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IPPC Secretariat

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CONTENTS

Executive summary

[1] The Standards Committee (SC) revised one draft International Standard for Phytosanitary Measures (ISPM) and one draft annex to an ISPM and recommended them to the Twentieth Session of the Commission on Phytosanitary Measures (CPM) for adoption in 2026:

- the draft revision of ISPM 26 (*Establishment and maintenance of pest free areas for tephritid fruit flies*) (2021-010), and
- the draft annex *Field inspection* (2021-018) to ISPM 23 (*Guidelines for inspection*).

[2] The draft annexes are available in English as appendices of this report. They will also be posted on the International Phytosanitary Portal as CPM papers in all FAO languages.

[3] The SC discussed concerns related to draft annexes to ISPM 46 (*Commodity-specific standards for phytosanitary measure*) (hereafter referred to as "commodity standards"). The SC acknowledged the Technical Panel on Commodity Standards' approach to fully exercising its existing authority and that the panel can exclude a pest from a draft commodity standard if the evidence provided by the submitting contracting party does not demonstrate that the commodity as described in the commodity standard is a pathway for the pest. The SC invited the panel to provide a draft list of criteria for exclusion of pests and measures in commodity standards, for consideration by the SC in May 2026.

[4] The SC revised and approved two draft specifications:

- Specification 78 (Annex *Remote audits* to ISPM 47 (*Audit in the phytosanitary context*)) (2023-031); and
- Specification 79 (Revision of ISPM 12 (*Phytosanitary certificates*)) (2023-020).

[5] The SC deferred their review of the draft specification on the revision of ISPM 23 (*Guidelines for inspection*) (2023-014) until the SC meeting in May 2026.

[6] The SC received an update about the discussions at the 2025 Strategic Planning Group (SPG) on future improvements to ISPMs ("rethinking ISPMs"). The SC concluded that their position on this issue had not changed since the SPG. The SC therefore agreed to forward their position paper as submitted to the SPG, together with suggestions from the Technical Panel on Diagnostic Protocols, to the CPM Bureau as input to the preparation of the bureau's paper to CPM-20 (2026) on rethinking ISPMs, and to also forward the SC's position paper direct to CPM-20 (2026). The SC also invited the Technical Panel on Diagnostic Protocols to trial one of the panel's suggestions – a summary table of minimum requirements – in at least one draft diagnostic protocol. Furthermore, the SC requested that the SC Working Group (SC-7) compare a plain-language version of the draft revised ISPM 26 with the draft submitted to the CPM for adoption and make recommendations to the SC about the application of plain-language principles in the development of future ISPMs.

[7] The SC approved the criteria to be used for evaluating potential treatments for inclusion in ISPM 15 (*Regulation of wood packaging material in international trade*), which will be included in the *IPPC procedure manual for standard setting*. The SC confirmed that the Technical Panel on Phytosanitary Treatments could work on annexes to ISPM 15, as this was within the scope of the specification for the panel.

[8] The SC considered the distinction between declarations of "absence" and an "official pest free area" in ISPMs. They concluded that pest absence is a technical categorization whereas a pest free area (PFA) is a phytosanitary measure; pest absence from an area alone does not constitute a PFA; and a PFA must be officially established and maintained in accordance with ISPM 4 (*Requirements for the establishment of pest free area*) or ISPM 26. To resolve ambiguity between ISPM 8 (*Determination of pest status in an area*) and the definition on "pest free area" in ISPM 5 (*Glossary of phytosanitary terms*), the SC added the revision of the ISPM 5 term "pest free area" to the work programme of the SC and recommended to CPM-20 (2026) that the focused revision of ISPM 8 regarding the "pest absent" descriptions be added to the *List of topics for IPPC standards*. The SC also invited the

Technical Panel on Commodity Standards to consider the suggestions made by the SC on how phytosanitary import requirements of pest absence can be addressed in commodity standards.

[9] The SC considered two issues that had arisen during the 2025 consultation period regarding the Online Comment System: the feature to allow comments to be shared had been the default setting rather than being optional; and in one document there had been some discrepancies between the steward's acceptance or rejection of comments and the resulting output. The SC requested that the IPPC Secretariat investigate the latter and agreed that the default setting for documents where the IPPC Secretariat is the author should be that comments are not visible to other users.

[10] The SC reviewed the four submissions related to standards that had been received between May and September 2025 in response to the ongoing Call for Topics: Standards and Implementation. Of these submissions, the SC: recommended to CPM-20 (2026) that the revision of ISPM 3 (*Guidelines for the export, shipment, import and release of biological control agents and other beneficial organisms*) be added to the *List of topics for IPPC standards*; added two diagnostic protocols to the *List of topics for IPPC standards* (for tomato mottle mosaic virus and *Begomovirus solanumdelhiense*); and agreed that the proposed inclusion of additional terms related to wood packaging material in ISPM 5 would be more appropriately addressed by a revision of the relevant IPPC guide.

[11] The SC recommended two further changes to the *List of topics for IPPC standards* to CPM-20 (2026): to lift the pending status of *Minimizing pest movement by air containers and aircraft* (2008-002); and to increase the priority of the revision of ISPM 23 (*Guidelines for inspection*). The SC also assigned an assistant steward for the Technical Panel on Commodity Standards.

[12] The SC discussed the way forward for the draft annex *Design and use of systems approaches for the phytosanitary certification of seeds* (2018-009) to ISPM 38 (*International movement of seeds*). The SC agreed to pause, reassess after the IPPC systems approach workshop in Chile in December 2025, and engage with national plant protection organizations and industry.

[13] Following the decision of the Implementation and Capacity Development Committee (IC) that the IC representative to the SC should remain as an observer to the SC rather than become a member, the SC recommended to CPM-20 (2026) that the SC terms of reference be revised accordingly. The SC also supported the IC's proposal that links to relevant implementation material be added to ISPM subpages on the International Phytosanitary Portal and made some suggestions to the IC about where to incorporate the annexes and appendix removed from ISPM 26.

[14] The SC requested that, in future, the SC be invited to comment on draft concept notes for IPPC General Surveys, because of the new focus on ISPMs in these surveys.

1. Opening of the meeting

1.1 Welcome by the IPPC Secretariat

[1] The IPPC Standard Setting Unit (SSU) lead, Avetik NERSISYAN, and the IPPC Secretary, Enrico PEROTTI, opened the Standards Committee (SC) meeting and welcomed all participants. The IPPC secretary emphasized the foundational role of standard setting in the context of the IPPC, with standards providing boundaries and consistency, which are essential to the protection of biodiversity and the facilitation of safe trade. He thanked the SC participants for their work and commitment and wished them a successful meeting.

[2] The SSU lead and the SC chairperson, Sophie PETERSON (Australia), extended a particular welcome to the new SC members: Prateep ARAYAKITTIPONG (Thailand) and Raymonda JOHNSON (Sierra Leone). The SC chairperson also welcomed the new SC Vice-Chairperson, Prudence ATTIPOE (Ghana), to his role.

[3] The SC noted the absence of Talal Abdullah ALMUTAIRI (Saudi Arabia) and Sayed Muzammil HUSSAIN (Pakistan).

2. Meeting arrangements

2.1 Election of the rapporteur

[4] The SC elected Stavroula IOANNIDOU (Greece) as rapporteur.

2.2 Adoption of the agenda

[5] The SC adopted the agenda (Appendix 1), modified to consider agenda item 8.1 (TPCS concerns about inclusion of pests) alongside agenda item 5 (Issues raised from first consultation).

3. Administrative matters

3.1 Documents list

[6] The IPPC secretariat (hereafter referred to as "the secretariat") introduced the documents list (Appendix 2).

3.2 Participants list

[7] The secretariat introduced the participants list (Appendix 3) and invited participants to notify the secretariat of any information that required updating in it or was missing from it.

3.3 Local information

[8] The secretariat referred to the new visitor entrance in FAO headquarters.

3.4 Standard Setting Unit staff

[9] The SSU lead introduced the SSU staff and updated the SC on personnel changes.[1] He also thanked donor countries for their contributions. These are: Denmark, France, Japan, Kenya and New Zealand for hosting meetings of technical panels or Commission on Phytosanitary Measures (CPM) focus groups, and Australia, South Africa and the United States of America for their in-kind contribution of members of the secretariat.

3.5 CPM Bureau: update from June, September and October 2025 meetings

[10] The secretariat highlighted issues arising from the June, September and October 2025 meetings of the CPM Bureau that were relevant to the SC.[2] These included the side sessions to be held at CPM-20

[1] Standard Setting Unit staff (2025-11-03): https://www.ippc.int/en/publications/2463/

[2] 45_SC_2025_Nov.

(2026) on commodity standards (CSs) and sea containers, the feasibility of translating CSs for first consultation, support for countries that are approaching the expiry date for their registration of the ISPM 15 trademark, and discussions about the future of ISPMs ("rethinking ISPMs").

[11] The reports of these CPM Bureau meetings are available on the International Phytosanitary Portal (IPP).[3]

[12] The SC:

(1) *noted* the update from the June, September and October 2025 meetings of the CPM Bureau; and

(2) *noted* that outgoing SC members would be formally acknowledged during CPM-20 (2026) by the reading of names and thanking them for their contributions.

3.6 Strategic Planning Group: update from 2025 meeting

[13] The SC chairperson highlighted issues arising from the 2025 meeting of the Strategic Planning Group (SPG) that were relevant to the SC.

[14] She explained that the main focus of the agenda had been the future of ISPMs. Several discussion papers had been submitted on this issue,[4] including the paper developed by the small working group of SC members and approved by the SC.[5] There had been consensus that ISPMs could be improved by using language that was less complex and that this could be done without changing the Standard Setting Procedure. However, there were also matters that would need more discussion, including how to address guidance information. The SPG had recommended that the CPM Bureau write a paper for CPM-20 (2026) on the outcome of the SPG's discussions.

[15] The SC chairperson also reported that the concept note for the Third IPPC General Survey had been shared with the SPG. However, the CPM Bureau had noted after the SPG that, although the planned survey focused on standards, the SC had not been invited to comment on the concept note during its drafting stages. She explained that the concept note had therefore been added to the agenda for this SC meeting (agenda item 12.3).

[16] **SPG report timing.** The SC expressed concern that, because of the short period between the SPG meeting and the November meeting of the SC, the SPG report was never available in time for the SC meeting. Suggestions offered by SC members to resolve this included the provision of a short summary paper to the SC, prepared by the secretariat, or asking that publication of the SPG report be given priority over the CPM Bureau report.

[17] **Rethinking ISPMs.** The secretariat recalled the presentations from representatives from the World Organisation for Animal Health (WOAH) and the Codex Alimentarius Secretariat, during the SC meeting in November 2024, on their standard setting processes. This had been followed by a lunchtime session on risk analysis processes with the Codex Alimentarius Secretary during the SC meeting in May 2025. The secretariat commented that, if the SC wished, the secretariat could invite WOAH to do a follow-up presentation during the SC meeting in May 2026.

[18] The IPPC Secretary confirmed that the CPM Bureau paper on rethinking ISPMs would not only summarize the outcomes of the SPG discussions but also provide recommendations on the initial next steps, with input from IC and SC. The SC considered whether their position on rethinking ISPMs had changed since the SPG and concluded that it had not. They therefore agreed to forward the SC position paper on rethinking ISPMs, as submitted to the SPG, to the bureau as their input.

[19] The SC recalled the suggestion, in their SPG paper, to allow greater flexibility to the IPPC scientific copy-editor to make changes to draft texts approved by the SC and SC Working Group (SC-7). The

[3] CPM Bureau reports: https://www.ippc.int/en/commission/bureau/

[4] SPG 2025 papers: https://www.ippc.int/en/commission/strategic-planning-group/2025-spg/

[5] 25_SPG_2025_Oct.

secretariat confirmed that the degree of latitude granted to the copy-editor was a decision for the SC, but the responsibility for drafting lay with the SC not the copy-editor. If granted more latitude, the copy-editor would need clear guidance on what they are permitted to do. The secretariat also emphasized the critical role of the steward at the editing stage, deciding whether changes can be accepted or stray too far from the SC-approved text. After CPM adoption, apart from minor proofreading corrections, the text cannot be changed except for translation corrections through the language review group (LRG) process.

[20] The secretariat commented that, during the LRG process, some issues may arise that affect the English version of the ISPM. The secretariat suggested that the SC could perhaps ask the SC-7 to assist. The SC recognized that the LRG stage provides an extra opportunity for editorial improvements to the non-English versions of ISPMs that is not afforded to the English versions.

[21] **SPG report.** The SC requested that the SPG report include summaries from the breakout groups.[6]

[22] The SC:

(3) *noted* that the SPG had recommended that the CPM Bureau prepare a paper for CPM-20 (2026), with input from the SC and IC, summarizing the SPG's discussions on rethinking ISPMs and making recommendations on the initial steps to take this matter forward;

(4) *agreed* to forward the SC position paper on rethinking ISPMs, as submitted to the SPG, [7] to the CPM Bureau to support their preparation of the CPM paper; and

(5) *agreed* to forward the SC position paper on rethinking ISPMs, as submitted to the SPG, to CPM-20 (2026) for consideration under the relevant agenda item.

4. Draft ISPMs for recommendation to Commission on Phytosanitary Measures (CPM) for adoption (from second consultation)

4.1 Draft revision of ISPM 26 (*Establishment and maintenance of pest free areas for tephritid fruit flies*) (2021-010), priority 2

[23] The Steward, Joanne WILSON (New Zealand), introduced the draft ISPM and her notes and responses to the comments received during the second consultation.[8] A total of 377 consultation comments had been received. The main comments made were:

- a request to consider the future implications of the interim solution to attach Annex 1, Appendix 1 and Appendix 2 of the current ISPM 26 to the revised ISPM;
- a request to annex ISPM 26 to ISPM 4 (*Requirements for the establishment of pest free areas*);
- suggestions to use plain language throughout;
- a suggested change to the title of the ISPM;
- requests to define some terms and make changes to others;
- comments changing "FF-PFA designation" to "FF-PFA status";
- requests to clarify the difference between fruit fly absence and a fruit fly pest free area (FF-PFA); and
- requests for additional text or clarification of text, but with no proposed text provided.

[24] The steward reported that she had amended the text accordingly. Regarding the use of plain language, she provided two versions: a moderately plain-language revision, focusing on the structure of particular sentences or paragraphs; and a fully revised, plain-language version. She clarified that it was too early to consider the latter version, but it had been a useful exercise to see what would be involved

[6] SPG reports: https://www.ippc.int/en/commission/strategic-planning-group/

[7] 25_SPG_2025_Oct.

[8] 2021-010; 28_SC_2025_Nov; 29_SC_2025_Nov.

in producing a plain-language ISPM. It had taken 50 hours of work by a plain-language specialist plus the steward's time, and some general comments from the plain-language specialist had been included in the steward's notes.[9]

[25] The SC discussed the generic issues raised from consultation.

[26] **Lack of proposed text.** The SC chairperson encouraged SC members, when attending IPPC regional workshops, to remind colleagues in the region about the need to provide alternative text when suggesting changes to a draft ISPM or specification and to emphasize the risks of not doing this: the steward might misunderstand the comment, which might lead to difficulties at the objection stage.

[27] The secretariat suggested that, under agenda item 12.2 (Update on the IPPC regional workshops), the SC consider recommending that the presentations for regional workshops be adjusted to include a reminder for contracting parties and regional plant protection organizations (RPPOs) to provide alternative text when proposing changes during consultation periods. However, the SC did not have time to consider this in that agenda item.

[28] **Interim solution to retain Annex 1, Appendix 1 and Appendix 2.** The steward reported that there had been general support for the interim solution that Annex 3, Appendix 1 and Appendix 2 be incorporated as attachments to the standard as agreed by the SC in May 2025.[10] However, one region had expressed concern that the approach set a precedent and that no such option existed in the IPPC Standard Setting Procedure.

[29] The SC recalled that they had discussed this at length in May 2025. The SC considered that it was not a question of the Standard Setting Procedure but rather how the information was presented. They agreed, as previously, that the material should be retained as attachments in the same file as the rest of the ISPM, but that it would be clearly distinguished by the use of a different text colour and the insertion of a divider page between the attachments and the rest of the ISPM.

