.

Detailed process

(1) The TPG identifies a case where the use of a specific term presents a severe problem for the understanding of ISPMs, and creates severe conflicts of meaning between ISPMs.

(2) If not already on the LOT, the TPG recommends to the SC that the term be added.

(3) For adopted standards, the TPG provides to the SC a detailed analysis of the use of the term throughout all ISPMs, and makes proposals as to how standards should be adjusted, separating clearly proposals relating to:

- consistency, to be adjusted by ink amendments
- substantial changes, to be adjusted at future revision
- other changes needing another type of process (e.g. development of a definition for restricted meanings of the term, revision of an existing definition that uses the term).

(4) For future standards, the TPG develops an explanation and recommendations, to be integrated in the *General recommendations on consistency.*

(5) The SC reviews the analysis and proposals, and:

- reviews and approves ink amendments to be submitted to the CPM for noting, and then incorporated by the Secretariat into the relevant ISPMs;
- notes the proposals for future revision (to be archived by the Secretariat until the ISPMs are revised);
- notes the proposed recommendation to be added to the General recommendations on consistency; and
- approves or notes any other proposal as appropriate.

7.5.4 General recommendations on consistency of terms[170]

One task of the Technical Panel for the Glossary is to review ISPMs, adopted or drafted, for consistency in the use of terminology, especially of the Glossary terms. During consistency review, in particular during the review of adopted ISPMs in 2009–2012, the TPG has identified a number of points where greater consistency is needed. General recommendations on these points have been applied to the ISPMs reviewed, and should also be taken into consideration in drafting new ISPMs.

The TPG has compiled these general principles and recommendations in a document, which is reviewed annually by the TPG, updated as necessary and included in the *IPPC style guide.*[171] This document should be considered a valuable resource for expert drafting groups.

7.5.5 TPG activities in relation to languages[172]

Under Article XII.5 of the IPPC, "The Secretary shall provide translations in the official languages of the FAO of documentation for meetings of the Commission and international standards".

Role of the TPG in relation to translations

According to the TPG specification (Specification TP 5), the TPG should "[…] ensure that potential translation problems [for terms and definitions] are identified". This happens in particular when terms and definitions are first developed, in English only, and TPG members identify words or phrases that may not be easy to translate. The TPG also provides recommendations on translations of terms and definitions at several stages in the Standard setting process.

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[170] TPG 2010-10, Annex 14, noted by SC 2011-05. last revised by TPG 2018-12, approved by the SC 2019-05.

[171] *IPPC Style guide*: https://www.ippc.int/en/publications/132/.

[172] Presented at the TPG 2012-10 meeting; revised by the TPG 2014-02 report, Appendix 2; noted by SC 2014-05, paragraph 161, Decision 60.

In addition, "the combined membership should have expertise in all FAO languages" (Specification TP 5).

Outline of the Standard setting procedure related to TPG involvement (in bold) related to translations[173]:

Topics

(1) Topics are proposed to the SC to be included in the LOT.

(2) A draft ISPM is prepared by an expert drafting group.

First consultation

(3) The SC May approves the draft ISPM for first consultation, and the draft is posted for first consultation.

(4) After first consultation (when it reviews consultation comments on terms and definitions and consistency in the use of terms), the **TPG makes suggestions regarding translation of the terms and definitions in the draft ISPM and informs the SC that such suggestions were made**. The Secretariat provides TPG suggestions to translators, to be taken into account the next time the translation of the draft ISPM is adjusted.

Second consultation

(5) The SC-7 approves the draft ISPM for the second consultation.

(6) Following the second consultation, the draft ISPM is revised by the Steward and presented to the SC November meeting, which reviews the draft ISPM and recommends it to the CPM for adoption.

CPM

(7) The draft ISPM is translated prior to the CPM meeting.

(8) For the draft *Amendments to the Glossary* (only), **TPG members are invited to review and provide comments on the language versions of terms and definitions.** The Secretariat submits TPG comments to the translators, who adjust the Amendments to the Glossary as needed before posting for CPM.

(9) The ISPM is adopted by the CPM.

LRG

(10) For the languages where a language review group (LRG) is formed, the adopted ISPMs will be submitted to the LRG process to consider the preferred use of terminology and to identify editing and formatting errors resulting from translation. **Individual TPG members for the relevant languages are invited to participate in the work of the LRG.[174]**

[173] TPG activities in relation to languages only are listed. The TPG also reviews draft ISPMs at different stages in the process in relation to consultation comments on terms and definitions, and to consistency in the use of terms.

[174] https://www.ippc.int/core-activities/governance/standards-setting/ispms/language-review-groups.

7.6 Technical Panel on Phytosanitary Treatments (TPPT)

The adoption of one phytosanitary treatment does not mean that others are not suitable for use in international trade.[175]

Current tasks of the TPPT[176]

The tasks of the TPPT are described in Specification TP 3 - *Technical Panel on Phytosanitary Treatments.*[177]

Procedures for the production of phytosanitary treatments (PTs) were noted by the SC in 2006. The TPPT must wait for treatment submissions before they can be evaluated and adopted.

With regard to ISPM 15, SC November 2025 confirmed that the TPPT (as per Task 8 of Specification TP 3) may work on annexes to existing ISPMs on topics relating to phytosanitary treatments.[178]

Issues associated with phytosanitary treatments[179]

The CPM-4 (2009) discussed issues associated with technical standards and:

- *Noted* that the TPPT intends to produce criteria to assist the consideration of treatments based on historical data.
- *Underlined* its agreement with the statements below, which are in line with ISPM 28:

  > Phytosanitary treatments should have a level of efficacy in killing, inactivating or removing pests, or rendering pests infertile, or for devitalisation that is both feasible and applicable for use primarily in international trade.
  >
  > When considering phytosanitary treatments for submission to the TPPT, NPPOs and RPPOs should consider factors such as the effects on human health and safety, the impact on the environment and the quality and intended use of the regulated article. The scope of phytosanitary treatments does not include issues associated with product registration or other domestic requirements for approval of treatments. As appropriate these should be addressed by contracting parties using their normal domestic regulatory procedures.
  >
  > Submissions are evaluated by the TPPT and, where necessary, further information may be requested to support the submission. If appropriate, submissions will be evaluated to determine if data can be extrapolated to other relevant situations.

- *Noted* that contracting parties should consider the level of efficacy of a phytosanitary treatment in determining whether the treatment can be used as a phytosanitary measure in a specific situation. The acceptance of a treatment will depend on factors such as the pest population(s) to be controlled, the pathway, whether the PT is to be used as part of a systems approach and the probability of any remaining pests being able to escape from consignments and cause damage.
- *Encouraged* the development of phytosanitary treatments for broad groups of pests or families or genera that provide appropriate control while maintaining the quality of a wide range of commodities, where possible.

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[175] As indicated in ISPM 28 and reaffirmed by SC 2012-04, paragraph 31.1

[176] Introduced into the work programme by the ICPM-6 (2004).

[177] Specification approved by the SC 2004-11. First revision approved by the SC 2005-04. Second revision approved by SC 2010-05.

[178] SC 2025-11, decision 27.

[179] CPM-4 (2009), paragraph 117. 3-6.

7.6.1 TPPT Working procedure for treatment evaluation[180]

At its 2015 September meeting the TPPT reviewed the document entitled *Working TPPT procedure for treatment evaluation* which includes an updated procedure for the development of phytosanitary treatments and contains guidance on treatment evaluation by TPPT.

Introduction

This document provides a description of the agreed procedure for the evaluation of phytosanitary treatments for inclusion in an International Standard for Phytosanitary Measures (ISPM). The procedures and processes documented here have been agreed to and applied by the Technical Panel for Phytosanitary Treatments (TPPT) for the evaluation of phytosanitary treatments against the requirements of ISPM 28 (*Phytosanitary treatments for regulated pests*).

It is important to note that the burden is on the submitter to provide a complete and accurate submission and information in support of their proposed treatment. This includes the appropriate statistical analysis of the research results, including efficacy.

7.6.2 Procedure for the development of phytosanitary treatments[181]

Call for submissions for phytosanitary treatments

The IPPC Secretariat issues a call for submissions for phytosanitary treatments as approved by the SC. Phytosanitary treatments are submitted by NPPOs or RPPOs for evaluation as an international standard in response to a call for submissions by the Secretariat.

The *Submission form for phytosanitary treatments* (section 7.6.4) should be used by NPPOs or RPPOs to submit information on phytosanitary treatments. This form may vary, however, so it will be updated and made available by the IPPC Secretariat on the IPP in the "Call for treatments" web page.

The Secretariat may also call for treatments to be submitted as "contributed resources" for the Phytosanitary Resources page. For those submissions the *Submission form for phytosanitary treatments submitted as contributed resources* should be used (see section 7.6.5).

The submissions are collected by the Secretariat and sent to the Technical Panel on Phytosanitary Treatments (TPPT) for review.

Evaluation of treatment submissions

The TPPT prioritizes submissions for development of phytosanitary treatments, taking into account guidance from the SC and the *Criteria for justification and prioritization of proposed topics* and using the *Prioritization score sheet for phytosanitary treatments* (see section 7.6.6). The TPPT will also take into account recommendations by other CPM bodies.

Submissions will be evaluated for their suitability as an international treatment by the TPPT in line with guidance provided in ISPM 28 (*Phytosanitary treatments for regulated pests*) and the section below. The submitted treatments will be determined to be:

- a recommended treatment for inclusion in the TPPT work programme
- a treatment requiring more information or research in order to evaluate its efficacy, or
- a treatment not recommended for inclusion in ISPM 28 and/or another ISPM.

Recommended treatments will be submitted by the TPPT to the SC with a recommendation that they be included in the work programme. For treatments requiring more information, or not recommended

[180] Approved by the TPPT 2014-06.

[181] Approved by the TPPT 2005-08, Annex 1 and noted by the SC 2006-05, paragraph 24; updated and approved and included to Working TPPT criteria for treatment evaluation by TPPT 2013-07.

treatments, the NPPO or RPPO, with a copy to the contact person for the submission will be notified by the Secretariat and additional information will be requested or the reasons for the non-recommendation will be given, respectively. In addition, the submitter of treatments that are being recommended to the SC will be advised accordingly.

One expert for each treatment submission is selected as its "lead" by the TPPT to evaluate the submission.

The lead will review the data to ensure it supports the stated efficacy based on ISPM 28 (*Phytosanitary treatments for regulated pests*) and additional instructions from the TPPT if needed.

The lead completes a *Checklist for evaluating treatment submissions* (see section 7.6.7) and the *Prioritization score sheet for phytosanitary treatments* (see section 7.6.6) developed by the TPPT.

In some cases, for example where more than one submission is received for a particular treatment/commodity/pest combination, the lead may need to resolve differences between data sets and to prevent duplication of near identical treatments.

The lead may be able to accumulate further data to support a treatment submission. Where incomplete submissions are received, leads will liaise with the submitter to help progress the submission.

The treatment is then submitted to the TPPT for assessment.

The TPPT provides expertise to review the treatments submitted as "contributed resources" and recommends them for posting, as agreed by the Capacity Development Committee (CDC) at their December 2016 meeting.

The TPPT also categorizes and tags phytosanitary treatments (adopted or provided as "contributed resources") for the IPPC Phytosanitary Treatments online search tool.

7.6.3 Overview of a good research protocol

A number of authors have published comprehensive guides on what good research methodologies should cover when developing phytosanitary treatments. Hallman and Mangan (1998), Hallman (2000), Heather (2004), and Heather and Hallman (2008) provide comprehensive overviews of sound research protocols, while Sgrillo (2002) provides some background and guidance on quantitative parameters for phytosanitary measures.

From these papers and ISPM 28 it can be surmised that a sound research protocol should ensure that:

- There is an unambiguous description of the target pest and commodity, and the nature of the association of the two in trade and how this relates to the mode of action of the treatment.
- The specimens are identified to the species level by a specialist, including detailed information of how the species was determined. Refer to ISPM 8 (section 2.1 Pest records) for further guidance.
- With regards to voucher specimens, submitters should ensure to preserve sample specimens in appropriate media for future reference.
- The condition of the target pest, host and environment at the time of testing is equivalent to the likely condition or range of conditions found in trade. For example, laboratory colonies of test pests should be representative of what is most likely to be encountered in trade and should be replenished with wild types periodically.
- The effectiveness of the treatment is tested against the most tolerant life stage or condition of the target pest likely to be found at the time of treatment application in trade.
- For generic treatments, effectiveness of the treatment is tested against the most tolerant species within the target group.
- When doing replicates or when repeating laboratory trials for comparison in a different location or time, treatment conditions should be as similar as possible on each occasion, such as commodities, load factors, testing equipment, experimental protocols, etc.

- The methods used to measure the experimental parameters of the treatment are appropriate and that records are provided with submissions. This may include calibration of equipment and records indicating, over time, temperature ranges, treatment duration (including heat up, cool down and dwell time), dosimetry, etc.
- The treatment outcome is appropriate to the phytosanitary needs of trade.
- Statistical analyses are completed using the most appropriate methods. Experts in statistics should be consulted.
- The publication or reporting of the research outcomes is suitably transparent for assessment by regulatory organizations.

The treatment end point is suitable for international trade

As stated in ISPM 18 but which might be applicable to all treatments: "The objective of using irradiation as a phytosanitary measure is to prevent the introduction or spread of regulated pests. This may be realized by achieving certain responses in the targeted pest(s) such as:

- mortality
- preventing successful development (e.g. non-emergence of adults)
- inability to reproduce (e.g. sterility), or
- inactivation."

Selecting a suitable treatment end point needs to take into account the cost-effectiveness of the treatment, considering both the cost of applying and verifying the treatment and the cost-impact of any damage to treated-product quality.

The following should be taken into consideration when deciding on a suitable treatment end point:

Treatments causing mortality of the exposed life stage(s)
This treatment outcome should ensure no live pests are found in the treated product on inspection at the destination country. However consideration should be taken of the method used by the importing country to verify pest mortality. While successful treatments may result in pest mortality, it may take several days or more for the target pests to cease metabolic activity (see Philips *et al.*, 2015). Pests that are moribund but still alive after treatment may be incorrectly interpreted as treatment failure when using chemical mortality tests to verify treatment success.

Treatments preventing successful development to the next metamorphic stage
Treatment of the target pest in a commodity while not killing the life stages present would prevent the pest developing further. For example if only eggs occur in the treated commodity, no larvae would be detected after treatment. If pupation occurs in the treated commodity then treatment would prevent the eclosion of adults. If adults typically occur in the product then prevention of reproduction (e.g. egg laying) would be the target.

Treatments preventing adult emergence
While immature life stages present in the treated product may survive the treatment, they would be unable to complete development and emerge as adults from the commodity or from a life stage that has left the commodity. It is therefore possible that live immature life stages of the target insect may be present in the treated product during phytosanitary inspection. There may currently be no simple methods available which can be used to identify whether or not treatment has been carried out correctly by testing the recovered insect (see below).

This requirement is the 'traditional' criterion for treatment efficacy for irradiation treatments against tephritid fruit flies and also, at least in some jurisdictions, other quarantine treatments such as cold disinfestation and fumigation. In the case of tephritid fruit flies, preventing adult emergence could be considered the desired response required for regulatory purposes because it prevents the emergence of adult flies that could be trapped and trigger regulatory actions (PT 7: *Irradiation treatment for fruit flies of the family Tephritidae* (generic)).

Treatments causing sterility of target insect pests
In this case treatment of the life stages present in the commodity would not prevent development but would render any surviving adults reproductively sterile (e.g. unable to produce viable progeny).

As above there is the likelihood that live immature pest life stages will be found in treated product. However an additional complication is that live, but sterile adults may escape into the importing locality and be trapped thereby triggering exotic pest incursion activities and restrictions. Until simple and reliable techniques are readily available to identify insects found in quarantine traps as being treated and sterile, it may be difficult for importing countries to accept sterility as a suitable end point for a phytosanitary treatment.

Researchers would need to prove to the satisfaction of importing countries that insects surviving treatment will be sterile, and will not be able to survive long enough or migrate far enough to be a problem in existing surveillance systems.

Presence of live adult insects after irradiation phytosanitary treatments

Members of the TPPT expressed concern about possible difficulties that might occur for quarantine authorities approving new quarantine treatments whose efficacy was based on lack of successful reproduction of adults rather than acute mortality of pests. The two approaches achieve the same end result in that quarantine security is satisfied – no fertile insects will escape imported fruit and invade the local importing region. The differences are that when a treatment is based on prevention of reproduction there may be live adults in or near to the treated product, which would cause significant concern to importing countries even though the irradiation treatment would have caused sterility of those insects.

Background
ISPM 18 calls for a precise description of the response required for efficacy. For example, where the required response is inability to reproduce it gives a range of specific options, such as complete sterility, limited fertility of only one sex, egg laying or hatching without further development, and sterility of the F1 generation.

Typically, the most advanced developmental stage of the insect occurring in the commodity is the most radiotolerant when the measure of efficacy is preventing further development or reproduction (Hallman *et al.*, 2010). In the case of tephritid fruit flies, preventing adult emergence is the desired response required for regulatory purposes because it prevents the emergence of adult flies that could be trapped and trigger regulatory actions (ISPM 28, Annex 7). When the insect pupates in the host, preventing adult emergence may require an excessive dose, so prevention of development of the F1 generation is the preferred measure of efficacy (Hallman *et al.*, 2010). Thus, the most tolerant stage when all stages could be present in shipped commodity would be the adult, and in the vast majority of arthropods with notable exceptions being tephritid fruit flies and Lepidoptera that pupate off the shipped commodity, adults could be present. These adults (although unable to reproduce) will most likely be alive for some time after irradiation, so for irradiation to be considered as a viable phytosanitary treatment plant protection organizations must develop protocols to ensure that the discovery of live adults after proper irradiation is not an obstacle to importation. Protocols have been developed by countries that import irradiated commodities (New Zealand and USA sources).

There is no easy procedure available to identify whether or not an insect is irradiated or is sterile or fertile, so if such adults were detected (e.g. trapped) in the importing country, subsequent costly regulatory actions or pest impacts may eventuate. In each target pest and host combination the probability of the unwanted detection needs to be considered.

Likewise if insects may be considered vectors of quarantined disease-causing agents it may not be prudent to accept live insects after irradiation.

Pests such as bacteria, fungi, viruses or phytoplasma that may be vectored by insects require irradiation doses 10 to 100 times greater than most insect life stages to remove viability. Therefore irradiation

treatments suitable for international trade are unlikely to remove the ability of a sterile but otherwise unencumbered irradiated pest to vector other regulated pests if they are able to do so normally.

Considerations
It needs to be understood that, with the exception of tephritid and Lepidoptera pests, many pest arthropods, when treated with irradiation for quarantine purposes, may be at the adult stage. This applies to thrips, mealybugs, scales, some Coleoptera and mites, among others. The issue of the likelihood of the post-treatment presence of live, though sterile, adults can be addressed by normal and accepted certification of treatment completion and data supporting sterility. The second issue i.e. the likelihood of such adults escaping from the fruit and entering exotic pest monitoring pathways or vectoring other regulated pests needs to be addressed. Published literature suggests that the numbers of adults surviving treatment for the length of time required to fall into pest monitoring traps or vector a pest in the "new" country is negligible as is the likelihood of easy movement (e.g. flight).

Conclusions
Published research shows clearly that irradiation of insects at all life stages likely to found infesting horticultural commodities, may be an efficient quarantine treatment to prevent the introduction or spread of regulated pests.

The main concern is the survival of adults, although sterile, sufficiently long to be detected (e.g. travel into exotic pest detection traps or vector other regulated pests). Evidence to date suggests that surviving adults are rare but if they do occur they are much weakened and short lived. Researchers are encouraged to determine the viability of surviving adults to address these concerns.

Experimental conditions are consistent with the conditions in international trade

Treatment parameters should be tested to ensure changes in conditions that may be found in international trade do not unexpectedly reduce the effectiveness of the treatment. Evidence should therefore be provided that shows how treatment efficacy may be affected when one or more treatment parameters are altered. Examples to consider include but are not limited to the following:

- **Commodity and/or pest temperature during treatment**: under trading conditions the temperature of the commodity or target pest may vary over the duration of the treatment. The effect of such temperature changes on treatment efficacy should be understood.
- **Commodity and/or pest temperature pre- or post- treatment**: pests may become more tolerant of a treatment if their temperature before the treatment is altered (Jamieson *et al.* (in press)). The rate at which pests are returned to normal temperatures after treatment may alter the effect of the treatment.
- **Water content of commodity**: changes in commodity water content may reduce treatment efficacy (e.g. by reducing treatment penetration or increasing pest tolerance).
- **Commodity density or chemical composition**: the density or chemical composition of the commodity may reduce treatment efficacy (e.g. by reducing treatment penetration of chemical reactivity).
- **Hypoxic or aerobic conditions**: the presence or absence of oxygen may reduce treatment efficacy (e.g. by changing pest metabolic or respiration activity).
- **The effect of treatment conditions on life-stage tolerance to the treatment:** The relative tolerances of different pest life stages may change as one or more environmental or treatment conditions change. For example different life stages may have different mortality responses to increasing treatment temperatures (Fonoti and Tunupopo, 1997). Testing LST should be carried out to the targeted conditions of the treatment.
- **Commodity packaging**: commodity packaging should be consistent with packaging found in international trade.

Use of historical records

Historical evidence can be used to support the general effectiveness of a treatment that has been in use for many years.

General Considerations when Calculating the Level of Efficacy Achieved by a Treatment Schedule

The panel has recommended a number of principles that they should apply when calculating the level of efficacy achieved by a treatment schedule at the 95% confidence level, based on the total number of target pests treated. Further information on the calculation of the level of efficacy is provided in a publication by Couey and Chew (1986). These agreed principles include:

The level of mortality in the controls must be accounted for when calculating treatment efficacy from counts of dead treated pests. The recorded mortality of treated target pests should be adjusted for natural mortality recorded in controls e.g. if there is a 10% level of mortality in the control sample, 10% of the deaths in the treated sample should be attributed to causes other than the treatment.

Greater than expected natural mortality levels (in controls) should be treated with care because they may indicate a target pest population under stress. A population under stress may be more susceptible to the treatment than a natural population. If control mortality is high, evidence should be provided that either indicates pest susceptibility to the treatment is no greater than normal populations or that high control mortality reflects normal conditions.

- Percentage mortality of treated target pests should be adjusted for mortality in the control by the following formula: $Y_a = 100\% - [(X - Y)/X](100\%)$, where Y_a is the adjusted percentage surviving in the treated cohort, X is the percentage surviving in the control and Y is the percentage surviving in the treated cohort (Abbott 1925).
- Greater than expected response levels in controls may indicate a target pest population under stress that may be more susceptible to the treatment than a natural population. If control response is high, evidence should be provided that either indicates pest susceptibility to the treatment is no greater than normal populations or that high control response reflects normal conditions.
- Sample sizes and repetitions should be sufficient to account both for natural variation and achieve significant regressions when extrapolating treatment efficacy. A small number of treatment repetitions can, on analysis, result in statistical errors giving meaningless conclusions (if the SD at 95% is greater than the mean, the lower (worst case) result may be a negative dose e.g. 10 ± 12 gives a range from -2 to 22).

When the population of treated pests is estimated from control pest populations, the estimation must be based on a statistical analysis of the controls. Where possible, control data should not be grouped together, but should be recorded for each individual test commodity or target pest. Pseudo-replication[182] should be avoided or minimized, as much as possible.

- Researchers need to apply the same statistical rigour to control data as they do to treatment data (Write *et.al* 2024). Where the infestation rate for each treated regulated article is estimated from the infestation rate of the controls, regulated article infestation rate would be:

[182] Pseudoreplication is used to test for treatment effects with data from experiments where either treatments are not replicated (though samples may be) or replicates are not statistically independent. The error described by this term arises when treatments are assigned to units that are subsampled and the treatment F-ratio in an analysis of variance (ANOVA) table is formed with respect to the residual mean square rather than with respect to the among unit mean square. The F-ratio relative to the within unit mean square is vulnerable to the confounding of treatment and unit effects, especially when unit number is small (e.g. four tank units, two tanks treated, two not treated, several subsamples per tank). The error is avoided by forming the F-ratio relative to the among unit mean square in the ANOVA table (tank MS in the example above). Pseudoreplication, as originally defined, is a special case of inadequate specification of random factors where both random and fixed factors are present: http://en.wikipedia.org/wiki/Pseudoreplication.

- Mean infestation rate per treated regulated article $(\overline{\mathbf{x}_t}) = \overline{\mathbf{x}_c} - (\frac{\mathbf{STD}}{\sqrt{r}} \times \boldsymbol{t_{r-1(0.05)}})$

Note: **r** is equal to the number of control replicates used to estimate the control mean $(\overline{\mathbf{x}_c})$ and standard error $(\frac{\mathbf{STD}}{\sqrt{r}})$ of the control data. $\boldsymbol{t_{r-1(0.05)}}$ is the **r-1** value from the one-tailed 0.05 probability (95% confidence level) in the t-distribution tables.[183]

- Where the control infestation rate is based on the mean of grouped commodities, as the number of controls increases so does the level of confidence in the estimation of the population mean. A suitable formula for estimating the average number of exposed pests per treated regulated article would therefore be:

$$\text{Average per treated regulated article} = \boldsymbol{\mu - (STD \times \sqrt{(1+1/r)})}$$

Note: **r** is equal to the number of control replicates used to estimate the mean (**μ**) and standard deviation (**STD**) of the control means.

Description of treatment efficacy

The TPPT noted the need for clarity on the description of treatment efficacy that is currently provided in ISPM 28. The panel considered it important that treatment efficacy be clearly described to avoid confusion with other similar terms in common use such as "dose", "efficacy", and "lethal dose". The term "effective dose" or "ED" as currently used in ISPM 28 should not be replicated in other ISPMs as it may create confusion. Instead, alternative and more clarifying wording should be used to communicate the desired efficacy of a treatment, such as[184]:

> There is 95% confidence that the treatment according to this schedule [kills|inactivates|removes|renders infertile|devitalizes] not less than 99.9963% of [the treated pests].

For the example used above (for *Bursaphelenchus xylophilus*) this would look like the following:

> There is 95% confidence that the treatment according to this schedule kills not less than 99.99683% of all life stages of *Bursaphelenchus xylophilus*.

Choosing Surrogate Species for the Development of Phytosanitary Treatments

Note: In the context of the TPPT, discussion on choosing a surrogate species is confined to the use of insect pest species to substitute for target species when the target species is difficult or impossible to obtain or use in research on developing a phytosanitary treatment.