[30] **Request to annex ISPM 26 to ISPM 4.** One consultation comment had asked the SC to reconsider annexing ISPM 26 to the overarching pest free area (PFA) standard, ISPM 4. The SC recalled that this had been a comment ever since the expert working group (EWG). The SC noted the merit in applying a consistent approach to whether draft standards related to other ISPMs were developed as annexes or stand-alone ISPMs, but they recalled that the SC had taken different approaches for different standards. The SC also noted that ISPM 4 was a general standard whereas ISPM 26 was specific to fruit flies and contracting parties used it as a detailed guide; if annexing ISPM 26 to ISPM 4, ISPM 4 itself would need to be amended. The SC therefore agreed to keep this draft ISPM as a stand-alone ISPM.

[31] **Use of the term "fruit" vs "host material".** The SC considered whether to use "host material" or "fruit". They recognized that, although fruit was the main traded commodity that could be infested by fruit flies, there was a small amount of trade in other plant parts (e.g. zucchini flowers) that could potentially be infested by fruit flies. Returning to the issue later in the meeting, the SC used "host material" when referring to any part of a plant that fruit flies could infest and "fruit" only when it was appropriate to refer specifically to fruit. The SC reviewed the use of "fruit" throughout the draft ISPM and amended accordingly (but see also below regarding the concerns of one SC member).

Review of draft text

[32] The SC made various editorial changes to the text to improve its clarity and flow. The main technical and substantive issues discussed were as follows.

[33] **Title.** One consultation comment had suggested that the title be changed to include reference to export certification to clarify the trade-related purpose of the ISPM. As an alternative, the steward suggested

[9] 29_SC_2025_Nov.

[10] SC 2025-05, agenda item 8.1.

inserting "as a phytosanitary measure" to clarify that an FF-PFA is a phytosanitary measure, not a pest status. The TPG had also suggested simplifying the title to "Pest free areas for fruit flies". The SC agreed to retain the title without any change, because it was already clear and it aligned with ISPM 4.

[34] **Scope.** The SC considered alternative text suggested by the steward in response to a consultation comment that the paragraph about pest absence could cause confusion. The SC agreed to retain the existing wording for consistency with ISPM 4 and because it referred to "technical justification". However, they amended the text to clarify that the phrase "should not be required" referred to *importing countries* not requiring an FF-PFA if an exporting country has declared pest absence in accordance with ISPM 8 (*Determination of pest status in an area*).

[35] **Definitions.**

[36] For the definition of "fruit fly pest free area, the SC noted that the two critical elements that distinguished an FF-PFA from pest absence were that an FF-PFA is a phytosanitary measure and it has to be maintained. They considered whether it was necessary to mention eradication but agreed to retain this for clarity given that eradication was referred to in the draft ISPM as one of the control measures. The SC did, however, change the verb "determined" to "declared" in relation to a national plant protection organization (NPPO) declaring pest absence, both for accuracy and for consistency with the Scope section.

[37] The secretariat highlighted an inconsistency in the definitions, which in adopted ISPMs were formatted with the term being defined, followed by the definition, which was not usually in more than one sentence. The secretariat explained that, if this format were to be applied, the two sentences in the definition of "fruit fly pest free area" would need switching around so that the unique descriptor (describing the area) came first and the sentence about it being a phytosanitary measure came second. The SC noted that there was merit in splitting long sentences into multiple sentences in definitions, if this made them easier to understand.

[38] One SC member expressed concerns about including the definitions section at all, given that the definitions had not been subject to consultation, no wording for them had been provided during consultation, and there was already a definition of "pest free area" in ISPM 5 (*Glossary of phytosanitary terms*). The SC considered four options: omit the definitions, retain them, explain the terms within the text rather than having formal definitions, or submit the draft ISPM for a third consultation. The SC opted to retain the definitions, noting that the definitions had been included in response to suggestions raised during consultation.

[39] **Background.** One SC member suggested that *Euleia* and *Strauzia* be omitted from the list of examples of Tephritidae covered by the standard, because the intended focus of the draft ISPM was on fruit, given the importance of fruit in trade. However, after agreeing that the scope was not restricted to fruit (see above), the SC agreed to retain these two genera in the list.

[40] **Criteria for the area to qualify as a fruit fly pest free area.** The SC agreed that, when referring to detections of sterile fruit flies, it was better not to refer to them as being *marked*, to allow for instances when a specimen is taken to the laboratory to check and it is found not to be marked.

[41] **Official designation of the fruit fly pest free area.** The steward explained that the text had been amended to remove reference to pest absence and eradication, as a consultation comment had said that it was confusing to reintroduce the concept of pest absence at this point in the draft ISPM. The SC acknowledged that pest absence and eradication were mentioned earlier in the draft ISPM, together with ISPM 8 and ISPM 9 (*Guidelines on pest eradication programmes*), and so there was no need to repeat them here.

[42] **Suspension.** In the list of triggers for the suspension of FF-PFA status, the SC agreed that it was insufficient for a "female with eggs" to be a trigger – the eggs needed to be viable, which could be demonstrated in the laboratory. They considered whether to use "gravid" or "with viable eggs", concluded that these terms meant the same thing, and opted for the latter for simplicity.

[43] **Annex on specific surveillance for fruit flies (trapping and host sampling).** The SC agreed that "rotation" in the context of trapping procedures referred to the practice of moving traps to locations where the target fruit fly is most likely to be found (e.g. traps might be in a *Citrus* orchard first and then moved to a location where a different host is grown).

[44] The SC continued to work on Annex 1 in an evening and lunch session. Upon return to the plenary session, the SC chairperson reported that the main issues addressed related to the review of "host" versus "fruit".

[45] **Annexes on corrective action plans and on control measures when a breeding population is detected.** The SC reviewed these two annexes during lunchtime sessions and an evening session. The SC chairperson summarized the outcome upon a return to plenary, explaining that the discussions mainly focused on use of the terms "eradication area" and "control measure" but SC members had also changed the term "fruit-fly free" to "FF-PFA".

[46] **Review of the draft ISPM.** The revised draft ISPM as modified in the meeting was circulated to the SC at the end of the Thursday evening session, with the focus of review being on terminology and where the definitions could fit in the text. Some SC members emailed comments in response, which were reviewed by the SC during a further lunchtime session on Friday. Upon returning to the plenary session after the Friday lunchtime session, the SC chairperson reported that SC members had reviewed the definitions, agreed to retain them in the Definitions section rather than integrating them within other sections, and agreed which definitions to include. They had also reviewed all instances of "FF-PFA status" versus "FF-PFA".

[47] The SC chairperson thanked all SC members for their immense effort throughout the week, attending numerous lunchtime and evening sessions to work through the draft ISPM and achieve an understanding of the issues raised by the draft.

[48] One SC member raised concerns about the global change from "fruit" to "host material" in the draft ISPM and was also of the opinion that the genera *Euleia* and *Strauzia* should be removed from the standard as they were not relevant. However, for the sake of consensus, the member agreed with the other SC members to send the standard to the CPM for adoption.

Plain-language version of ISPM 26

[49] The SC considered how best to make use of the plain-language version of ISPM 26 provided by the steward. The SC chairperson emphasized that this had been provided as a case study, to be used as an example to explore how a plain-language ISPM could look and how it compared to the same ISPM written in the usual way.

[50] The SC recognized that there would be benefit in the SC-7 doing a side-by-side comparison of the draft revision of ISPM 26 being sent for adoption and the plain-language version to identify aspects that were problematic in the plain-language version (e.g. language that misses the intended meaning by being too plain, language that is too weak to be incorporated into legislation, comments about the structure).

[51] The SC also noted that SC members could provide comments regarding the plain-language version of ISPM 26, for discussion at SC-7 in May 2026.

Potential implementation issues

[52] The following issues and suggestions had been raised in consultation comments regarding potential implementation issues:

- a suggestion to create a specific guide for FF-PFAs;
- a request for detail on the mechanisms for coordination and joint action when establishing PFAs in border regions between countries;

- the need to change the genus name "*Toxotrypana*" to "*Anastrepha*" in Table 1 of the attachment on fruit fly trapping, once the attachment is revised in full (in accordance with the taxonomical opinion of the International Commission on Zoological Nomenclature);
- the need to consider different subspecies or variants within fruit fly genera, how this affects host range and how this information can be used to make decisions;
- the need for clarification of minimum buffer zone widths for different species of fruit flies and for landscape connectivity and pest pressure;
- a suggestion to include specific examples, such as case studies, in guidance material to help NPPOs determine fruit fly absence in an area with confidence (given that the period required to determine absence varies depending on the fruit fly species and environmental conditions);
- the need for information on how to manage cross-contamination when servicing fruit fly traps; and
- the difficulty that developing countries will face in implementing the ISPM, because of insufficient human and financial resources.

[53] The SC:

(6) *thanked* the stewards for their efforts in developing the draft revision of ISPM 26 (*Establishment and maintenance of pest free areas for tephritid fruit flies*) (2021-010);

(7) *recommended* the draft revision of ISPM 26 (*Establishment and maintenance of pest free areas for tephritid fruit flies*) (2021-010), as modified at this meeting, for submission to CPM-20 (2026) for adoption (Appendix 4);[11]

(8) *requested* that the secretariat archive the implementation issues identified for this draft ISPM in the repository of potential implementation issues on standards, for future consideration by the Implementation and Capacity Development Committee (IC);

(9) *requested* that the SC-7 compare the plain-language version of ISPM 26 with the draft submitted to CPM-20 (2026) for adoption and make recommendations to the SC, based on this comparison, about the application of plain-language principles in the development of future ISPMs; and

(10) *agreed* that an item would be added to the agenda for the SC meeting May 2026 to provide input to the SC-7's discussion on the plain-language version of ISPM 26.

4.2 Draft annex to ISPM 23 (*Guidelines for inspection*): Field inspection (2021-018), priority 2

[54] The Steward, Masahiro SAI (Japan), introduced the draft ISPM and his notes and responses to the comments received during the second consultation.[12] A total of 345 consultation comments had been received. The main points raised were:

- whether to postpone the draft annex until the draft revision of ISPM 23 was ready for first consultation;
- whether a definition of the term "field inspection" was needed;
- where best to locate the statement on the distinction between field inspection and specific surveillance;
- the use of terminology relating to phytosanitary requirements;
- the use of the term "threshold" vs "tolerance level";

[11] Note that draft ISPMs approved by the SC for adoption by CPM-20 (2026) are available in English as appendices of this report, in advance of them being posted on the International Phytosanitary Portal in all FAO languages as CPM papers.

[12] 2021-018; 19_SC_2025_Nov; 20_SC_2025_Nov.

- how best to describe the requirement regarding phytosanitary measures that are used in combination with, or instead of, field inspection; and
- how best to amend the text to allow for the use of authorized entities.

[55] The SC discussed the general issues raised.

[56] **Postponement of development of the draft.** The steward explained that some consultation comments had expressed concern about developing an annex to an ISPM while the final version of that ISPM was unknown (Revision of ISPM 23 (*Guidelines for inspection*) (2023-014): see agenda item 6.3). The suggestion from the consultation comments was to postpone adoption of the draft annex until the revised ISPM 23 was ready for first consultation. The SC acknowledged the rationale for postponing adoption as an annex, but agreed to proceed with its development for the following reasons: postponement would risk losing continuity; many countries had supported the finalization of the draft annex, whereas only a few had suggested postponement; the steward for the revision of ISPM 23 was also the steward for the annex and could therefore ensure that the revised ISPM 23 was aligned with the annex; and once the annex was adopted, it would be part of ISPM 23 and could be aligned with the core text of the standard as part of the revision.

[57] **Definition of "field inspection".** Some consultation comments had raised concerns over the lack of clarity of the term "field inspection". The steward explained, however, that the meaning of "field inspection" in the annex was not just a combination of the ISPM 5 terms "field" and "inspection", as the ISPM 5 definition of "field" was more limited. The SC noted that there was inconsistency in adopted ISPMs regarding the meaning of "field inspection" and hence a consistency review would be needed if an ISPM 5 definition of "field inspection" was developed. The SC agreed to define the term "field inspection" in the annex and not as an ISPM 5 term.

[58] The SC reviewed the draft ISPM.

Review of the draft text

[59] The SC made various editorial changes to the text to improve its clarity and flow. The main technical and substantive issues discussed were as follows.

[15] **Terminology for phytosanitary requirements.** The steward explained that, in this draft annex, the ISPM 5 term "phytosanitary import requirements" was used only in the context of import and the term "phytosanitary requirements" was used for more general statements, as inspections could be conducted at times other than at import (e.g. at the place of production, the production site, or the point of export). When discussing the Scope section, the SC agreed to use only the term "phytosanitary import requirements", rather than also referring to "other phytosanitary requirements of the importing country", as all phytosanitary requirements of the importing country would be covered by the ISPM 5 term.

[60] **Scope.** The SC amended the text to make it clear that testing of samples, as well as inspection of consignments, was outside the scope of the annex.

[61] **Field inspection and specific surveillance.** The steward explained that some consultation comments had suggested that this section be moved to the Scope section. The SC recalled that, initially, this section had described the distinction between field inspection and specific surveillance, but the two concepts were linked in the current wording, which said that field inspection can be part of specific surveillance. The SC therefore considered moving the text to the Scope section. However, as the Scope was already clear and the SC was uncertain as to the appropriate level of obligation for field inspection as a part of specific surveillance ("can" vs "may"), the SC agreed to simply omit the section rather than moving it to the Scope.

[62] **Assumptions involved in the application of field inspection.** The SC recognized that, if a pest is detected in a field, it is possible – depending on the pest concerned – that only a small part of the field is infested, so it should not be assumed that the whole field is infested. The SC agreed, therefore, that

if the pest is detected *in a field* during field inspection, the commodity derived from that field *may* be infested; however, if the pest is detected *on plants* during field inspection, it is assumed that the commodity derived from those plants *is* infested. The SC noted that making this distinction between the field and the plants also allowed for asymptomatic plants.

[63] **Equivalent measures.** One consultation comment had suggested that, although the draft annex said that another phytosanitary measure may be carried out in combination with field inspection, in certain cases other methods (e.g. laboratory testing) may be more appropriate than field inspection (not in addition to it). It suggested that text about equivalent measures should be added. However, the SC agreed to retain the original text, as phytosanitary measures other than field inspection were outside the scope of the draft annex.

[64] **Responsibilities of NPPOs.** The SC considered a new responsibility added by the steward in response to a consultation comment: authorizing entities to perform inspection and facilitating the audit and verification of field inspection activities in line with ISPM 45 (*Requirements for national plant protection organizations if authorizing entities to perform phytosanitary actions*) and ISPM 47 (*Audit in the phytosanitary context*). The SC agreed to adjust the wording to make it clear that this responsibility only applied when an NPPO uses other entities to perform field inspection.

Potential implementation issues

[65] The following issues and suggestions had been raised in consultation comments regarding potential implementation issues:

- Continuous training is essential to enhance the skills of inspectors or personnel authorized by the NPPO, with support from international or local experts, to address the shortage of trained personnel.
- Implementation strategies for field inspection may include:
  - the establishment of a unified digital system;
  - procurement of technological equipment, including drones and satellite imagery; and
  - targeted training programmes to ensure authorized personnel are equipped with the latest tools and procedures.
- Awareness campaigns need to be conducted to improve refusal or lack of cooperation during field inspections, and to emphasize the benefits of phytosanitary control and demonstrate how field inspections facilitate access to international markets.
- Guidance is needed on specific commodities and case studies, given the wide variety of possible pest–plant combinations.
- Clarification is needed on how field inspection could enhance the efficiency of consignment inspection or improve the effectiveness of pest detection, potentially supported by a case study.

[66] The SC agreed that all these potential implementation issues should be archived for future consideration by the IC, but with the reference to remote sensing (i.e. satellite imagery) omitted as this was not applicable to field inspection.

[67] The SC:

(11) *thanked* the stewards for their efforts in developing the draft annex *Field inspection* (2021-018) to ISPM 23 (*Guidelines for inspection*);

(12) *agreed* not to develop an ISPM 5 definition of "field inspection" but to describe it in the draft annex instead;

(13) *recommended* the draft annex *Field inspection* (2021-018) to ISPM 23 (*Guidelines for inspection*), as modified at this meeting, for submission to CPM-20 (2026) for adoption (Appendix 5); and

(14) *requested* that the secretariat archive the implementation issues identified for this draft ISPM in the repository of potential implementation issues on standards, for future consideration by the IC.

5. Issues raised from the first consultation period

[68] The SC considered some issues that had been raised during the first consultation on two draft CSs (annexes to ISPM 46 (*Commodity-specific standards for phytosanitary measures*)): International movement of fresh *Musa* spp. fruit (2023-028) and International movement of fresh *Colocasia esculenta* for consumption (2023-023).[13]

Letter from NPPO of Colombia (ICA)

[69] The secretariat introduced a letter submitted by the NPPO of Colombia (Instituto Colombiano Agropecuario (ICA)), which it had submitted along with its consultation comments on the draft CS on International movement of fresh *Musa* spp. fruit (2023-028).[14] The letter contended that the development and publication of this CS was unnecessary, explained the reasons for this and said that, for these reasons, the member countries of the Andean Community (Comunidad Andina) expressed their total disagreement with the draft CS and requested that regulations with these characteristics not be issued.

Paper from the Technical Panel on Commodity Standards

[70] The Steward of the Technical Panel on Commodity Standards (TPCS), Joanne WILSON (New Zealand), presented a paper from the TPCS, which outlined the panel's concerns about the inclusion of pests in draft CSs when supporting references have not been provided to support the association between the pest and the traded plant part.[15] She explained that there was a consequential concern that CSs could inadvertently legitimize unjustified measures for pests that should not be regulated on the specific commodity. To help address this, the panel had proposed that: commodity descriptions in CSs be clarified to assist with the exclusion of some pests; TPCS procedures be refined to describe the reasons for excluding pests; and that pests be included or excluded based on consensus.

COSAVE proposal to review the criteria for the inclusion of pests in draft commodity standards

[71] André Felipe C.P. da SILVA (Brazil) presented a paper from Comité de Sanidad Vegetal del Cono Sur (COSAVE), which sought to allow the TPCS the authority to exclude pests in draft CSs if the pests did not meet the criteria for association with the pathway.[16] The paper pointed out that, although a pest can only be included in a CS if it is regulated by at least one contracting party and is supported by technical justification, ISPM 46 did not state that all regulated pests must automatically be included.

[72] The TPCS steward added that, while assessing the association of the pest with the specific commodity, the TPCS also had to be careful not to challenge the sovereign right of countries to regulate.

APPPC considerations and recommendations on commodity standards

[73] Masahiro SAI (Japan) presented a paper highlighting issues related to the development of CSs that had been identified during the Asia and Pacific Plant Protection Commission (APPPC) Regional Workshop in September 2025.[17] The participants had identified uncertainty in how certain categories of pests – incidental or contaminating pests, pests linked to discarded parts of the commodity, and pests that are relevant only if the commodity is diverted from its intended use – were addressed in the development of CSs. They proposed that consideration be given to how to address these categories, for

[13] Draft ISPMs submitted for first consultation: https://www.ippc.int/en/core-activities/standards-setting/member-consultation-draft-ispms/#a

[14] 09_SC_2025_Nov.

[15] 18_SC_2025_Nov.

[16] 08_SC_2025_Nov.

[17] 10_SC_2025_Nov.

example by explicitly excluding them from CSs where appropriate or by providing supplementary explanatory text in CSs to clarify when pest associations are unclear or diversion of the commodity from intended use is common. To enhance transparency, the APPPC had also proposed that the TPCS publish on the IPP a brief rationale for exclusion of specific pests submitted by contracting parties and that a side session on CSs be held at CPM-20 (2026).

Discussion

[74] The SC discussed the papers from ICA, the TPCS, COSAVE and the APPPC.

[75] **The authority of the TPCS to exclude pests.** Following an extensive discussion, the SC agreed that the TPCS could fully exercise its authority to exclude a pest from a CS if the evidence provided by the submitting contracting party did not demonstrate that the commodity as described in the draft CS was a pathway for the pest. They reached this decision for the following reasons:

- According to ISPM 46, a criterion for inclusion of a pest is that it is regulated by at least one contracting party. As it is "a criterion" not "the criterion", this does not preclude the TPCS from also using other criteria.
- The text in each CS makes it clear that the list of pests is not exhaustive.
- Even if a pest is excluded from a CS, this does not affect the sovereign right of a country to regulate that pest. Equally, inclusion of a pest in the CS does not constitute technical justification for its regulation. Regardless of whether a pest is included or not in a CS, countries need to have technical justification – and therefore conduct a pest risk analysis or equivalent examination of evidence – to regulate a pest.
- If a submitting contracting party disagrees with the exclusion of a pest, it can raise this during consultation and provide supporting evidence.
- The reputational risk to ISPMs is greater if a pest that is not associated with the commodity is included in a CS than if such a pest is excluded from the CS.

[76] The SC noted that the pest list in a CS should not include any pests for which the TPCS has doubts about the association with the commodity. However, the SC recognized that, to achieve their intended purpose – to support countries that do not have the resources to do a full pest risk analysis from scratch – the pest list in a CS did need to be long enough to be useful.

[77] **Criteria for exclusion.** The secretariat confirmed that the TPCS had compiled a draft list of potential reasons for excluding a pest. However, it had yet to be finalized and had not been presented to the SC, so the TPCS were referring to it as a list of potential reasons for excluding pests, rather than as a list of criteria. The secretariat referred to the June 2025 TPCS meeting report, which included some of the reasons for exclusion.[18] The SC invited the TPCS to share their list of potential reasons, in the form of draft criteria, for consideration by the SC at their meeting in May 2026.

[78] The SC noted that some pests were submitted by exporting countries based on the requirements of importing countries with which they traded. In these cases, the exporting country could not be expected to provide a pest risk analysis as supporting evidence. The secretariat noted, however, that it was still necessary for the TPCS to try to confirm whether each pest was regulated, as some pests were submitted based purely on interception data.

[79] **Transparency.** Mr SAI confirmed that the proposal from the APPPC was that both the criteria for excluding pests and the reasons for excluding individual pests be published on the IPP.

[80] The SC noted that there were a series of steps in the development of a CS at which there was a need to record the justification for excluding pests: for example, when the steward is building the initial list of pests; when the TPCS is reviewing the initial list; and after consultation, when the steward and then the TPCS are reviewing comments. The SC noted that justification could be given in the steward's

[18] TPCS 2025-06, agenda item 6.2.

notes, the TPCS report, or in a separate document, and that excluded measures could perhaps also be included. The secretariat confirmed that general reasons for exclusion of pests were captured in meeting reports, but it was not feasible to include a reason for every pest excluded.

[81] The TPCS steward confirmed that the TPCS had discussed a database but had not developed it yet. However, in the meantime, contracting parties could request clarification from the secretariat about the reasons for excluding a particular pest. She explained that, for the draft CS on International movement of *Malus domestica* fruit for consumption (2023-024), for which she was also the steward, she had inserted a column in the collated spreadsheet of pests to record the reason for exclusion. The SC noted that it would be useful for the SC if the template spreadsheet could be shared with the SC.

[82] The secretariat confirmed that the TPCS working procedures were included in the *IPPC procedure manual for standard setting*, but the procedures did not include the criteria for exclusion because these had not yet been approved by the SC.

[83] **Removal of pests if no measure.** One SC member explained that, for the draft CS on International movement of *Malus domestica* fruit for consumption (2023-024), their country had submitted a list of pests but no measures, because of staffing shortages. The member confirmed, however, that their country could potentially provide the missing information. The SC noted that pests and measures could be submitted at the consultation stage, preferably during first consultation.

[84] **Raising awareness.** The SC recognized that, although CSs already emphasized the need for technical justification when regulating pests, the potential misuse of the list of pests in CSs was still a concern among contracting parties and so there may be a need for further awareness-raising and education among contracting parties.

[85] The SC noted that, since the APPPC workshop, the CPM Bureau had agreed to hold a side session on CSs at CPM-20 (2026). The SC and secretariat suggested further ways of raising awareness and educating NPPOs about CSs, including: sharing the existing webinar recordings on CSs with NPPO personnel who submit information and comments on CSs;[19] creating new webinars or videos; creating an open forum through which contracting parties could send questions to the secretariat, who could liaise with the TPCS; and holding a workshop. The SC questioned whether addressing the input to the forum would be too time-consuming. The secretariat confirmed that they were exploring options for a potential workshop in 2027, but it was still very tentative.

[86] **Response to letter from ICA.** The secretariat confirmed that they would formally reply to the letter.

[87] **Response to COSAVE paper.** The SC members from COSAVE countries confirmed that COSAVE's concerns had been addressed by the decisions taken at this meeting.

[88] **Categories of pests highlighted by APPPC.** The SC had insufficient time to consider these categories and noted that it would need to return to the matter.

[89] **The** SC:

(15) *acknowledged* the TPCS's approach to fully exercising its existing authority, as outlined in ISPM 46, Specification TP 6 (*Technical Panel on Commodity Standards*) and its working procedures;

(16) *acknowledged* that the TPCS can exclude a pest from a draft annex to ISPM 46 if the evidence provided by the submitting contracting party does not demonstrate that the commodity as described in the draft annex is a pathway for the pest, noting that a contracting party may ask for a pest's inclusion or exclusion during consultation with additional evidence;

[19] IPPC webinars on commodity standards: https://www.ippc.int/en/news/workshops-events/webinars/ippc-commodity-standards/

(17) *noted* that the process for managing changes to the pests or measures listed in draft annexes to ISPM 46 that occur in response to second consultation comments needs to be considered and addressed through future changes to the Standard Setting Procedure;

(18) *invited* the CPM to encourage contracting parties to submit pests and measures for inclusion in draft annexes to ISPM 46 during the call for information, with any additional pests and measures being proposed during the first consultation;

(19) *noted* the issue of contaminating pests and diversion from intended use raised in the paper from the APPPC and that this would need further consideration from the TPCS and SC;

(20) *invited* the TPCS to provide a draft list of criteria for exclusion of pests and measures in commodity standards, for consideration by the SC in May 2026; and

(21) *thanked* the APPPC, COSAVE, and ICA for their papers, *noted* that some of the issues had been addressed in this meeting, and *agreed* to consider any remaining issues at a later date, once the TPCS and SC have reviewed the list of criteria for excluding pests and measures.

6. Draft specifications from first consultation for revision and approval

6.1 Annex to ISPM 47 (*Audit in the phytosanitary context*): Remote audits (2023-031), priority 1

[90] The Steward, Steve CÔTÉ (Canada), introduced the draft specification and his notes and responses to the comments received during the first consultation.[20] A total of 145 comments had been received, and the steward had revised the draft specification accordingly. The steward summarized the main points made:

- The vast majority of consultation comments had supported the draft specification. Various comments had sought to improve clarity and the tasks for the EWG. These included the need for the annex to clearly describe what a remote audit is, what a remote audit can and cannot be used for, the limitations of remote audits and the circumstances under which they can be used, and to clarify that remote audits are not intended to replace all on-site audits.
- Some comments had highlighted the use of appropriate digital tools to conduct remote audits. Consultation comments had also suggested that the specification refer to the use of technical standards for encryption, data storage and access control. One consultation comment had suggested that the EWG should evaluate the potential for developing or utilizing an IPPC-supported online platform or portal to facilitate the conduct of remote audits, including document sharing, real time communication, data capture and audit reporting.

[91] The SC reviewed the draft specification.

Review of the draft text

[92] The SC made various editorial changes to the text to improve its clarity and flow. The main technical and substantive issues discussed were as follows.

[93] **Tasks.** To avoid duplication and improve clarity, the SC merged, split or removed some tasks. They also moved some elements of tasks to other tasks and rearranged the order of some tasks.

[94] **Circumstances for using remote audit.** When specifying a task to define and describe when remote audits can be used and when they should not be used, the SC noted that there are no circumstances when there is an obligation to use remote audit (i.e. no circumstances when remote audits *should* be used).

[95] **Review of the best practices and approaches of international organizations.** When listing examples of other international organizations using remote audits, the SC agreed to list the International Accreditation Forum rather than WOAH, as the former was listed in the References

[20] 41_SC_2025_Nov; 42_SC_2025_Nov.

section but WOAH was not. The SC noted that this did not exclude the EWG reviewing the practices and approaches of WOAH, as the organizations listed were just examples.

[96] **Digital technology.** The SC agreed that, in the context of digital technology, cybersecurity and the handling of data privacy, it was better to refer to the infrastructure and expertise needed rather than to competencies, so that it covered aspects such as the availability of a secure room to hold audit interviews. The SC also agreed that the EWG should describe how to address situations where this infrastructure and expertise is not available or possible.

[97] **Internet connectivity.** The SC acknowledged that including requirements for internet connectivity could limit the use of the annex by countries with weaker internet connectivity. However, the SC recognized that having sufficient connectivity was a technical necessity for remote audit. The SC therefore included reference to internet connectivity but with the EWG also being tasked with outlining options that could be considered if requirements such as internet connectivity are not available.

[98] **Legal and regulatory frameworks.** The SC recalled that legal frameworks were covered in the core text of ISPM 47. The SC considered whether to refer to legal frameworks of specific relevance to remote audit, but they recognized that it would not be feasible for the EWG to identify all the relevant legislation and such legislation was also outside the scope of NPPOs. The SC therefore deleted the task related to legal and regulatory frameworks.

[99] **Responsibilities of auditor and auditee.** The SC clarified that the responsibilities of auditor and auditee to be listed by the EWG were those that were specific to remote audits (i.e. additional to the responsibilities in the core text of ISPM 47). The SC also deleted a sentence about formal arrangements such as bilateral audit protocols, which had been added in response to a consultation comment, because requirements for bilateral agreements are not included in international standards.

[100] **Gradual introduction of remote audits and the selection of auditees.** A task for the EWG to provide guidance on this had been added in response to a consultation comment, but the SC deleted it because the intended meaning was not clear.

[101] **Nonconformity.** A task to consider how to address nonconformity if it occurred had been added in response to a consultation comment. However, the SC deleted it, as nonconformity would be addressed in the same way as for a non-remote audit.

[102] **Task to identify potential implementation issues.** The SC noted that the standard task on identifying potential implementation issues, which appeared in all specifications, had been substantially modified in response to a consultation comment. The secretariat referred to the annotated template for draft specifications and confirmed that the task was not an optional one. The SC therefore reinstated the default wording from the annotated template but noted that the wording in the annotated template could be simplified in future (an issue which they later added to the draft agenda of the 2026 SC-7 meeting: see agenda items 6.2 and 10.1).

[103] **Online platform or portal to facilitate the conduct of remote audits.** The SC considered a suggestion, which had been raised during the IPPC regional workshop in Africa, that the EWG evaluate the potential for developing or utilizing an IPPC-supported online platform or portal to facilitate the conduct of remote audits. The SC agreed that this was an implementation issue rather than something that could be addressed in the annex, so it was not a matter for the EWG.

[104] **Expertise.** The SC amended the list of expertise to include auditees (i.e. those receiving a remote audit).

[105] The SC queried an item that had apparently been added to the Expertise list in response to a consultation comment: “devices and technology that facilitate remote auditing”. The steward clarified that he had not accepted this comment and so the SC deleted it.

[106] **Provision of resources.** The SC noted that the standard text on Provision of resources had been deleted, even though the steward had not accepted the comment suggesting this deletion. They reinstated the text.

[107] **Participants.** One SC member advised that a representative from the Organisation for Economic Co-operation and Development (OECD) had informally confirmed that OECD did not have any experience in remote audits. The SC therefore removed OECD from the examples of organizations experienced in the development of remote-audit guidance.

[108] The SC recalled that, according to the "Guidelines for the composition and organization of expert working groups" in the *IPPC procedure manual for standard setting*, an EWG should have six to ten members. However, the SC agreed to keep the minimum number of EWG members as five, noting that the steward would also be part of the EWG, bringing this number to six.

[109] **Technical glitches.** The steward expressed concern that the version the SC was working on did not match what the steward had accepted in the Online Comment System (OCS) (see "Expertise" and "Provision of resources" above). The SC chairperson confirmed that the version presented was the version emailed to the secretariat. The secretariat suggested that, rather than being a version-control issue, the erroneous acceptance of comments might be related to a technical glitch experienced before in relation to tracked changes in documents coming out of the OCS.

[110] The SC:

(22) *approved* Specification 78 (Annex *Remote audits* to ISPM 47 (*Audit in the phytosanitary context*)) (2023-031) as modified in this meeting (Appendix 6); and

(23) *requested* that the secretariat investigate the apparent technical glitches that had resulted in discrepancies between the steward's acceptance or rejection of comments on the draft specification and the resulting output.