Target species: The species that is of quarantine concern to an importing country.

Surrogate species: The species that is tested instead of the target species.

A suitable surrogate species may be as tolerant as or preferably more tolerant than the target species and must respond as closely as possible to the treatment as the target species. When a surrogate species is used in developing a phytosanitary treatment the TPPT needs to see justification that the surrogate species is a suitable substitute for the target species.

The following attributes may be used in providing such a justification. Similarity between the target species and the surrogate species in:

- Order, Family, Genus, Species (different strain, sub-species, variant, etc.) ["taxonomic distance"]

[183] SC 2024-05, decisions 19 and 20.

[184] SC 2015-05 agreed to the proposed wording. TPPT 2015-09 proposed ink amendments and CPM-11 (2015) noted them for the then 19 adopted annexes to ISPM 28. Following, the ink amendments were incorporated into the phytosanitary treatments.

- Host (i.e. target product) and host range
- Life history, phenology, size
- Feeding regime
- Reaction to treatment
- Tolerance to treatment (preferably less tolerant at same temperature, duration of exposure, dose concentration, etc.) ["toxicologically representative"]
- Habitat type (e.g. tropical, temperate)
- Level of damage to target product and the part/s of target product damaged
- Published supporting scientific literature and/or existing international / bilateral approvals.

Use of Extrapolation to Estimate Phytosanitary Treatment Efficacy[185]

ISPM 28 (*Phytosanitary Treatments for Regulated Pests)*, requires that where possible the level of efficacy of a phytosanitary treatment be indicated and quantified or expressed statistically. Where experimental data are insufficient, other evidence supporting efficacy (i.e. historical experience) should be provided. Furthermore, it should be documented that the efficacy data were generated using appropriate scientific procedures, including where relevant an appropriate experimental design. The data supporting the treatment should be verifiable, reproducible, and based on statistical methods and/or on established and accepted international practice.

The efficacy of a phytosanitary treatment can be determined by exposing large numbers of the most tolerant stage of the pest infesting the commodity to the treatment with the target dose extrapolated from the dose - response relationship. Treatments are often approved by national plant protection organizations of importing countries based on treatment efficacy when large numbers of pests in the most tolerant stage are treated with none or acceptably few reaching the defined survival threshold.

Extrapolation has been used to estimate the dose that will provide a high level of treatment efficacy, >99.9%, and sometimes up to 99.9968% ("probit 9"), from dose-response models. Extrapolation in a statistical sense is estimation outside of the observed range, including observations within the observed range but with insufficient sample size; e.g. a sample size of 200 individuals is inadequate to serve as an observation at treatment levels that provide >99.9% control.

Box Draper (1987) famously wrote, "Essentially, all models are wrong, but some are useful.". They clarified that the practical question is how wrong they can be while still being useful. Regression analyses (most often probit analysis) are often used to analyse dose-response data and estimate doses to achieve specific levels of response. However, these dose estimates are typically in the 50% range in order to compare treatments and options, and in that range they are quite useful. These models may be not well suited to estimate extreme levels of response such as those demanded of phytosanitary treatments, and it is open to inquiry how useful it might be for this purpose. It is not so much that a more useful model might exist and should be sought but whether if what is being asked of any such model might be feasible.

A variety of statistical methods have been used for extrapolating phytosanitary treatment doses, such as probit analysis, other forms of regression analysis, and kinetic models. Markov chain Monte Carlo has been used, but in biology it is mainly used for computational biology, the degree of complexity of which has not been available at the same level for research into phytosanitary treatments. Probit analysis is often suggested as the preferred model for biological assay of insects. Although different probability density functions (normal, logit, Gompertz) give largely the same estimates for most of the dose-response curve, where they differ is precisely where it is important for phytosanitary treatments: at the extremes.

[185] Agreed by the TPPT in its 2015-08 meeting.

Schortemeyer *et al*. (2011) reviewed many papers on phytosanitary treatment development for fresh fruits and vegetables and concluded that extrapolations based on dose-response analyses from these studies do not "generally lead to confidence in the outcomes". They concluded that "the analysis of carefully designed dose-response experiments may be used to" extrapolate to appropriate treatment doses. Their suggestions for careful experiments that would be more successful than research they reviewed can be insinuated from problems that they identify in published studies estimating mortality, which are the lack of:

- preliminary studies to indicate doses "necessary to achieve interpretable results"
- transparency is selection of numbers and levels of treatment and sample size
- correction for mortality in the untreated controls
- information on model selection or fit of data to the model
- role of confidence limits in dose extrapolation
- discussion on how far results can be meaningfully extrapolated.

However, many of the studies Schortemeyer *et al*. (2011) found lacking did, indeed, address the criticisms that they levelled, so it is not readily evident where general improvements could be made that would yield more confident extrapolations.

West & Hallman (2013) examined 11 dose-response studies coupled with large-scale tests where a few survivors occurred to use those data points to compare the accuracy of different analyses in extrapolating to high-levels of control (Table 3). Large-scale studies with a few survivors are especially useful for studying the accuracy of extrapolations because the lack of 100% efficacy avoids the uncertainty of overkill associated with large-scale testing when there are no survivors. Also, it provides an estimate of accuracy that is independent of statistical fit of the data to a model; i.e. accuracy of extrapolation need not be dependent on fit to model.

One pertinent observation from Table 3 is that discrepancy from the closest model extrapolation varied from -18 to +48%, which may be excessive error for supporting extrapolation of doses required for phytosanitary treatments to fresh commodities, which often have narrow tolerance ranges above doses required for efficacy. In any case, from a phytosanitary perspective over-treating is an acceptable error, because although it may result in unnecessary expense and increase the risk of damage to the commodity it would provide quarantine security, while under-treating may not. The least-close extrapolations in Table 3 had, of course, greater discrepancies. Also, no one model best predicted extrapolated doses, indicating that it might be difficult to recommend one model to support extrapolation. Of course, the studies examined might not be ideally designed for purposes of extrapolation and perhaps better experimental designs can be devised. Non-perishable commodities, such as wooden pallets and durable goods, may very well tolerate treatment severities in excess of the minimum needed to control quarantine pests, and in these cases upper range dose estimates of extrapolations may be applied as phytosanitary treatments.

Unfortunately dose-response analyses might not accurately point to a confirmatory dose that should be tried and researchers are urged to pick a confirmatory dose that will result in the least severe treatment feasible taking into consideration possible detrimental effects to the commodity, the difficulty and cost of conducting the confirmatory testing, and the level of urgent need for the treatment. Detailed knowledge of the phytosanitary situation including pest and commodity reactions to the treatment, logistics of commercial application, and ramifications of overtreatment will help guide dose selection in confirmatory testing. It is also worth noting that the result of dose-response analysis should provide a high level of confidence (e.g. 95%) that the treatment will achieve the required level of protection represented by the upper dose confidence level.

Table 3. Dose extrapolation, best-fitting model, and Pearson X^2 from large-scale studies that resulted in a very small percentage survival (West & Hallman, 2013)

Dose tested	Observed control (%)	Model that fit best*	Dose extrapolated	% discrepancy	Pearson X^2
65 min	99.9973	Skewed logit	44 min	+48	0.0
22 d	99.9921	Skewed logit	21 d	+4.8	4.1
14 d	99.9990	Skewed logit	17 d	-18	3.5
12 wk	99.9940	Probit	11 wk	+9.1	3.0
+9 d	99.9993	Logit	11 d	-18	19
12 d	99.9991	Gompertz	13 d	-7.7	46
30 min	99.9994	Logit	32 min	-6.3	15
7 d	99.9994	Logit	6 d	+17	7.0
20 min	99.9988	Skewed logit	16 min	+25	8.2
14 d	99.9999	Skewed logit	17 d	-18	3.5
40 g/m^2	99.9990	Gompertz	38 g/m^2	+5.3	8.3

*The following models were tested: probit, logit, skewed logit, Gompertz

Probit 9 and Efficacy Standards for Phytosanitary Treatments[186]

Phytosanitary measures must assure a level of security appropriate to preventing invasive species from becoming established in new areas. The level of security of phytosanitary treatments has often been set at the irrational number ≈99.99683% since 1939. This number is "probit 9" and was chosen from a then newly developed statistical model, probit analysis, designed for transforming data from a normal, sigmoid distribution into a straight line for ease of analysis in the pre-computer age. The idea is to "stretch" both tails of the normal, bell-shaped curve until they become straight. In this scheme probits (from "probability units") 5, 6, 7, 8, 9, 10, and 11 when expressed as percentages are 50, ≈84.14, ≈97.72, ≈99.86, ≈99.997, ≈99.99997, and ≈99.9999999 %, respectively.

It is not clear how Probit 9 became a de-facto efficacy standard for many phytosanitary treatments. Landolt *et al*. (1984) find no reason for setting the efficacy level at probit 9 or even why mortality is used as the criterion for phytosanitary treatments (except for irradiation) instead of other criteria that would closer reflect biological reality. For example, they state that in an unpublished 1938 document confirmatory testing was decided at no survivors of 10,000 insects tested, but was later raised to probit 9 and requiring 75-100 thousand or more insects treated in a subsequent unpublished document with no reasons given for either decision.

Robertson *et al.* (1994) bemoan the fact that the probit 9 requirement, including attending assumptions of, a) complete mortality as the measurement of efficacy, and b) fit to the probit model, has undergone no revision since it was first codified in 1939 despite substantial progress in understanding pest risk potential.

Authors such as Landolt *et al.* (1984), Baker *et al.* (1990), Vail *et al.* (1993), and Mangan *et al.* (1997) have argued that treatment efficacy decisions should be based on the remaining level of phytosanitary risk of the entire production system not the level of mortality achieved of the phytosanitary treatment. That proposal presents a challenge for treatments designed to be geographically broadly applicable such as those adopted by the IPPC because the level of risk may vary considerably among prospective exporting areas. For example, Mangan *et al*. (1997) estimate that even a phytosanitary treatment at the probit 9 level might be insufficient to prevent a mating pair of Mexican fruit fly, *Anastrepha ludens*, from entering the US via shipments of fruit from Mexico.

The possibility that probit 9 level security for phytosanitary treatments would be insufficient to prevent infestation from invasive species gives pause to attempts to lower the efficacy requirement for treatments that apply over broad geographic areas that may include some that are highly infested with quarantine

[186] Agreed by the TPPT in its 2015-09 meeting.

pests. Therefore, studies that show support for requiring such a high level of efficacy deserve further scrutiny. In Mangan *et al*. (1997), the percentage of *A. ludens* infested grapefruit picked off trees during the entire harvest period in orchards in Tamaulipas, Mexico, in two years was as high as 6.5% (mean puparia/infested fruit = 5.0), and it was estimated that in 4 of 9 instances a probit 9 level treatment would be insufficient to prevent the survival of two insects to the puparial stage using the maximum pest limit equations developed by Baker *et al*. (1990). Fruit lot size for these calculations was one truck load of 120,000 grapefruit. Furthermore, many other pests, such as mites, thrips, and mealybugs, may occur in large numbers in harvested fresh commodities and thus not be controlled to the required level of security by a probit 9 treatment.

Data from Mangan *et al*. (1997) highlight the fact that commodities such as fresh fruits cannot be infested to levels of > 3 % before there is an unacceptable risk of pest establishment after a probit 9-level treatment. Likewise Baker *et al*. (1990) calculate that infestations not greater than 0.4 % may be required under some scenarios to assure quarantine security after a probit 9 level treatment. Therefore, phytosanitary treatments designed for broad application should not be "stand-alone" but be supported by pre-treatment infestation limits. National plant protection organizations from importing countries may also require pre-harvest controls to reduce infestation levels.

Caveats for the paper by Mangan *et al*. (1997) are that only survival to the puparial stage is used with many steps to go before an invasive species would be at risk of establishment; therefore, the risk of establishment seems higher than it actually is. It also assumes that both puparia would result in a sexual pair of adults that would end up together after the load of 120,000 grapefruits was distributed. Furthermore, it assumes that the distribution models accurately predict survival, which may have a low level of accuracy at the extreme level of security demanded of phytosanitary treatments. However, model accuracy could go either way; i.e. be less than reality or more. Also on the side of caution the data used probably underestimated infestation levels, as sampling techniques for fruit flies and likewise other pests miss some of them (Gould 1995).

Regardless, the levels of infestation considered by Mangan *et al.* (1997) that resulted in post-treatment risk of survival greater than those normally considered acceptable for fresh commodities and tephritids and should not be considered normal for international trade, although they sometimes do occur (APHIS 2002). The TPPT concludes that phytosanitary treatment schedules should not be designed for worst-case scenarios that may be imagined, but scenarios of reasonably high risk. Furthermore, members are advised that phytosanitary treatments might not be sufficiently efficacious under all trading situations such as where infestation levels or volumes of trade are high, nor should exporters trade highly infested fresh commodities.

A more pertinent question for treatment research is whether confirmatory testing at the probit 9 level with a standard confidence level of 95%, which requires that ~93,600 insects be treated with no survivors yields a more useful level of confidence than testing only 30,000 insects as is approved as an APPPC (2004) Standard. A probit 9 requirement results in an increase in confidence of 0.0068% compared with 30,000 insects treated with a cost of treatment research that is more than tripled. Although the difference in efficacy seems slight the difference in treatment severity could be significant. For example, Hallman and Martinez (2001) found that an irradiation dose to prevent adult emergence of 3rd instar *A. ludens* in grapefruit that satisfied 30,000 insects treated was 17 % less than the dose required for probit 9.

The TPPT does not recommend any specific level of efficacy but encourages members to take into account factors that affect the risk of quarantine pests occurring in and surviving shipments, such as infestation levels, volumes traded, and other factors affecting survival and establishment, as is discussed by previous authors (Landolt *et al*. 1984, Baker *et al.* 1990, Vail *et al.* 1993, Mangan *et al.* 1997). Additionally, the TPPT does not propose to change the way efficacy is measured (mortality except for irradiation treatments) or recommend specific models for analysis of data.

General Considerations for Heat treatments

The panel considered issues associated with treatments based on temperature, taking into account the work of Hallman and Mangan (1997). In 2009 the panel recommended a number of principles that

should be applied when evaluating temperature treatments for adoption as international standards (outlined below).

Mortality assessments
When assessing mortality, any larvae that are found alive should be considered survivors whether or not they subsequently fail to pupate or survive to adults. This takes account of the fact that in practice on phytosanitary inspection any live insect found will be considered a survivor.

Genotype of insect
It is possible that laboratory-bred colonies of insects may become more susceptible to temperature-based treatments over time. The panel is not aware of any research having been undertaken to demonstrate whether this is an issue in reality. The panel considers that as long as the colonies used in the research have been established or reinvigorated before the research, issues such as these should not be considered significant subject to research showing otherwise.

Pre-treatment acclimation
Insects may be less susceptible to temperature treatments depending on the conditions they are exposed to immediately prior to treatment. The panel considers that where this may be an issue, pre-treatment requirements should be included in any recommended treatment schedule.

Commodity variability
To provide confidence that temperature treatments are applicable internationally, host material used in research should be sampled from as wide a geographic area as possible and unexpected results should be considered with care.

Scale of treatment application
The panel should consider any possible reduction in effectiveness of temperature treatments that may occur when treatments are scaled up and applied in commercial conditions.

Rate of temperature change
Where the rate of temperature change of the commodity may be considered significant to the effectiveness of a temperature treatment, this should be specified in the treatment schedule.

Determining the most tolerant life stage
The most tolerant life stage should be determined using hosts and pests under normal conditions of infestation and treatment parameters, using a common measure of efficacy. If conditions are different, it should be demonstrated that these differences are equivalent to normal conditions. For instance, if artificial inoculation is used, this should be similar to the host and pest found in nature, e.g. depth in commodity and level of infestation. When developing mortality curves, life stages should be exposed to as close to the target temperature as possible for different periods.

Most thermotolerant stage of Tephritidae
The purpose of this annotated bibliography is to evaluate the literature on most thermotolerant stage among tephritid eggs and larvae. Any study that compared at least two stages with discriminating lethal temperatures was included. Studies or parts of studies at lower temperatures where survival was considerable were not included. Where raw data are given the conclusion regarding most tolerant stage is based on the raw data regardless of what the statistical analysis (if any) showed; in any case raw data and analyses largely agreed.

Conclusion. The egg stage was the most thermotolerant or the next most thermotolerant in studies done with insects reared in fruit using a common measure of efficacy. The egg itself can vary considerably in thermotolerance depending on age and usually increases in thermotolerance as it develops.

Analysis. It is not possible to compare all of the studies as they are presented because the methodologies and measures of efficacy differ considerably. Many of the studies use end points that require fewer steps for the egg to achieve survival than the 3rd instar; the egg had only to hatch while the 3rd had to

pupariate, which involves more development. A common end point should be used, such as survival to a stage which can be detected by inspectors.

Many of the studies were done in vitro where stages were heated under the same conditions; this arrangement may artificially favor egg tolerance. Because eggs are always laid very near the surface and late instar larvae are often deep in the fruit some late larvae would heat up slower allowing time for some accommodation to the temperature increase and generation of heat-shock proteins (which offer protection against heat and other threats) compared with eggs. Thomas and Shellie (2000) found survival of 3rd instar *A. ludens* increased when they were heated to lethal temperatures more slowly. However, in commercial practice with heated air treatments the entire load heats up relatively slowly allowing adaptation to occur in eggs as well. That is not the same with hot water immersion treatments where the heat reaches the egg stage rather quickly.

In some of the studies done in fruit 3rd instars were reared on diet for several days before being inserted into the fruit. This technique has been used with much phytosanitary research, not only heat, but there are only two heat studies with one tephritid (*A. ludens* in mango and grapefruit) that compare efficacy using this technique vs efficacy using 3rd instars reared naturally in fruit and both find that it is much easier to kill 3rd instars reared on diet and inserted into fruit than those reared in fruit (Shellie and Mangan 2002, Hallman (unpublished); see page 121 of Heather and Hallman (2008) for interpretation of the former).

Operational considerations may tend to favor concentration of treatment efficacy on the 3rd instar because the 3rd instar is the stage likely to be found by inspectors and it is the stage of those present in fruit closest to the adult, thus, closest to successful colonization.

One of the most illustrative studies is a PhD thesis (Corcoran 2001) that was not published in any journal, peer-reviewed or not. It is illustrative because it is the only study where results using in vitro and in-fruit techniques can be compared, thus, shedding light on the relevance of the abundant heat in vitro studies in the literature. Unfortunately raw data are not given and the only results are LD50 and LD99 values with 95% fiducial limits, and fit of the data to the probit model is not given. In any case, for the one fly comparing in vitro vs fruit (*Bactrocera papayae*) there were no differences in thermotolerance among the egg (60% developed) and the three instars as measured by pupariation when the stages were reared and treated with heated air in mangoes. When the four stages were immersed in 46°C water and efficacy measured as pupariation the 1st instar was more tolerant than the 3rd which was more tolerant than the egg and 2nd. That study with one species indicates that *in vitro* research using the same endpoint overestimates 1st instar tolerance considerably and 3rd instar tolerance to some degree. Of course, it is not prudent to conclude for all tephritids based on one study with one species.

Nine studies using stages reared from the egg in fruit and measuring a common endpoint (the ideal situation) give results for six species of *Bactrocera* spp. and *Ceratitis capitata* (Table 4). These studies are the most similar to the actual situation facing phytosanitary heat treatments. All of the studies were done in Australia using heated air and seven of nine were done with mangoes. In seven of nine studies (78%) the egg was the most thermotolerant stage (or of equal tolerance as other stages that were among the most tolerant in that study). In four of seven studies (57%) the 1st instar was most (or equally) tolerant (1st instar was not included in all 9 studies). In four of nine (44%) the 3rd instar was most (or equally) tolerant. In one of seven studies (14%) the 2nd was most (or equally) tolerant. In the two studies where the egg was not the most tolerant stage it was the next most tolerant. Because of the difference in application of heated air vs hot water immersion (rapid heating of egg stage in hot water immersion) the most tolerant stage for hot water immersion could be different.

Table 4. Summary of thermotolerance studies among stages of Tephritidae that used common measures of efficacy among the stages and reared and treated the stages within fruit.

Species	Fruit	Relative tolerance	Reference
Bactrocera aquilonis	mango	1st> egg > 3rd> 2nd	Corcoran (2001)
Bactrocera cucumis	zucchini	Egg > 1st> 2nd> 3rd	Corcoran *et al.* (1993)
Bactrocera fraunfeldi	mango	1st = egg > 3rd> 2nd	Corcoran (2001)
Bactrocera jarvisi	mango	1st = 3rd> egg > 2nd	Corcoran (2001)
Bactrocera papayae	mango	All same	Corcoran (2001)
Bactrocera tryoni	mango	Egg > 3rd> 2nd> 1st	Heard *et al.* (1992)
Bactrocera tryoni	mango	3rd> egg > 2nd> 1st	Heard *et al.* (1992)
Bactrocera tryoni	mango	Egg = 3rd	Heather *et al*. (1997)
Bactrocera tryoni	tomato	Egg > 1st> 2nd> 3rd	Heather *et al.* (2002)
Ceratitis capitata	mango	Egg = 3rd	Heather *et al.* (1997)

General Considerations for Heated Air Treatments

Heated air treatments used as phytosanitary measures for pests on fresh fruit and vegetables have historically been divided into two main categories, vapour heat treatment (VHT) and high temperature forced air (HTFA) (Hallman and Armstrong 1994). Other names have been used for both; for example, VHT has been called moist heat or heat sterilization in some older literature, while HTFA has been called forced hot air, forced moist air, dry heat, and hot dry air. Inconsistent nomenclature in the literature has resulted in confusion, and readers must refer to the methodology used in the research to determine to which group a heated air treatment really belongs.

Heated air treatments distinct from VHT and HTFA and used for products other than fresh fruit and vegetables include heat with no added humidity at 80-100°C applied to soil and durable products able to tolerate the high heat and steam sterilization (saturated air at 100-120°C, sometimes under pressure) to control pests and disease organisms in straw and other durable non-food items or to sterilize contaminated or waste material.

VHT was first used as a commercial phytosanitary treatment in 1929 to disinfest grapefruit of *Ceratitis capitata* in Florida. Large rooms were packed with fruit, and heated air near saturation was pumped into the room for 14-16 hours until the entire load reached temperatures lethal to *C. capitata* larvae and eggs. Its use expanded to other countries, pests, and commodities until fumigants came into widespread use by the 1950s. Research on VHT resumed in Japan in the late 1970s as some commodities did not tolerate the fumigants used (ethylene dibromide and methyl bromide). A major change in the new VHT was the forcing of heated air through the load resulting in much shorter treatment times (a few hours). These modern VHT are the ones currently being evaluated by the TPPT.

HTFA was developed in Hawaii 25 years ago as a modification of VHT, which was thought to be causing surface damage to papaya (Armstrong *et al.*, 1989). The modification was that HTFA maintained the dew point of the air in the treatment chamber below the surface temperature of the fruit to prevent condensation, which was considered the reason for fruit damage.

Differences between VHT and HTFA

The main distinction between VHT and HTFA is based on moisture content of the heated air and the consequential heating which results. VHT typically uses air near saturation, which results in condensation of water on the fruit surface until the fruit surface temperature increases to near the air temperature. During HTFA the dew point is typically always kept below the surface temperature of the commodity being heated resulting in no condensation on the fruit surface. Of the three heat treatments that have been used commercially, VHT, HTFA and hot water treatment (HWT), VHT results in the most rapid heating (Table 5), when all other factors are similar. This is because condensation of water vapour on a surface releases latent heat of 2257 J/g of water vapour in addition to the heat by convection from the heated air. HTFA mainly heats the commodity via convection.

Table 5. Mean time to raise fruit centre temperatures to desired level via three commercial heat treatments using three fruits per replicate (Shellie and Mangan, 1994).

Treatment	Time (minutes) to reach desired temperature in	
	Mango	**Grapefruit**
Vapour heat	60	63
Hot water immersion	76	78
High temperature forced air	113	120

VHT does not achieve the treatment speed shown in the small-scale tests in Table 5 when applied to commercial-size lots because as water vapour condenses during treatment less vapour is available for condensation further down the airflow stream. Also, some heat will be lost evaporating some of the water that had previously condensed.

Because there seems to be no differences in efficacy between VH and HTFA treatments, the TPPT on its 2015-09 meeting[187] agreed that HTFA is a variation of VH and should be mentioned under VH for explanatory purposes, not as a separate treatment. A draft ISPM is being developed on the Requirements for the use of temperature treatments as phytosanitary measures (2014-005).

VHT and HTFA treatment schedules

A treatment schedule in ISPM 28 should contain information directly relevant to satisfying treatment requirements for efficacy on a commercial scale and nothing more. Operational requirements to achieve the treatment requirements will vary among treatment facilities and treated products and need to be considered on a case-by-case basis. In the case of heated air treatments that information would most basically be a temperature threshold that must be reached and the time that temperatures must remain at that threshold. It is assumed that temperature measurements are taken in sufficient locations within the treatment load that extreme temperatures are measured and that no part of the load remains significantly below temperature/time combinations necessary for efficacy.

An example of a VHT schedule is ISPM 28, Annex 15, Vapour heat treatment for *Bactrocera cucurbitae* on *Cucumis melo* var. *reticulatus*:

Exposure in a vapour heat chamber:

- At ≥95% rh
- Air temperature increasing from room temperature to >46°C
- For between 3-5 h until fruit core temperature reaches 45°C
- Followed by 30 min at ≥95% rh in an air temperature of ≥46°C and with fruit pulp temperature ≥45°C.

An example of a HTFA schedule is the proposed: “High temperature forced air treatment for selected fruit fly species (Diptera: Tephritidae) in fruit” (2009-105). The TPPT recommended that the proposal be accepted for papaya to be disinfested of the species *Bactrocera melanotus* and *B. xanthodes.* The proposed treatment is based on:

Exposure in a forced air chamber:

- At ≥60% rh
- Air temperature increasing from room temperature to 48.5°C
- For ≥3 hours or until core temperature reaches 47.5°C
- Followed by 20 min at ≥60% rh, air temperature ≥48°C and fruit pulp temperature ≥47.5°C
- After which fruit may be cooled in a shower of water at 24-26°C for 70 min to maintain fruit quality.

[187] See section 5.1 of 2015-09 TPPT meeting report: https://www.ippc.int/en/publications/81833/.

Schedule Time. An open question is how the schedule time during the final holding or dwell phase of the treatment should be determined. One possibility is that the longest time required for any of the temperature recorders in the centre of individual commodities to reach the scheduled temperature would be the minimum required treatment time. This would be in harmony with phytosanitary irradiation treatments (ISPM 18, ISPM 28) where the highest dose recorded during confirmatory testing is the minimum dose in the schedule. Sometimes the minimum time scheduled for heated air treatments scheduled by some countries is the time when 50% of the recorders reach the desired temperature. A risk with this scheduling is that it permits some recorders to read significantly lower temperatures when 50% of the recorders reach the scheduled temperature, and any pests in that part of the load may be at sub-lethal temperature/times. While it may be assumed that this variation also occurred during the research to develop the treatment, the scale of phytosanitary treatment research can be considerably reduced and is likely conducted under a more uniform environment than a commercial facility. Both of these factors increase the possibility that some temperature recorders may not achieve the target temperature during the treatment period. In addition, some experiments to develop temperature treatments are designed so that the treatment time is initiated only when all of the temperature probes meet the treatment conditions. It is therefore important to consider how the supporting research was conducted when establishing the criteria for the treatment schedule.

Factors that may affect efficacy of commercial heated air treatments

Various factors might theoretically affect the efficacy of heated air treatments when applied on a commercial scale (Armstrong and Mangan, 2007; Hallman, 2000; Hallman, 2007; Heather and Hallman, 2008; Chapters 6 and 8). Few have been tested sufficiently to conclude whether or not they are significant or if any difference is sufficient to reduce efficacy when applied commercially. Efficacy of modern VHT and HTFA is based on the centres (or central seed surfaces) of commodities reaching a target temperature and being held at that temperature for a set amount of time. Therefore, although there may be factors that affect the heating rate of commodities besides temperature (moisture content, air speed, commodity size, shape, and density and its initial temperature, and load size, density, and arrangement) the effect of these factors on efficacy may be negligible because efficacy is based on temperature and time requirements, which may include heating rates.

Some factors may affect efficacy on a commercial scale and might not be compensated by defining efficacy as a threshold temperature/time combination, and these are discussed below. This list may not be exhaustive.

Heating rate. The heating rate of heated air treatments may vary because the end point for a treatment is not only time, as it is for some treatments (e.g. hot water immersion and fumigation), but temperature threshold at a certain time. Heating rate may be scheduled to be not too fast which would result in less total heat being delivered to the commodity with perhaps consequentially lowered efficacy. However, Whiting and Hoy (1998) found that as the heating rate decreased from 4°C/h to 1.7°C/h the time to achieve 99% mortality of *Epiphyas postvittana* in a 1 kPa oxygen atmosphere increased only by the amount of time necessary to reach the target temperature of 40°C, indicating no effect of heating rate on efficacy for the relatively low rates of heating studied. However, this treatment is complicated by the fact that it was a heat/low-oxygen treatment, not only heat. Neven (1998) found that heating rate was directly related to efficacy of hot water immersion of *Cydia pomonella* fifth instar; e.g. a heating rate of 4°C/h required 6 min at 46°C to kill 95%, while at a rate of 12°C/h 95% mortality was achieved in <1 min. Total heating time was 115 min at 12°C/h and 351 min at 4°C/h. The research by Neven (1998) suggests that maximum rather than minimum heating rates should be regulated. While there is no clear trend of an effect of heating rate on efficacy researchers and plant protection organizations need to account for differences in heating rates that may occur between experimental and commercial conditions and to minimize the likelihood of treatment failure. Because heating rate is the one factor generally thought to affect efficacy, testing of this effect should be part of research to develop heated air treatments.

Stress. Proteins that are synthesized in response to heat or other stress increase tolerance of the organism to heat and other forms of stress that lasts for many hours after the stress. These proteins are typically

called heat shock proteins (hsp), although they may be induced by other stressors besides heat and may offer protection to other forms of stress besides heat. There are many examples in the phytosanitary heat treatment literature (Lurie and Jang, 2007). Once a heat treatment is initiated there may be insufficient time for hsp to be produced to protect the insect from that treatment. However, Neven (1998) found that *C. pomonella* apparently developed increased tolerance to heat as it was being delivered at rates between 4-12°C/h. Similarly, Thomas and Shellie (2011) suggest that heat shock protein development can occur under commercial treatment scenarios where heating rates are slow, increasing the likelihood of treatment failure if the research supporting the treatment was done with a faster heating rate. Thus, the effect of stress on efficacy is related to and indeed may be the mode of action of the concern with heating rate. Of course, it must be acknowledged that increased tolerance to heat may be due to factors other than hsp. A problem might arise when pests infesting commodities are subjected to stress that induces hsp a few hours before treatment. Because phytosanitary heat treatment research is usually done under controlled conditions, stress-inducing hsp may not occur during the research. However, under commercial conditions there may be opportunities for sufficient stress to induce hsp, particularly in the case of high loading factors common to commercial operations which typically result in slower heating rates compared to laboratory trials, thus potentially increasing tolerance of pests to the treatment.

Phenotype. The aggregate phenotypes of a pest species may theoretically affect efficacy, although few controlled studies have been done comparing different populations of quarantine pests for thermotolerance. Hansen *et al.* (1990) found no difference between a laboratory colony of *Bactrocera dorsalis* and feral insects in Hawaii when third instars were heated in papaya. However, the laboratory colony had originated from insects collected years before in the same region and was reared under ambient conditions, resulting in perhaps little natural selection pressure on thermotolerance of the laboratory colony. Because thermotolerance can be genetically selected, it may be possible that different populations of the same pest species express phenotypical differences in thermotolerance.

Rearing conditions. Hallman (1994) found that *Anastrepha suspensa* third instars reared at a constant 30°C in diet were more thermotolerant than those reared at lower temperatures. Alternatively if insects used to develop phytosanitary heat treatments are reared at constant temperatures that are below those commonly found in the field where the insect is a quarantine pest it is conceivable that the lab-reared insect could be easier to kill, resulting in a treatment that may have a lower level of efficacy when applied commercially.

Infestation methodology. Shellie and Mangan (2002) found that *Anastrepha obliqua* larvae reared on diet and inserted into mango (a technique used to support some heated air treatments) were easier to kill via hot water immersion than those reared via oviposition in mango. Hallman (2014) found a similar, less marked, result with *Anastrepha ludens* in grapefruit. Therefore, it is conceivable that infestation techniques using diet-reared larvae implanted into fruit would result in sub-efficacious heat treatments.

Host. The host upon which an insect is reared might theoretically affect thermotolerance, although there are no data from adequately controlled studies on this topic. A reasonable hypothesis is that poorer hosts result in insects that are easier to kill with heat versus insects reared on more favourable hosts. This seems to be the case for cold treatments (De Lima *et al.*, 2007). If this holds true for heat treatments it would mean that treatments developed with good hosts would suffice for all hosts, although they may be more severe than needed for poor hosts. On the contrary, a treatment developed on a poor host may not necessarily suffice for a good host.

Atmosphere. Decreased levels of oxygen and/or increased levels of carbon dioxide increase susceptibility of quarantine pests to heat and have been used to develop phytosanitary treatments. Indeed, the TPPT has evaluated two heat/modified atmosphere treatments (2012-010 and 2012-013) and found them acceptable. Therefore, modifications of the atmosphere during a heat treatment do not reduce efficacy and need not be of concern to PPO, unless the treatment is specifically a heat/modified atmosphere treatment, and then the concern would be that the atmosphere is maintained within a specified range.

Notes on commodity quality. Factors affecting heating rate and condensation of water on the commodity may also affect commodity quality, and, thus, commercial utility of the treatment. Commodity tolerance may also differ among cultivars, seasons, and agroecosystems.

Temperature recording during research

Due to variations in research methodologies that can be used to effectively support heated air treatments, standard protocols for recording temperature have not been developed. There is a wide variety of commercially available temperature monitoring and recording systems that are suitable for use in heated air treatment research. Researchers typically choose their temperature monitoring systems based on their available resources and the requirements of their methodology and experimental design. Temperature recording systems can be calibrated by the manufacturer, certified via traceable calibration (e.g. NIST) or calibrated against a certified temperature measurement system in the range of temperatures to be specified by the treatment schedule. Temperature dose mapping is done to identify the range of temperatures occurring during treatment. Temperature recording during the research is done periodically in areas of the load that include the extremes found during mapping. Special attention should be paid to obtaining temperature readings from the innermost areas of the largest individual commodities being heated and commodities located in cold spots in the chamber. The most important factors that should be described and quantified are calibration, accuracy of temperature probes and recorder, and logging intervals.

Information that should be provided in heated air treatment submissions

Specific protocols describing information to be provided in submissions to the TPPT for heated air treatments have not been developed because the unique nature of many treatments conducted under different situations calls for different information. It is the responsibility of the researchers to provide clear and organized reporting of their results without flooding the submission with irrelevant information. Information to be reported can be divided into several groups concerning the pest, commodity, heat treatment system, temperature monitoring and recording system, and control and measurement of other variables (Armstrong and Mangan, 2007; Tang *et al.*, 2007; Heather and Hallman, 2008, Chapter 6).

Pest. The scientific name of the pest is provided, and vouchers should be deposited in a permanent insect collection for future reference as taxonomic classifications may change. If more than one pest species is covered by the proposal and the treatment is based on controlling the most tolerant species, relative tolerance data among the species is provided. The history of the population is provided, and research is done with organisms either from wild populations or not far removed in generations from wild populations. Information on most tolerant stage(s) is provided of the stages found in the commodities in international trade. Rearing information is provided, including diets, temperatures, and generations in colony.

Commodity. The species, cultivars, stage of maturity, and sources of host material used in the research is given. The host material is of similar quality to that which is marketed and should be free of pesticides that may enhance target pest mortality.

Heat treatment system. The system used to develop the treatments is described and referenced, including how measurements of heat and other variables (e.g. humidity, air speed) were calibrated and performed.

Treatment. Application of the treatment is described in sufficient detail for anyone else to replicate it exactly. Recording of all variables is done with sufficient periodicity to capture differences over time.

Criterion for efficacy. Determination of efficacy for an individual pest is explained in detail. It is insufficient to write “mortality”, rather how it was decided that an insect was dead. This criterion must be one that the regulatory agencies of importing NPPO can accept as being certain within the span of time and costs under which they may be inspecting the imported commodity.

Determination of most tolerant stage. If it has not already been determined, the most thermotolerant stage is determined *in situ*. It is not valid to do that determination in vitro because location of the different pest stages in the commodity may affect tolerance. Artificially infesting the commodity with diet-reared

organisms might also affect tolerance (Shellie and Mangan, 2002; Hallman, 2014). If diet-reared organisms are used, scientifically based justification must be provided.

Dose-response testing. After the most tolerant stage(s) are identified testing is done to seek the mildest treatment that will provide a high level of efficacy. Although probit analysis or other models may be used to analyse the data and predict levels of efficacy, they might not be accurate at the high levels of efficacy demanded of phytosanitary treatments. An iterative approach may be the best method to determine the dose required for efficacy. Numbers of insects treated at each level in each replicate and their efficacy responses are reported.

Confirmatory testing. Traditionally treatments for fresh commodities require large-scale confirmatory testing to ensure that an estimated dose achieves the desired high level of efficacy and is done with the most thermotolerant stage(s). This testing should be done over a long enough period of time to encompass broad variation in test insects and commodities that is representative of the prospective export industry. Numbers of insects treated in each replicate and their efficacy responses are reported.

Analysis of results. The numbers of organisms and commodities treated in all tests are reported. Numbers surviving and not surviving the criterion for efficacy are reported. Determination of most tolerant stage is analysed in several replicates. Even though an analysis of variance may show no statistically significant differences among stages, it would be prudent to use the stage(s) with the highest mean tolerance in the large-scale testing to confirm treatment efficacy.

Concluding observations

One concern that needs to be examined for all phytosanitary treatments, not only heated air, relates to how minimum threshold conditions are established for the treatment schedule. There are two general methods: 1) the severest recording determines the minimum for the treatment schedule, and 2) a mean/median of all of the recordings becomes the minimum for the schedule. The first method is much more conservative in terms of treatment efficacy; however, it may also allow for more damage to the commodity being treated. This is because of the robustness of phytosanitary treatments stemming from two areas: A) commercially traded fresh commodities are essentially not traded at infestation levels approaching those for which the extremely high levels of efficacy are designed, and B) the measurement of efficacy used to define mortality may exceed that necessary to prevent establishment of an invasive species.

Heated air treatments may be simplified and harmonized by using, as treatment endpoint, a temperature/time threshold with perhaps an established time requirement to reach the temperature threshold. The hypothesis supporting this proposal is that it does not matter how a certain temperature/time threshold is reached within the load being treated, regarding such variables as air temperature, humidity, air speed, size of commodity, physical arrangement, load factor, etc., but that the entire load reach that temperature/time combination. The minimum/maximum time requirement to reach the temperature threshold would reduce potential variation in efficacy caused by heating rate (see discussion below). Although VHT imparts more heat to the load initially compared with HTFA, after the threshold temperature is reached no more condensation should be occurring because the dew point temperature would not reach the surface temperature of the load. Therefore, in the example VHT schedule given above (ISPM 28, Annex 15), the humidity level during the 30 min hold time should not matter. Furthermore, humidity may not matter during the heat-up either, as long as the threshold temperature was reached in a reasonable amount of time. Industry would want to keep humidity high enough to prevent desiccation, but it should not matter for efficacy. This philosophy could facilitate the development of generic heated air treatments. Harmonization of VHT and HTFA treatments would ideally require supporting research to substantiate the hypothesis that humidity level does not affect efficacy during hold time.

The number of factors that theoretically could affect treatment efficacy, including a few with data showing that they do under specific circumstances, may cast doubt on attempts to schedule broadly applicable phytosanitary heated air treatments. However, importing countries (e.g. Japan, New Zealand, and the USA) have a history of allowing heated air treatments without problems that could be traced to

efficacy. Phytosanitary treatments in general tend to be more severe than needed for pest exclusion in commercial applications, which provides an additional margin of error to allow for reductions in efficacy resulting from these factors.

Nevertheless, researchers are urged to conduct their research using a protocol that closely follows natural conditions regarding factors such as genotype of pest, rearing temperatures, host material, etc., and, where feasible, include studies on the effect of factors that have may have the largest impact on treatment efficacy. Additionally, factors that will not be prescribed by the treatment schedule should vary to encompass natural variability in the populations for which the treatment is designed. Plant protection organizations should also be aware of the differences between factors that should be carefully controlled and those that should vary to not place unnecessary burdens on researchers and industry.

General Considerations for Wood Packaging Material Heat Treatments

The panel considered the following issues when evaluating wood packaging material heat treatments for adoption as international standards (outlined below).

Mortality assessments
When assessing mortality, the target life stage should be that most likely to be present in the wood at the time of treatment. Any target life stage found alive should be considered a survivor whether or not it subsequently fails to survive to adulthood or produce offspring. This takes account of the fact that in practice on phytosanitary inspection any live life stage found will be considered a survivor.

Environmental factors
Consideration should be taken of potential environmental effect on the efficacy of the treatment under conditions expected to be encountered at the time of treatment (such as wood moisture content or density). Unexpected results should be considered with care.

Pre-treatment acclimation
Target pests may be less susceptible to temperature treatments depending on the conditions they are exposed to immediately prior to treatment. The panel considers that where this may be an issue, pre-treatment requirements should be included in any recommended treatment schedule.

Scale of treatment application
The panel should consider any possible reduction in effectiveness of temperature treatments that may occur when treatments are scaled up and applied in commercial conditions.

Rate of temperature change
Where the rate of temperature change of the commodity may be considered significant to the effectiveness of a temperature treatment, this should be specified in the treatment schedule.

Heating process
Consideration should be taken of the heating process (e.g. heating from inside out or outside in) and the conditions that need to be met before the treatment can commence.

General Considerations for Cold Treatments

The panel considered the issues associated with treatments based on temperature, taking into account the work of Hallman and Mangan (1997). The panel recommended a number of principles that they should apply when evaluating temperature treatments for adoption as international standards (outlined below).

Mortality assessments
When assessing mortality, any larvae that are found alive should be considered survivors whether or not they subsequently fail to pupate or survive to adults. This takes account of the fact that in practice on phytosanitary inspection any live insect found will be considered a survivor.

Genotype of insect
It is possible that laboratory-bred colonies may become more susceptible to temperature-based treatments over time. The panel is not aware of any research having been undertaken to demonstrate whether this is an issue in reality. The panel considers that as long as the colonies used in the research have been established or reinvigorated before the research, issues such as these should not be considered significant subject to research showing otherwise.

The Insect Pest Control Laboratories of FAO/IAEA conducted a study to explore if the different populations of *Ceratitis capitata* respond differently to cold treatments. Three populations were compared in cold tolerance and concluded that there was no evidence to support any significant differences in cold tolerance of *C. capitata* populations from different geographical regions, and the TPPT noted that differences apparent from the literature might instead be due to differences in methodology.[188]

Pre-treatment acclimation
Insects may be less susceptible to temperature treatments depending on the conditions they are exposed to immediately prior to treatment. The panel considers that where this may be an issue pre-treatment requirements should be included in any recommended treatment schedule.

In July 2013[189], the TPPT agreed that artificial infestation in relation to cold tolerance would be considered satisfactory only when the pest developmental stage tested had developed in the fruit (e.g. eggs placed and larvae tested).

Commodity variability
To provide confidence that temperature treatments are applicable internationally, host material used in research should be sampled from as wide a geographic area as possible and unexpected results should be considered with care.

Regarding cultivars of *Citrus* species or any other host commodity, the TPPT in their September 2015 meeting concluded[190] that there was no evidence indicating that different cultivars of *Citrus sinensis* or any other host commodity responded differently to cold treatments. This conclusion was based on a review of the available literature and the analysis of a number of studies that failed to demonstrate any differences in responses to cold treatments on cultivar level for *Citrus sinensis*.

In their meeting in September 2016, the TPPT further discussed the effects of the cultivar/variety on the efficacy of cold treatments. The Phytosanitary Measures Research Group (PMRG) had previously analysed all data available where *Ceratitis capitata* had been tested on two or more varieties and where studies were conducted by the same research team, using the same methodology. Based on this analysis the TPPT concluded that there is a tendency that as the lethal time (LT) increases, the differences in efficacy disappear. However, when the LT 99 and above were considered for the most tolerant stage/instar, no differences were reported. Therefore, the TPPT found that there is no evidence to support that varieties could affect the cold tolerance.

Scale of treatment application
The panel should consider any possible reduction in effectiveness of temperature treatments that may occur when they are scaled up and applied in commercial conditions.

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[188] See TPPT 2016-09 report for the full discussions and related appendix related to the methodology, outcomes and conclusions from the IAEA/FAO study.

[189] TPPT 2013-07 report.

[190] See the 2015-09 meeting report for details on the discussions and analysis.

Rate of temperature change
Where the rate of temperature change of the commodity may be considered significant to the effectiveness of a temperature treatment, this should be specified in the treatment schedule.

Issues associated with drafting of the treatment descriptions for cold treatments
When drafting the treatment descriptions from the different submissions, the TPPT noted that one submission related to two fruit flies on a number of different hosts. Other submissions were for the same fruit fly species and host commodity. The TPPT therefore made the following decisions regarding the treatment descriptions:

Each treatment should be for an individual fruit fly species.

For fruit fly hosts, the TPPT was aware that several countries had found different *Citrus* species responded to cold treatment differently. Treatments should therefore be produced for separate *Citrus* species.

Treatments involving the same fruit fly species and host (for example *Ceratitis capitata* on *Citrus sinensis*) were included as different schedules in the same treatment description.

Regarding temperatures sensitivities (e.g. 2°C +/- 0.5°C), these were not added to the treatment schedules. In some submissions the temperature limits were quoted, but the TPPT noted that experimental probes were often more sensitive than commercial probes. The TPPT therefore decided to include a sentence in the treatment descriptions indicating that 'the stated temperatures should not be exceeded'. Commercial operators would need to take into account the normal working range of their equipment in order to meet this requirement.

General Considerations for Wood Fumigation Treatments

The panel considered the following issues when evaluating wood fumigation treatments for adoption as international standards (outlined below).

Mortality assessments
When assessing mortality, the target life stage should be that most likely to be present in the wood at the time of treatment. Any target life stage found alive should be considered a survivor whether or not it subsequently fails to survive to adulthood or produce offspring. This takes account of the fact that in practice on phytosanitary inspection any live life stage found will be considered a survivor.

Environmental factors
Consideration should be taken of potential environmental effects on the efficacy of the treatment under conditions expected to be encountered at the time of treatment. Wood factors such as moisture content, density, porosity and presence of bark should be considered along with temperature. Unexpected results should be considered with care.

Scale of treatment application
The panel should consider any possible reduction in effectiveness of fumigation treatments that may occur when treatments are scaled up and applied in commercial conditions.

General Considerations for Irradiation Treatments

The panel considered the issues associated with treatments based on irradiation, taking into account the work of Hallman and Mangan (1997). The panel recommended a number of principles that they should apply when evaluating irradiation treatments for adoption as international standards (outlined below).

Extension of treatments to all fruits and vegetables
The efficacy of irradiation treatments can be extrapolated to all fruits and vegetables. Confidence was based on experience in the application of irradiation treatments and evidence from studies on *Anastrepha ludens, A. suspensa* and *Bactrocera tryoni* (Bustos *et al*., 2004; Gould & von Windeguth, 1991; Hallman & Martinez, 2001; Jessup *et al*., 1992; von Windeguth 1986; von Windeguth & Ismail, 1987).

The panel recognised, however, that treatment efficacy has not been tested for all potential fruit and vegetable hosts of the submitted target pests. If evidence becomes available to show that the extrapolation of treatments to cover all hosts of the target pests is incorrect, then the treatments should be reviewed.

Extension of treatments to all populations within a species
The panel considered whether the scope of submitted irradiation treatments could be extended to cover all strains and biotypes of the target pests concerned.

The panel was confident that the extrapolation of efficacy to all strains and biotypes of the target pests could be made for the irradiation treatments that had been submitted. This confidence was based on the absence of published evidence for significant differences between subspecies and biotypes in their radiation tolerance, including a study comparing strains of one target pest by Hallman (2003). The panel also recognised that recommended minimum doses are higher than otherwise required and should account for any minor differences in intra-species tolerances that may exist.

The panel recognised, however, that treatment efficacy has not been tested for all potential strains and biotypes of the submitted target pests. If evidence becomes available to show extrapolation of treatments to cover all strains and biotypes is incorrect, then the treatments should be reviewed.

Extension of species to the whole genus
The panel considered whether the scope of submitted irradiation treatments could be extended to cover all species in a genus of the target pests concerned.

The panel noted that Bakri *et al*. (2005) had indicated that, with few exceptions, there was no need to develop radiation biology data for all species within the same genus. The panel considered that a case for extrapolating irradiation doses to all species within a genus would need to be explored more fully in any submission.

Extending beyond genus to family[191]
The panel considered whether the scope of submitted irradiation treatments could be extended to cover all genera in a family of the target pests concerned.

The TPPT noted that within Tephritidae a wide range of genera has been tested and this had supported extending irradiation treatments to the Family level in this case (report of 2006 meeting).

It was noted that for other insect families it may also be possible to get sufficient data to confirm that most economically important genera within a family conform to the same treatment dose. The panel considered that a case for extrapolating irradiation doses to all genera within a family would need to be explored more fully in any submission. Factors to be considered include: a representative number of species studied, large scale confirmatory tests completed, and relative consistency among results achieved.

Determination of the most tolerant life stage of the target pest(s)
The panel noted that the insect life stage that is most tolerant to irradiation is the most advanced stage when identical objectives are measured (e.g. prevention of adult emergence). The treatments only need to be effective for those life stages likely to be encountered in the traded commodity.

Effect of environmental conditions
The panel considered whether the scope of submitted irradiation treatments could be extended to cover treatments undertaken in all environmental conditions likely to be encountered under commercial conditions.

[191] Revised based on the decision of the TPPT at their July 2017 meeting.

The panel was confident that the extrapolation of efficacy to all likely temperatures could be made for the irradiation treatments that had been submitted. Confidence was based on experience in the operation of irradiation treatments and evidence from studies on *Rhagoletis pomonella* (Hallman, 2004).

The panel noted that lowered oxygen conditions (hypoxia) may affect the efficacy of irradiation treatments. Unless the treatment has been determined to be effective under hypoxic conditions, the panel considers that to achieve the stated treatment efficacy the irradiation treatment should not be applied to fruit and vegetables stored in modified atmospheres.

Non-target effects of irradiation

The panel considered that the only potentially significant non-target effects of the irradiation treatments that were reviewed at the meeting were those affecting commodity quality. The research presented indicated that there would be minimal adverse effects at the prescribed dosages to the commodities tested. In some circumstances the research indicated that the irradiation treatments may enhance product quality through extending shelf life. However, the panel has recommended extending the treatments to all fruits and vegetables, including those that have not been tested or have been shown to be negatively impacted by relatively low irradiation doses. The panel therefore recommends that, prior to approving an irradiation treatment; NPPOs may wish to take account of any potential non-target effects of the treatment.

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7.6.4 Procedure for developing phytosanitary treatments for ISPM 15 (*Regulation of wood packaging material in international trade*)[192]

Taking into account the other subsections of section 7.6, the following procedure provides specific guidance on how to develop phytosanitary treatments for ISPM 15 (*Regulation of wood packaging material in international trade*).

When developing new phytosanitary treatments for ISPM 15, submitters should provide confidence that the pest risks of a wide variety of wood packaging material from all regions of the world have been addressed. Phytosanitary treatments for ISPM 15 need to adequately manage the risk of introducing pests globally associated with raw wood used to manufacture wood packaging material. As such treatment developers may need to collaborate nationally or internationally with scientists, technical professionals or national plant protection organizations to gather the data required to support the international adoption of a treatment. This relies on the principle that all sources of existing relevant information should be considered to support each step in the process. Research may be required where existing information is insufficient.

The following elements that could affect treatment efficacy should be addressed in the development of an ISPM 15 phytosanitary treatment:

- pests likely to be associated with wood packaging material used in international trade;
- pest life stages most likely to be associated with wood packaging material used in international trade;
- wood species and characteristics (e.g. hardwood vs softwood, sawn wood vs round wood used as dunnage, moisture content, presence or absence of bark); and
- environmental conditions (e.g. temperature, humidity, atmosphere).