6.2 Revision of ISPM 12 (*Phytosanitary certificates*) (2023-020), priority 1

[111] The Steward, Stavroula IOANNIDOU (Greece), introduced the draft specification and her notes and responses to the comments received during the first consultation.[21] A total of 145 comments had been received, although some comments (from one region) were missing because of a technical problem. The steward had revised the draft specification according to the comments received. The steward summarized the main points and concerns raised during consultation. These included:

- divergent opinions on whether or not the EWG should separate requirements from guidance information in the standard;
- concerns about making it a requirement for the date of inspection to be recorded on phytosanitary certificates, because of the complexity of doing this when multiple inspections have occurred;
- whether additional information was required in the standard regarding the duration of validity of phytosanitary certificates and certified copies;
- many concerns regarding the equivalence of phytosanitary certificates in paper and in electronic form, including electronic certificates provided as portable document format (PDF) files;
- sensitivities about the use of the term "ePhyto", with the suggestion that the standard refer to e-certification instead, so that it covered more than just the IPPC ePhyto Solution (as some countries already had, or were developing, their own systems);
- a query about the value of inviting experts from the ePhyto Steering Group to participate in the EWG and a comment that participants should be drawn from all regions; and
- the proposed addition of several new tasks for the SC to consider.

[21] 44_SC_2025_Nov; 47_SC_2025_Nov.

[112] **Inclusion of implementation guidance.** The steward suggested that, as the outcome of the ongoing discussions about rethinking ISPMs was as yet unknown, the standard should include both requirements and the associated guidance but organized in a better format. The SC agreed that the revision of ISPM 12 should both clarify requirements and provide guidance, noting that the EWG could still recommend that some parts be removed, even without there being a specific task to do that.

Review of the draft text

[113] The SC made various editorial changes to the text to improve its clarity and flow. The main technical and substantive issues discussed were as follows.

[114] **Use of the term "ePhyto".** The SC considered the sensitivity about the term "ePhyto". One SC member speculated that the problem might have arisen because the use of a capital letter "P" could convey the idea that it was a brand name and only associated with the IPPC ePhyto Solution. Another SC member commented that, in their understanding, the term "ePhyto" referred only to electronic phytosanitary certificates exchanged through the IPPC ePhyto Hub. Given that it was not used in the currently adopted ISPM 12, the SC therefore agreed to use the term "electronic phytosanitary certificates", rather than the abbreviation "ePhytos" or "digital certificates", throughout the specification.

[115] **Multiple inspection dates.** The SC noted that, although some importing countries required the inspection date to be entered onto a phytosanitary certificate, the requirement was through a bilateral agreement. However, recognizing that sometimes there are multiple inspection dates, the SC agreed that it would be useful for the revision of ISPM 12 to clarify which inspection date should be included on phytosanitary certificates if an importing country requests this. The SC therefore added this as one of the reasons for revision and also added a new task for the EWG to consider including additional guidelines.

[116] **Scope.** The SC agreed that, although the revision should update information in ISPM 12, the scope of the revision should not include updates to the requirements, as changes to the requirements for phytosanitary certificates were not necessary and would go well beyond what was envisaged for the revision.

[117] Later in the agenda item, the SC reinforced this, strongly recommending that the EWG not start from scratch with the revision of ISPM 12, but start from the existing text and avoid mixing sections as far as possible.

[118] **Purpose.** The SC recognized that some countries had difficulties in implementing electronic certification. The SC therefore agreed that the revised ISPM 12 should *facilitate* the transition to electronic phytosanitary certificates rather than *encouraging* it.

[119] **Re-export.** The SC considered the task on reviewing requirements for the issuance of phytosanitary certificates for re-export and, in particular, two of the example scenarios provided: situations where the country issuing the re-export certificate does not require a phytosanitary certificate and situations where an error by the first issuing country has been identified. They agreed to delete the latter and considered how to rephrase the former to clarify the meaning. However, they agreed that the simplest solution was to delete both examples and just retain the third example, which related to regulated articles that may have been stored for an extended period.

[120] **Security and authentication requirements.** The SC reviewed the task on reviewing the security and authentication requirements for phytosanitary certificates. They noted that the term "2D codes" had been used instead of "QR codes" because the latter was a registered trademark. The SC recognized that some countries had concerns about being obliged to use 2D codes on phytosanitary certificates issued in paper form, but they agreed that there was no need to mention technical capacity in this task.

[121] **Splitting of consignments.** The SC reviewed a new task that had been added by the steward in response to a consultation comment. It tasked the EWG with considering how exporting and importing

NPPOs should manage certification in cases of partial consignment release. The SC member from the submitting country explained that this related to situations where a country imports a consignment and then re-exports part of it. The SC noted that this was partial consignment re-export rather than the ISPM 5 meaning of "release", which related to compliance, but they amended the text to include both scenarios. The steward also encouraged contracting parties to submit discussion papers to inform the EWG's work on this task.

[122] **Attachments.** The SC reviewed the task on revising, reviewing and updating the requirements in ISPM 12 to better reflect NPPOs use of phytosanitary certificates in paper and in electronic form. They noted that one of the problems was the management of attachments, because re-export may involve both a paper and an electronic phytosanitary certificate but whereas attachments to paper certificates were not signed, NPPOs were sometimes required to sign for the whole submission (phytosanitary certificate plus attachments) in the case of electronic phytosanitary certificates. The SC amended the task accordingly.

[123] **Additional declarations.** The SC considered a new task that had been added by the steward in response to a consultation comment. It tasked the EWG with reviewing the use of additional declarations. The steward clarified that the task had been suggested to align the tasks with the Scope section. However, the SC noted that this was no longer needed, following their changes to the Scope, and ISPM 12 already included some examples of additional declarations. The SC therefore deleted the task.

[124] **Certificates in formats that are not Extensible Markup Language (XML).** The SC reviewed the task on clarifying issues regarding the validity and compliance of electronic phytosanitary certificates and electronically issued but not XML-transmitted phytosanitary certificates. They recognized that the main issue was that a phytosanitary certificate issued in XML format is sometimes transmitted, by agreement, as a PDF file because the importing country cannot accept XML certificates; however, the current ISPM 12 did not address how to determine the validity and compliance of the PDF certificate. The steward confirmed that, according to ISPM 12, electronic phytosanitary certificates are electronically produced and are transmitted in XML form, so PDFs are not electronic phytosanitary certificates. She suggested that PDFs should be dealt with as if they were paper certificates. The SC agreed that it was essential that the EWG address this.

[125] **Cross-referencing other ISPMs.** The SC considered a sentence that had been added to the standard task on reviewing all references to ISPM 12 in other ISPMs and all references to other ISPMs in ISPM 12. The added text, which had been suggested in a consultation comment, tasked the EWG with considering cross-referencing ISPM 7 (*Phytosanitary certification system*) and ISPM 20 (*Guidelines for a phytosanitary import regulatory system*) to ensure consistent terminology and avoid conflicting interpretations of certification procedures. The SC, however, recognized that there were likely to be many ISPMs that refer to phytosanitary certificates and so it was better to omit this additional text rather than just referring to two ISPMs.

[126] **Task to identify potential implementation issues.** The SC reverted to the standard text from the annotated template. The SC chairperson, however, suggested that the SC-7 consider the annotated template for draft specifications to review the wording of this standard task.

[127] **Participants.** The SC noted that one consultation comment had questioned the value of including up to two technical experts from the ePhyto Steering Group as invited experts. The SC agreed to reduce the number to one and confirmed that their role should be as an invited expert rather than a member.

[128] In response to a consultation comment, the SC increased the number of EWG members from "five to seven" to "six to eight", to allow for one member from each FAO region.

[129] The SC considered the role of the IC member invited to attend the EWG. The SC noted that the wording in the specification allowed for the IC member to attend either as an invited expert (in which case they were obliged to contribute a discussion paper) or an IC representative (in which case they

were not eligible for financial assistance). The IC representative to the SC, Kyu-Ock YIM (Republic of Korea), confirmed that it was preferable to retain both these options, to provide flexibility.

[130] The SC:

(24) *approved* Specification 79 (*Revision of ISPM 12 (*Phytosanitary certificates*)*) (2023-020) as modified in this meeting (Appendix 7).

6.3 Revision of ISPM 23 (*Guidelines for inspection*) (2023-014), priority 2

[131] The SC deferred this item to the SC meeting in May 2026.

7. Discussions and follow-up from SC May 2025

7.1 Section on "Impacts on biodiversity and the environment" that is in all ISPMs

[132] The SC forwarded this issue to the SC-7 for consideration.

7.2 Evaluation of draft treatments submitted prior to the establishment of criteria under ISPM 15

[133] The secretariat presented a paper on the draft criteria for evaluating potential treatments for inclusion in ISPM 15 (*Regulation of wood packaging material in international trade*).[22] The Technical Panel on Phytosanitary Treatments (TPPT) had developed the criteria, at the request of the SC, for inclusion in the TPPT section of the *IPPC procedure manual for standard setting*.[23] In May 2025, the SC had also invited the TPPT to confirm how draft treatments submitted before approval of the criteria would be evaluated.[24]

[134] The secretariat explained that the TPPT had confirmed that no treatments on the *List of topics for IPPC standards* would be affected by these criteria. Furthermore, the TPPT were seeking confirmation that the panel could work on treatment submissions related to ISPM 15.

[135] **ISPM 15 vs ISPM 28 (*Phytosanitary treatments for regulated pests*).** The SC queried why there was a need for wood treatments to be annexed to a different ISPM than ISPM 18 and why different criteria were needed. The TPPT steward and the former TPPT steward explained that the treatments for wood were targeted at a group of pests, rather than a single pest on a single commodity, and the users of ISPM 15 were not the usual users of ISPM 28 annexes.

[136] **TPPT working on annexes other than ISPM 28.** The secretariat confirmed that it was within Specification TP 3 (*Technical Panel on Phytosanitary Treatments*) for the panel to work on annexes to ISPM 15, as the relevant task (Task 8) was not specific to ISPM 28 annexes.

[137] **Extrapolation.** The SC noted that, according to the criteria for ISPM 15 treatments, a response of pests to a measure could be extrapolated for use with other pests. The SC recognized that guidance on using extrapolation may be needed. The former TPPT steward commented that guidance may be available from the Phytosanitary Measures Research Group on what to do if there are insufficient numbers of individuals for efficacy studies.

[138] **Liaison with other groups.** The SC noted that, as three TPPT members were also on the International Forestry Quarantine Research Group, there was no need to engage directly with the latter group about the criteria.

[22] 43_SC_2025_Nov.

[23] SC 2024-05, agenda item 7.1.

[24] SC 2025-05, agenda item 7.1.

[139] **Amendments to the document.** The SC made one minor text amendment to the criteria document to improve clarity (changing "under laboratory conditions" to "laboratory research", so that it was clear it was a source of information and for consistency with elsewhere in the document).

[140] One SC member offered to provide the missing digital object identifiers (DOIs) for the Bibliography. The secretariat confirmed that they would include these in the document and would ensure that the document confirmed with the *IPPC style guide*.

[141] The SC:

(25) *approved* the draft ISPM 15 criteria (Appendix 8), as modified in this meeting, for inclusion as section 7.6.4 in the *IPPC procedure manual for standard setting* subject to the inclusion of missing DOIs for references and checks to ensure that it was consistent with the *IPPC style guide*;

(26) *invited* the TPPT to consider whether additional guidance could be added to the *IPPC procedure manual for standard setting* on how extrapolation can be used in evaluating treatments for submission as annexes to ISPM 28; and

(27) with regard to ISPM 15, *confirmed* that the TPPT (as per Task 8 of Specification TP 3 (*Technical Panel on Phytosanitary Treatments*)) may work on annexes to existing ISPMs on topics relating to phytosanitary treatments.

7.3 Rationale for the proposed change from "intended outcome" to "required response" in the ISPM 5 definition of "treatment schedule", the context, and the potential impacts

[142] The SC removed this item from the agenda, as there was no paper, and agreed to consider it at their meeting in May 2026 if a paper is provided.

7.4 Specifications, functions, rules and guidance for technical panels

[143] The SC deferred this item to the SC meeting in May 2026.

7.5 Technical Panel for the Glossary activities and timing for providing recommendations on, and translation of, consultation comments

[144] The SC deferred this item to the SC meeting in May 2026.

7.6 SC small working group revising the "Guidelines on the role of lead and assistant steward(s)"

[145] The secretariat presented the draft revisions to the "Guidelines on the role of lead and assistant steward(s)" section of the *IPPC procedure manual for standard setting*, which had been drafted by the small working group of SC members tasked with doing this.[25] The secretariat reported that few changes to the text had been made since the SC meeting in May 2025,[26] but the group had noted that the procedure manual would benefit from a full review and consolidation.

[146] The SC noted that there were many references to stewards throughout the manual, but it was difficult to locate them. The SC therefore agreed that it would be best to review the proposed revisions to the section on "Guidelines on the role of lead and assistant steward(s)" first, before embarking on any wider revision. One SC member suggested that, as the reason the issue arose in the first place was to answer the question "what is the role of a steward?", perhaps all that was needed was to draft a section on the role of a steward.

[25] 46_SC_2025_Nov.

[26] SC 2025-05, agenda item 8.4.

[147] The secretariat clarified that the procedure manual was not a single text but was a repository of procedures agreed by various IPPC bodies, compiled by the secretariat.

[148] The SC:

(28) *requested* that the secretariat upload the draft revision of section 5.7 of the *IPPC procedure manual for standard setting* to the Online Comment System by 1 December, for feedback from the SC by the end of February, and schedule a virtual meeting of the small working group in mid- to late March 2026 to discuss the feedback.

7.7 SC small working group on distinction between declarations of "absence" and an "official pest free area" in ISPMs

Outcome of small working group

[149] Joanne WILSON (New Zealand) presented a paper from the small working group that had been tasked by the SC to assess whether issues regarding the distinction between declarations of "absence" and an "official pest free area" affected ISPMs other than ISPM 26.[27]

[150] Ms WILSON reported that the small working group had reached the following conclusions:

- Pest absence from an area alone does not constitute a PFA. A PFA must be officially established and maintained in accordance with ISPM 4 or ISPM 26.
- Ambiguity exists between ISPM 8 and ISPM 5. Specifically, the way ISPM 8 describes some categories of pest absence creates confusion about whether pest status is a technical determination or a result of phytosanitary measures.
- The ambiguity is limited to ISPM 5, ISPM 8 and ISPM 9 and does not impact other ISPMs.
- Changes are needed to the ISPM 5 definition of PFA and the pest status categories in ISPM 8 to address ambiguities.

[151] Ms WILSON outlined the distinctions between pest status and a PFA as determined by the small working group, including that pest absence is a technical categorization whereas a PFA is a phytosanitary measure, and declarations of pest absence in an area should be accepted by importing countries unless there is technical justification for requiring an official PFA. She also highlighted the ambiguities in ISPM 5 and ISPM 8 identified by the small working group and the draft amendments proposed by the group to resolve these ambiguities:

- **Definition of "pest free area" in ISPM 5.** The group had proposed that the definition be amended to read: "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".
- **Amendments to ISPM 8.** The group had proposed the following changes:
  - remove the "absent: the entire country is a pest free area" category, as it is the outcome of a phytosanitary measure, does not align with the intended purpose of ISPM 8, and is already covered by the "absent: pest not recorded" and "pest no longer present" categories,
  - remove the "absent: pest eradicated" category, as it is the outcome of a phytosanitary measure, does not align with the intended purpose of ISPM 8, and is already covered by the "absent: pest no longer present" category, and
  - incorporate "the pest was eradicated" as a reason for pest absence into the "absent: pest no longer present" category.
- **Ink amendment to ISPM 9.** The group had proposed that, if the "absent: pest eradicated" category from ISPM 8 was removed, an ink amendment would be needed to section 3.5

[27] 04_SC_2025_Nov; SC 2025-05, agenda item 8.1.

(Declaration of eradication) in ISPM 9, to change the status from "absent: pest eradicated" to "absent: pest no longer present".

[152] The SC considered the proposals from the small working group.

[153] The secretariat confirmed that the SC had the authority to add TPG subjects to the *IPPC list of topics for IPPC standards*, with the CPM noting the addition. However, the proposed revision of ISPM 8 would need to be agreed by the CPM.

Issues raised by the TPCS with the definition of pest absence

[154] The TPCS Steward, Joanne WILSON (New Zealand), presented a paper on issues raised by the TPCS in relation to use of the terms "pest free area", "pest free country", and "pest absence" in draft CSs.[28] The TPCS sought clarity from the SC on: the appropriate terminology to use in CSs when describing a phytosanitary import requirement for an entire country to be free from a particular pest; and whether, in the context of a CS, the absence of a pest from an entire country could be considered a phytosanitary measure or whether it was a status.