To ensure these elements are addressed appropriately, when developing a treatment for ISPM 15, four main steps need to be taken (Steps 1 and 2 can be done in any order, followed by Step 3 (if required) and then Step 4):

- **Step 1. Screening for pest tolerance –** screening intended to identify the pest and its life stage (associated with wood packaging material) most tolerant to the phytosanitary treatment tested and the effective schedule for that treatment (i.e. dose, concentration, rate of application, duration, etc. that results in complete mortality[193] of that pest at that life stage);
- **Step 2. Effect of physical parameters –** identification of the performance of the phytosanitary treatment under differing physical parameters of the environment in which the treatment is applied;
- **Step 3. Validation of the effective treatment schedule –** validation of the effective treatment schedule found in Steps 1 and 2 which result in complete mortality under laboratory conditions; and
- **Step 4. Validation under operational conditions –** testing under operational conditions to confirm the efficacy of the treatment during its use in the production of wood packaging material.

Step 1: Screening for pest tolerance

The screening is intended to gather data from the literature or laboratory research to identify the effective treatment schedule for the most tolerant pest at the most tolerant life stage. That life stage will be used

[192] SC 2025-11, decision 25.

[193] Throughout this section, the term "mortality" or "killed" is used to describe successful outcome of treatments. It should be noted, however, that successful phytosanitary treatments may not necessarily result in killing pests, but may inactivate, remove, devitalize, or render them infertile (ISPM 5 (*Glossary of phytosanitary terms*)). However, for the purposes of phytosanitary treatments in ISPM 15, mortality should be considered the successful outcome.

for testing in Steps 3 and 4. Screening should follow the data gathering requirements prescribed in ISPM 28 (*Phytosanitary treatments for regulated pests*). Evidence on treatment efficacy should be provided for at least one species from each pest group listed in Table 1. Reasons for the selection of the species of test pests should be explained. Available data on the biology of the pest and resistance or tolerance to specific treatments should be used to guide or support the selection of the test pests.

Pests that should be used in Step 1 of the treatment testing process are presented in Table 1. These pests are associated with wood used for wood packaging material and affect forest trees (Ormsby, 2022).

Table 1. Pests to be used in the treatment testing process

Type of pest	Species, genera or families to be used
Insect	Bostrychidae, Buprestidae, Cerambycidae, Curculionidae (Scolytinae) and Siricidae
Fungus	*Heterobasidion* spp. and Ceratatocystidaceae
Nematode	*Bursaphelenchus xylophilus*

To identify the effective treatment schedule for the most resistant life stage of a pest likely to be associated with wood packaging material in international trade, data (from existing literature or laboratory research) should be provided that demonstrates the extent to which all life stages of the eight selected pests have been killed when exposed to a range of treatment schedules. It should be noted that one treatment schedule should be included in the testing that exceeds the level at which complete mortality was achieved. However, if information indicates that certain life stages are not relevant to the proposed treatment (e.g. they will not infest wood packaging material), these may be excluded, provided technical justification is included with the treatment submission.

For each variable in the test (e.g. dose, concentration, life stage), a minimum of five test samples should be used. For insects, the test sample should be the single individual. For fungi or nematodes, the test sample should be a colonized piece of wood, as it is not practical to handle these pests individually. Individuals or isolates used for testing should have the quality, vigour and stability (see pest information in section 3.2.1 of ISPM 28) appropriate to naturally occurring pests. Appropriate hosts should be used for each pest species to ensure an appropriate pest response is achieved. Some pests, for example fungi and nematodes, should be tested only *in vivo* (in wood) unless evidence is provided that *in vitro* testing (e.g. fungi grown on nutrient agars in Petri dishes) provides equivalent and acceptable results. Reasons for the selection of isolates should be clearly documented in the submission.

The results of the screening should document the treatment responses among the selected pests. The screening should also indicate which of the pest life stages tested is the most tolerant (i.e. the pest life stage requiring the highest treatment schedule to achieve treatment success).

Step 2: Effect of physical parameters

Step 2 identifies the minimum effective treatment schedule that must be delivered throughout the profile of the wood tested under differing physical parameters. Treatment efficacy may be limited by a number of factors, such as:

- a treatment's ability to penetrate wood;
- a treatment may be diluted by substances in the wood; and
- a treatment may be incapable of killing pests at a particular temperature or moisture content.

Treatment developers should therefore conduct testing of the treatment efficacy under differing physical parameters, which may include:

- temperature of the wood and the ambient air;
- composition of the atmosphere (e.g. levels of oxygen or carbon dioxide, vacuums);

- moisture inside and at the surface of the wood (e.g. wood moisture contents of freshly cut and dried wood);
- dimensions of the wood (e.g. sizes of wood used for pallets, boxes or dunnage);
- anatomy and density of the wood (e.g. ring porous, diffuse porous, sapwood, heartwood);
- wood species (e.g. tropical and temperate species; coniferous and broadleaf species); or
- presence or absence of bark.

In Step 2, a single piece of wood used for testing should be considered a test sample. At least five test samples should be used for testing a single level of a physical parameter (e.g. one level of temperature, one species of wood).

It should be demonstrated in the submission that the treatment is capable of killing pests throughout the profile of the wood considering various physical parameters. This may be achieved by monitoring pest mortality or demonstrating that the effective treatment schedule can be delivered throughout the entire profile of the wood. The effective treatment schedule determined in Step 2 may differ from the effective treatment schedule determined in Step 1 (for example, the schedule determined in Step 2 may be higher than that determined in Step 1) as a result of the physical parameters.

If available information indicates that certain physical parameters are not relevant and were excluded from testing, the circumstances under which these do not affect the treatment should be described in the treatment submission.

Step 3: Validation of the effective treatment schedule

Step 3 validates the effective treatment schedule identified in Steps 1 and 2 for the most tolerant pest life stage. A piece of wood infested by pests should be considered a test sample. The size of the pieces of wood used for testing should correspond to the size of wood packaging material used in international trade. Testing is achieved by exposing a minimum of 60 test samples (see ISPM 31 (*Methodologies for sampling of consignments*), Appendix 2, Table 1 (P=95%)) to the effective treatment schedule under laboratory conditions. An effective treatment schedule may be considered validated under laboratory conditions when there are no survivors in any of the test units. This step may not be required if the treatment developer is confident that they have identified the effective treatment schedule.

Step 4: Validation under operational conditions

Step 4 validates the effective treatment schedule under operational conditions, by exposing the most tolerant pest life stage in samples of wood (of a size and nature normally used for wood packaging material) to the effective treatment schedule. This should be done under a range of conditions that may be found in practice in treatment facilities, including conditions most likely to result in the treatment being unsuccessful. Treatment developers should test pieces of wood infested with the most tolerant life stage of the pest at population or infestation levels normally expected in untreated wood. Parameters used for testing may determine the treatment schedule once approved (e.g. minimum wood temperature at treatment of 20 °C or greater).

The number of test samples (pieces of wood) to be used for testing should be determined, taking into account the actual average level of infestation by insects found in the pieces of wood prepared for testing. For example, if the infestation level of pieces of wood prepared for testing by a pest is found to be four per test sample and the required number of individuals of the pest to be used in the testing is 1 200, then the number of test samples of wood exposed to the treatment in Step 4 should be greater than 300. Test samples should be split into at least three replicates with one control per replicate (e.g. 100 per replicate from the above example of 300 test samples). These replicates should be exposed to the treatment separately.

For the most tolerant pest identified in Step 1, the minimum number for testing is specified in Table 2 (Ormsby, 2022). To achieve the numbers required to demonstrate the required treatment efficacy based on the number of individuals listed in Table 2, it may be necessary to use wood that is inconsistent with

ISPM 15 (e.g. wood containing bark). Guidance is provided in section 7.6.3 on estimating treated numbers from controls, the use of surrogate species, the use of extrapolation to estimate treatment efficacy, and the use of "whole population" testing when single life-stage testing is not feasible.

Table 2. Minimum number required for testing the pests provided in Table 1, assuming no treatment failures (e.g. survivors) occur

Type of pest	Minimum number
Bostrychidae	6 188
Buprestidae	5 700
Cerambycidae	7 470
Curculionidae (Scolytinae)	997
Siricidae	1 485
Nematoda	180 blocks
Fungi	180 blocks

Source: **Ormsby, M.D.** 2022. Elucidating the efficacy of phytosanitary measures for invasive alien species moving in wood packaging material. *Journal of Plant Diseases and Protection*, 129: 339–348. https://doi.org/10.1007/s41348-022-00571-1

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ISPM 31. 2016. *Methodologies for sampling of consignments*. IPPC Secretariat. Rome, FAO. Adopted 2008. https://www.ippc.int/en/publications/588/

Ormsby, M.D. 2022. Elucidating the efficacy of phytosanitary measures for invasive alien species moving in wood packaging material. *Journal of Plant Diseases and Protection*, 129: 339-348. https://doi.org/10.1007/s41348-022-00571-1

Further reading

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7.6.5 Submission form for phytosanitary treatments

(Reviewed by TPPT March 2016)

Name of Country/RPPO:

Click here to find the *IPPC Procedure Manual for Standard Setting* on the IPP (www.ippc.int), where you can download this form.

Submission number (Secretariat use only):

Complete the following form, preferably in electronic format, and submit by e-mail to the IPPC Secretariat (ippc@fao.org). The call will remain open, but if you wish your submission to be considered by the TPPT in their next meeting, please send it no later than [date to be established by the IPPC Secretariat]. Please use one form per phytosanitary treatment. An electronic version of this form is available on the International Phytosanitary Portal (IPP) at https://www.ippc.int/en/core-activities/standards-setting/calls-treatments/. Incomplete submissions will be returned. Please save the completed submission form with the following file name: COUNTRY or RPPO NAME_Title of treatment.doc, prior to submitting to the IPPC Secretariat via e-mail.

Copies of all relevant supporting information and publications should be supplied with the treatment submission, preferably in PDF format, for ease of subsequent distribution.

Submitters are encouraged to make all supporting documentation available publicly. If you allow the public release of your submission and supporting documents, please check the relevant box below.

(Text in brackets given for explanatory purposes)

Name of treatment	*(Provide enough detail to identify the treatment; for example, cold treatment of citrus for Mediterranean fruit fly)* *(If quoting the taxonomy of any Citrus spp., it should be in accordance with the reference Cottin, R. 2002. Citrus of the world: a citrus directory. France, INRA-CIRAD)*

Submitted by: (Name of national or regional plant protection organization)
☐ I agree to the public release of the submission and supporting documents.
Contact: (Contact information of an individual able to clarify issues relating to this submission, including sources of efficacy data) Name:..... Position and organization: ..... Mailing address:..... ..... Phone: ..... Fax:..... E-mail: .....

Treatment description

Active ingredient	(Brand names alone will not be accepted)
Treatment type	(For example, chemical, irradiation, heat, cold)
Target pest	(Scientific name)
Target regulated articles	

Treatment schedule	(Include a brief description such as active ingredient, dose, time and temperature and the efficacy of the treatment (effective dose and confidence limits))
Other relevant information	(This should include any assumptions or extrapolations and the supporting evidence for these)
References	

The following form must be completed in accordance with ISPM 28 *Phytosanitary treatments for regulated pests*, the IPPC Strategic Framework and the *Procedure and criteria for identifying topics for inclusion in the IPPC standard setting work programme*.

The following form refers to the relevant sections of ISPM 28 and are numbered accordingly.

3.2 Efficacy data in support of the submission of a phytosanitary treatment
The source of all efficacy data (published or unpublished) should be provided in the submission. Supporting data should be presented clearly and systematically.
3.2.1 Efficacy data under laboratory/controlled conditions (Treatments may be considered without efficacy data under laboratory/controlled conditions if sufficient efficacy data is available from the operational application of the treatment (section 3.2.2) and if no data under laboratory/controlled conditions exists this section may be left blank.)
Pest information
Identity of the pest to the appropriate level, life stage, and if a laboratory or field strain was used
Conditions under which the pests are cultured, reared or grown
Biological traits of the pest relevant to the treatment
Method of natural or artificial infestation
Determination of most resistant species/life stage (in the regulated article where appropriate)
Regulated article information
Type of regulated article and intended use
Botanical name for plant or plant product (where applicable)
Conditions of the plant or plant product
Experimental parameters
Level of confidence of laboratory tests provided by the method of statistical analysis and the data supporting that calculation
Experimental facilities and equipment
Experimental design
Experimental conditions
Monitoring of critical parameters
Methodology to measure the effectiveness of the treatment
Determination of efficacy over a range of critical parameters, where appropriate
Methodology to measure phytotoxicity, when appropriate
Dosimetry system, calibration and accuracy of measurements,
3.2.2 Efficacy data using operational conditions (historical data, may in some cases substitute for the requested information below)
Pest information
Identity of the pest to the appropriate level, life stage, and if a laboratory or field strain was used

Conditions under which the pests are cultured, reared or grown
Biological traits of the pest relevant to the treatment
Method of natural or artificial infestation
Determination of most resistant species/life stage (in the regulated article where appropriate)
Regulated article information
Type of regulated article and intended use
Botanical name for plant or plant product (where applicable)
Conditions of the plant or plant product
Experimental parameters
Level of confidence of laboratory tests provided by the method of statistical analysis and the data supporting that calculation
Experimental facilities and equipment
Experimental design
Experimental conditions
Monitoring of critical parameters
Methodology to measure the effectiveness of the treatment
Determination of efficacy over a range of critical parameters, where appropriate
Methodology to measure phytotoxicity, when appropriate
Dosimetry system, calibration and accuracy of measurements
Factors that affect the efficacy of the treatment
Special procedures that affect the success of the treatment, if applicable
3.3 Feasibility and applicability (Information should be provided where appropriate on the following items)
Procedure for carrying out the phytosanitary treatment
Cost of typical treatment facility and operational running costs if appropriate
Commercial relevance, including affordability
Extent to which other NPPOs have approved the treatment as a phytosanitary measure
Availability of expertise needed to apply the phytosanitary treatment
Versatility of the phytosanitary treatment
The degree to which the phytosanitary treatment complements other phytosanitary measures
Summary of available information of potential undesirable side-effects
Applicability of treatment with respect to specific regulated article/pest combinations
Technical viability
Phytotoxicity and other effects on the quality of regulated articles, when appropriate

Consideration of the risk of the target organism having or developing resistance to the treatment

Send submissions to:

E-mail: ippc@fao.org
(preferred)

Mail: IPPC Secretariat (AGPP)
Food and Agriculture Organization of the UN
Viale delle Terme di Caracalla,
00153 Rome, Italy

7.6.6 Submission form for phytosanitary treatments submitted as *contributed resources*

SUBMISSION FORM FOR PHYTOSANITARY TREATMENTS FOR PUBLICATION AS CONTRIBUTED RESOURCES[194]

(Prepared by the IPPC Secretariat)

Instructions to the submitter:

Please make sure to send to the IPPC Secretariat the document that outlines the phytosanitary treatment and contains the treatment schedule (e.g. a manual). The treatments submissions will be evaluated against the IC established Criteria for contributed resources[195], if they are used in international trade.

Please fill out the form below with the basic information on the phytosanitary treatment.

The Technical Panel for Phytosanitary Treatments (TPPT) will review the submissions before posting treatments on the Phytosanitary Resources page.

The call will remain open, but if you wish your submission to be considered by the TPPT in their next meeting in [year], please send it before [date to be established by the IPPC Secretariat].

After you completed the following form, preferably in electronic format, please save it under the file name: *COUNTRY or RPPO NAME_Title of treatment.docx* and submit it by e-mail to the IPPC Secretariat (ippc@fao.org). The words "Call for Phytosanitary Treatments" should be placed in the subject line of the email message.

Name of the treatment: .....
Submitted by: (Name of national or regional plant protection organization) ....
Contact: (Contact information of an individual able to clarify issues relating to this submission) Name:..... Position and organization: ..... Mailing address:..... ..... Phone: ..... Fax:..... E-mail: .....

If you agree to post the submitted documents on the IPP as "contributed resources" please underline the following: Yes, I agree.

[194] Contributed resources available on IPP at: https://www.ippc.int/en/core-activities/capacity-development/guides-and-training-materials/contributed-resource-list/

[195] Criteria for the posting of contributed phytosanitary resources on the IPP, Appendix 15 of the IC (2019-04) meeting report: https://www.ippc.int/en/publications/87316/

Treatment description

To enable tagging and categorizing the submitted phytosanitary treatments posted on the Phytosanitary Resources page, please fill out carefully the following table (text in brackets is given for explanatory purposes).

Treatment type	*(in accordance with IPPC specific treatment types as established for IPPC Specific Treatment Types)*
Target pest	*(Scientific name, common name, taxonomic family and order, for guidance see also the EPPO Global Data base for Pest Scientific Information)*
Product/ Commodity	*(Common name, scientific name - as applicable)*
Treatment schedule	*(Include a brief description of the treatment schedule, such as active ingredient, dose, time and temperature - as applicable)*
Other relevant information	*(This should include any assumptions or extrapolations and the supporting evidence for these)*
Accepted by	*(Country(s) who accept trade based on this treatment (and from which country(s) commodities in case specified))*
References	*(For example title, manual section, author - as in the attached reference document)*

The document that outlines the phytosanitary treatment and contains the treatment schedule (e.g. a manual) should be attached to the treatment submission, preferably in PDF format, for ease of subsequent publication on the Phytosanitary Resources page.

Send submissions to:

E-mail: ippc@fao.org
(preferred)

Mail: IPPC Secretariat (AGDI)
Food and Agriculture Organization of the UN
Viale delle Terme di Caracalla
00153 Rome, Italy

7.6.7 Prioritization score sheet for phytosanitary treatments[196]

(Reviewed by TPPT 2016-03)

Click here for the *IPPC Procedure manual for standard setting* on the IPP (www.ippc.int), where you can download this form.

Scorer: Date:

Proposed treatment:

Criterion	Score	Reasons
Core criteria		
Practical		
Economic		
Environmental		
Strategic		
Total		

Scores	Definitions	Scores	Definitions
0	No value	3	Moderate
1	Low	4	
2		5	High

[196] Aside from the score sheet, the TPPT agreed to delete the "Prioritization criteria for proposed phytosanitary treatments and score definitions" and use the *Procedure and criteria for identifying topics for inclusion in the IPPC standard setting work programme* adopted by the CPM for determining priorities. The TPPT revised the score sheet as presented in this procedure manual (TPPT 2009-01 meeting report).

7.6.8 Checklist for evaluating treatment submissions

CHECKLIST FOR EVALUATING TREATMENT SUBMISSIONS

(Revised by TPPT 2013-03)

CHECKLIST: TITLE

TREATMENT DESCRIPTION[197]

Publication information

Date of this document	
Treatment title	
Document category	Draft phytosanitary treatment
Current document stage	Checklist
Origin	
Major stages	
Notes	

Treatment schedule

Name of treatment	(Provide enough detail to identify the treatment; for example ”Cold treatment of citrus for *Ceratitis capitata*") (If quoting the taxonomy of any *Citrus* spp., it should be in accordance with the reference Cottin, R. 2002. *Citrus of the world: a citrus directory*. France, INRA-CIRAD.)
Active ingredient	(Brand names alone will not be accepted)
Treatment type	(For example, chemical, irradiation, heat, cold)
Target pest	(Scientific name)
Target regulated articles	
Treatment schedule	(Include a brief description such as active ingredient, dose, time and temperature and the efficacy of the treatment (effective dose and confidence limits))
Other relevant information	(This should include any assumptions or extrapolations and the supporting evidence for these)
References	

[197] This description will be used as the basis for the treatment document for SC approval and the consultation.

Checklist[198]

	SUMMARY INFORMATION	COMMENTS – ARE THE REQUIREMENTS MET?
1.	**The summary information should be submitted by NPPOs or RPPOs to the Secretariat and should include:**	
2.	name of the treatment	
3.	name of the NPPO or RPPO and contact information	
4.	name and contact details of a person responsible for submission of the treatment	
5.	treatment description (active ingredient, treatment type, target regulated article(s), target pest(s), treatment schedule, other information)	
6.	reason for submission, including its relevance to existing ISPMs	
7.	**Efficacy data in support of the submission of a phytosanitary treatment**	
8.	**The source of all efficacy data (published or unpublished) should be provided in the submission. Supporting data should be presented clearly and systematically.**	
9.	**Efficacy data provided**	
10.	**Efficacy level**	ED_{xxx} at XX% confidence level[199]
11.	**Intended outcome**	
12.	**Pest information:**	
13.	identity of the pest	
14.	conditions under which the pests are cultured, reared or grown	
15.	biological traits of the pest relevant to the treatment	
16.	method of natural or artificial infestation	
17.	determination of most resistant species/life stage (in the regulated article where appropriate)	
18.	**Regulated article information:**	
19.	type of regulated article and intended use	
20.	botanical name for plant or plant product	
21.	conditions of the plant/plant product (free from non-target pests/size, shape, weight/infested at susceptible stage)	
22.	**Experimental parameters (labs and/or operational) and/or historic information:**	

[198] For the first evaluation after submission of the treatment, the TPPT lead should complete the comment column. The checklist will then be considered by the whole TPPT and the panel may amend the comments during their discussion.

For subsequent evaluations of the treatment, new rows for additional information and comments should be inserted underneath each relevant entry every time they are added by the TPPT lead. As before, the TPPT may amend these comments during discussion at the TPPT meeting.

[199] Provide appropriate reference here.

	SUMMARY INFORMATION	COMMENTS – ARE THE REQUIREMENTS MET?
23.	level of confidence of tests provided by the method of statistical analysis and the data	
24.	experimental facilities and equipment	
25.	experimental design	
26.	experimental conditions	
27.	determination of efficacy over a range of critical parameters	
28.	methodology to measure the effectiveness of the treatment	
29.	monitoring of critical parameters (e.g. exposure time, dose, temperature of regulated article and ambient air, relative humidity)	
30.	**Feasibility and applicability, such as:**	
31.	procedure for carrying out the phytosanitary treatment (including ease of use, risks to operators, technical complexity, training required, equipment required, facilities needed)	
32.	cost of typical treatment facility and operational running costs if appropriate	
33.	commercial relevance, including affordability	
34.	extent to which other NPPOs have approved the treatment as a phytosanitary measure	
35.	availability of expertise needed to apply the phytosanitary treatment	
36.	versatility of the phytosanitary treatment (e.g. application to a wide range of countries, pests and commodities)	
37.	the degree to which the phytosanitary treatment complements other phytosanitary measures (e.g. potential for the treatment to be used as part of a systems approach for one pest or to complement treatments for other pests)	
38.	consideration of potential indirect effects (e.g. impacts on the environment, impacts on non-target organisms, human and animal health)	
39.	applicability of treatment with respect to specific regulated article/pest combinations	
40.	technical viability	
41.	phytotoxicity and other effects on the quality of regulated articles	
42.	consideration of the risk of the target organism having or developing resistance to the treatment	

LIST OF ANNEXES

ANNEX 1: The International Plant Protection Convention (1997)

PREAMBLE

The contracting parties,

- *recognizing* the necessity for international cooperation in controlling pests of plants and plant products and in preventing their international spread, and especially their introduction into endangered areas;
- *recognizing* that phytosanitary measures should be technically justified, transparent and should not be applied in such a way as to constitute either a means of arbitrary or unjustified discrimination or a disguised restriction, particularly on international trade;
- *desiring* to ensure close coordination of measures directed to these ends;
- *desiring* to provide a framework for the development and application of harmonized phytosanitary measures and the elaboration of international standards to that effect;
- *taking into account* internationally approved principles governing the protection of plant, human and animal health, and the environment; and
- *noting* the agreements concluded as a result of the Uruguay Round of Multilateral Trade Negotiations, including the Agreement on the Application of Sanitary and Phytosanitary Measures;

have agreed as follows:

ARTICLE I

Purpose and responsibility

1. With the purpose of securing common and effective action to prevent the spread and introduction of pests of plants and plant products, and to promote appropriate measures for their control, the contracting parties undertake to adopt the legislative, technical and administrative measures specified in this Convention and in supplementary agreements pursuant to Article XVI.

2. Each contracting party shall assume responsibility, without prejudice to obligations assumed under other international agreements, for the fulfilment within its territories of all requirements under this Convention.

3. The division of responsibilities for the fulfilment of the requirements of this Convention between member organizations of FAO and their member states that are contracting parties shall be in accordance with their respective competencies.

4. Where appropriate, the provisions of this Convention may be deemed by contracting parties to extend, in addition to plants and plant products, to storage places, packaging, conveyances, containers, soil and any other organism, object or material capable of harbouring or spreading plant pests, particularly where international transportation is involved.

ARTICLE II

Use of terms

1. For the purpose of this Convention, the following terms shall have the meanings hereunder assigned to them:

"Area of low pest prevalence" - an area, whether all of a country, part of a country, or all or parts of several countries, as identified by the competent authorities, in which a specific pest occurs at low levels and which is subject to effective surveillance, control or eradication measures;

"Commission" - the Commission on Phytosanitary Measures established under Article XI;

"Endangered area" - an area where ecological factors favour the establishment of a pest whose presence in the area will result in economically important loss;

"Establishment" - perpetuation, for the foreseeable future, of a pest within an area after entry;

"Harmonized phytosanitary measures" - phytosanitary measures established by contracting parties based on international standards;

"International standards" - international standards established in accordance with Article X, paragraphs 1 and 2;

"Introduction" - the entry of a pest resulting in its establishment;

"Pest" - any species, strain or biotype of plant, animal or pathogenic agent injurious to plants or plant products;

"Pest risk analysis" - the process of evaluating biological or other scientific and economic evidence to determine whether a pest should be regulated and the strength of any phytosanitary measures to be taken against it;

"Phytosanitary measure" - any legislation, regulation or official procedure having the purpose to prevent the introduction and/or spread of pests;

"Plant products" - unmanufactured material of plant origin (including grain) and those manufactured products that, by their nature or that of their processing, may create a risk for the introduction and spread of pests;

"Plants" - living plants and parts thereof, including seeds and germplasm;

"Quarantine pest" - a pest of potential economic importance to the area endangered thereby and not yet present there, or present but not widely distributed and being officially controlled;

"Regional standards" - standards established by a regional plant protection organization for the guidance of the members of that organization;

"Regulated article" - any plant, plant product, storage place, packaging, conveyance, container, soil and any other organism, object or material capable of harbouring or spreading pests, deemed to require phytosanitary measures, particularly where international transportation is involved;

"Regulated non-quarantine pest" - a non-quarantine pest whose presence in plants for planting affects the intended use of those plants with an economically unacceptable impact and which is therefore regulated within the territory of the importing contracting party;

"Regulated pest" - a quarantine pest or a regulated non-quarantine pest;

"Secretary" - Secretary of the Commission appointed pursuant to Article XII;

"Technically justified" - justified on the basis of conclusions reached by using an appropriate pest risk analysis or, where applicable, another comparable examination and evaluation of available scientific information.