[155] Suggestions made by SC members included (in no particular order):

- Include in each annex the statement from ISPM 4 "If an exporting country has declared a pest to be absent in an area in accordance with ISPM 8, then establishing a PFA in that area should not be required, unless there is technical justification by importing countries", and exclude any pest submitted with a "pest absence" requirement from the CS. The SC noted that this would align with the example additional declarations in ISPM 12, one of which is that the pest "is absent".
- Include the same statement in ISPM 46.
- Omit any mention of "pest absence" or "pest free country" in the CS, as these are not measures to manage pest risk, and exclude any pests submitted with these requirements unless an alternative measure is provided.
- Retain pests submitted with "pest absence" or "pest free country" in the table of pests, with a footnote indicating the import requirement and stating that "pest absence" or "pest free country" is not a measure. This option has the advantage of retaining those pests for which there are no other measures but that countries consider sufficiently important to warrant regulating.

[156] The SC noted that pests for which the only measures submitted were those in the table of general measures could still be included in the table of pests.

[157] The SC:

(29) *thanked* the small working group of SC members and the TPCS for their papers on terminology related to pest status and PFAs;

(30) *added* the revision of the ISPM 5 term "pest free area" as a subject to the work programme of the SC in the *List of topics for IPPC standards*;

(31) *recommended* to CPM-20 (2026) that the focused revision of ISPM 8 regarding the "pest absent" descriptions be added to the *List of topics for IPPC standards*, with priority 1, to resolve ambiguity with ISPM 5; and

(32) *invited* the TPCS to consider the suggestions made at this meeting on how phytosanitary import requirements of pest absence can be addressed in CSs, and to propose one or two solutions for consideration by the SC at its meeting in May 2026.

[28] 39_SC_2025_Nov.

7.8 OCS update – discussion of features in the system

[158] Stephanie DUBON (United States of America) presented a paper submitted by the United States of America on the sharing of comments within the OCS.[29] She explained that, contrary to the original intention for the system, the feature to allow comments to be shared was currently the default setting in the OCS rather than being optional. While recognizing the value of sharing comments, the paper highlighted the potential unintended consequences of this.

[159] **Sharing comments.** The SC expressed concern that, when changes such as this happened without agreement, it significantly undermined the confidence of contracting parties in the consultative process.

[160] The secretariat explained that they had not been aware of the change in the OCS but had since done some testing and it appeared that the default setting had indeed been changed. The secretariat confirmed that they could change the default setting so that the sharing feature ("independent review") was turned off. The SC chairperson emphasized the importance of checking this before the consultation period is opened. The secretariat confirmed that countries would still have the option to share at regional workshops if they created a subreview.

[161] The SC discussed the advantages and disadvantages of being able to share comments during consultation. They noted that it allowed submitters to react to other comments (e.g. giving a simple "thumbs up" if a comment matches their own) and stewards to provide their responses and seek clarifications. However, the sharing feature may mean that some contracting parties were less confident at submitting their comments, and responses to stewards' queries might be limited because the person entering the comments may not have the necessary technical expertise or may not even open the OCS once they had submitted their comments.

[162] The SC agreed to return to the former practice of comments not being shared during consultation, with the option for countries to share when creating a subreview. One SC member suggested that the secretariat send a letter to RPPOs to explain what they need to do for OCS subreviews.

[163] **Duplicated comments.** The SC noted that it was not possible to turning off duplicated comments, although some regions addressed this by countries giving a general statement that they agreed with their region's comments.

[164] The SC:

(33) *requested* that the secretariat:

- for documents where the IPPC Secretariat is the author, ensure that the default setting in the Online Comment System for consultation periods is that comments are not visible to other users, and
- provide assurance to the SC chairperson that the secretariat's internal operating procedures have been updated to ensure that this setting is checked before each consultation; and

(34) *requested* that the secretariat amend the OCS section of the *Procedure manual for standard setting* to reflect the SC's decision at this meeting about the sharing of comments within OCS.

8. Technical panel urgent issues

8.1 TPCS concerns about inclusion of pests

[165] This item was considered as part of agenda item 5 (Issues raised from the first consultation period).

[29] 15_SC_Nov_2025.

8.2 Rethinking ISPMs: TPDP's opinion on diagnostic protocols

[166] The secretariat reported that, at its meeting in July, the Technical Panel on Diagnostic Protocols (TPDP) had discussed the CPM paper on rethinking ISPMs,[30] specifically in relation to diagnostic protocols (DPs).[31] The TPDP had highlighted the opportunity for contracting parties to use artificial intelligence to translate DPs into other languages. They had confirmed that the target audience was technical experts but that the contact details of experts were provided in each DP in case of technical queries. The TPDP had emphasized the importance of reading DPs in full to understand what the minimum requirements are before implementing the protocol, but they had suggested that DPs could potentially be improved by including guidance on how to meet minimum diagnostic requirements, for instance by summarizing them in a table. The TPDP had also recognized the need for capacity development activities and for more information on existing constraints to the use of DPs.

[167] The SC recalled that, since the July TPDP meeting, the SC had suggested that the TPDP consider the possibility of having two versions of a DP: a full version (with validation data, etc.) and a shorter version.[32] The SC recognized that the TPDP had not yet had the opportunity to consider this. However, the SC noted that, as the guidance on the structure of DPs was in the TPDP *Instructions to authors* rather than the Standard Setting Procedure, the SC could request changes to the structure of DPs, provided these did not conflict with the requirements of ISPM 27 (*Diagnostic protocols for regulated pests*). The SC agreed that including a summary table of minimum requirements could be useful, would be worth trying, and would not conflict with ISPM 27.

[168] The SC:

(35) *agreed* to forward the paper from the TPDP on rethinking ISPMs to the CPM Bureau as part of the SC's input to the bureau's preparation of a CPM paper on the next steps for improving ISPMs; and

(36) *invited* the TPDP to include a summary table of minimum requirements, as suggested in the fourth bullet point of the TPDP paper to this meeting, in at least one current draft DP for consideration by the SC in November 2026.

9. Topics

9.1 Submissions from the 2025 call for topics

[169] Following the decision of CPM-19 (2025) to keep the Call for Topics: Standards and Implementation open throughout the year for a two-year trial basis,[33] six submissions had been submitted in the period May to September 2025.[34] Two of these were for implementation topics, for review by the IC. Four of the submissions were for standards, for review by the SC: one for the revision of an ISPM, two for the development of new diagnostic protocols (DPs), and one for ISPM 5 terms. As agreed by the SC in May 2025,[35] where a submission was relevant to a technical panel the secretariat had shared the submission with that panel.

[170] The SC reviewed the submissions for standards during lunchtime sessions. Upon return to the plenary session, the SC chairperson summarized the outcome of the discussions.

[30] CPM 2025/47.

[31] 33_SC_2025_Nov; TPDP meeting reports: https://www.ippc.int/en/commission/standards-committee/technical-panels/technical-panel-diagnostic-protocols/

[32] 25_ SPG_2025_Oct.

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

[34] 13_SC_2025_Nov.

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

*9.1.1 Revision of ISPM 3 (***Guidelines for the export, shipment, import and release of biological control agents and other beneficial organisms***) (2025-010)*[36]

[171] See decisions below.

9.1.2 Diagnostic protocols

[172] Submissions had been received to develop DPs for:

- tomato mottle mosaic virus (2025-013); and
- tomato leaf curl New Delhi virus (2025-014).

[173] The TPDP had recommended that both subjects be added to the *List of topics for IPPC standards* but that the scope of the draft DP for tomato leaf curl New Delhi virus (2025-014) be broadened to include closely related variants (subspecies).[37]

[174] The SC chairperson reported that, at the lunchtime session, SC members had agreed with the TPDP's recommendations. The SC member from Israel commented that the submission for tomato mottle mosaic virus (2025-013) needed amending to remove mention of Israel, as this virus was not found in Israel.

[175] **Names used in titles of DPs on viruses.** In the plenary session, the SC acknowledged that the title of the draft DP for tomato leaf curl New Delhi virus (2025-014) would need adjusting to reflect the broader scope, as variants would not be "New Delhi". Outside the session, the secretariat consulted with the TPDP virology lead, who confirmed that the most appropriate approach would be to use the species name in the title of a DP when there is not a virus name that covers the entire scope of the DP, but otherwise to use the virus name (as diagnosis is of the physical entity). The virology lead also confirmed the species name for tomato leaf curl New Delhi virus as on the Master Species List of the International Committee on Taxonomy of Viruses.

Inclusion of additional ISPM 5 terms related to wood packaging material (2025-011)

[176] In the plenary session, the SC chairperson explained that, in the lunchtime session, SC members had reviewed the two papers provided: the submission form and the feedback from the TPG.[38] The submission proposed that ISPM 5 definitions be developed for the following types of wood packaging material: shipborne dunnage, crate, case, pallet and spool, but the TPG had not supported this. The SC chairperson reported that SC members had considered that the issue was more appropriately addressed through an addition to the IPPC *Guide to the regulation of wood packaging material* rather than including extra terms in ISPM 5.

[177] The SC:

(37) *noted* the update on the ongoing Call for Topics: Standards and Implementation, including the six submissions received to date;

(38) *recommended* to CPM-20 (2026) that the following topic be added to the *List of topics for IPPC standards*:

- Revision of ISPM 3 (*Guidelines for the export, shipment, import and release of biological control agents and other beneficial organisms*) (2025-010), priority 1;

(39) *agreed* that, in anticipation of the CPM adding the revision of ISPM 3 (*Guidelines for the export, shipment, import and release of biological control agents and other beneficial organisms*) (2025-010) to the *List of topics for IPPC standards*, the European members of the SC would refine the draft specification so that it is ready for potential SC consideration in May 2026;

[36] 05_SC_2025_Nov; 06_SC_2025_Nov.

[37] 36_SC_2025_Nov; 37_SC_2025_Nov.

[38] 27_SC_2025_Nov; 34_SC_2025_Nov.

(40) *added* the following diagnostic protocols to the *List of topics for IPPC standards*:

- Tomato mottle mosaic virus (2025-013), priority 1, and
- *Begomovirus solanumdelhiense* (2025-014), priority 2;

(41) *invited* the TPDP to clarify the host material that would be tested using the two new DPs (seeds, plant material, or both);

(42) *agreed* that potential confusion over the meaning of the terms "shipborne dunnage", "crate", "case", "pallet" and "spool" would be more appropriately addressed by a revision of the IPPC *Guide to the regulation of wood packaging material* rather than adding definitions to ISPM 5;

(43) *accepted* the offer of Steve CÔTÉ (Canada) to:

- prepare a submission to the IC under the ongoing call for topics, proposing the revision of the IPPC *Guide to the regulation of wood packaging material* to explain these terms, and
- investigate whether documentation being produced by a North American Plant Protection Organization project on categorization of wood packaging materials could be submitted as a contributed resource to provide further support; and

(44) *encouraged* contracting parties and RPPOs to actively participate in the ongoing Call for Topics: Standards and Implementation by submitting well-prepared and globally relevant proposals for standards, implementation resources, and IPPC Observatory studies.

9.2 List of topics

Review and adjustments to the List of topics for IPPC standards

[178] The SC reviewed the *List of topics for IPPC standards*, which had been updated to take account of decisions taken by the SC meeting in May 2025 as well as subsequent changes.[39]

[179] Following the resignation from the SC of one of the assistant TPCS stewards, the SC assigned an assistant steward to replace him.

Minimizing pest movement by air containers and aircraft (2008-002)

[180] The SC considered this topic, for which the status was "pending", during a lunchtime session. Upon return to the plenary session, the SC chairperson explained that SC members had recognized the potential benefits of collaborating with partner organizations such as the other two "sisters" (the Codex Alimentarius Secretariat and WOAH) and the World Health Organization to support harmonized approaches under a One Health framework. Members of the SC had expressed divergent views about the relative risks associated with air containers compared to sea containers, but they had agreed to propose to the CPM that it be assigned "priority 2", noting that it would provide a test case for collaboration with partner organizations and how to deal with containers generally.

[181] The SC:

(45) *assigned* Nader ELBADRY (Egypt) as one of the assistant stewards for the Technical Panel on Commodity Standards (2019-009), to replace Eyad MOHAMMED (Syrian Arab Republic);

(46) *corrected* the entry for assistant steward for the International movement of *Citrus* fruit (2023-019);

(47) *recommended* to CPM-20 (2026) that the topic *Minimizing pest movement by air containers and aircraft* (2008-002) be assigned priority 2 and its pending status be lifted;

(48) *agreed* that Mariangela CIAMPITTI (Italy, lead), Stephanie DUBON (United States of America), Nader ELBADRY (Egypt), Stavroula IOANNIDOU (Greece) and Edouard NYA (Cameroon) would form a small working group to develop paper for CPM-20 (2026) on the rationale for the proposed change to the status of the topic *Minimizing pest movement by air*

[39] 31_SC_2025_Nov; *List of topics for IPPC standards*: https://www.ippc.int/en/core-activities/standards-setting/list-topics-ippc-standards/list

containers and aircraft (2008-002), based on the paper presented at this meeting with the addition of aspects including One Health, linkage to sea containers, and collaboration among the "three sisters"; and

(49) *requested* that the secretariat liaise with the lead of the small working group to arrange a virtual meeting.

10. Standards Committee

10.1 Standards Committee Working Group (SC-7) May 2025

Update from the 2025 SC-7 meeting

[182] The secretariat gave an update from the SC-7 meeting held in May 2025.[40]

Agenda of the 2026 SC-7 meeting

[183] The SC reviewed the draft agenda for the 2026 SC-7 meeting[41] and modified it to include the additional items agreed during this meeting. The latter included: comparison of the plain-language version of ISPM 26 with the draft submitted to CPM-20 (2026) for adoption (from agenda item 4.1 of this meeting); the "Impacts on biodiversity and the environment" section that is in all ISPMs (from agenda item 7.1 of this meeting); and the draft annex *Design and use of systems approaches for the phytosanitary certification of seeds* (2018-009) to ISPM 38 (*International movement of seeds*), including inviting a representative from the International Seed Federation (ISF) (see agenda item 10.2 of this meeting). In the item on biodiversity, they also added consideration of the annotated template for draft specifications, following a suggestion in agenda item 6.2. In addition, the SC made provision to include two items (agenda items 7.4 and 7.5) deferred from this meeting to the SC meeting in May 2026, in case there was insufficient time at the SC meeting or any follow-up by the SC-7 was required.

Selection or reconfirmation of SC-7 members

[184] The SC reviewed the SC-7 membership list and agreed that the representative from Africa would change to allow the outgoing African representative to attend IC meetings as the SC representative to the IC.[42]

[185] The SC:

(50) *noted* the update from the 2025 SC-7 meeting;

(51) *agreed* that the papers on the specifications, functions, rules and guidance for technical panels (agenda item 7.4) and on TPG activities and timing from this meeting (agenda item 7.5) would be added to the agenda of the SC meeting in May 2026, with the possibility of them being forwarded to the SC-7 the following week;

(52) *agreed* to the draft agenda for the 2026 SC-7 meeting (Appendix 9) and that the duration of the meeting would be four or five days (to be determined by the secretariat after liaison with SC-7 members);

(53) *agreed* that relevant stewards would be invited to participate virtually in the agenda item for their topics, with Joanne WILSON (New Zealand) participating in person; and

(54) *agreed* that the SC representatives on the SC-7 would be Edouard NYA (Africa), Masahiro SAI (Asia), David OPATOWSKI (Europe), André Felipe C.P. da SILVA (Latin America and Caribbean), Nader ELBADRY (Near East), Steve CÔTÉ (North America) and Sophie PETERSON (Southwest Pacific) (Appendix 10).

[40] SC-7 2025-05 report: https://www.ippc.int/en/publications/94854/

[41] 25_SC_2025_Nov.

[42] SC and SC-7 membership list: https://www.ippc.int/en/publications/1109/

10.2 Draft annex to ISPM 38 (*International movement of seeds*): Design and use of systems approaches for the phytosanitary certification of seeds (2018-009), priority 1

[186] The Co-Steward, Matías GONZÁLEZ BUTTERA (Argentina) explained that the SC-7, at its May 2025 meeting, had agreed that the draft annex was insufficiently mature to be submitted for second consultation and had recommended to the SC that further progress on the draft annex be paused until the SC agreed the way forward.[43] As agreed by the SC-7, the two co-stewards had therefore considered options for the way forward for the draft annex. Mr GONZÁLEZ BUTTERA presented the eight potential options for SC consideration:[44]

- continue the development of the current draft annex;
- pause and reassess after the global workshop on systems approaches to be held in Chile in December 2025;
- pause and engage with NPPOs and industry;
- pilot multilateral systems approaches;
- revise ISPM 14 (*The use of integrated measures in a systems approach for pest risk management*) and develop guidance material specifically for seed;
- align the annex with Annex 1 (Use of systems approaches in managing the pest risk associated with the movement of wood) to ISPM 39 (*International movement of wood*);
- develop seed-specific CSs (annexes to ISPM 46) for seeds; and
- develop two new annexes, one providing high-level guidance on multilateral approaches and the other providing general options for measures in a systems approach.

[187] **Multilateral systems approaches.** The SC acknowledged that continuing the current annex, which incorporated the concept of multilateral systems approaches, could be difficult given that experience of such approaches was still limited. The SC noted, however, that a pilot of a multilateral systems approach was already underway in the Latin America and Caribbean region, linked to the seed sector.

[188] **Aligning with other ISPMs.** One SC member favoured aligning the annex with either ISPM 36 (*Integrated measures for plants for planting*) or ISPM 39 but recognized that this may not address the issues experienced by seed companies as it did not account for the complex nature of the seed trade.

[189] **Pause, reassess and engage with NPPOs and industry.** The two co-stewards expressed a preference for a combination of two of the options: pausing, reassessing after the workshop, and engaging with NPPOs and industry. The SC agreed to follow this approach and considered ways of doing this. The SC noted that questions to explore could include asking NPPOs whether there was still a need for the annex and asking the seed industry whether it would help to have a standard that followed the approach of ISPM 36 or Annex 1 to ISPM 39. The SC recalled that the concerns of the ISF were already documented in the report of the EWG for this annex,[45] and so it might be helpful to discuss the issue not only with the International Seed Federation, representing the industry globally, but also for SC members to reach out to seed companies in their own countries. The SC agreed that it was too early to have a call for papers to solicit further information, as it was better to discuss the issues in person first; a call could be considered later but the purpose of the call would need to be clearly defined.

[190] The SC:

[43] SC-7 2025-05, agenda item 4.3.

[44] 23_SC_2025_Nov.

[45] Meeting report of the EWG on Design and Use of Systems Approaches for Phytosanitary Certification of Seeds (2018-009): https://www.ippc.int/en/publications/90591/

(55) *requested* that the secretariat invite the representatives from the International Seed Federation (ISF) attending the IPPC systems approach workshop in Chile in December 2025 to meet with the SC representatives attending the workshop (María José MONTELONGO (Uruguay), André Felipe C.P. da SILVA (Brazil) and David Alfonso TELLO CEPEDA (Ecuador)) to informally discuss the way forward for the annex;

(56) *agreed* that SC members attending CPM-20 (2026) would do the same during the week of the CPM session;

(57) *agreed* that SC members would endeavour to consult representatives from their national seed associations to discuss the way forward for this annex;

(58) *agreed* that feedback from the discussions with ISF and the national seed associations would be added as an item on the agenda of the SC meeting in May 2026, for the SC to provide its response;

(59) *requested* that the secretariat invite a representative from the ISF to give a presentation to the SC-7 during its meeting in May 2026; and

(60) *requested* that the SC-7 provide three or four options on the way forward, for consideration by the SC at its meeting in November 2026.

10.3 Summary on polls and fora discussed on e-decision site (from May 2025 to November 2025)

[191] The secretariat presented a paper listing the e-decision fora and polls conducted from May to November 2025, and the SC reviewed it.[46]

[192] The SC noted that the five phytosanitary treatments that had been added to the *IPPC list of topics for IPPC standards* by e-decision in October 2025[47] did not yet have a priority, as the SC had agreed that the TPPT would review the assigned priorities for discussion at the SC's meeting in May 2026. Some SC members expressed concern over whether this would delay evaluation of the supporting information for these phytosanitary treatments. However, the TPPT Steward, Matías GONZALEZ BUTTERA, confirmed that the TPPT had already evaluated the submissions and agreed that there was sufficient supporting information; had this not been the case, the TPPT would not have recommended inclusion of these subjects in the list of topics.

[193] The SC:

(61) *agreed* that the "Summary of Standard Committee e-decisions between May 2025 and November 2025" accurately reflected the outcome of the SC e-decisions (Appendix 11).

11. Implementation and Capacity Development Committee (IC) and SC–IC interactions

11.1 Update on IC activities

[194] Kyu-Ock YIM (Republic of Korea), the IC representative to the SC, presented an update on collaboration between the IC and SC,[48] including a verbal update on the IC meeting that had taken place the preceding week:[49]

- She reported that the IC had agreed that the IC representative should remain as an observer to the SC but had recommended that the SC terms of reference be revised to change "IC member may attend as an observer" to "IC representative attends as an observer".

[46] 16_SC_2025_Nov.

[47] 2025_eSC_Nov_07.

[48] 07_SC_2025_Nov.

[49] IC meeting reports: https://www.ippc.int/en/commission/capacity-development-committee/

- The IC had discussed the development of a repository of implementation issues, but further consideration was needed about processes and the IC representative to the SC confirmed that she would report back to the SC about this at a future meeting.
- To improve the connection between ISPMs and associated implementation materials, the IC had recommended that links to the latter be added to the subpage of ISPMs on the IPP and that the subpage for ISPM 26 could also be a good place to locate the annex and two appendices that were being removed from the ISPM until incorporated into other guidance.
- Regarding implementation material to support the revised ISPM 26, the IC representative to the SC recalled that a topic to develop a specific guide on FF-PFAs had been proposed in 2023. At the time, the IC had not recommended the new topic for inclusion in the *List of implementation and capacity development topics* but had opted instead to incorporate material into a revision of the IPPC *Guide for establishing and maintaining pest free areas*. However, the IC representative to the SC sought the opinion of the SC on whether a specific guide for FF-PFAs would be useful.

[195] **Links to implementation material.** The SC welcomed the proposal to add links to implementation material from ISPM subpages of the IPP, noting that these would only be links directing to another part of the IPP, not the actual material itself. The SC asked whether contributed resources could be linked in the same way. The IC representative to the SC clarified that contributed resources have a different status to IPPC guides and training materials, as they are not produced under the auspices of the IPPC Secretariat. However, she offered to ask the IC to consider how to connect ISPMs with relevant contributed resources.

[196] **Implementation issues repository.** The secretariat confirmed that the repository was held in the SC–IC work area of the IPP and was divided into three folders: comments from consultations; issues forwarded from the SC to the IC; and issues from the IC.

[197] **Guide to fruit fly free pest free areas.** The SC noted that the options to be considered were either to update the IPPC *Guide for establishing and maintaining pest free areas* or produce a separate guide on PFAs specifically for fruit flies. One SC member expressed a preference for the former, as there were already case studies of FF-PFAs in the guide, and the SC concurred that there was no need for two guides.

[198] The SC:

(62) *acknowledged* the IC's decision on the status of the IC representative to the SC;

(63) *recommended* to CPM-20 (2026) that the SC terms of reference be revised from "IC member may attend as an observer" to "IC representative attends as an observer";

(64) *noted* that the secretariat had developed a repository system for implementation issues that have been raised regarding draft or adopted standards, to be managed by the secretariat in the restricted area of the IPP;

(65) *noted* that the IC would be discussing further their proposed process to collect, forward and discuss potential implementation issues;

(66) *supported* the IC's proposal that links to relevant implementation material be added to ISPM subpages on the IPP; and

(67) *invited* the IC to reconsider the topic proposal for an IPPC guide on fruit fly pest free areas and incorporate guidance on fruit fly pest free areas, including the material from the annexes and appendix removed from ISPM 26, in a revision of the IPPC *Guide for establishing and maintaining pest free areas*.

12. Updates

12.1 Technical Consultation among Regional Plant Protection Organizations, 2025 update

[199] The SC received an update on the Thirty-Seventh Technical Consultation among Regional Plant Protection Organizations (TC-RPPO), which had been held in Bangkok, Thailand, on 23–26 September 2025. [50]

[200] The report from the TC-RPPO will be posted on the IPP.[51]

[201] The SC:

(68) *noted* the update from the Technical Consultation among Regional Plant Protection Organizations.

12.2 Update on the IPPC regional workshops

[202] The SC received an update on the 2025 IPPC regional workshops, which had been held during August and September and had been timed to coincide with the July–September consultation period.[52] The secretariat confirmed that responsibility for the regional workshops rotated between the three units of the secretariat.

[203] The SC:

(69) *noted* the update on the 2025 IPPC regional workshops; and

(70) *thanked* SC members who participated in the 2025 IPPC regional workshops.

12.3 Briefings from IPPC Secretariat

Update from the Implementation and Facilitation Unit

[204] The SC received an update from the secretariat's Implementation and Facilitation Unit.[53] The SC noted that, although the update invited to select an SC representative to participate in the IC Team on E-commerce, this had already been done.

IPPC Observatory: Third IPPC General Survey

[205] A member of the Implementation and Facilitation Unit presented a concept note for the Third IPPC General Survey.[54] The concept note had been developed by an international specialist under the governance of the IC Subgroup on the IPPC Observatory, with subsequent consultation among the IC, the IPPC Secretariat, and the WOAH and Codex observatories. The presenter explained that the scope of the survey would be narrower than the two previous surveys, focusing on national systems and obligations, and specific ISPMs of relevance had been identified. The plan was to launch the survey at CPM-20 (2026), with the intention of conducting a survey every few years. The presenter thanked the Republic of Korea for their financial contribution towards development of the concept note.

[206] The SC acknowledged that, although two SC members were part of the IC Subgroup on the IPPC Observatory, it would be beneficial for the SC to be included in future consultations on the design of the survey, because of the focus on ISPMs.

[50] 11_SC_2025_Nov.

[51] TC-RPPO reports: https://www.ippc.int/en/ippc-community/regional-plant-protection-organizationstechnical-consultation-among-rppos/

[52] 12_SC_2025_Nov.

[53] 38_SC_2025_Nov.

[54] 40_SC_2025_Nov.

Update from the Integration and Support Team

[207] A member of the secretariat's Integration and Support Team referred the SC to the team's update[55] and encouraged regions to express interest in hosting, in collaboration with the secretariat, a high-level event for the International Day of Plant Health in 2026.

Update from the Standard Setting Unit

[208] The SSU lead presented an update on the activities of the SSU during 2025 and the tentative workplan for 2026.[56]

[209] The SC discussed the tentative workplan for 2026.

[210] **Revision of draft reorganized pest risk analysis ISPM (2023-037).** The secretariat clarified that the secretariat had been cautious about planning ahead for this topic, because of uncertainty about how the ongoing CPM discussions about rethinking ISPMs would affect this draft ISPM. However, the SC noted that this potentially affected all draft ISPMs and development of ISPMs should continue according to the agreed CPM priorities for all topics for which a specification had been approved. As the *Revision of the draft reorganized pest risk analysis ISPM* (2023-037) was priority 1, the SC therefore agreed that it should be included in the list of potential EWGs for 2026.

[211] **Potential EWGs for 2026.** The secretariat listed the potential topics for which an EWG could be convened in 2026:

- *Safe provision of humanitarian aid in the phytosanitary context* (2021-020) (host already agreed: Fiji), priority 1;
- Annex *Remote audits* (2023-031) to ISPM 47 (*Audit in the phytosanitary context*), priority 1;
- Revision of ISPM 12 (*Phytosanitary certificates*) (2023-020), priority 1;
- *Revision of the draft reorganized pest risk analysis ISPM* (2023-037), priority 1; and
- Revision of ISPM 23 (*Guidelines for inspection*) (2023-014), priority 2.

[212] For reasons of staff capacity, the secretariat recommended that two EWGs be selected, with a maximum of three.

[213] The SC noted that the selection of EWGs depended not only on the priority of the topic but also on there being a host. There were four priority 1 topics, of which one already had an agreed host. The secretariat confirmed that the call for experts for this topic, *Safe provision of humanitarian aid in the phytosanitary context* (2021-020), had already been opened.

[214] The secretariat confirmed that Japan had offered to host one meeting in 2026: either (in order of preference), the EWG on *Revision of the draft reorganized pest risk analysis ISPM* (2023-037), the EWG on the revision of ISPM 23 (*Guidelines for inspection*) (2023-014), or a face-to-face TPCS meeting.

[215] Stavroula IOANNIDOU (Greece) commented that Greece would be able to host the EWG for the revision of ISPM 12 (*Phytosanitary certificates*) (2023-020).

[216] The SC noted that, if there were to be two EWGs per year, it would be 2028 before the EWG on the revision of ISPM 23 (*Guidelines for inspection*) (2023-014) could be held, as it was a priority 2. As a contracting party had offered to host it, the SC agreed that it was appropriate to ask the CPM to change the prioritization to priority 1. They acknowledged, however, that the EWG for this topic would not be held in 2026.

[55] 24_SC_2025_Nov.

[56] 30_SC_2025_Nov; 14_SC_2025_Nov.

[217] The SC noted, therefore, that there were two EWGs with firm offers from hosts (*Safe provision of humanitarian aid in the phytosanitary context* (2021-020) and *Revision of the draft reorganized pest risk analysis ISPM* (2023-037)) plus a third potential one (Revision of ISPM 12 (*Phytosanitary certificates*) (2023-020)), so no further decision from the SC was needed regarding EWGs for 2026.

[218] The SC:

(71) *noted* the update from the Implementation and Facilitation Unit;

(72) *noted* that Prudence ATTIPOE (Ghana) had already been selected as the SC representative to participate in the IC Team on E-commerce;

(73) *noted* the concept note for the Third IPPC General Survey and *requested* that the SC be invited to comment on draft concept notes for future IPPC General Surveys;

(74) *noted* the update from the Integration and Support Team;

(75) *noted* the SSU update;

(76) *thanked* Eyad MOHAMMED (Syrian Arab Republic) for his service to the SC;

(77) *noted* the tentative list of SSU activities for 2026;

(78) *noted* the tentative dates for the SC meetings in 2026; and

(79) *recommended* to CPM-20 (2026) that the priority for the revision of ISPM 23 (*Guidelines for inspection*) (2023-014) be changed from priority 2 to priority 1.

13. SC recommendations for CPM-20 (2026) decisions and discussions

[219] The SC noted that the following would be recommended to CPM-20 (2026):

- draft ISPMs for adoption: draft revision of ISPM 26 (*Establishment and maintenance of pest free areas for tephritid fruit flies*) (2021-010), and draft annex *Field inspection* (2021-018) to ISPM 23 (*Guidelines for inspection*);
- the addition of the following new topics to the *List of topics for IPPC standards*:
  - focused revision of ISPM 8 regarding the "pest absent" descriptions, with priority 1 (see agenda item 7.7), and
  - revision of ISPM 3 (from the call for topics; see agenda item 9.1), with priority 1,
- the following changes to the status and priority of topics in the *List of topics for IPPC standards*:
  - *Minimizing pest movement by air containers and aircraft* (2008-002), pending status to be lifted and to be assigned priority 2 (see agenda item 9.2), and
  - revision of ISPM 23 (*Guidelines for inspection*) (2023-014), to be changed from priority 2 to priority 1;
- *List of topics for IPPC standards* (to note the updates, including the addition of subjects); and
- revision of the SC terms of reference to change "IC member may attend as an observer" to "IC representative attends as an observer" (see agenda item 11.1).

[220] The SC noted that the following would be forwarded to, or a paper prepared for, CPM-20 (2026):

- SC update and covering paper on adoption of standards (including inviting the CPM to encourage contracting parties to submit pests and measures for inclusion in draft annexes to ISPM 46 during the call for information, with any additional pests and measures being proposed during the first consultation (see agenda item 5));
- rationale for the proposed change to the status of the topic *Minimizing pest movement by air containers and aircraft* (2008-002) (see agenda item 9.2); and
- SC position paper on rethinking ISPMs, as submitted to the SPG (see agenda item 3.6).

[221] These items are in addition to the item identified by the SC in May 2025 for consideration by CPM-20 (2026):

· ink amendments to the Spanish version of ISPM 15 and to ISPM 5, for noting.[57]

[222] The SC noted that the following papers would be forwarded to the CPM Bureau:

- SC position paper on rethinking ISPMs, as submitted to the SPG (see agenda item 3.6); and
- the paper from the TPDP on rethinking ISPMs (see agenda item 8.2).

14. Agenda items deferred to future SC meetings

[223] The following items were deferred to the May 2026 meeting of the SC:

- draft specification on revision of ISPM 23 (*Guidelines for inspection*) (agenda item 6.3 of this meeting);
- rationale for the proposed change from "intended outcome" to "required response" in the ISPM 5 definition of "treatment schedule", the context, and the potential impacts (agenda item 7.3 of this meeting) – but only if a paper is provided;
- specifications, functions, rules and guidance for technical panels (agenda item 7.4 of this meeting) (with the potential to then be forwarded from the SC to the SC-7 meeting the following week); and
- TPG activities and timing for providing recommendations on, and translation of, consultation comments (agenda item 7.5 of this meeting) (with the potential to then be forwarded from the SC to the SC-7 meeting the following week).