2. The definitions set forth in this Article, being limited to the application of this Convention, shall not be deemed to affect definitions established under domestic laws or regulations of contracting parties.

ARTICLE III

Relationship with other international agreements

Nothing in this Convention shall affect the rights and obligations of the contracting parties under relevant international agreements.

ARTICLE IV

General provisions relating to the organizational arrangements for national plant protection

1. Each contracting party shall make provision, to the best of its ability, for an official national plant protection organization with the main responsibilities set out in this Article.

2. The responsibilities of an official national plant protection organization shall include the following:

(a) the issuance of certificates relating to the phytosanitary regulations of the importing contracting party for consignments of plants, plant products and other regulated articles;

(b) the surveillance of growing plants, including both areas under cultivation (*inter alia* fields, plantations, nurseries, gardens, greenhouses and laboratories) and wild flora, and of plants and plant products in storage or in transportation, particularly with the object of reporting the occurrence, outbreak and spread of pests, and of controlling those pests, including the reporting referred to under Article VIII paragraph 1(a);

(c) the inspection of consignments of plants and plant products moving in international traffic and, where appropriate, the inspection of other regulated articles, particularly with the object of preventing the introduction and/or spread of pests;

(d) the disinfestation or disinfection of consignments of plants, plant products and other regulated articles moving in international traffic, to meet phytosanitary requirements;

(e) the protection of endangered areas and the designation, maintenance and surveillance of pest free areas and areas of low pest prevalence;

(f) the conduct of pest risk analyses;

(g) to ensure through appropriate procedures that the phytosanitary security of consignments after certification regarding composition, substitution and reinfestation is maintained prior to export; and

(h) training and development of staff.

3. Each contracting party shall make provision, to the best of its ability, for the following:

(a) the distribution of information within the territory of the contracting party regarding regulated pests and the means of their prevention and control;

(b) research and investigation in the field of plant protection;

(c) the issuance of phytosanitary regulations; and

(d) the performance of such other functions as may be required for the implementation of this Convention.

4. Each contracting party shall submit a description of its official national plant protection organization and of changes in such organization to the Secretary. A contracting party shall provide a description of its organizational arrangements for plant protection to another contracting party, upon request.

ARTICLE V

Phytosanitary certification

1. Each contracting party shall make arrangements for phytosanitary certification, with the objective of ensuring that exported plants, plant products and other regulated articles and consignments thereof are in conformity with the certifying statement to be made pursuant to paragraph 2(b) of this Article.

2. Each contracting party shall make arrangements for the issuance of phytosanitary certificates in conformity with the following provisions:

(a) Inspection and other related activities leading to issuance of phytosanitary certificates shall be carried out only by or under the authority of the official national plant protection organization. The issuance of phytosanitary certificates shall be carried out by public officers who are technically qualified and duly authorized by the official national plant protection organization to act on its behalf and under its control with such knowledge and information available to those officers that the authorities of importing contracting parties may accept the phytosanitary certificates with confidence as dependable documents.

(b) Phytosanitary certificates, or their electronic equivalent where accepted by the importing contracting party concerned, shall be as worded in the models set out in the Annex to this Convention. These certificates should be completed and issued taking into account relevant international standards.

(c) Uncertified alterations or erasures shall invalidate the certificates.

3. Each contracting party undertakes not to require consignments of plants or plant products or other regulated articles imported into its territories to be accompanied by phytosanitary certificates inconsistent with the models set out in the Annex to this Convention. Any requirements for additional declarations shall be limited to those technically justified.

ARTICLE VI

Regulated pests

1. Contracting parties may require phytosanitary measures for quarantine pests and regulated non-quarantine pests, provided that such measures are:

(a) no more stringent than measures applied to the same pests, if present within the territory of the importing contracting party; and

(b) limited to what is necessary to protect plant health and/or safeguard the intended use and can be technically justified by the contracting party concerned.

2. Contracting parties shall not require phytosanitary measures for non-regulated pests.

ARTICLE VII

Requirements in relation to imports

1. With the aim of preventing the introduction and/or spread of regulated pests into their territories, contracting parties shall have sovereign authority to regulate, in accordance with applicable international agreements, the entry of plants and plant products and other regulated articles and, to this end, may:

(a) prescribe and adopt phytosanitary measures concerning the importation of plants, plant products and other regulated articles, including, for example, inspection, prohibition on importation, and treatment;

(b) refuse entry or detain, or require treatment, destruction or removal from the territory of the contracting party, of plants, plant products and other regulated articles or consignments thereof that do not comply with the phytosanitary measures prescribed or adopted under subparagraph (a);

(c) prohibit or restrict the movement of regulated pests into their territories;

(d) prohibit or restrict the movement of biological control agents and other organisms of phytosanitary concern claimed to be beneficial into their territories.

2. In order to minimize interference with international trade, each contracting party, in exercising its authority under paragraph 1 of this Article, undertakes to act in conformity with the following:

(a) Contracting parties shall not, under their phytosanitary legislation, take any of the measures specified in paragraph 1 of this Article unless such measures are made necessary by phytosanitary considerations and are technically justified.

(b) Contracting parties shall, immediately upon their adoption, publish and transmit phytosanitary requirements, restrictions and prohibitions to any contracting party or parties that they believe may be directly affected by such measures.

(c) Contracting parties shall, on request, make available to any contracting party the rationale for phytosanitary requirements, restrictions and prohibitions.

(d) If a contracting party requires consignments of particular plants or plant products to be imported only through specified points of entry, such points shall be so selected as not to

unnecessarily impede international trade. The contracting party shall publish a list of such points of entry and communicate it to the Secretary, any regional plant protection organization of which the contracting party is a member, all contracting parties which the contracting party believes to be directly affected, and other contracting parties upon request. Such restrictions on points of entry shall not be made unless the plants, plant products or other regulated articles concerned are required to be accompanied by phytosanitary certificates or to be submitted to inspection or treatment.

(e) Any inspection or other phytosanitary procedure required by the plant protection organization of a contracting party for a consignment of plants, plant products or other regulated articles offered for importation, shall take place as promptly as possible with due regard to their perishability.

(f) Importing contracting parties shall, as soon as possible, inform the exporting contracting party concerned or, where appropriate, the re-exporting contracting party concerned, of significant instances of non-compliance with phytosanitary certification. The exporting contracting party or, where appropriate, the re-exporting contracting party concerned, should investigate and, on request, report the result of its investigation to the importing contracting party concerned.

(g) Contracting parties shall institute only phytosanitary measures that are technically justified, consistent with the pest risk involved and represent the least restrictive measures available, and result in the minimum impediment to the international movement of people, commodities and conveyances.

(h) Contracting parties shall, as conditions change, and as new facts become available, ensure that phytosanitary measures are promptly modified or removed if found to be unnecessary.

(i) Contracting parties shall, to the best of their ability, establish and update lists of regulated pests, using scientific names, and make such lists available to the Secretary, to regional plant protection organizations of which they are members and, on request, to other contracting parties.

(j) Contracting parties shall, to the best of their ability, conduct surveillance for pests and develop and maintain adequate information on pest status in order to support categorization of pests, and for the development of appropriate phytosanitary measures. This information shall be made available to contracting parties, on request.

3. A contracting party may apply measures specified in this Article to pests which may not be capable of establishment in its territories but, if they gained entry, cause economic damage. Measures taken against these pests must be technically justified.

4. Contracting parties may apply measures specified in this Article to consignments in transit through their territories only where such measures are technically justified and necessary to prevent the introduction and/or spread of pests.

5. Nothing in this Article shall prevent importing contracting parties from making special provision, subject to adequate safeguards, for the importation, for the purpose of scientific research, education, or other specific use, of plants and plant products and other regulated articles, and of plant pests.

6. Nothing in this Article shall prevent any contracting party from taking appropriate emergency action on the detection of a pest posing a potential threat to its territories or the report of such a detection. Any such action shall be evaluated as soon as possible to ensure that its continuance is justified. The action taken shall be immediately reported to contracting parties concerned, the Secretary, and any regional plant protection organization of which the contracting party is a member.

ARTICLE VIII

International cooperation

1. The contracting parties shall cooperate with one another to the fullest practicable extent in achieving the aims of this Convention, and shall in particular:

(a) cooperate in the exchange of information on plant pests, particularly the reporting of the occurrence, outbreak or spread of pests that may be of immediate or potential danger, in accordance with such procedures as may be established by the Commission;

(b) participate, in so far as is practicable, in any special campaigns for combatting pests that may seriously threaten crop production and need international action to meet the emergencies; and

(c) cooperate, to the extent practicable, in providing technical and biological information necessary for pest risk analysis.

2. Each contracting party shall designate a contact point for the exchange of information connected with the implementation of this Convention.

ARTICLE IX

Regional plant protection organizations

1. The contracting parties undertake to cooperate with one another in establishing regional plant protection organizations in appropriate areas.

2. The regional plant protection organizations shall function as the coordinating bodies in the areas covered, shall participate in various activities to achieve the objectives of this Convention and, where appropriate, shall gather and disseminate information.

3. The regional plant protection organizations shall cooperate with the Secretary in achieving the objectives of the Convention and, where appropriate, cooperate with the Secretary and the Commission in developing international standards.

4. The Secretary will convene regular Technical Consultations of representatives of regional plant protection organizations to:

(a) promote the development and use of relevant international standards for phytosanitary measures; and

(b) encourage inter-regional cooperation in promoting harmonized phytosanitary measures for controlling pests and in preventing their spread and/or introduction.

ARTICLE X

Standards

1. The contracting parties agree to cooperate in the development of international standards in accordance with the procedures adopted by the Commission.

2. International standards shall be adopted by the Commission.

3. Regional standards should be consistent with the principles of this Convention; such standards may be deposited with the Commission for consideration as candidates for international standards for phytosanitary measures if more broadly applicable.

4. Contracting parties should take into account, as appropriate, international standards when undertaking activities related to this Convention.

ARTICLE XI

Commission on Phytosanitary Measures

1. Contracting parties agree to establish the Commission on Phytosanitary Measures within the framework of the Food and Agriculture Organization of the United Nations (FAO).

2. The functions of the Commission shall be to promote the full implementation of the objectives of the Convention and, in particular, to:

(a) review the state of plant protection in the world and the need for action to control the international spread of pests and their introduction into endangered areas;

(b) establish and keep under review the necessary institutional arrangements and procedures for the development and adoption of international standards, and to adopt international standards;

(c) establish rules and procedures for the resolution of disputes in accordance with Article XIII;

(d) establish such subsidiary bodies of the Commission as may be necessary for the proper implementation of its functions;

(e) adopt guidelines regarding the recognition of regional plant protection organizations;

(f) establish cooperation with other relevant international organizations on matters covered by this Convention;

(g) adopt such recommendations for the implementation of the Convention as necessary; and

(h) perform such other functions as may be necessary to the fulfilment of the objectives of this Convention.

3. Membership in the Commission shall be open to all contracting parties.

4. Each contracting party may be represented at sessions of the Commission by a single delegate who may be accompanied by an alternate, and by experts and advisers. Alternates, experts and advisers may take part in the proceedings of the Commission but may not vote, except in the case of an alternate who is duly authorized to substitute for the delegate.

5. The contracting parties shall make every effort to reach agreement on all matters by consensus. If all efforts to reach consensus have been exhausted and no agreement is reached, the decision shall, as a last resort, be taken by a two-thirds majority of the contracting parties present and voting.

6. A member organization of FAO that is a contracting party and the member states of that member organization that are contracting parties shall exercise their membership rights and fulfil their membership obligations in accordance, *mutatis mutandis*, with the Constitution and General Rules of FAO.

7. The Commission may adopt and amend, as required, its own Rules of Procedure, which shall not be inconsistent with this Convention or with the Constitution of FAO.

8. The Chairperson of the Commission shall convene an annual regular session of the Commission.

9. Special sessions of the Commission shall be convened by the Chairperson of the Commission at the request of at least one-third of its members.

10. The Commission shall elect its Chairperson and no more than two Vice-Chairpersons, each of whom shall serve for a term of two years.

ARTICLE XII

Secretariat

1. The Secretary of the Commission shall be appointed by the Director-General of FAO.

2. The Secretary shall be assisted by such secretariat staff as may be required.

3. The Secretary shall be responsible for implementing the policies and activities of the Commission and carrying out such other functions as may be assigned to the Secretary by this Convention and shall report thereon to the Commission.

4. The Secretary shall disseminate:

(a) international standards to all contracting parties within sixty days of adoption;

(b) to all contracting parties, lists of points of entry under Article VII paragraph 2(d) communicated by contracting parties;

(c) lists of regulated pests whose entry is prohibited or referred to in Article VII paragraph 2(i) to all contracting parties and regional plant protection organizations;

(d) information received from contracting parties on phytosanitary requirements, restrictions and prohibitions referred to in Article VII paragraph 2(b), and descriptions of official national plant protection organizations referred to in Article IV paragraph 4.

5. The Secretary shall provide translations in the official languages of FAO of documentation for meetings of the Commission and international standards.

6. The Secretary shall cooperate with regional plant protection organizations in achieving the aims of the Convention.

ARTICLE XIII

Settlement of disputes

1. If there is any dispute regarding the interpretation or application of this Convention, or if a contracting party considers that any action by another contracting party is in conflict with the obligations of the latter under Articles V and VII of this Convention, especially regarding the basis of prohibiting or restricting the imports of plants, plant products or other regulated articles coming from its territories, the contracting parties concerned shall consult among themselves as soon as possible with a view to resolving the dispute.

2. If the dispute cannot be resolved by the means referred to in paragraph 1, the contracting party or parties concerned may request the Director-General of FAO to appoint a committee of experts to consider the question in dispute, in accordance with rules and procedures that may be established by the Commission.

3. This Committee shall include representatives designated by each contracting party concerned. The Committee shall consider the question in dispute, taking into account all documents and other forms of evidence submitted by the contracting parties concerned. The Committee shall prepare a report on the technical aspects of the dispute for the purpose of seeking its resolution. The preparation of the report and its approval shall be according to rules and procedures established by the Commission, and it shall be transmitted by the Director-General to the contracting parties concerned. The report may also be submitted, upon its request, to the competent body of the international organization responsible for resolving trade disputes.

4. The contracting parties agree that the recommendations of such a committee, while not binding in character, will become the basis for renewed consideration by the contracting parties concerned of the matter out of which the disagreement arose.

5. The contracting parties concerned shall share the expenses of the experts.

6. The provisions of this Article shall be complementary to and not in derogation of the dispute settlement procedures provided for in other international agreements dealing with trade matters.

ARTICLE XIV

Substitution of prior agreements

This Convention shall terminate and replace, between contracting parties, the International Convention respecting measures to be taken against the *Phylloxera vastatrix* of 3 November 1881, the additional Convention signed at Berne on 15 April 1889 and the International Convention for the Protection of Plants signed at Rome on 16 April 1929.

ARTICLE XV

Territorial application

1. Any contracting party may at the time of ratification or adherence or at any time thereafter communicate to the Director-General of FAO a declaration that this Convention shall extend to all or any of the territories for the international relations of which it is responsible, and this Convention shall be applicable to all territories specified in the declaration as from the thirtieth day after the receipt of the declaration by the Director-General.

2. Any contracting party which has communicated to the Director-General of FAO a declaration in accordance with paragraph 1 of this Article may at any time communicate a further declaration modifying the scope of any former declaration or terminating the application of the provisions of the present Convention in respect of any territory. Such modification or termination shall take effect as from the thirtieth day after the receipt of the declaration by the Director-General.

3. The Director-General of FAO shall inform all contracting parties of any declaration received under this Article.

ARTICLE XVI

Supplementary agreements

1. The contracting parties may, for the purpose of meeting special problems of plant protection which need particular attention or action, enter into supplementary agreements. Such agreements may be applicable to specific regions, to specific pests, to specific plants and plant products, to specific methods of international transportation of plants and plant products, or otherwise supplement the provisions of this Convention.

2. Any such supplementary agreements shall come into force for each contracting party concerned after acceptance in accordance with the provisions of the supplementary agreements concerned.

3. Supplementary agreements shall promote the intent of this Convention and shall conform to the principles and provisions of this Convention, as well as to the principles of transparency, non-discrimination and the avoidance of disguised restrictions, particularly on international trade.

ARTICLE XVII

Ratification and adherence

1. This Convention shall be open for signature by all states until 1 May 1952 and shall be ratified at the earliest possible date. The instruments of ratification shall be deposited with the Director-General of FAO, who shall give notice of the date of deposit to each of the signatory states.

2. As soon as this Convention has come into force in accordance with Article XXII it shall be open for adherence by non-signatory states and member organizations of FAO. Adherence shall be effected by the deposit of an instrument of adherence with the Director-General of FAO, who shall notify all contracting parties.

3. When a member organization of FAO becomes a contracting party to this Convention, the member organization shall, in accordance with the provisions of Article II paragraph 7 of the FAO Constitution, as appropriate, notify at the time of its adherence such modifications or clarifications to its declaration of competence submitted under Article II paragraph 5 of the FAO Constitution as may be necessary in light of its acceptance of this Convention. Any contracting party to this Convention may,

at any time, request a member organization of FAO that is a contracting party to this Convention to provide information as to which, as between the member organization and its member states, is responsible for the implementation of any particular matter covered by this Convention. The member organization shall provide this information within a reasonable time.

ARTICLE XVIII

Non-contracting parties

The contracting parties shall encourage any state or member organization of FAO, not a party to this Convention, to accept this Convention, and shall encourage any non-contracting party to apply phytosanitary measures consistent with the provisions of this Convention and any international standards adopted hereunder.

ARTICLE XIX

Languages

1. The authentic languages of this Convention shall be all official languages of FAO.

2. Nothing in this Convention shall be construed as requiring contracting parties to provide and to publish documents or to provide copies of them other than in the language(s) of the contracting party, except as stated in paragraph 3 below.

3. The following documents shall be in at least one of the official languages of FAO:
   (a) information provided according to Article IV paragraph 4;
   (b) cover notes giving bibliographical data on documents transmitted according to Article VII paragraph 2(b);
   (c) information provided according to Article VII paragraph 2(b), (d), (i) and (j);
   (d) notes giving bibliographical data and a short summary of relevant documents on information provided according to Article VIII paragraph 1(a);
   (e) requests for information from contact points as well as replies to such requests, but not including any attached documents;
   (f) any document made available by contracting parties for meetings of the Commission.

ARTICLE XX

Technical assistance

The contracting parties agree to promote the provision of technical assistance to contracting parties, especially those that are developing contracting parties, either bilaterally or through the appropriate international organizations, with the objective of facilitating the implementation of this Convention.

ARTICLE XXI

Amendment

1. Any proposal by a contracting party for the amendment of this Convention shall be communicated to the Director-General of FAO.

2. Any proposed amendment of this Convention received by the Director-General of FAO from a contracting party shall be presented to a regular or special session of the Commission for approval and, if the amendment involves important technical changes or imposes additional obligations on the contracting parties, it shall be considered by an advisory committee of specialists convened by FAO prior to the Commission.

3. Notice of any proposed amendment of this Convention, other than amendments to the Annex, shall be transmitted to the contracting parties by the Director-General of FAO not later than the time when the agenda of the session of the Commission at which the matter is to be considered is dispatched.

4. Any such proposed amendment of this Convention shall require the approval of the Commission and shall come into force as from the thirtieth day after acceptance by two-thirds of the contracting parties. For the purpose of this Article, an instrument deposited by a member organization of FAO shall not be counted as additional to those deposited by member states of such an organization.

5. Amendments involving new obligations for contracting parties, however, shall come into force in respect of each contracting party only on acceptance by it and as from the thirtieth day after such acceptance. The instruments of acceptance of amendments involving new obligations shall be deposited with the Director-General of FAO, who shall inform all contracting parties of the receipt of acceptance and the entry into force of amendments.

6. Proposals for amendments to the model phytosanitary certificates set out in the Annex to this Convention shall be sent to the Secretary and shall be considered for approval by the Commission. Approved amendments to the model phytosanitary certificates set out in the Annex to this Convention shall become effective ninety days after their notification to the contracting parties by the Secretary.

7. For a period of not more than twelve months from an amendment to the model phytosanitary certificates set out in the Annex to this Convention becoming effective, the previous version of the phytosanitary certificates shall also be legally valid for the purpose of this Convention.

ARTICLE XXII

Entry into force

As soon as this Convention has been ratified by three signatory states it shall come into force among them. It shall come into force for each state or member organization of FAO ratifying or adhering thereafter from the date of deposit of its instrument of ratification or adherence.

ARTICLE XXIII

Denunciation

1. Any contracting party may at any time give notice of denunciation of this Convention by notification addressed to the Director-General of FAO. The Director-General shall at once inform all contracting parties.

2. Denunciation shall take effect one year from the date of receipt of the notification by the Director-General of FAO.

ANNEX

Model Phytosanitary Certificate

No. _____

Plant Protection Organization of _____

TO: Plant Protection Organization(s) of _____

I. Description of Consignment

Name and address of exporter: _____

Declared name and address of consignee: _____

Number and description of packages: _____

Distinguishing marks: _____

Place of origin: _____

Declared means of conveyance: _____

Declared point of entry: _____

Name of produce and quantity declared: _____

Botanical name of plants: _____

This is to certify that the plants, plant products or other regulated articles described herein have been inspected and/or tested according to appropriate official procedures and are considered to be free from the quarantine pests specified by the importing contracting party and to conform with the current phytosanitary requirements of the importing contracting party, including those for regulated non-quarantine pests.

They are deemed to be practically free from other pests.*

II. Additional Declaration

[Enter text here]

III. Disinfestation and/or Disinfection Treatment

Date _____ Treatment _____ Chemical (active ingredient) _____

Duration and temperature _____

Concentration _____

Additional information _____

_____

Place of issue _____

(Stamp of Organization) Name of authorized officer _____

Date _____ _____

(Signature)

_____

No financial liability with respect to this certificate shall attach to _____ (name of Plant Protection Organization) or to any of its officers or representatives.*

* Optional clause

Model Phytosanitary Certificate for Re-Export

No. _____

Plant Protection Organization of _____ (contracting party of re-export)

TO: Plant Protection Organization(s) of _____ (contracting party(ies) of import)

I. Description of Consignment

Name and address of exporter: _____

Declared name and address of consignee: _____

Number and description of packages: _____

Distinguishing marks: _____

Place of origin: _____

Declared means of conveyance: _____

Declared point of entry: _____

Name of produce and quantity declared: _____

Botanical name of plants: _____

This is to certify that the plants, plant products or other regulated articles described above _____ were imported into (contracting party of re-export) _____ from _____ (contracting party of origin) covered by Phytosanitary Certificate No. _____, *original ☐ certified true copy ☐ of which is attached to this certificate; that they are packed ☐ repacked ☐ in original ☐ *new ☐ containers, that based on the original phytosanitary certificate ☐ and additional inspection ☐, they are considered to conform with the current phytosanitary requirements of the importing contracting party, and that during storage in _____ (contracting party of re-export), the consignment has not been subjected to the risk of infestation or infection.

* Insert tick in appropriate ☐ boxes

II. Additional Declaration

III. Disinfestation and/or Disinfection Treatment

Date _____ Treatment _____ Chemical (active ingredient) _____

Duration and temperature _____

Concentration _____

Additional information _____

_____

Place of issue _____

(Stamp of Organization) Name of authorized officer _____

Date _____ _____

(Signature)

_____

No financial liability with respect to this certificate shall attach to _____ (name of Plant Protection Organization) or to any of its officers or representatives.*

* Optional clause

IPPC (1997)

ANNEX 2: Rules of procedure of the Commission on Phytosanitary Measures[200]

Rule I: Membership

Membership of the Commission on Phytosanitary Measures (hereafter referred to as "the Commission") consists of all contracting parties to the International Plant Protection Convention (hereafter referred to as "the IPPC").

Before the opening of each session of the Commission, each contracting party (hereafter referred to as "member of the Commission") shall communicate to the Director-General (hereafter referred to as "the Director-General") of the Food and Agriculture Organization of the United Nations (hereafter referred to as "the Organization") the names of all the persons (the head of the delegation, as well as alternates, experts and advisers) appointed by such member of the Commission to represent it during the session mentioned above. For the purpose of these Rules, the term "delegates" means the persons so appointed.

Rule II: Officers

The Commission shall elect a Chairperson, a Vice-Chairperson and other persons from among the delegates to form a Commission Bureau of seven persons, so that each FAO region is represented. The Commission shall elect a rapporteur for each regular session from among the delegates. No delegate shall be eligible without the concurrence of the respective head of delegation. The Commission Bureau shall be elected under the FAO Rules and Regulations at the end of a regular session and shall hold office for a term of two years. Subject to the agreement of the region concerned, an individual member shall be eligible for re-election for another two consecutive terms. In exceptional circumstances, an FAO region may submit a request to the CPM for an exception to allow a member to serve an additional term(s). The Chairperson, or in the absence of the Chairperson, a Vice-Chairperson, shall preside at all meetings of the Commission and shall exercise such other functions as may be required to facilitate the work of the Commission. A Vice-Chairperson acting as a Chairperson shall have the same powers and duties as the Chairperson. The purpose of the Commission Bureau is to provide guidance to the Commission on the strategic direction, financial and operational management of its activities in cooperation with others as approved by the Commission. *Detailed Rules of Procedure for the Bureau are attached in Annex I which shall constitute an integral part of these Rules of Procedure.*

The Chairperson shall declare the opening and closing of each plenary meeting of the session. He/she shall direct the discussions in plenary meetings, and at such meetings ensure observance of these Rules, accord the right to speak, put questions and announce decisions. He/she shall rule on points of order and, subject to these Rules, shall have complete control over the proceedings at any meetings. He/she may, in the course of the discussion of an item, propose to the Commission the limitation of the time to be allowed to speakers, the number of times each delegation may speak on any question, the closure of the list of speakers, the suspension or adjournment of the meeting, or the adjournment or closure of the debate on the item under discussion.