[224] The following item was forwarded to the May 2026 meeting of the SC-7:

- section on "Impacts on biodiversity and the environment" that is in all ISPMs (agenda item 7.1 of this meeting).

[225] The SC noted that the follow-up to agenda item 7.6 of this meeting (SC small working group revising the "Guidelines on the role of lead and assistant steward") would also need to be considered by the SC or SC-7.

15. Any other business

[226] There was no other business.

16. Date and venue of the next SC meeting

[227] The next SC meeting is scheduled for 11–15 May 2026 in Rome, Italy.

17. Evaluation of the meeting process

[228] The secretariat confirmed that they would email SC members a link to complete the evaluation of the meeting.

18. Review and adoption of the decisions

[229] The SC reviewed and adopted the decisions from this meeting.

[230] For ease of reference, a list of action points arising from the meeting is attached as Appendix 12.

[231] The SC:

[57] SC 2025-05, agenda item 15.

(80) *requested* that the secretariat open an e-decision to approve the report from this meeting, following approval of the text by the rapporteur.

19. Close of the meeting

[232] The SC chairperson thanked all participants for their contributions and closed the meeting.

Appendix 1: Agenda

	AGENDA ITEM	DOCUMENT NO.	PRESENTER/ SECRETARIAT SUPPORT
1.	**Opening of the Meeting**		
1.1	Welcome by the IPPC Secretariat	---	IPPC SECRETARY (PEROTTI)
2.	**Meeting Arrangements**		
2.1	Election of the Rapporteur	---	Chairperson (PETERSON)
2.2	Adoption of the Agenda	01_SC_2025_Nov	Chairperson
3.	**Administrative Matters**		
3.1	Documents List	02_SC_2025_Nov	KRAH
3.2	Participants List	03_SC_2025_Nov SC membership list	KRAH
3.3	Local Information	Link to local information	KRAH
3.4	Standard Setting Unit staff	Link to standard setting staff	NERSISYAN / KRAH
3.5	CPM Bureau: Update from June, September and October 2025 meetings	Link to Bureau meeting reports 45_SC_2025_Nov	NERSISYAN
3.6	Strategic Planning Group: Update 2025 meeting	Link to SPG meeting reports	PETERSON
4	**Draft ISPMs for recommendation to Commission on Phytosanitary Measures (CPM) for adoption (from second consultation)**		
4.1	***Draft revision of ISPM 26 (Establishment and maintenance of pest free areas for fruit flies (Tephritidae)) (2021-010)*** - Steward: Joanne WILSON - Assistant steward: Prudence ATTIPOE ❖ Compiled comments (including Steward's response) (2021-010) ❖ Steward's notes and potential implementation issues (2021-010) ❖ SC-7 2025 meeting report	2021-010 28_SC_2025_Nov 29_SC_2025_Nov Link SC-7 2025 meeting report	**WILSON** / TORELLA

	AGENDA ITEM	DOCUMENT NO.	PRESENTER/ SUPPORT SECRETARIAT
4.2	***Draft annex Field inspection (2021-018) to ISPM 23 (Guidelines for inspection)*** - Steward: Masahiro SAI - Assistant steward: Mariangela CIAMPITTI ❖ Compiled comments (including Steward's response) (2021-018) ❖ Steward's notes and potential implementation issues (2021-018) ❖ SC-7 2025 meeting report	2021-018 19_SC_2025_Nov 20_SC_2025_Nov Link SC-7 2025 meeting report	**SAI** / TORELLA
5	**Issues raised from the first consultation period**		
5.1	❖ *Draft annex International movement of fresh Musa spp. fruit (2023-028) to ISPM 46* ❖ *Draft annex International movement of fresh Colocasia esculenta for consumption (2023-023)* ❖ Comunidad Andina paper: Comunidad Andina paper: First consultation: 2023-028 - Draft annex international movement of fresh Musa spp. fruit to ISPM 46.	First consultation period 09_SC_2025_Nov	**DA SILVA** / MOREIRA **PETERSON** / MOREIRA **NERSISYAN**
5.2	**TPCS Concerns of inclusion of pests** ❖ COSAVE paper: COSAVE proposal to review the criteria for the inclusion of pests in the draft annexes to ISPM 46 ❖ APPPC paper: APPPC Considerations and Recommendations on Commodity Standards	18_SC_2025_Nov 08_SC_2025_Nov 10_SC_2025_Nov	**WILSON/MOREIRA** **DA SILVA** **SAI**
6	**Draft Specifications from first consultation for revision and approval**		
6.1	***Draft specification on Annex Remote audits to ISPM 47 (Audit in the phytosanitary context) - Priority 1*** - Steward: Steve CÔTÉ - Assistant steward: Nader EL BADRY ❖ Compiled comments (including Steward's response)	2023-031 41_SC_2025_Nov	**CÔTÉ** / MOREIRA

	AGENDA ITEM	DOCUMENT NO.	PRESENTER/ SECRETARIAT SUPPORT
	❖ Steward's notes	42_SC_2025_Nov	
6.2	***Draft specification on Revision of ISPM 12 (Phytosanitary certificates) - Priority 1*** - Steward: Stavroula IOANNIDOU - Assistant steward: Steve CÔTÉ ❖ Compiled comments (including Steward's response) ❖ Steward's notes	2023-020 44_SC_2025_Nov 47_SC_2025_Nov	**IOANNIDOU**
6.3	***Draft specification on Revision of ISPM 23 (Guidelines for inspection) - Priority 2*** - Steward: Masahiro SAI - Assistant steward: Steve CÔTÉ ❖ Compiled comments (including Steward's response) ❖ Steward's notes	2023-014 21_SC_2025_Nov 22_SC_2025_Nov	**SAI**
7	**Discussions and follow-up from SC May 2025**		
7.1	❖ Impacts on biodiversity and the environment that is in all ISPMs	26_SC_2025_Nov	**STIRLING**
7.2	❖ Evaluation of draft treatments submitted prior to the establishment of criteria under ISPM 15	43_SC_2025_Nov	**STIRLING/BUTTERA**
7.3	❖ Rationale for the proposed change from "intended outcome" to "required response" in the ISPM 5 definition of "treatment schedule", the context, and the potential impacts		**STIRLING/BUTTERA**
7.4	❖ Specifications, functions, rules and guidance for technical panels	32_SC_2025_Nov	**TORELLA**
7.5	❖ TPG activities and timing for providing recommendations and translation on consultation comments	35_SC_2025_Nov	**TORELLA/DA SILVA**
7.6	❖ SC small working group revising the "Guidelines on the role of lead and assistant steward(s)	46_SC_2025_Nov	**ATTIPOE /TORELLA / MARTINO**
7.7	❖ SC small working group on distinction between declarations of "absence" and an "official pest free area" in ISPMs ❖ TPCS: issues with pest absence definition	04_SC_2025_Nov 39_SC_2025_Nov	**WILSON**

	AGENDA ITEM	DOCUMENT NO.	PRESENTER/ SECRETARIAT SUPPORT
7.8	❖ OCS update – Discussion of features in the system (proposed by USA)	15_SC_2025_Nov	**DUBON**
8.	**Technical Panel urgent issues**		
8.1	❖ Rethinking ISPMS: TPDP opinion on Diagnostic Protocols	33_SC_2025_Nov	**MARTINO/ATTIPOE**
9.	**Topics**		
9.1	**2025 Call for Topics submissions**	13_SC_2025_Nov	KRAH
9.1.1	❖ Draft Proposed Standard: 2025-010: Revision of ISPM 3 Guidelines for the export, shipment, import and release of biological control agents and other beneficial organisms ❖ Draft Proposed Specification: 2025-010: Revision of ISPM 3 Guidelines for the export, shipment, import and release of biological control agents and other beneficial organisms	05_SC_2025_Nov 06_SC_2025_Nov	Chairperson / SC / KRAH
9.1.2	❖ Subject proposals from call for topics: diagnostic protocols - Tomato mottle mosaic virus- 2025-013 - Tomato leaf curl New Delhi virus- 2025-014	36_SC_2025_Nov 37_SC_2025_Nov	MARTINO / **ATTIPOE**
9.1.3	❖ Subject proposals from call for topics: glossary terms - Proposed submission - 2025-011: Inclusion of additional terms in ISPM 5 (Glossary of Phytosanitary Terms) related to wood packaging material) - Options for addressing the Canadian request on developing definitions related to ISPM 15	27_SC_2025_Nov 34_SC_2025_Nov	**DA SILVA/TORELLA**
9.2	**List of Topics** ❖ Review and adjustments to the *List of topics for IPPC standards* ❖ Minimizing pest movement by air containers and aircraft	Link to List of Topics for IPPC standards 31_SC_2025_Nov 17_SC_2025_Nov	Chairperson / KRAH **CIAMPITTI**
10.	**Standards Committee**		

	AGENDA ITEM	DOCUMENT NO.	PRESENTER/ SUPPORT SECRETARIAT
10.1	**Standards Committee Working Group (SC-7) May 2025** ❖ Update from the 2025 SC-7 meeting ❖ Agenda of the 2026 SC-7 meeting ❖ Selection or reconfirmation of SC-7 members	Link SC-7 2025 meeting report 25_SC_2025_Nov Link to SC membership list	NERSISYAN/TORELLA
10.2	***Draft annex Design and use of systems approaches for the phytosanitary certification of seeds (2018-009) to ISPM 38 (International movement of seeds)*** - Co-stewards: Matías GONZÁLEZ BUTTERA / Joanne WILSON - Proposed options on the way forward	23_SC_2025_Nov	GONZÁLEZ BUTTERA / WILSON
10.3	Summary on polls and forums discussed on e-decision site (from May 2025 to November 2025)	16_SC_2025_Nov	KRAH
11	**Implementation and Capacity Development (IC) Committee and SC/IC Interactions**		
11.1	Update on IC activities ❖ Implementation and Capacity Development Committee and Standards Committee Collaboration	Link to IC meeting reports 07_SC_2025_Nov	YIM
12	**Updates**		
12.1	Technical-consultation among Regional Plant Protection organizations (TC-RPPOs) 2025 update	Link to the 2025 webpage – TC RPPOs 11_SC_2025_Nov	CAPLEN
12.2	Update on the IPPC Regional Workshops	12_SC_2025_Nov Link to webpage	NERSISYAN
12.3	Briefings from IPPC Secretariat		
	❖ Update from the Implementation and Facilitation Unit (IFU) ❖ IPPC Observatory - Third IPPC General Survey (concept note)	38_SC_2025_Nov 40_SC_2025_Nov	BRUNEL MADAMINOVA
	❖ Update from the Integration and Support Team (IST)	24_SC_2025_Nov	SENTINELLI
	❖ Update from the Standard Setting Unit (SSU) ○ **Work plan and calendar**	30_SC_2025_Nov 14_SC_2025_Nov Link to the IPP calendar	NERSISYAN

	AGENDA ITEM	DOCUMENT NO.	PRESENTER/ SECRETARIAT SUPPORT
13.	**SC recommendations for CPM-20 (2026) decisions and discussions**		Chairperson
14.	**Agenda items deferred to future SC Meetings**		Chairperson
15.	**Any other business**		Chairperson
16.	**Date and venue of the next SC Meeting**	11 to 15 May 2026 (FAO HQ, Rome)	Chairperson
17.	**Evaluation of the meeting process**	Link to survey	Chairperson
18.	**Review and Adoption of the decisions**		Chairperson
19.	**Close of the meeting**		Chairperson

Appendix 2: Documents list

DOCUMENT NO.	AGENDA ITEM	DOCUMENT TITLE	DATE POSTED / DISTRIBUTED
Draft ISPMs			
2021-010	4.1	Draft revision of ISPM 26 (*Establishment and maintenance of pest free areas for fruit flies* (*Tephritidae*)) (2021-010)	2025-10-29
2021-018	4.2	Draft annex Field inspection (2021-018) to ISPM 23 (*Guidelines for inspection*)	2025-10-24
2023-031	6.1	Draft specification: Annex Remote audits to ISPM 47 (*Audit in the phytosanitary context*)	2025-11-06
2023-020	6.2	Draft specification: Revision of ISPM 12 (*Phytosanitary certificates*)	2025-11-11
2023-014	6.3	Draft specification: Revision of ISPM 23 (*Guidelines for inspection*)	2025-10-24
Other Documents			
01_SC_2025_Nov	2.2	Provisional Agenda	2025-11-16
02_SC_2025_Nov	3.1	Documents List	2025-11-16
03_SC_2025_Nov	3.2	Participants List	2025-11-03
04_SC_2025_Nov	7.7	Clarifying “pest absence” and “pest free area” in ISPMs	2025-09-30
05_SC_2025_Nov	9.2	Draft Proposed Standard: 2025-010: Revision of ISPM 3 Guidelines for the export, shipment, import and release of biological control agents and other beneficial organisms	2025-09-30
06_SC_2025_Nov	9.2	Draft Proposed Specification: 2025-010: Revision of ISPM 3 Guidelines for the export, shipment, import and release of biological control agents and other beneficial organisms	2025-09-30
07_SC_2025_Nov	11.1	Implementation and Capacity Development Committee and Standards Committee Collaboration	2025-09-30
08_SC_2025_Nov	8.1	COSAVE proposal to review the criteria for the inclusion of pests in the draft annexes to ISPM 46	2025-10-06
09_SC_2025_Nov	5.1	Comunidad Andina paper: First consultation: 2023-028 - Draft annex international movement of fresh *Musa spp*. fruit to ISPM 46.	2025-10-06
10_SC_2025_Nov	8.1	APPPC Considerations and Recommendations on Commodity Standards	2025-10-06
11_SC_2025_Nov	12.1	Technical-consultation among Regional Plant Protection organizations (TC-RPPOs) 2025 update	2025-10-08
12_SC_2025_Nov	12.2	Update on the IPPC Regional Workshops	2025-10-08
13_SC_2025_Nov	9.1	Update on the Call for Topics: Standards and Implementation	2025-10-17
14_SC_2025_Nov	12.3	2026 Strategic Work Plan: Standard Setting Unit	2025-10-17
15_SC_2025_Nov	7.8	OCS update – Discussion of features in the system (proposed by USA)	2025-10-20

DOCUMENT NO.	AGENDA ITEM	DOCUMENT TITLE	DATE POSTED / DISTRIBUTED
16_SC_2025_Nov_Rev	10.3	Summary on polls and forums discussed on e-decision site (from May 2025 to November 2025)	2025-10-20
17_SC_2025_Nov	9.2	Minimizing pest movement by air containers and aircraft	2025-10-21
18_SC_2025_Nov	8.1	TPCS concerns regarding the inclusion of certain pests in commodity standard annexes to ISPM 46	2025-10-24
19_SC_2025_Nov	4.2	Compiled comments (including Steward's response): Draft annex Field inspection (2021-018) to ISPM 23 (*Guidelines for inspection*)	2025-10-24
20_SC_2025_Nov	4.2	Steward's notes and potential implementation issues: Draft annex Field inspection (2021-018) to ISPM 23 (*Guidelines for inspection*)	2025-10-24
21_SC_2025_Nov	6.3	Compiled comments (including Steward's response): Draft specification on Revision of ISPM 23 (*Guidelines for inspection*)	2025-10-24
22_SC_2025_Nov	6.3	Steward's note: Draft specification on Revision of ISPM 23 (*Guidelines for inspection*)	2025-10-24
23_SC_2025_Nov	10.2	Draft annex Design and use of systems approaches for the phytosanitary certification of seeds (2018-009) to ISPM 38 – Options for the way forward	2025-10-24
24_SC_2025_Nov	12.3	Update from the Integration and Support Team (IST)	2025-10-24
25_SC_2025_Nov	10.1	Provisional Agenda of the 2026 SC-7 meeting	2025-10-28
26_SC_2025_Nov	7.1	Impacts on biodiversity and the environment that is in all ISPMs	2025-10-28
27_SC_2025_Nov	9.1.3	Proposed submission - 2025-011: Inclusion of additional terms in ISPM 5 (Glossary of Phytosanitary Terms) related to wood packaging material)	2025-10-29
28_SC_2025_Nov	4.1	Compiled comments (including Steward's response) (2021-010): Draft revision of ISPM 26 (*Establishment and maintenance of pest free areas for fruit flies (Tephritidae*))	2025-10-29
29_SC_2025_Nov	4.1	Steward's notes and potential implementation issues (2021-010): Draft revision of ISPM 26 (*Establishment and maintenance of pest free areas for fruit flies (Tephritidae*))	2025-10-29
30_SC_2025_Nov	12.3	Update from the Standard Setting Unit (SSU)	2025-11-03
31_SC_2025_Nov	9.2	Review and adjustments to the List of topics for IPPC standards	2025-11-03
32_SC_2025_Nov	7.4	Specifications, functions, rules and guidance for technical panels	2025-11-03
33_SC_2025_Nov	8.2	Rethinking ISPMS: TPDP opinion on Diagnostic Protocols	2025-11-03
34_SC_2025_Nov	9.1.3	Options for addressing the Canadian request on developing definitions related to ISPM 15	2025-11-03
35_SC_2025_Nov	7.5	TPG activities and timing for providing recommendations and translation on consultation comments	2025-11-03
36_SC_2025_Nov	9.1.2	Subject proposals from call for topics: diagnostic protocols: Tomato mottle mosaic virus- 2025-013	2025-11-04