The Chairperson, or a Vice-Chairperson acting as Chairperson, shall not vote but may appoint an alternate, associate or adviser from his/her delegation to vote in his/her place (see Annex I for the ROP of the CPM Bureau and Annex II for the Guidelines for Rotation of the CPM Chairperson and Vice-Chairperson and Nomination of Bureau).

The Chairperson, in the exercise of his/her functions, remains under the authority of the Commission.

[200] The ICPM-1(1998) provisionally adopted the Rules of procedure (ROPs) of the Commission, ICPM-2 (1999) revised and adopted the ROPs; CPM-7 (2012) adopted the revised Standard setting procedure; CPM-8 (2013) revised and adopted the CPM ROPs *for the CPM Bureau and rule VII for observers*.

Rule III: Secretary

The Secretary of the IPPC shall be responsible for implementing the activities assigned to the Secretariat in accordance with the policies of the Commission. The Secretary shall report to the Commission on the activities assigned to the Secretariat.

Rule IV: Sessions

The Commission shall hold one regular session each year. Special sessions shall be held as considered necessary by the Commission or at the written request of at least one third of the members of the Commission.

Sessions of the Commission shall be convened by the Chairperson of the Commission, after consultation with the Director-General.

Notice of the date and place of each session of the Commission shall be communicated to all the members of the Commission at least two months before the session.

Each member of the Commission shall have one representative, head of delegation, who may be accompanied by one or more alternates, experts and advisers. An alternate, expert or adviser shall not have the right to vote except when substituting for the head of delegation.

Meetings of the Commission shall be held in public unless the Commission decides otherwise.

A majority of the members of the Commission shall constitute a quorum.

Rule V: Agenda and documents

The Director-General, in consultation with the Chairperson of the Commission, shall prepare a provisional agenda.

The first item on the provisional agenda shall be the adoption of the Agenda.

Any member of the Commission may request the Director-General to include specific items in the Provisional Agenda.

The Provisional Agenda shall normally be circulated by the Director-General at least two months in advance of the session to all members of the Commission and to all observers invited to attend the session.

Any member of the Commission, and the Director-General, may, after the despatch of the Provisional Agenda, propose the inclusion of specific items on the Agenda with respect to matters of an urgent nature. These items should be placed on a supplementary list, which, if time permits before the opening of the session, shall be dispatched by the Director-General to all members of the Commission, failing which the supplementary list shall be communicated to the Chairperson for submission to the Commission.

After the Agenda has been adopted, the Commission may, by a two-thirds majority of the members of the Commission present and voting, amend the Agenda by the deletion, addition or modification of any item. No matter referred to the Commission by the Conference or Council of the Organization may be omitted from the Agenda.

Documents to be submitted to the Commission at any session shall be furnished by the Director-General to all the members of the Commission and to observers invited to the session, at the time the Agenda is dispatched or as soon as possible thereafter.

Formal proposals relating to items on the Agenda and amendments thereto introduced during a session of the Commission shall be made in writing and handed to the Chairperson, who shall arrange for copies to be circulated to all delegates.

Rule VI: Voting procedures

Subject to the provisions of Article II of the Constitution of the Organization, each member of the Commission shall have one vote.

The Commission shall make every effort to reach agreement on all matters by consensus. If all efforts to reach consensus have been exhausted and no agreement has been reached, the decision shall, as the last resort be taken by a two-thirds majority of the members of the Commission present and voting.

For the purpose of these Rules, the phrase "members present and voting" means members of the Commission casting an affirmative or negative vote. Members who abstain from voting or cast a defective ballot are considered as not voting.

Upon the request of any member of the Commission, voting shall be by roll-call vote, in which case the vote of each member shall be recorded.

When the Commission so decides, voting shall be by secret ballot.

The provisions of Rule XII of the General Rules of the Organization shall apply *mutatis mutandis* to all matters not specifically dealt with under this Rule.

Rule VII: Observers

Regional plant protection organizations (RPPOs) recognized by the Commission under article IX of the IPPC shall participate only as observers in all meetings of the Commission.

Countries can participate as observers in meetings of the Commission as follows:

- Any Country that is not a contracting party but is a Member of FAO, as well as the United Nations, any of its specialized agencies and the International Atomic Energy Agency, may upon request communicated to the IPPC Secretary and endorsement by the CPM Bureau, participate as an observer in meetings of the Commission.
- Any Country that is not a Member of FAO or an IPPC contracting party, but is a Member of the United Nations, any of its specialized agencies or the International Atomic Energy Agency may, upon request communicated to the FAO Director General, and subject to the relevant provisions of the Basic Texts of the Organization, be invited to participate as an observer in meetings of the Commission.
- Any Country that is not a Member of FAO or a member of the United Nations, any of its specialized agencies or the International Atomic Energy Agency shall not be permitted to send observers to meetings of the Commission.

International organizations, whether intergovernmental or non-governmental, may, subject to the relevant provisions of the Basic Texts of the Organization participate as observers in meetings of the Commission. Relations with the concerned organization shall be dealt with by the Director-General, FAO, taking into account guidance given by the Commission.

i. Intergovernmental organizations (IGOs):

- IGOs should meet the following criteria: it should have been set up by an intergovernmental convention (a convention to which the parties are States); the governing body of the organization should be composed of members designated by governments; the income of the organization should be made up mainly, if not exclusively, of contributions from governments.
- IGOs that have established formal relations with FAO may, upon request communicated to the IPPC Secretary and endorsement by the Bureau, participate as observers in meetings of the Commission.
- IGOs that have not established formal relations with FAO may, upon request communicated to the IPPC Secretary, participate as observers in meetings of the Commission if, in the judgment of

the IPPC Secretary and the CPM Bureau, there are concrete reasons for allowing their participation which would forward the work of the Commission.

ii. International non-governmental organizations (INGOs):

- INGOs that have been granted formal status by FAO may participate in meetings of the Commission.
- INGOs that have not been granted formal status by FAO may, upon request communicated to the IPPC Secretary, participate as observers in meetings of the Commission if, in the judgment of the IPPC Secretary and the CPM Bureau, there are concrete reasons for allowing their participation which would forward the work of the Commission.
- INGOs that have not been granted formal status by FAO shall be examined in light of the following criteria: they should be international in structure and scope of activity, and representative of the specialized field of interest in which they operate; they should be concerned with matters covering a part or all of the Commission's field of activity; they should have aims and purposes in conformity with the IPPC; they should have a permanent directing body and Secretariat, authorized representatives and systematic procedures and machinery for communicating with its membership in various countries; and they should have been established at least three years before they request participating in the meetings of the Commission.

Observers to CPM meetings may: i) participate in the discussions, subject to the approval of the Chairperson of the Commission and without the right to vote; ii) receive the documents other than those of a restricted nature, and iii) circulate, without abridgement, the views of the organization or country which they represent on particular items of the agenda.

CPM Bureau meetings are not open to observers.

Each CPM Subsidiary Body shall establish its own rules on observers which shall conform to these Rules and the relevant provisions of the FAO Basic Texts.

Rule VIII: Records and reports

At each session, the Commission shall approve a report embodying its views, recommendations and conclusions, including, when requested, a statement of minority views. Such other records, for its own use, as the Commission may on occasion decide, shall also be maintained.

The report of the Commission shall be transmitted at the close of each session to the Director-General who shall circulate it to all members of the Commission and observers that were represented at the session, for their information, and, upon request, to other Members and Associate Members of the Organization.

Recommendations of the Commission having policy, programme or financial implications for the Organization shall be brought by the Director-General to the attention of the Conference and/or of the Council of the Organization for appropriate action.

Subject to the provisions of the preceding paragraph the Director-General may request members of the Commission to supply the Commission with information on action taken on the basis of recommendations made by the Commission.

Rule IX: Subsidiary bodies

The Commission may establish such subsidiary bodies as it deems necessary for the accomplishment of its functions.

The terms of reference and procedures of the subsidiary bodies shall be determined by the Commission.

Membership in these subsidiary bodies shall consist of selected members of the Commission, or of individuals appointed in their personal capacity as respectively determined by the Commission.

The representatives of subsidiary bodies shall be specialists in the fields of activity of the respective subsidiary bodies.

The establishment of subsidiary bodies shall be subject to the availability of the necessary funds in the relevant chapter of the approved budget of the Organization. Before taking any decision involving expenditure in connection with the establishment of subsidiary bodies, the Commission shall have before it a report from the Director-General on the administrative and financial implications thereof.

Each subsidiary body shall elect its own officers, unless appointed by the Commission.

Rule X: Development and adoption of International Standards

The procedures for the development and adoption of international standards are set out in the Annex III to these Rules and shall form an integral part thereof.

Notwithstanding the provisions of Rule VI.2, where consensus is not reached on a proposal for the adoption of a standard which has been introduced before the Commission for the first time, the proposed standard shall be referred back to the appropriate body of the Commission, together with its comments thereon, for further consideration.

Rule XI: Expenses

Expenses incurred by delegates when attending sessions of the Commission or of its subsidiary bodies, as well as the expenses incurred by observers at sessions, shall be borne by their respective governments or organizations. Developing countries delegates may request financial assistance to attend sessions of the Commission or its subsidiary bodies.

Any financial operations of the Commission and its subsidiary bodies shall be governed by the appropriate provisions of the Financial Regulations of the Organization.

Rule XII: Languages

Pursuant to Rule XLVII of the General Rules of the Organization, the languages of the Commission and its subsidiary bodies shall be the languages of the Organization.

Any representative using a language other than one of the languages of the Commission shall provide for interpretation into one of the languages of the Commission.

Rule XIII: Amendment and suspension of the rules

Amendment of or additions to these Rules may be adopted by a two-thirds majority of the members of the Commission present and voting, provided that not less than 24 hours' notice of the proposal for the amendment or the addition has been given.

Any of the above Rules of the Commission, other than Rule I.1, Rule IV.2 and 6, Rule V.6, Rule VI.1 and 2, Rule VII, Rule VIII.3 and 4, Rule IX.2 and 5, Rule XI, Rule XIII.1 and Rule XIV may be suspended by a two thirds majority of the members of the Commission present and voting, provided that not less than 24 hours' notice of the proposal for suspension has been given. Such notice may be waived if no representative of the members of the Commission objects.

Rule XIV: Entry into force

These Rules and any amendments or additions thereto shall come into force upon approval by the Director-General of the Organization.

ANNEX I

RULES OF PROCEDURE FOR THE BUREAU OF THE COMMISSION ON PHYTOSANITARY MEASURES[201]

Rule 1. Purpose of the Bureau

The purpose of the Bureau is to provide guidance to the CPM on the strategic direction, financial and operational management of its activities in cooperation with others as approved by CPM.

As appropriate, members of the Bureau will also assist the CPM in its administrative and operational duties. The Bureau provides continuity in the management of the CPM and, through representation of all FAO regions, facilitates the expression of all viewpoints on strategic, administrative and procedural matters on an ongoing basis.

Rule 2. Functions of the Bureau

The Bureau shall have the following functions:

(1) Ensuring the efficient implementation of the CPM work programme in coordination with the Secretariat.

(2) Making recommendations to improve CPM management and delivery of strategic directions, financial and operational activities.

(3) Assisting with the administrative, and operational duties of the CPM in areas such as:

- delivery of the IPPC Strategic Framework
- financial planning and management

(4) Providing advice, guidance and strategic direction to subsidiary and other bodies in between plenary sessions of the CPM, in accordance with CPM decisions.

(5) Addressing specific issues assigned to it by the CPM.

Rule 3. Membership

The members of the Bureau shall be elected by the CPM as per Rule II of the Rules of Procedure of the CPM.

FAO regions select their candidates for membership of the Bureau on the basis of the procedures agreed within each region.

Rule 4. Replacement of members

FAO regions shall nominate replacements for members of the Bureau and submit them to the CPM for election. Replacements should be eligible to be members as set forth in these Rules. Each FAO region shall select a maximum of two replacements for CPM election. If a member of the Bureau, other than the Chairperson, becomes unavailable for a meeting their respective replacement may substitute them during that specific meeting. If a member of the Bureau becomes unavailable on a long term basis, for unavoidable reasons, resigns or no longer meets the qualifications required for being member of the Bureau, the replacement will substitute the member of the Bureau for the remainder of the term of office for which he/she has been elected. The replacement should be from the same region as the member of the Bureau being replaced.

[201] CPM-8 (2013) and adopted the Annex I of the CPM ROPs.

Rule 5. Chairperson

The Chairperson of the CPM shall be the Chairperson of the Bureau.

Rule 6. Meetings

Bureau meetings shall be convened by the IPPC Secretary. Four members of the Bureau shall constitute a quorum. The Bureau shall meet at least twice a year. The IPPC Secretary may also convene meetings of the Bureau as necessary to enable any outstanding specific activities to be undertaken before the following CPM session or scheduled Bureau meeting.

In the absence of the Chairperson, the Vice Chairperson will chair the meeting.

Meetings of the Bureau shall be closed unless otherwise determined by the Bureau. The Bureau may invite experts to provide advice or information on specific matters. The IPPC Secretary or a representative designated by him/her shall attend the meetings of the Bureau.

Rule 7. Decision making

Decisions will be made by consensus. Situations where consensus cannot be reached shall be described in the meeting reports detailing all positions maintained and presented to the CPM for guidance and appropriate action.

Rule 8. Documentation, records and reports

The Secretariat is responsible for coordinating the activities of the Bureau and providing administrative, technical and editorial support, as required by the Bureau.

The Secretary, in consultation with the Chairperson of the CPM, shall prepare a provisional agenda for the Bureau meetings and make it available to members of the Bureau preferably four weeks prior to the beginning of each meeting.

The Secretariat shall make meeting documents available to Bureau members as soon as possible after the preparation of the provisional agenda.

The Secretariat shall keep the records of the Bureau and minutes of the Bureau meetings. A report should be available within one month after each meeting and posted on the International Phytosanitary Portal.

The Chairperson shall submit a yearly report to the CPM on the activities of the Bureau.

Rule 9. Language

The business of the Bureau shall be conducted in English, unless otherwise decided by the Bureau.

Rule 10. Amendment

These Rules and amendments or additions thereto shall be adopted by two thirds majority of the members of the Commission present and voting, provided that not less than 24 hours' notice of the proposal for the amendment or addition has been given.

ANNEX II

GUIDELINES FOR ROTATION OF THE CPM CHAIRPERSON AND VICE-CHAIRPERSON AND NOMINATION OF BUREAU[202]

Rotation of the CPM Chairperson and Vice-Chairperson

Chairperson of the Commission on Phytosanitary Measures will be rotated among the seven (7) FAO regions in the following sequence: Asia, Southwest Pacific, Latin America and the Caribbean, Africa, North America, Near East and Europe, followed by a grouping that would include only the four (4) largest regions (those regions with the largest number of countries): Asia, Latin America and the Caribbean, Europe, Africa, and then followed by the first seven listed above, and so forth. The rotation scheme would thus be: 7-4-7-4.

Following the rotation scheme identified above, the region which is next in line for occupying the position of the Chairperson will propose a candidate for the Vice-Chairperson. In the following term the region occupying the position of the Vice-Chairperson will propose a candidate for the position of the Chairperson.

Selection and Nomination of Bureau members

When selecting candidates, regions should take due account of the need for competences relevant to participation in the Bureau. Candidates should be selected on the basis of individual qualifications and experience relevant to the mandate of the CPM and where appropriate on the basis of their potential to take on the chairing of the CPM.

In putting forward candidates for the Bureau, regions should consider the individual's experience and expertise on technical and operational IPPC issues and their capacity to contribute to CPM and Bureau activities and functions. In particular, consideration should be given to the individual's:

- Knowledge of the IPPC purpose, objectives, strategies, functions, roles and operational and internal processes.
- Understanding of IPPC related international organizations, for example: WTO-SPS and its related standard setting bodies, CBD, etc.
- Experience in financial management.
- Knowledge of national phytosanitary systems, regulations and practices.
- Experience in guiding or directing the operations of an organization or governance body to accomplish its mission, goals and objectives.
- Communication and collaboration skills including the ability to clarify, summarize and seek consensus.
- Experience in chairing and facilitating large fora, including supporting decision-making, negotiation and enabling compromise in such fora.
- Ability to act in an impartial and objective way.
- Ability to be flexible and resilient.

The following considerations would be desirable:

- The role of Chairperson is a substantial one and a candidate should be prepared to devote a significant amount of time and energy to fulfil the responsibilities attached to this role. The employer should provide the time and where appropriate, the necessary resources to enable the

[202] These guidelines were adopted by CPM-8 (2013) as Attachment II, but for logic sequencing the IPPC Secretariat renumbered them Annex II.

Chairperson to fulfil the responsibilities attached to this role. Vice-Chairpersons should have the same competence and expertise, as the Chairperson, but may have less experience.

- The candidates for Bureau membership (including Chairperson and Vice-Chairpersons) should be employed by an NPPO.
- Candidates for Chairperson should have served for at least one term (two years) in the Bureau.
- It may be desirable that the Chairperson has served previously as a Vice-Chairperson.

These guidelines are not intended to set precedents for other FAO or Article XIV bodies and are neither intended to establish nor recognise the FAO regions mentioned therein and their rotational weightings.

ANNEX III

IPPC STANDARD SETTING PROCEDURE

The text of Annex III is reported under 2.1 of this document and hence deleted here.

ANNEX 3: Adopted International Standards for Phytosanitary Measures (ISPMs)

(as of October 2025)

The below list of adopted ISPMs is available in all FAO languages at https://www.ippc.int/en/publications/626/.

Adopted ISPM texts are available as pdf documents at: https://www.ippc.int/core-activities/standards-setting/ispms.

Legend:

* Standard under revision

** New supplement, annex or appendix under development

ISPM 1	*Phytosanitary principles for the protection of plants and the application of phytosanitary measures in international trade* (adopted in 1993, revised in 2006)
ISPM 2*	*Framework for pest risk analysis* (adopted in 1995, revised in 2007)
ISPM 3	*Guidelines for the export, shipment, import and release of biological control agents and other beneficial organisms* (adopted in 1995, revised in 2005)
ISPM 4	*Requirements for the establishment of pest free areas* (adopted in 1995, revised in 2024)
ISPM 5	*Glossary of phytosanitary terms* (updated as needed) - Supplement 1: Guidelines on the interpretation and application of the concept of "official control" and "not widely distributed" (2012) - Supplement 2: Guidelines on the understanding of "potential economic importance" and related terms including reference to environmental considerations (2003) - Appendix 1: Terminology of the Convention on Biological Diversity in relation to the Glossary of phytosanitary terms (2009)
ISPM 6	*Surveillance* (adopted in 1997, revised in 2018)
ISPM 7	*Phytosanitary certification system* (adopted in 1997, revised in 2011)
ISPM 8	*Determination of pest status in an area* (adopted in 1998, revised in 2021)
ISPM 9	*Guidelines for pest eradication programmes* (adopted in 1998)
ISPM 10	*Requirements for the establishment of pest free places of production and pest free production sites* (adopted in 1999)
ISPM 11*	*Pest risk analysis for quarantine pests* (adopted in 2001, revised in 2004 and 2013)
ISPM 12*	*Phytosanitary certificates* (adopted in 2001, revised in 2011 and 2022) - Appendix 1: Electronic phytosanitary certificates, information on standard XML schemas and exchange mechanisms (2014)
ISPM 13	*Guidelines for the notification of non-compliance and emergency action* (adopted in 2001)
ISPM 14	*The use of integrated measures in a systems approach for pest risk management* (adopted in 2002)
ISPM 15	*Regulation of wood packaging material in international trade* (adopted in 2002, revised in 2009, Annex 1 and 2 revised in 2013 and in 2018)
ISPM 16	*Regulated non-quarantine pests: concept and application* (adopted in 2002)

ISPM 17 *Pest reporting* (adopted in 2002)

ISPM 18 *Requirements for the use of irradiation as a phytosanitary measure* (adopted in 2003, revised in 2023)

ISPM 19 *Guidelines on lists of regulated pests* (adopted in 2003)

ISPM 20 *Guidelines for a phytosanitary import regulatory system* (adopted in 2004, revised in 2017 and 2023)
- Annex 1: Arrangements for verification of compliance of consignments by the importing country in the exporting country (2017)
- Annex 2: Use of specific import authorizations (2023)

ISPM 21 *Pest risk analysis for regulated non-quarantine pests* (adopted in 2004)

ISPM 22 *Requirements for the establishment of areas of low pest prevalence* (adopted in 2005)

ISPM 23* ** *Guidelines for inspection* (adopted in 2005)

ISPM 24 *Guidelines for the determination and recognition of equivalence of phytosanitary measures* (adopted in 2005)

ISPM 25 *Consignments in transit* (adopted in 2006)

ISPM 26* *Establishment of pest free areas for fruit flies (Tephritidae)* (adopted in 2006, revised in 2014 and 2015)
- Appendix 1: Fruit fly trapping (2011)
- Annex 2: Control measures for an outbreak within a fruit fly-pest free area (2014)
- Annex 3: Phytosanitary procedures for fruit fly management (2015)

ISPM 27 *Diagnostic protocols for regulated pests* (adopted in 2006)
- DP 1: Diagnostic protocol for *Thrips palmi* Karny (2010)
- DP 2: Diagnostic protocol for *Plum pox virus* (2012, revised in 2018)
- *DP 3: Diagnostic protocol for *Trogoderma granarium* Everts (2012)
- DP 4: Diagnostic protocol for *Tilletia indica* Mitra (2014)
- *DP 5: Diagnostic protocol for *Phyllosticta citricarpa* (McAlpine) Aa on fruit (2014)
- DP 6: Diagnostic protocol for *Xanthomonas citri* subsp. *citri* (2014)
- DP 7: Diagnostic protocol for *Potato spindle tuber viroid* (2015)
- DP 8: Diagnostic protocol for *Ditylenchus dipsaci* and *Ditylenchus destructor* (2015)
- DP 9: Diagnostic protocol for Genus *Anastrepha* (2015, revised in 2024)
- DP 10: Diagnostic protocol for *Bursaphelenchus xylophilus* (2016)
- DP 11: Diagnostic protocol for *Xiphinema americanum sensu lato* (2016)
- DP 12: Diagnostic protocol for Phytoplasmas (2016)
- DP 13: Diagnostic protocol for *Erwinia amylovora* (2016)
- DP 14: Diagnostic protocol for *Xanthomonas fragariae* (2016)
- DP 15: Diagnostic protocol for *Citrus tristeza virus* (2016)
- DP 16: Diagnostic protocol for Genus *Liriomyza* (2016)
- DP 17: Diagnostic protocol for *Aphelenchoides besseyi, A. fragariae* and *A. ritzemabosi* (2016)
- DP 18: Diagnostic protocol for *Anguina* spp. (2017)
- DP 19: Diagnostic protocol for *Sorghum halepense* (2017)
- DP 20: Diagnostic protocol for *Dendroctonus ponderosae* (2017)
- DP 21: Diagnostic protocol for '*Candidatus* Liberibacter solanacearum' (2017)
- DP 22: Diagnostic protocol for *Fusarium circinatum* (2017)

- DP 23: Diagnostic protocol for *Phytophthora ramorum* (2017)
- DP 24: Diagnostic protocol for *Tomato spotted wilt virus, Impatiens necrotic spot virus* and *Watermelon silver mottle virus* (2017)
- DP 25: Diagnostic protocol for *Xylella fastidiosa* (2018, revised in 2024)
- DP 26: Diagnostic protocol for *Austropuccinia psidii* (2018)
- DP 27: Diagnostic protocol for *Ips* spp. (2018, revised in 2024)
- DP 28: Diagnostic protocol for *Conotrachelus nenuphar* (2018)
- DP 29: Diagnostic protocol for *Bactrocera dorsalis* (2019)
- DP 30: Diagnostic protocol for *Striga* spp. (2021)
- DP 31: Diagnostic protocol for '*Candidatus* Liberibacter' spp. on *Citrus* spp. (2022)
- DP 32: Diagnostic protocol for Genus *Ceratitis* (2023)
- DP 33: Diagnostic protocol for *Mononychellus tanajoa* (2023)
- DP 34: Diagnostic protocol for *Heterobasidion annosum sensu lato* (2025)
- DP 35: Diagnostic protocol for *Meloidogyne mali* (2025)
- DP 36: Diagnostic protocol for Genus *Pospiviroid* (2025)

ISPM 28 *Phytosanitary treatments for regulated pests* (adopted in 2007)

- PT 1: ***Revoked***. Irradiation treatment for *Anastrepha ludens* (2009. Covered by PT 39)
- PT 2: ***Revoked***. Irradiation treatment for *Anastrepha obliqua* (2009. Covered by PT 39)
- PT 3: ***Revoked***. Irradiation treatment for *Anastrepha serpentina* (2009. Covered by PT 39)
- PT 4: Irradiation treatment for *Bactrocera jarvisi* (2009)
- PT 5: Irradiation treatment for *Bactrocera tryoni* (2009)
- PT 6: Irradiation treatment for *Cydia pomonella* (2009)
- PT 7: Irradiation treatment for fruit flies of the family Tephritidae (generic) (2009)
- PT 8: Irradiation treatment for *Rhagoletis pomonella* (2009)
- PT 9: Irradiation treatment for *Conotrachelus nenuphar* (2010)
- PT 10: Irradiation treatment for *Grapholita molesta* (2010)
- PT 11: Irradiation treatment for *Grapholita molesta* under hypoxia (2010)
- PT 12: Irradiation treatment for *Cylas formicarius elegantulus* (2011)
- PT 13: Irradiation treatment for *Euscepes postfasciatus* (2011)
- PT 14: Irradiation treatment for *Ceratitis capitata* (2011)
- PT 15: Vapour heat treatment for *Bactrocera cucurbitae* on *Cucumis melo* var. *reticulatus* (2014)
- PT 16: Cold treatment for *Bactrocera tryoni* on *Citrus sinensis* (2015)
- PT 17: Cold treatment for *Bactrocera tryoni* on *Citrus reticulata x C. sinensis* (2015)
- PT 18: Cold treatment for *Bactrocera tryoni* on *Citrus limon* (2015)
- PT 19: Irradiation treatment for *Dysmicoccus neobrevipes*, *Planococcus lilacinus* and *Planococcus minor* (2015)
- PT 20: Irradiation treatment for *Ostrinia nubilalis* (2016)
- PT 21: Vapour heat treatment for *Bactrocera melanotus* and *Bactrocera xanthodes* on *Carica papaya* (2016)
- PT 22: Sulphuryl fluoride fumigation treatment for insects in debarked wood (2017)
- PT 23: Sulphuryl fluoride fumigation treatment for nematodes and insects in debarked wood (2017)
- PT 24: Cold treatment for *Ceratitis capitata* on *Citrus sinensis* (2017)
- PT 25: Cold treatment for *Ceratitis capitata* on *Citrus reticulata x C. sinensis* (2017)

- PT 26: Cold treatment for *Ceratitis capitata* on *Citrus limon* (2017)
- PT 27: Cold treatment for *Ceratitis capitata* on *Citrus paradisi* (2017)
- PT 28: Cold treatment for *Ceratitis capitata* on *Citrus reticulata* (2017)
- PT 29: Cold treatment for *Ceratitis capitata* on *Citrus clementina* (2017)
- PT 30: Vapour heat treatment for *Ceratitis capitata* on *Mangifera indica* (2017)
- PT 31: Vapour heat treatment for *Bactrocera tryoni* on *Mangifera indica* (2017)
- PT 32: Vapour heat treatment for *Bactrocera dorsalis* on *Carica papaya* (2018)
- PT 33: Irradiation treatment for *Bactrocera dorsalis* (2021)
- PT 34: Cold treatment for *Ceratitis capitata* on *Prunus avium*, *Prunus salicina* and *Prunus persica* (2021)
- PT 35: Cold treatment for *Bactrocera tryoni* on *Prunus avium*, *Prunus salicina* and *Prunus persica* (2021)
- PT 36: Cold treatment for *Ceratitis capitata* on *Vitis vinifera* (2021)
- PT 37: Cold treatment for *Bactrocera tryoni* on *Vitis vinifera* (2021)
- PT 38: Irradiation treatment for *Carposina sasakii* (2021)
- PT 39: Irradiation treatment for the genus *Anastrepha* (2021)
- PT 40: Irradiation treatment for Tortricidae on fruits (2022)
- PT 41: Cold treatment for *Bactrocera zonata* on *Citrus sinensis* (2022)
- PT 42: Irradiation treatment for *Zeugodacus tau* (2022)
- PT 43: Irradiation treatment for *Sternochetus frigidus* (2022)
- PT 44: Vapour heat-modified atmosphere treatment for *Cydia pomonella* and *Grapholita molesta* on *Malus pumila* and *Prunus persica* (2022)
- PT 45: Irradiation treatment for *Pseudococcus jackbeardsleyi* (2023)
- PT 46: Cold treatment for *Thaumatotibia leucotreta* on *Citrus sinensis* (2024)

ISPM 29 *Recognition of pest free areas and areas of low pest prevalence* (adopted in 2007)

ISPM 30 ***Revoked***. *Establishment of areas of low pest prevalence for fruit flies* (*Tephritidae*) (adopted in 2008. Incorporated as an annex to ISPM 35 in 2018)

ISPM 31 *Methodologies for sampling of consignments* (adopted in 2008)

ISPM 32 *Categorization of commodities according to their pest risk* (adopted in 2009)

ISPM 33 *Pest free potato (*Solanum *spp.) micropropagative material and minitubers for international trade* (adopted in 2010)

ISPM 34 *Design and operation of post-entry quarantine stations for plants* (adopted in 2010)

ISPM 35 *Systems approach for pest risk management of fruit flies* (*Tephritidae*) (adopted in 2012)

ISPM 36 *Integrated measures for plants for planting* (adopted in 2012)

ISPM 37 *Determination of host status of fruit to fruit flies (Tephritidae)* (adopted in 2016, revised in 2024)
- Annex 1: Criteria for evaluation of available information for determining host status of fruit to fruit flies (Tephritidae) (2024)

ISPM 38** *International movement of seeds* (adopted in 2017)

ISPM 39 *International movement of wood* (adopted in 2017, revised in 2025)
- Annex 1: Use of systems approaches in managing the pest risk associated with the movement of wood (2025)

ISPM 40 *International movement of growing media in association with plants for planting* (adopted in 2017)

ISPM 41 *International movement of used vehicles, machinery and equipment* (adopted in 2017)

ISPM 42 *Requirements for the use of temperature treatments as phytosanitary measures* (adopted in 2018)

ISPM 43 *Requirements for the use of fumigation as a phytosanitary measure* (adopted in 2019)

ISPM 44 *Requirements for the use of modified atmosphere treatments as phytosanitary measures* (adopted in 2021)

ISPM 45 *Requirements for national plant protection organizations if authorizing entities to perform phytosanitary actions* (adopted in 2021)

ISPM 46 *Commodity-specific standards for phytosanitary measures* (adopted in 2022)
- CS 1: International movement of fresh *Mangifera indica* fruit (2025)

ISPM 47** *Audit in the phytosanitary context* (adopted in 2022)

ANNEX 4: Adopted CPM Recommendations

(as of July 2024)

Texts of adopted CPM Recommendations are available at: https://www.ippc.int/en/commission/cpm/cpm-recommendations/.

R-01 *LMOs, biosecurity and alien invasive species* (adopted in 2001; available in Ar En Es Fr Ru Zh)

R-02 *Threats to biodiversity posed by alien species: actions within the framework of the IPPC* (adopted in 2005; available in Ar En Es Fr Ru Zh)

R-03 *Replacement or reduction of the use of methyl bromide as a phytosanitary measure* (adopted in 2008; available in Ar En Es Fr Ru Zh)

R-04 *IPPC coverage of aquatic plants* (adopted in 2014; available in Ar En Es Fr Ru Zh)

R-05 *Internet trade (e-commerce) in plants and other regulated articles* (adopted in 2014; available in Ar En Es Fr Ru Zh)

R-06 *Minimizing the pest risk associated with the sea-container pathway* (available in Ar En Es Fr Ru Zh; adopted in 2024)

R-07 *The importance of pest diagnosis* (adopted in 2016; available in Ar En Es Fr Ru Zh)

R-08 *Preparing to use high-throughput sequencing (HTS) technologies as a diagnostic tool for phytosanitary purposes* (adopted in 2019; available in Ar En Es Fr Ru Zh)

R-09 *Safe provision of food and other humanitarian aid to prevent the introduction of plant pests during an emergency situation* (adopted in 2021; available in Ar En Es Fr Ru Zh)

R-10 *Reduction of the incidence of contaminating pests associated with regulated and unregulated articles to protect plant resources and facilitate safe trade* (adopted in 2022; available in Ar En Es Fr Ru Zh)

ANNEX 5: Explanatory documents

(as of October 2025)

Texts of explanatory documents are available on the IPP at: https://www.ippc.int/en/about/core-activities/standards-setting/explanatory-documents-international-standards-phytosanitary-measures/.

Table 6: Explanatory documents for ISPMs available on the IPP:

Title	Date	Author
ISPM 5 *Glossary of phytosanitary terms* (the Annotated Glossary)	2025	Beatriz Melcho
ISPM 15 *Regulation of wood packaging material in international trade*	2017	Shane Sela (lead author), Thomas Schroeder, Matsui Mamoru and Michael Ormsby
ISPM 17 *Pest reporting*	2005	Ian M. Smith
ISPM 18 *Guidelines for the use of irradiation as a phytosanitary measure*	2006	Guy J. Hallman
ISPM 20 *Guidelines for a phytosanitary import regulatory system*	2005	Alan Pemberton
ISPM 31 *Methodologies for sampling consignments*	2009	Carolyn F. Whyte

The purpose of explanatory documents on standards

Standards, by their nature, are often not easy to understand. This is not because the language is difficult or the writing is complex, but because a standard describes a particular set of activities often using specific terminology. The definition of a standard in ISPM 5 *(Glossary of phytosanitary terms)* is:

> **Standard:** Document established by consensus and approved by a recognized body that provides, for common and repeated use, rules, guidelines or characteristics for activities or their results, aimed at the achievement of the optimum degree of order in a given context.

The activities described in a standard are usually technical and aimed at a certain result, with the idea that all who carry out this series of activities are doing it the same way. Usually, this also means that those using the standard and achieving the result know precisely what they are doing. So the standard describes the set of activities but does not necessarily explain them.

This leaves those who are not experienced in the activities described in the standard without explanation of the content of the standard and of why certain activities are done the way they are. Some more detailed explanation may be given in some areas of the standards but generally this is limited. Therefore, the Interim Commission recommended that explanatory documents be made available to those who want them. These explanatory documents should be seen as tools to inform, clarify difficult issues and assist in the implementation of ISPMs. Such a document would explain what a particular standard applies to, how it is employed and would note any difficulties in using it.

Form of the explanatory document

Normally, a document of 5–10 pages would be sufficient to help with the understanding of the standard. In certain cases, longer documents may be necessary. Diagrams or flow charts may be of assistance in certain circumstances (for example to explain relationships with other ISPMs) as long as they do not introduce more questions than they answer. Presentations (PowerPoint or equivalent) may also be helpful for some officials in training roles.

The name of the author of the explanatory document will be at the head of the document.

Status and use of explanatory document

Readers of explanatory documents should recognize that these are written by one or several experts, and are not standards in themselves. The expert will be familiar with the standard and with international thinking on the standard. It should be noted that these explanatory documents are not official interpretations of the standard – they are the comments of the expert author(s) of the explanatory document only and cannot be quoted as part of a standard.

The explanatory documents will be reviewed by the Secretariat and other experts (including the SC), and should not contain contentious or incorrect statements.

The content of an explanatory document

The format of explanatory documents will differ depending on the subject of the standard concerned. Some might describe various aspects of the standard at length; others might concentrate on particular problem areas of the standard, while for standards with fewer difficulties the explanatory document might be quite short. Whatever the length of the explanatory document, it should cover a number of basic areas, which are explained in detail below:

- purpose and relationships with other standards
- general structure of the standard
- contents of the standard (the major headings should be listed)
- major points of concern
- references to additional explanatory material.

Purpose and relationships with other standards

This section describes the general purpose of the standard and how it interacts with other standards.

Some standards have a section on the purpose of the standard (for example ISPM 17 and ISPM 19) but this is generally quite short. It should clarify why the standard was written, what problems it was meant to try to solve and what benefits might accrue from its use.

An explanatory document can discuss how a standard fits into the framework of the IPPC and how it relates to other standards. For example, the relationship of the standards on pest risk analysis (PRA), or the link between ISPM 7 (*Export Certification system*) and ISPM 12 (*Phytosanitary certificates*) would be noted. This could also extend to links between a concept standard and specific standards (for example ISPM 43 (*Requirements for the use of temperature treatments as phytosanitary measures*) and related PTs).

General structure of the standard

The explanatory document focuses on the requirements section of the standard, not the introduction (Scope, References, Definitions and abbreviations, Outline of requirements) or administration section (e.g. Adoption).

The basic structure of the standard could be commented on and reasons for it explained if they are not immediately obvious: for example, the three main stages of pest risk analysis in ISPM 11, the respective responsibilities of those involved in the import and release of biological control agents in ISPM 3, or the technical issues listed in ISPM 18 (*Guidelines for the use of irradiation as a phytosanitary measure*) (e.g. treatment, dosimetry, approval of facilities, phytosanitary system integrity).

Contents of the standard

In this part of the explanatory document, the individual sections of the standard are discussed. Explanation should only be offered where necessary. For many standards background information can be of great assistance to those not familiar with the activities described in the standard. This is the particular benefit of the explanatory documents.

Major points of concern

For some standards it may be helpful to provide a background to the discussions that led to a particular point being expressed the way it is. There may have been contentious issues discussed at the EWG, at the SC meeting, in country consultations or at the Commission meeting. It is helpful for users of the standard to be aware of the difficulties that have arisen, been debated and hopefully solved. These are often the very points that new users of the standard have concerns about and where they need guidance. This section could also list points which have been shown to be of particular concern when starting to apply the standard (e.g. treatment schedules) or have been found to require systematic consideration when applying a standard (e.g. consideration of environmental consequences under economic consequences in the earlier versions of the PRA standards).

References to additional explanatory material

The references noted here are not those referred to in the standard. If available, they should provide additional background to the standard. This may be material on the way some countries and their agencies apply the standard or other discussion documents on the standard (generally information that will be useful in understanding the use of the standard).

ANNEX 6: Statement of commitment

STATEMENT OF COMMITMENT

[Report of CPM-2 (2007), Appendix 11, updated by IPPC Secretariat 2012-11 with guidance from CPM-7 (2012); updated by the IPPC Secretariat 2015-09[203] and 2020-10-02[204]; updated/revised/approved by CPM Bureau 2023-03-24]

Each nominee is requested to read the information listed and referenced in Appendix 1 for the relevant body, complete and sign this statement of commitment and submit it at the same time as the nomination and CV.

1. Body (CPM Bureau, Standards Committee, Technical Panel, Expert Working Groups, Implementation and Capacity Development Committee, IC Sub-groups, Working Groups, etc.): (Please indicate the relevant IPPC body you are being nominated for)

Expected meeting date and location, if relevant:

2. Nominee:
I have read the information listed and referenced in Appendix 1 in regards to my nomination and, if selected, agree to undertake the tasks and responsibilities involved and to commit the time required. I have also discussed with my employer the time commitment and financial resources[205] required (as appropriate) to carry out my duties if my nomination is approved for the body indicated under section 1 above.

I also agree that, if I request financial assistance to attend the relevant meeting and I am eligible to receive it, I have read and will adhere to the conditions laid out in Commitment of Funded Participants section of the *Criteria used for prioritizing participants to receive travel assistance to attend meetings organized by the IPPC Secretariat* (web link provided in footnote 1).

_____ _____
Signature Date

[203] 2015-09, in order to accommodate the situation where two different agencies contribute to the funding of an expert (one for salary and the other for travel), the IPPC Secretariat clarified that "financial resources" were intended for travel.

[204] 2020-10, in order to apply this form to all bodies and clarify 4. Authorization (financial resources).

[205] As recommended by the second session of the Interim Commission on Phytosanitary Measures (1999), whenever possible, those participating in IPPC activities voluntarily fund their travel and subsistence to attend meetings. Participants may request financial assistance, with the understanding that resources are limited and the priority for financial assistance is given to developing country participants (see below section *"4. Authorization (financial resources)*)". The statistical information in place at the time of signing this statement of comment will be applied for the duration of the term of membership in the relevant IPPC body.

3. Authorization (time):
I have read the information listed and referenced in Appendix 1 in regards to the above nominee who is employed in our organization. If this nominee is selected, I agree to ensure that the appropriate time will be allocated to allow the nominee to undertake the tasks and responsibilities involved and commit the time required. I have the authority from my organization to authorize this and understand the time commitment required to carry out these duties.

_____
Name, Title (Supervisor) (please print)

_____
Address (Supervisor)

_____
Phone (Supervisor)

_____
Email (Supervisor)

_____ _____
Signature (Supervisor) Date

4. Authorization (financial resources)[206]:

☐ **4.1** I have read the information listed and referenced in Appendix 1 in regards to the above nominee who is employed in our organization. If this nominee is selected, I agree to ensure that the appropriate financial resources will be allocated to allow the nominee to undertake the tasks and responsibilities involved. I have the authority from my organization to authorize this and understand the financial resources required (as appropriate, see footnote 1) to carry out these duties.

OR

☐ **4.2** I have read the Criteria used for prioritizing participants to receive travel assistance to attend meetings organized by the IPPC Secretariat and the nominee is eligible for travel assistance (airfare and/or DSA), considering that evidence of effort will be presented to the IPPC Secretariat, indicating that no other funds were available, and that the Secretariat should try to allocate appropriate funds, if available. I note that each year the IPPC Secretariat will apply the latest released World Bank Criteria

[206] The organization that employs an IPPC meeting participant is responsible for funding the travel and daily subsistence allowance for that person to attend. If the employer is unable to allocate sufficient funds, participants are first encouraged to seek assistance from sources other than the IPPC Secretariat. Where such demonstrated efforts to secure assistance have been unsuccessful, requests for assistance (i.e. travel and subsistence costs) from the IPPC Secretariat may be made. However, any support is subject to available funds. Requests for assistance will be assessed by the *Criteria used for prioritizing participants to receive travel assistance to attend meetings* organized by the IPPC Secretariat that is in place at the time this statement of commitment (https://www.ippc.int/publications/criteria-used-prioritizing-participants-receive-travel-assistance-attend-meetings).

used for prioritizing participants' assistance prior to arranging travel and based on availability of funds for meetings.

☐ Contact information same as per point 3 (if this is the case, still add signature and date below).

_____
Name, Title (please print)

_____
Address

_____
Phone

_____
Email

_____ _____
Signature Date

Contact details for nominee:
Name: (LAST NAME in upper case, given names in lower case)
E-mail:
Phone:
Fax:
Mailing address:

APPENDIX 1

General membership duties relevant to all bodies:
- allocate time, as appropriate, for travel to the meeting, attendance in the meeting including virtual meetings and follow-up activities, as necessary
- consult and liaise with relevant national and international experts, as appropriate
- read all meeting documents prior to the meeting and provide discussion papers and/or comments, if necessary
- maintain a functioning e-mail address and participate in any scheduled electronic discussions or conference calls occurring outside of the meeting dates and times, if necessary
- participate as an individual expert in a personal capacity
- participate in relevant meetings for the duration of the term and participate in virtual meetings, some of which may take place outside local daytime hours, in order to accommodate the participation from multiple time zones
- if unable to attend the meeting, provide written notification to the IPPC Secretariat well in advance and before travel arrangements have been made
- use web based tools as appropriate (Adobe Connect, Zoom, MS Teams, e-mail, Online Comment System, Skype, e-forums, e-decisions, Google Docs, etc.)
    - other specific details may be found in the IPPC Procedural Manual for Standard Setting (https://www.ippc.int/core-activities/ippc-standard-setting-procedure-manual) or Implementation and Capacity Development (https://www.ippc.int/en/publications/86954/).

Note: for authors of diagnostic protocols, there is generally no attendance to meetings.

CPM Bureau member duties, in addition to the above general duties;
- participate in relevant IPPC Regional Workshops
- participate for the entirety of the two-year term, as appropriate
- other duties as assigned.

Further details are provided in the following documents, found on the IPP:
- Rules of Procedures of the Commission on Phytosanitary Measures (including Rules of Procedure for the Bureau of the CPM)

Standards Committee (SC) member duties, in addition to the above general duties:
- attend two to three SC meetings annually at FAO headquarters
- participate in relevant IPPC Regional Workshops for reviewing draft ISPMs
- participate for the entirety of the three-year term, as appropriate
- other duties as assigned.

Further details are provided in the following documents, found in the IPPC Procedural Manual for Standard Setting:
- Terms of reference and Rules of procedure for the SC
- Guidelines on the duties of SC members
- Guidelines on the role and responsibilities of a steward of an ISPM

Stewards
Assistant Steward will assist the Steward and take over the duties of the Steward if needed. The Assistant Steward is not expected to attend the meetings.

If the member agrees to be a Steward they:

For an expert drafting group:
- agree to represent the SC throughout the standard setting process of the draft ISPM, including reviewing comments and revising draft standards in track changes at various stages in the standard setting process as described in the IPPC procedural manual. In some cases, this will involve reviewing a large number of comments and providing responses to these comments in a very short, pre-determined time period.
- agree to prepare relevant SC documents and attend SC meetings (possibly virtually) where the draft standard will be discussed

For a technical panel:
- agree to provide advice and guidance to the panel members and IPPC Secretariat on various issues related to the relevant panel, take decisions on behalf of the panel, represent the panel at all SC meetings and attend all annual technical panel meetings

Technical panel member duties, in addition to the above general duties:
- attend at least one annual meeting and multiple virtual meetings (not to exceed one per month)
- participate in the technical panel for the full duration of the five year term
- other duties as assigned

- Technical panel on diagnostic protocols (TPDP) members agree to ensure that the development of individual diagnostic protocols (DPs) assigned to them is progressing, communicate and exchange with lead authors and editorial teams as necessary, and intervene, as appropriate, to ensure DPs are developed and reviewed as agreed in the TPDP work plan. Provide updates to the IPPC Secretariat on each DP as requested.
- Technical panel on phytosanitary treatments (TPPT) members agree to ensure work is progressing in the development of the phytosanitary treatments (PTs) assigned to them and intervene, as appropriate, to ensure PTs are developed and reviewed as agreed in the TPPT work plan. As TPPT lead for each PT, provide written updates to the IPPC Secretariat on each PT prior to each virtual meeting (monthly to quarterly).

Further details are provided in the IPPC Procedural Manual and on the IPP (www.ippc.int):

- Terms of reference and Rules of procedure for TPs
- Guidelines for the composition and organization of expert working groups
- Guidelines for the operation of expert working groups.
- Specifications

Expert working group (or focus group) member duties, in addition to the above general duties:

- attend at least one meeting and, if required, multiple virtual meetings (not to exceed one per month)
- other duties as assigned.

Further details are provided in the IPPC Procedural Manual:

- Guidelines for the composition and organization of expert working groups
- Guidelines for the operation of expert working groups.

Diagnostic protocols lead authors and editorial team members duties, in addition to the above general duties:

- Lead authors and members of an editorial team agree to fully participate in the development of each DP and to respond to comments and revise the DP as appropriate until adoption.
- Lead authors agree to conduct regular consultations with the editorial team members via phone, e-mail or virtual tools, to ensure liaison with the discipline lead, and to inform the discipline lead of any change impacting the development of their protocols.

Further details are provided in ISPM 27 (*Diagnostic protocols for regulated pests*) and the IPPC Procedural Manual:

- Instructions to authors of diagnostic protocols.

Implementation and Capacity Development Committee (IC) member duties, in addition to the above general duties:

- participate in relevant IPPC Regional Workshops
- participate for the entirety of the three-year term, as appropriate
- other duties as assigned.

Further details are provided in the following documents, found in the IPPC Procedural Manual for Implementation and Capacity Development:

- Terms of reference and Rules of Procedure for the IC
- Duties and associated tasks of IC members
- Guidelines on the role of IC lead and assistant lead

IC Sub-group member duties, in addition to the above general duties:

- participate in the IC Sub-group for the full duration of the term as specified in the relevant rules
- other duties as assigned

Further details are provided in the IPPC Procedural Manual for Implementation and Capacity Development and on the IPP (www.ippc.int):

- Rules of Procedure for IC Sub-groups
- Terms of reference for each Sub-group
- Guidelines for the organization of IC Sub-groups and expert groups

Duties of members of Working Group (or focus group, expert group, etc.) related to Implementation and Capacity Development, in addition to the above general duties:

- participate in the development of the specified Guide or training material and to respond to comments and develop and revise the draft as appropriate until it is published.
- other duties as assigned.

Further details are provided in the IPPC Procedural Manual for Implementation and Capacity Development and on the IPP (www.ippc.int):

- Guidelines for the organization of IC Sub-groups and expert groups
- Process for the development of IPPC Implementation and Capacity Development Guides and Training Materials

ANNEX 7: Submission form for topics for Standards and Implementation

SUBMITTED BY COUNTRY or ORGANIZATION:	Click or tap here to enter text.
SUBMISSION NUMBER	XXXX-YYY (to be completed by IPPC Secretariat)

Submission form for topics for Standards and Implementation

Please use one form per topic.

(Updated by the IPPC Secretariat 2023-01-25)

1. General information

Title of Proposal	Click or tap here to enter text.
Proposed Material	☐ **Standard** / ☐ **Implementation resource**
Submission supported by: (Country or Organization)	Click or tap here to enter text.
Contact Person: (Contact information of an individual able to clarify issues relating to this submission):	Name: Click or tap here to enter text. Position and organization: Click or tap here to enter text. Mailing address: Click or tap here to enter text. Phone: Click or tap here to enter text. E-mail: Click or tap here to enter text. E-mail: Click or tap here to enter text.

Important information for filling out and submitting the form:

Please read through the Call for Topics webpage, where additional guidance on preparing topic submissions is available: https://www.ippc.int/en/core-activities/standards-and-implementation/call-for-topics-standards-and-implementation/.

The use of the electronic submission forms is strongly encouraged. **The electronic version of this form is available here:** https://forms.office.com/e/9JAeegjr0Z

Diagnostic protocols are submitted using a different form available at: https://forms.office.com/e/pp9bS2fJgX

Submissions must address the Criteria for Justification (see 5) and must include a draft specification (see 3.1) for proposed standards or a draft outline (see 3.2) for proposed implementation resources. These are required for evaluation and subsequent development of the material. Including a literature review providing technical information is recommended.

The completed submission form **AND** draft specification/draft outline should be submitted as Word document by the IPPC official contact point, via e-mail, to the IPPC Secretariat (ippc@fao.org) no later than 15 September 20xx (Subject line: "Call for topics XXXX").

2. Summary of proposal

Summary of justification for the proposal (provide an outline of the problem needing resolution in sufficient detail, **250 words max**) Click or tap here to enter text.
Expected outcome of standard/implementation resource (value of development of proposed material, 2 lines max) Click or tap here to enter text.
Contribution to filling gaps in the Framework for standards and implementation: (2 lines max) Click or tap here to enter text.

3. Type of proposed material:

For **Standards**, go to section 3.1

For **Implementation resources**, go to section 3.2

3.1 Standard (check only one option)

New ISPM or component to an existing ISPM:	**Revision/Amendment** of standard:
☐ ISPM	☐ ISPM Choose an item.
☐ Supplement to ISPM: Choose an item.	☐ Supplement to ISPM Choose an item.
☐ Annex to ISPM: Choose an item.	☐ Annex to ISPM Choose an item.
☐ Appendix to ISPM: Choose an item.	☐ Appendix to ISPM Choose an item.
☐ Glossary term (subject)	☐ Glossary term (subject)

NOTICE:

Draft specification:

Any proposal for a Standard must include a draft specification.

An annotated template for the draft specification for Standards is available on the IPP in English, French and Spanish: https://www.ippc.int/en/publications/93111/

3.2 Implementation resource (check only one option)	
New implementation resource: ☐ Guide (e.g. Manual) ☐ Training material (e.g. e-Learning. Please specify: Click or tap here to enter text.) ☐ Awareness material (e.g. short videos. Please specify: Click or tap here to enter text.) ☐ Other (Please specify: Click or tap here to enter text.)	**Revision** of existing implementation resource: ☐ Please specify: Click or tap here to enter text.
Convention articles, ISPMs or CPM Recommendations to be addressed by the proposed implementation resource ☐ Convention articles (Please specify: Click or tap here to enter text.) ☐ ISPM (Please specify: Click or tap here to enter text.) ☐ CPM Recommendation (Please specify: Click or tap here to enter text.)	
NOTICE **Draft outline:** Submissions for topics on implementation **must include** a draft outline of the proposed implementation resource. A form and instructions for the draft outline for implementation resources are available on the IPP (https://www.ippc.int/en/publications/90082/)	

4. Literature review[207]

(In this section submitters are recommended to provide a **summary of the topic** based on scientific and technical publications, including a referenced **list of literature reviewed**. This will help provide the scientific basis for the content of the standard/implementation resource to be used by the selected experts during the development of the standard/implementation resource)**. (max 500 words)** Click or tap here to enter text.

[207] As agreed by CPM-7 (2012) and CPM-11 (2016).

5. Criteria for justification and prioritization of proposed topics[208]:

5.1 Core criteria (information must be provided by submitter. It is expected that all submissions meet the following core criteria)

	Core Criteria	Information provided by Submitter
1	Contribution to the purpose of the IPPC as described in article I.1.	**(max 250 words)** Click or tap here to enter text.
2	Linkage to IPPC Strategic Objectives (SOs) and Organizational results demonstrated.	**(max 250 words)** Click or tap here to enter text.
3	Feasibility of implementation at the global level (consider ease of implementation, technical complexity, capacity of NPPO(s) to implement, relevance for more than one region).	**(max 250 words)** Click or tap here to enter text.
4	Clear identification of the problems that need to be resolved through the development of the standard or implementation resource.	**(max 250 words)** Click or tap here to enter text.
5	Availability of, or possibility to collect, information in support of the proposed standard or implementation resource (e.g. scientific, historical, technical information, experience).	**(max 250 words)** Click or tap here to enter text.

5.2 Supporting criteria (information may be provided by submitter, as appropriate):

Supporting criteria:	Information provided by submitter
Supporting criteria (Practical) 1) Is there a regional standard and/or implementation resource on the same topic already available and used by NPPOs, RPPOs or international organizations. 2) Availability of expertise needed to develop the proposed standard and/or implementation resource.	**(max 250 words)** Click or tap here to enter text.
Supporting criteria (Economic) 1) Estimated value of the plants protected. 2) Estimated value of trade including new trade opportunities affected by the proposed standard and/or implementation resource (e.g. volume of trade, value of trade, the percentage of Gross Domestic Product of this trade) if appropriate.	**(max 250 words)** Click or tap here to enter text.
Supporting criteria (Environmental) 1) Utility to reduce the potential negative environmental consequences of certain phytosanitary measures, for example reduction in global emissions for the protection of the ozone layer. 2) Utility in the management of non-indigenous species which are pests of plants (such as some invasive alien species).	**(max 250 words)** Click or tap here to enter text.

[208] As agreed by CPM-13 (2018).

Supporting criteria:	Information provided by submitter
3) Contribution to the protection of the environment, through the protection of wild flora, and their habitats and ecosystems, and of agricultural biodiversity.	
Supporting criteria (Strategic) 1) Extent of support for the proposed standard and/or implementation resource (e.g. one or more NPPOs or RPPOs have requested it, or one or more RPPOs have adopted a standard on the same topic). 2) Frequency with which the issue to be addressed, as identified in the submission emerges as a source of trade disruption (e.g. disputes or need for repeated bilateral discussions, number of times per year trade is disrupted). 3) Relevance and utility to developing countries. 4) Coverage (application to a wide range of countries/pests/commodities). 5) Complements other standards and/or implementation resources (e.g. potential for the standard to be used as part of a systems approach for one pest, complement treatments for other pests). 6) Conceptual standard and/or implementation resource to address fundamental concepts (e.g. treatment efficacy, inspection methodology). 7) Urgent need for the standard and/or implementation resource.	**(max 250 words)** Click or tap here to enter text.

6. Financial/in-kind resources

Commitment for financial/in-kind resources to support the development of the proposed standards or implementation resource (non-obligatory). Click or tap here to enter text.

ANNEX 8: Categories of IPPC related documents

(Noted by 2012-10 SPG, 2012-11 SC added a row for explanatory documents)

CATEGORY	OBJECTIVES	REFERENCES	AUTHORSHIP	OVERSIGHT	CLEARANCE PROCESS
IPPC GENERAL					
Strategies and work plans	This includes: • the IPPC Strategic Framework, which includes medium and long-term plans; • strategy documents for standard setting, communications, capacity building, dispute settlement and resource mobilization; • the programme of work and budget; • work plans.	FAO guidelines and CPM decisions	Drafted by CPM Bureau in conjunction with the IPPC Secretariat	IPPC Secretariat, incorporated into FAO programming	Adopted by the CPM
CPM Meeting documents & report	The Secretary shall be responsible for implementing the policies and activities of the Commission and carrying out such other functions as may be assigned to the Secretary by this Convention and shall report thereon to the Commission.	Article XII.3 of the IPPC	Relevant parties	IPPC Secretariat	The report is adopted by the CPM at the end of each session
CPM Recommendations	CPM Recommendations are decisions and agreements made by the CPM, according to existing procedures and are intended to promote or achieve the objectives of the IPPC[209]. These decisions and agreements may consist of directions, guidance, or calls to action to the contracting parties or the Secretariat or both, on matters that may not be appropriately or effectively expressed as an ISPM, on which phytosanitary measure(s) are based.	CPM-4 and 5	Relevant parties	IPPC Secretariat	A CPM Recommendation would be adopted when CPM agrees or decides to something that is relevant to the ongoing activities of all contracting parties in the area of plant protection, in accordance with and within the context of the IPPC

[209] As noted by CPM-4. See 2009 CPM-4 report, section 13.9, paragraph 193.3; CPM-10 in 2015 adopted a revised process for adopting CPM Recommendations. (See also section 3.3.6.)

CATEGORY	OBJECTIVES	REFERENCES	AUTHORSHIP	OVERSIGHT	CLEARANCE PROCESS
IPPC procedure manual	The Procedure manual provides the decisions, procedures and practices of the Commission on Phytosanitary Measures (CPM), its subsidiary bodies and other relevant drafting groups.	-	Compiled by the IPPC Secretariat	IPPC Secretariat	Text is taken from other documents that have previously been adopted by the CPM, ICPM, etc Developed by the Secretariat as procedure support material – noted by the CPM
IPPC procedure manual for standard setting	The Procedure manual provides the decisions, procedures and practices of the Commission on Phytosanitary Measures (CPM), its subsidiary bodies and other relevant drafting groups relevant to standard setting.	-	Compiled by the IPPC Secretariat	IPPC Secretariat	Text is taken from other documents that have previously been adopted by the CPM, ICPM, etc Developed by the Secretariat as procedure support material – noted by the SC
IPPC procedure manual for implementation and capacity development	The Procedure manual provides the decisions, procedures and practices of the Commission on Phytosanitary Measures (CPM), its subsidiary bodies and other relevant drafting groups relevant to implementation facilitation and capacity development.	-	Compiled by the IPPC Secretariat	IPPC Secretariat	Text is taken from other documents that have previously been adopted by the CPM, ICPM, etc Developed by the Secretariat as procedure support material – noted by the IC
Other meeting documents and reports	Various meetings of Working Groups, Technical Consultations, SPG, etc.	Various	As at present	IPPC Secretariat	As at present

Document categories

CATEGORY	OBJECTIVES	REFERENCES	AUTHORSHIP	OVERSIGHT	CLEARANCE PROCESS
STANDARD SETTING					
Specifications	Specifications serve as a terms of reference for the expert working group responsible for developing an ISPM, and provide guidance on the scope of the standard and on the tasks expected of the working group.		Standards Committee	IPPC Secretariat	Agreed by the Standards Committee
ISPMs	International Standards for Phytosanitary Measures (i.e. any legislation, regulation or official procedure having the purpose to prevent the introduction and/or spread of quarantine pests, or to limit the economic impact of regulated non-quarantine pests)	IPPC, SPS Agreement, CPM reports	Stewards and expert drafting groups who are nominated by contracting parties and selected by the Standards Committee	IPPC Secretariat in consultation with contracting parties	These international standards are developed & adopted by the Commission on Phytosanitary Measures (CPM)
Diagnostic Protocols	Annexes to ISPM 27 (*Diagnostic protocols for regulated pests*)	IPPC; TPDP, SC and CPM reports	TPDP and DP drafting groups selected by the TPDP	IPPC Secretariat in consultation with contracting parties	These international standards are adopted by the Standards Committee on behalf of the Commission on Phytosanitary Measures (CPM)
Phytosanitary treatments	Annexes to ISPM 28 (*Phytosanitary treatments for regulated pests*)	IPPC; TPPT, SC and CPM reports	TPPT	IPPC Secretariat in consultation with contracting parties	These international standards are adopted by the Commission on Phytosanitary Measures (CPM)
Explanatory documents	Explanatory documents on ISPMs explain what the standards apply to, and how they are employed and note any difficulties in using a particular standard. They should be seen as tools to inform, clarify difficult issues and assist in the implementation of ISPMs. Explanatory documents are reviewed by experts acting under the auspices of the Secretariat before publication; the draft documents are made available to the SC which may comment in the reviewing process. These documents would be published under the name of the author acting under the auspices of the Secretariat, with	ICPM-6 (2004) report	Experts acting under the auspices of the Secretariat	IPPC Secretariat	Cleared by the author under the auspices of the Secretariat

CATEGORY	OBJECTIVES	REFERENCES	AUTHORSHIP	OVERSIGHT	CLEARANCE PROCESS
	a clear disclaimer that these cannot be taken as an official legal interpretation of the IPPC or its related documents, and are produced for public information purposes only.				
COMMUNICATIONS					
Advocacy material	Improve the image and recognition of the IPPC and the importance of the trans-boundary movement of pests. Wide range of topics and media formats (e.g. electronic, print or video), some general but also a considerable amount developed with specific audiences in mind e.g. resource mobilization or education.	CPM, communications, resource mobilization, standard setting and capacity development strategies	Various	IPPC Secretariat and when appropriate Bureau	Agreed by the Secretariat and the Bureau consulted when appropriate
News	Improve the image and recognition of the IPPC and the importance of the trans-boundary movement of pests. News, press releases, case studies, project updates, donor news	Communications strategy	Various staff in the IPPC Secretariat and outside partners as appropriate	IPPC Secretariat	Approved by the relevant Secretariat team leaders who may wish to consult more widely depending on the subject and content
IMPLEMENTATION RESOURCES					
Good Phytosanitary Practices • **manuals** • **operational** • **etc.**	These are operational descriptions for the practical implementation of aspects of the Convention and its standards (e.g. CPM, information exchange, ISPMs e.g. inspection, national phytosanitary systems, treatments or legislation, and treatment manuals). Covers good practices for phytosanitary procedures and processes that should be applied in the field when completing the tasks of an NPPO, e.g. handbooks, Guide to the IPPC, Standards setting process, PRA, forestry, seed trade, wood packaging, the management of diagnostic systems, and participation in the IPPC.		Various – e.g. FAO, outside experts, established committees, Subsidiary Bodies, others as appropriate, IICA, FAO Forestry, Secretariat, NPPOs, RPPOs	IPPC Secretariat, but at times external parties with involvement of the IPPC Secretariat where appropriate	These will be reviewed and noted by the relevant subsidiary body(ies). Primary responsibility for coordination lies with the subsidiary bodies

CATEGORY	OBJECTIVES	REFERENCES	AUTHORSHIP	OVERSIGHT	CLEARANCE PROCESS
Training material	To provide baseline training material that can be used as is or developed for local needs and conditions. e.g. PRA training material, PowerPoint presentations on ISPMs and information exchange. The objective is to make a wide range of material in various formats available to improve access to training material and a more consistent international quality for all to use.		Selected experts in particular fields (e.g. the PRA steering committee, IICA, FAO Forestry, FAO, Secretariat, NPPOs, RPPOs) Derived from standards and other adopted texts	IPPC Secretariat	Support material developed by a wide range of people and organizations

ANNEX 9: IPPC Secretariat document processing calendar

(As of November 2024)

All dates are approximate except for those marked with: [1]dates related to the Standard setting procedure as adopted by the CPM-11 (2016); [2]deadlines decided by the CPM Bureau June 2011; [3]deadlines agreed by SC May 2017; [4]deadlines agreed by SC November 2024; [5]additional consultation period for DPs only agreed by SC May 2024.

CONSULTATION ON DRAFT SPECIFICATIONS	NOTES
Consultation for draft specification (60 days[1])	Starts 1 July
Secretariat sends compiled comments on draft specification to steward	3 days after consultation ends
Secretariat posts compiled comments on draft specification on public area of IPP	3 days after consultation ends
Steward reviews compiled comments, adjusts draft specification, and returns responses to comments to Secretariat	8 weeks before SC meeting
Secretariat posts draft specification with steward responses to comments on IPP in the SC restricted work area	2 weeks before SC meeting
Secretariat posts approved specification on IPP public area	2 weeks after last day of SC meeting (for En version, languages will follow as they are ready from translation)
MEMBER CONSULTATION ON DRAFT ISPMs	**NOTES**
Consultation begins (90 days[1])	Always 1 July
Consultation ends	Always 30 September
Steward presentations on draft ISPMs under consultation due for IPPC regional workshops	Always 15 June
Secretariat posts draft ISPMs in the public area of the IPP	Should be posted as soon as received from translation, no later than 1 July
Secretariat forwards compiled comments on draft ISPM to Steward or TP	3 days after first consultation ends
Secretariat makes compiled comments on draft ISPM publicly available	3 days after first consultation ends
IPPC regional workshops to review draft ISPM	Usually August to September
ISPM IN FIRST CONSULTATION	**NOTES**
Steward sends responses to comments and revised draft ISPM to the Secretariat	By 1 February
Secretariat posts draft ISPM and responses to comments for SC-7 in the restricted work area	By 1 March
ISPM IN SECOND CONSULTATION	**NOTES**
Steward sends responses to comments and revised draft ISPM to the Secretariat	15 October (2 weeks after second consultation ends)

Document calendar

Secretariat posts draft ISPM and responses to comments for SC November in the restricted work area	2 weeks before SC November
CPM	**NOTES**
Secretariat posts draft ISPMs on IPP in all FAO languages on IPP (for the CPM session)	Minimum 6 weeks before CPM[1] (normally by 15 January)
Secretariat posts CPM papers on IPP in all FAO languages on IPP (for the CPM session)	Minimum 4 weeks before CPM[2]
Contracting parties submit objections to Secretariat on the draft ISPMs	3 weeks before CPM[1]
Secretariat compiles objections, creates CPM paper, and posts it on IPP (for CPM session)	As soon as possible after the 3 week objection deadline
Secretariat publishes adopted ISPM on the public area of the IPP (Adopted standards page)	8 weeks after CPM[2]
SC MAY	**NOTES**
Drafting groups submit draft ISPMs to Secretariat	By 15 December
Secretariat posts draft ISPM in the IPP (available for NPPOs, RPPOs and international organizations if relevant)	By 1 March[2]
SC NOVEMBER	**NOTES**
Secretariat posts draft ISPMs and responses to comments for SC November in restricted work areas for SC	2 weeks before SC November
SC-7 MAY	**NOTES**
Secretariat posts draft ISPM and responses to comments in restricted work areas for SC	By 1 March[2]
DIAGNOSTIC PROTOCOLS SPECIFIC DEADLINES	**NOTES**
Consultation of draft DPs (90 days[1])	Starts 30 January[5] / 1 July
Secretariat posts draft DP and SC responses to consultation comments publicly on the IPP for DP notification period	Before start of DP notification period
DP notification period (45 days)	30 January to 15 March[4] / 1 July to 15 August[3]
GENERAL DEADLINES FOR ALL MEETINGS	**NOTES**
Invitations sent	12 weeks before meeting
Meeting documents/discussion papers submitted to Secretariat	5 weeks before meeting
Meeting documents posted in restricted work area	2 weeks before meeting[2]
Meeting documents posted for virtual meetings in restricted work area	1 week before meeting
Meeting reports posted	8 weeks after meeting
Meeting reports posted for virtual meetings	4 weeks after meeting

ANNEX 10: Submission Form for Information Materials for Commodity Standards

(Agreed by the Standards Committee in May 2022 and noted by the SC in May 2024)

Name of Country/RPPO:_____

Click here to find the IPPC Procedure Manual for Standard Setting on the IPP (www.ippc.int), where you can download this form.

Submission number (Secretariat Use Only):

Complete the following form, preferably in electronic format, and submit by e-mail to the IPPC Secretariat (ippc@fao.org).

Please use one form per commodity. An electronic version of this form is available on the International Phytosanitary Portal (IPP) at https://www.ippc.int/en/core-activities/standards-and-implementation/call-for-topics-standards-and-implementation/ and https://www.ippc.int/en/core-activities/standards-setting/member-consultation-draft-ispms/. Incomplete submissions will be returned. Please save the completed submission form with the following file name: COUNTRY or RPPO NAME –Title of commodity.doc, prior to submitting to the IPPC Secretariat via e-mail.

(Text in brackets given for explanatory purposes)

Name and description of Commodity	*(Provide enough detail to identify the commodity including the botanical name, authority, part of the plant for trade and its intended use)*

Scope of proposed commodity standard

☐ New Annex to ISPM 46

☐ A revision to a commodity standard annex (to include new pests and measures)

☐ An amendment to a commodity standard (to change a pest name or details of a measure)

☐ Information materials to support a commodity standard proposal

Submitted by: *(Name of national or regional plant protection organization)*

Contact: *(Contact information of an individual able to clarify issues relating to this submission, including pest risk assessment, phytosanitary measures, interception data related to measure etc.)*

Name: .....

Position and organization: .....

Mailing address: .....

.....

Phone:..... Fax:.....

E-mail:.....

List of regulated pests associated with the commodity for trade

(Only include pests that are regulated by your national and are associated with the plant or plant part traded (e.g. if only fruit is traded then do not include pests that are only associated with leaves)). Also consider including pests regulated by other countries, especially for those instances in which your NPPO export the commodity.)

Submission form for Commodity Standards

Pest type	Family	Species (include authority)	Link to pest risk assessment (if available)
e.g. fruit flies, moths, thrips, fungi, bacteria, fungi, virus			

List of Measures *(Please repeat this part for each measure proposed)*

Name and Description of Measure	
Name of Measure	*e.g. vapour heat treatment, cold treatment, irradiation, systems approach, PFA, PFPP, PFPS, pesticide*
Measure Type	*e.g. physical, chemical, biological*
Active Ingredient	*For chemical treatments only*
Schedule	*For treatments, the schedule should include details such as dose, concentration, time, temperature, relative humidity, where applicable, efficacy and confidence if known.* *For systems approaches, please include a description of the independent measures.*
Target Pest	*Include the regulated pests and life stages that the measure manages. Pests should be included in the list of pests (above)*
Reference	*Include any available reference or website link*

Other information *(Please complete as many fields as possible)*
Is there quantitative or qualitative evidence to indicate the measure is effective?
Where possible, provide published references or experimental data to support the measure.
Does experience from use in international trade indicate that the measure is effective?
Describe the countries that use the measure in trade (e.g. importing country – exporting country) and the number of years the measure has been used (e.g. year regulations were set). Include information on volume of trade and relevant pest interception data where possible.
Has the measure been successfully used to manage non-compliant consignments?
Describe the circumstances for use and how often the measure is used to manage non-compliant consignments.
Has the measure been successfully used to effectively manage pest risk domestically?
Describe the circumstances for domestic use of the measure e.g. the measure has been used extensively in relation to domestic movement of commodities; the measure has been used successfully in outbreak management and eradication programmes; information from domestic plant certification schemes indicates that the measure is effective; best management practices for the measure are available.
Has the measure been used successfully by the private sector or authorized entities?
Has the measure has been identified as an effective pest risk management option based on a PRA or comparable technical evaluation?
Please provide PRAs or comparable evaluations that identify the measure as being effective.
Is the measure, relevant to the pest, adopted in an ISPM or regional standard?
Please provide reference to ISPM or a regional standard

Send submissions to:

E-mail: ippc@fao.org
(preferred)

Mail: IPPC Secretariat (AGPP)
Food and Agriculture Organization of the UN
Viale delle Terme di Caracalla,
00153 Rome, Italy

Submission form for Commodity Standards

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Publication history

2016-2017 version:

- Included CPM-11 (2015) adopted Standard setting procedure and updated the Procedure manual throughout accordingly (e.g. deleted section on “editorial team”, modified “availability of standard setting documents”, included additional paragraph in the SC Rules of procedure, updated all figures relevant to the process, and edited all sections to ensure consistency in terminology with the new procedure. In this context, a number of paragraphs were moved for better flow, and black vs blue text was checked and corrected where necessary.
- Deleted Annex 9 as pertaining to “formal objections”.
- Updated section on IPPC regional workshops.
- Included note on process for ink amendments in languages other than English.
- Major reorganization and update of the TPPT section.
- Updated submission form for topics with consistent and correct wording.

2017-2018 version:

- Included change from “Regional workshops on draft ISPMs” to “IPPC regional workshops”.
- Updated the procedure for the Language Review Groups.
- Updated the roles and functions of regional plant protection organizations.
- Added a note on regional procedures for the submission of nominations to the Standards Committee.
- Added deadlines for posting papers for virtual meetings.
- Added information on calls for phytosanitary treatments to be posted on the Phytosanitary Resources page, on the TPPT reviewing and categorizing the submitted treatments.
- Modified the note on extending the scopes of irradiation treatments to other genera in the families.
- Modified the submission for phytosanitary treatments and added a submission form for treatments to be posted on the Phytosanitary Resources page.

2018-2019 version:

- Added information for CPs to use the new template for submitting objections to the adoption of ISPMs and included a link to the template on the IPP.
- Added a new figure and updated the text to reflect the new process of the Call for Topics: Standards and Implementation. The submission form for topics in Annex 3 has also been updated.
- Updated information about the *List of Topics* to include the new database.
- Aligned the text for *Criteria of Justification and Prioritization of proposed topics* to what was adopted by CPM-13 (Appendix 8).
- Updated the Terms of reference and Rules of Procedure for the SC to include an observer from the IC.
- Updated the TPG section to include the new Guidelines for a consistent ISPM terminology.

2019-2020 version:

- Major revision of content, to include and update necessary content and reorder sections and annexes for ease of reading.
- Included section on expert consultations for DPs.
- Included section on development of CPM Recommendations.
- Updated section numbering and removed separate Tables of content for TPDP and TPPT.
- Deleted ANNEX with IPPC Strategic Framework 2012-2019, included hyperlink to IPPC Strategic Framework 2020-2030.

2020-2021 version:

- Terms of reference and Rules of procedure for the SC were updated following the amendments adopted by the CPM-13 (2018).
- Statement of commitment form was updated.
- Provisions on ink amendments were updated.
- Provisions for TPG were updated.
- Minor fixes.

2021-2022 version:

- Subsection 6.1 (Guidelines for the composition and organization of expert working groups) was updated to include participation of IC members as invited experts or IC representatives.
- Modifications to the Standard Setting Procedure to allow the SC to recommend phytosanitary treatments for adoption by the CPM if no significant or major technical comments are made during the first consultation were included.

2022-2023 version:

- Standard Setting Procedure was updated following the amendments approved by the SC and adopted by the CPM-17 (2023).
- Provisions on SC's rules for agreement for the selection of experts for EWGs and Technical Panels were updated following the amendments approved by the SC.
- References to the disestablished TPFQ were removed.
- References to the Technical Panel on Commodity Standards (TPCS) were included.
- Statement of commitment form was updated.
- Minor fixes.

2022-2023 version (January 2024):

- Minor fixes.

2023-2024 version:

- Standard Setting Procedure revised following amendments recommended by the SC and adopted by CPM-18 (2024).
- Rule 7 of the rules of procedure for the SC updated as amended by CPM-18 (2024).
- Guidelines for the composition, organization and operation of EWGs revised by the SC and adopted as modified by CPM-18 (2024).
- Approval of subjects to be included in the work programme of technical panels via e-decision of SC.
- Response options for lead stewards when addressing consultation comments updated as agreed by SC May 2024.
- Working procedures of TPCS included as approved by SC May 2024. Submission form for information materials for commodity standards included as Annex 10.
- Provisions for TPG updated as agreed by SC May 2024.
- Efficacy calculation method for PTs updated as agreed by SC May 2024.
- Additional consultation period added for DPs only as agreed by SC May 2024, and DP notification period moved following the decision of the SC November 2024. Annex 9 updated.
- Guidelines for IPPC regional workshops revised as noted by CPM-18 (2024).
- Minor fixes.

2024-2025 version:

- Temporary changes to Standard Setting Procedure, in particular to Call for topics (Step 1), as agreed by CPM-19 (2025), and related topic reviewing schedule, as agreed by SC May 2025, included.

- Standard Setting Procedure Step 6 fixed according to review adopted by CPM-17 (2023).
- Procedure for developing and adopting CPM Recommendations updated as adopted by CPM-19 (2025).
- Procedure for developing phytosanitary treatments for ISPM 15 included as approved by SC November 2025.
- Clarified that SC-7 meeting reports are drafted and that draft ISPMs approved for second consultation are annexed to the report.
- Text improvements may be submitted via the ISPM objection process as clarified by CPM-19 (2025).
- CPM recommendations adopted from 2024 onwards are subject to language review as for ISPMs as clarified by CPM-19 (2025).
- Provisions updated per FAO Legal Office advice on Language Review Groups and ink amendments when ISPMs adjusted by LRGs or ink-amended.
- Language review procedure for CPM recommendations clarified to follow that for ISPMs.
- Provisions confirming that TPPT, with regard to ISPM 15, may work on annexes to existing ISPMs on topics relating to phytosanitary treatments are added, as confirmed by SC November 2025.
- For documents authored by the secretariat, default OCS setting changed to comments not visible to other users during consultation periods.
- Annexes 3 and 5 updated.
- Minor fixes.

Publication history last updated: 2026-01

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IPPC

The International Plant Protection Convention (IPPC) is an international plant-health agreement that aims to protect global plant resources and facilitate safe trade. The IPPC vision is that all countries have the capacity to implement harmonized measures to prevent pest introductions and spread, and minimize the impacts of pests on food security, trade, economic growth, and the environment.

Organization

- There are over 180 IPPC contracting parties.
- Each contracting party has a national plant protection organization (NPPO) and an official IPPC contact point.
- Ten regional plant protection organizations (RPPOs) have been established to coordinate NPPOs in various regions of the world.
- The IPPC Secretariat liaises with relevant international organizations to help build regional and national capacities.
- The secretariat is provided by the Food and Agriculture Organization of the United Nations (FAO).

International Plant Protection Convention Secretariat
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