DOCUMENT NO.	AGENDA ITEM	DOCUMENT TITLE	DATE POSTED / DISTRIBUTED
37_SC_2025_Nov	9.1.2	Subject proposals from call for topics: diagnostic protocols: Tomato leaf curl New Delhi virus- 2025-014	2025-11-04
38_SC_2025_Nov	12.3	Update from the Implementation and Facilitation Unit (IFU)	2025-11-05
39_SC_2025_Nov	7.7	TPCS: issues with pest absence definition	2025-11-05
40_SC_2025_Nov	12.3	IPPC Observatory - Third IPPC General Survey (concept note)	2025-11-05
41_SC_2025_Nov	6.1	Compiled comments (including Steward's response): Draft specification on Annex Remote audits to ISPM 47 (*Audit in the phytosanitary context*)	2025-11-06
42_SC_2025_Nov	6.1	Steward's notes: Draft specification on Annex Remote audits to ISPM 47 (*Audit in the phytosanitary context*)	2025-11-06
43_SC_2025_Nov	7.2	Evaluation of draft treatments submitted prior to the establishment of criteria under ISPM 15	2025-11-11
44_SC_2025_Nov	6.2	Compiled comments (including Steward's response): Draft specification on Revision of ISPM 12 (*Phytosanitary certificates*)	2025-11-11
45_SC_2025_Nov	3.5	CPM Bureau: Update from June, September and October 2025 meetings	2025-11-12
46_SC_2025_Nov	7.6	SC small working group revising the "Guidelines on the role of lead and assistant steward(s)	2025-11-14
47_SC_2025_Nov	6.2	Steward's notes: Draft specification on Revision of ISPM 12 (*Phytosanitary certificates*)	2025-11-16

IPP LINKS:	Agenda item
SC membership list	3.2
Link to local information	3.3
Link to survey	3.4
Standard setting staff	3.5
Link SC-7 2025 meeting report	4.1, 4.2, 9.1,
First consultation period	5.1,
List of Topics for IPPC standards	8.1
SC membership list	9.1
IC meeting reports	10.1
CPM Bureau	11.1
SPG meeting reports	11.2
Link to the IPP calendar	11.5
TC RPPOs- 2025 webpage	11.3

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Appendix 4: DRAFT REVISION OF ISPM 26: Establishment and maintenance of pest free areas for tephritid fruit flies (2021-010)

Status box

This is not an official part of the standard and it will be modified by the IPPC Secretariat after adoption.	
Date of this document	2025-11-28
Document category	Draft revision of ISPM
Current document stage	*To* CPM-20 (2026) for adoption
Major stages	2022-04 CPM-16 added topic *Revision of ISPM 26 (*Establishment of pest free areas for fruit flies (Tephritidae)*)* (2021-010) to the work programme with priority 2. 2022-11 Standards Committee (SC) approved Specification 75 (*Revision of ISPM 26 (*Establishment of pest free areas for fruit flies (Tephritidae)*)*). 2023-07 Expert working group drafted the revised standard. 2024-05 SC revised and approved for first consultation. 2024-07 First consultation. 2025-05 SC-7 revised and approved for second consultation. 2025-07 Second consultation. 2025-10 Steward revised. 2025-11 SC revised and approved for adoption.
Steward history	2022-05 SC Joanne WILSON (NZ, Lead Steward) 2022-05 SC Prudence ATTIPOE (GH, Assistant Steward)
Notes	This section will remain on the drafts going for consultation but will be deleted before adoption. 2023-07 Expert working group added “and maintenance” to the title (subsequently agreed by SC, 2024-05) 2024-02 Edited 2024-05 Edited 2025-05 Title changed, at suggestion of SC-7, to refer to “tephritid fruit flies” rather than “fruit flies (Tephritidae)”, as some fruit flies are not in the family Tephritidae 2025-06 Edited 2025-11 Edited

CONTENTS

Adoption

[Text to this paragraph will be added following adoption.]

INTRODUCTION

Scope

This standard provides requirements and guidance for the establishment and maintenance of pest free areas for economically important tephritid fruit flies.

If an exporting country has declared a fruit fly to be absent in an area in accordance with ISPM 8 (*Determination of pest status in an area*), then establishing a fruit fly pest free area (FF-PFA) in that area should not be required by importing countries – and hence this standard will not apply – unless there is technical justification.

Bibliography

References

The present standard refers to ISPMs. ISPMs are available on the International Phytosanitary Portal (IPP) at https://www.ippc.int/core-activities/standards-setting/ispms.

Further reading

Information to support the implementation of this standard may be available on the IPP at https://www.ippc.int/en/about/core-activities/capacity-development/guides-and-training-materials/.

IPPC Secretariat. 2019. *Guide for establishing and maintaining pest free areas – Understanding the principal requirements for pest free areas, pest free places of production, pest free production sites and areas of low pest prevalence*. IPPC Secretariat. Rome, FAO. xviii + 107 pp. https://www.ippc.int/en/publications/90620/

Definitions

Definitions of phytosanitary terms used in this standard can be found in ISPM 5 (*Glossary of phytosanitary terms*). In addition to the definitions in ISPM 5, in this standard the following definitions apply.

fruit fly pest free area	An **area** where a **national plant protection organization** (**NPPO**) has declared that the target fruit fly is absent (in accordance with ISPM 8, including when the target fruit fly has been **eradicated** in accordance with ISPM 9 (*Guidelines for pest eradication programmes*)) and where the **NPPO officially** maintains the area as a **pest free area** in accordance with this **standard**. A fruit fly pest free area is a **phytosanitary measure**.
target fruit fly	The **pest** specified for a fruit fly pest free area, regardless of whether the fruit fly is one species or more. "Target fruit fly" does not include sterile fruit flies released in a **sterile insect technique** programme.
breeding population	A group of fruit flies of the same species that interbreed and are capable of producing viable offspring within an **area**. A detection of an immature life stage (egg, larva or pupa), a female with viable eggs, or a specified number of adults is evidence of a breeding population.
fruit	Fruit in the botanical sense, including fruits that are sometimes called vegetables (e.g. tomato, melon).
host material	Any part of a **plant** that fruit flies can **infest**.

Outline of requirements

This standard provides requirements for FF-PFAs as a phytosanitary measure that may be used to protect plant resources and facilitate safe trade. National plant protection organizations should consider an FF-PFA to be a phytosanitary measure that, when used alone, is sufficient for managing the pest risk posed by a target fruit fly.

This standard includes general requirements for FF-PFA programmes relating to resources and infrastructure, communication and engagement, review activities for programme improvement, and documentation and record-keeping for transparency. It also has specific requirements for NPPOs to follow when initiating an FF-PFA, establishing an FF-PFA, maintaining an FF-PFA and suspending, reinstating or withdrawing an FF-PFA.

BACKGROUND

This standard, which focuses specifically on the establishment and maintenance of pest free areas for fruit flies, supplements the more general requirements for pest free areas in ISPM 4 (*Requirements for the establishment of pest free areas*). The measures and specific phytosanitary procedures in this standard target the fruit flies of the economically important species of the order Diptera, family Tephritidae, such as the genera *Anastrepha*, *Bactrocera*, *Carpomya* (synonym *Myiopardalis*), *Ceratitis*, *Dacus*, *Euleia*, *Rhagoletis*, *Strauzia* and *Zeugodacus*.

Areas naturally free from fruit flies may remain free from fruit flies as a result of the presence of physical barriers, unsuitable climatic conditions or the absence of hosts. Other areas naturally free from fruit flies may need to be maintained free through restrictions on the movement of regulated articles and related measures (if fruit flies have the potential to establish there). Areas where fruit flies are present may be made free by an eradication programme (ISPM 9).

IMPACTS ON BIODIVERSITY AND THE ENVIRONMENT

This standard may contribute to the protection of biodiversity and the environment by preventing the introduction and spread of fruit flies that are regulated pests. However, eradicating or excluding fruit flies may also have unintended effects, such as removing an important food source for endemic natural enemies that may be present in the FF-PFA. When establishing and maintaining FF-PFAs, countries are encouraged to consider the environmental impacts of the measures they are choosing and to apply phytosanitary measures and procedures that minimize impact on biodiversity and the environment.

GENERAL REQUIREMENTS

When designating and maintaining an area as an FF-PFA, the NPPO of the exporting country should follow the requirements outlined in ISPM 4 as well as the requirements in this standard.

The decision to establish an FF-PFA may be made based on factors such as:

- the biology and ecology of the target fruit fly;
- the population density of the target fruit fly in the area;
- the dispersal pathways of the target fruit fly;
- the size of the area;
- the geographical isolation of the area;
- the effectiveness of available survey methods; and
- the availability of methods for eradication of the target fruit fly.

1. Resources and infrastructure

When establishing and maintaining an FF-PFA, the NPPO of the exporting country should ensure that it has in place, or has ready access to, adequate infrastructure and operational capability and resources to establish and maintain the FF-PFA. Operational capability includes trained personnel to collect and identify specimens of the target fruit fly in a timely manner.

In circumstances where an entity is authorized to undertake certain activities on behalf of an NPPO, (such as diagnosis, application of phytosanitary treatments, eradication activities), this should be done in accordance with ISPM 45 (*Requirements for national plant protection organizations if authorizing entities to perform phytosanitary actions*). Authorized entities should be audited in accordance ISPM 47 (*Audit in the phytosanitary context*).

2. Communication and engagement

An important factor determining the success of an FF-PFA programme is the support and participation of the public close to the area, especially the local community. This includes the producers in the area, individuals who travel to or through the area, and parties with direct or indirect interests. Public support is particularly important in areas where the risk of introducing the target fruit fly is higher. The NPPO of the exporting country may implement an ongoing public- and stakeholder-awareness programme. It may be helpful to inform the public and stakeholders using different media (e.g. written, radio, television, social media, internet). This could be on topics such as the importance of establishing and maintaining the FF-PFA, and the importance of avoiding introducing or reintroducing the target fruit fly through potentially infested host material. Public and stakeholder support is likely to lead to more compliance with the various measures used to establish and maintain the FF-PFA.

3. Review activities

The FF-PFA programme should comply with all sections of this standard and its annexes, including the sections on regulatory control (section 7.1), surveillance procedures (e.g. trapping, fruit sampling – see Annex 1) and corrective action planning (section 7.3).

Once the FF-PFA is established, the NPPO of the exporting country should regularly review the FF-PFA maintenance programme to verify its effectiveness. The review should allow the NPPO to find and correct any deficiencies and to update procedures to take account of any new and relevant information on the target fruit fly or associated pathways.

4. Documentation and record-keeping

The phytosanitary measures used to establish and maintain an FF-PFA should be adequately documented. They should be reviewed and updated regularly, and they should include corrective actions if required.

The records of surveys, detections and incursions should be retained for at least 24 months, depending on the biology of the target fruit fly.

SPECIFIC REQUIREMENTS

5. Initiating the establishment of a fruit fly pest free area

When initiating the establishment of an FF-PFA, the NPPO of the exporting country should:

- ensure that a regulatory framework is in place to establish and maintain the FF-PFA;
- describe and delimit the area proposed as an FF-PFA (maps or coordinates showing the boundaries, natural barriers, locations where goods, people or vehicles enter the area, locations of hosts (commercial and non-commercial) in the area and, where necessary, the buffer zone);

- specify the target fruit fly species, describe its biology and ecology (seasonal abundance, distribution, host sequence) within, and adjacent to, the proposed area, and identify valid diagnostic methods;
- list the hosts of the target fruit fly in the proposed area in accordance with the criteria outlined in ISPM 37 (*Determination of host status of fruit to fruit flies (Tephritidae)*);
- describe potential pathways of entry for the target fruit fly into the proposed area (e.g. movement of hosts and other regulated articles, natural spread); and
- describe the annual climatic conditions in the proposed area (e.g. temperature, rainfall, relative humidity, prevailing wind speed and direction) and the potential effect of these on the establishment and spread of the target fruit fly.

Additional information that may be useful while establishing the FF-PFA includes:

- historical records of detections of, and surveys for, the target fruit fly in the area proposed as an FF-PFA;
- the results of phytosanitary actions taken following detections of the target fruit fly in the area;
- knowledge about hosts in the area, such as their growth patterns in different seasons or under different climatic conditions;
- a map of areas that are at high risk of infestation by the target fruit fly at particular times of the year according to stages of fruit ripening;
- a list of the other fruit fly species that may be present in the area, regardless of economic importance, to assist with identification; and
- comparison with other similar FF-PFAs.

6. Establishment of the fruit fly pest free area

6.1 Surveillance for the establishment of the fruit fly pest free area

General surveillance may be sufficient in cases where the target fruit fly has never been introduced into the area proposed as an FF-PFA nor into the surrounding areas (because of, for example, natural barriers or environmental conditions), and there have been no records of the target fruit fly's presence in the area proposed as an FF-PFA.

Where this is not the case, the NPPO of the exporting country should conduct specific surveillance to confirm the status of the target fruit fly in the proposed FF-PFA. The surveillance should be conducted in accordance with Annex 1 and in accordance with the requirements for a detection survey programme in ISPM 6 (*Surveillance*). For species that respond strongly to attractants, trapping should be used to determine fruit fly presence or absence in the area with a specified level of confidence. Fruit sampling may be used to support the trapping programme, particularly if trapping is less effective (e.g. if the species responds weakly to attractants). In cases where other parts of the plant can be infested by the fruit fly (e.g. flowers), then these parts should be sampled. If the species does not respond to attractants, host-material sampling may be used instead of trapping. When specific surveillance is used during the establishment of the FF-PFA, it should be undertaken for a period determined by:

- the biology and the ecology of the target fruit fly;
- the climatic conditions in the area;
- the availability of host material (e.g. fruit, flowers); and
- the sensitivity of the survey method used (e.g. how effective a trapping network is at detecting the target fruit fly).

To conduct specific surveillance, the NPPO of the exporting country should have:

- personnel who are trained to collect samples (e.g. fruit, fruit flies) in a timely manner; and
- access to trained personnel and to laboratory facilities with the equipment needed to identify specimens of the target fruit fly in a timely manner.

6.2 Controls on the movement of regulated articles

Controls on the movement of regulated articles should be applied to prevent the target fruit fly entering and establishing in the area proposed as an FF-PFA. These controls depend on the assessed pest risk (after identification of pathways) and should include:

- regulation of the target fruit fly species;
- the establishment of domestic movement restrictions, phytosanitary import requirements, or other measures to control the movement of regulated articles into or through the area proposed as an FF-PFA;
- inspection of regulated articles and examination of the relevant documentation; and
- where necessary in cases of non-compliance, the implementation of an appropriate phytosanitary action (e.g. treatment, refusal, destruction).

6.3 Establishment of a buffer zone

If the geographical isolation of the area proposed as an FF-PFA is not adequate to prevent the natural spread of the target fruit fly into it, the NPPO of the exporting country should consider establishing a buffer zone. The population of the target fruit fly in the buffer zone should be maintained at or below the specified tolerance level, which should be verified by surveillance. The NPPO of the exporting country should describe, with supporting maps, the boundaries of the buffer zone. Factors that should be considered when determining the boundaries for the buffer zone include:

- the biology and ecology of the target fruit fly;
- the rate and range of dispersal of the target fruit fly;
- the population density of the target fruit fly in surrounding areas;
- the presence of natural enemies that could reduce the target fruit fly population;
- host availability, host phenology, cropping systems, natural vegetation;
- the climatic conditions;
- the geography;
- the likelihood of assisted spread through identified pathways and control options for these pathways;
- the implementation of a surveillance system; and
- pest-control strategies that may be used.

6.4 Criteria for the area to qualify as a fruit fly pest free area

For the area to qualify as an FF-PFA, there should be verifiable evidence, collected over a specified period, that the target fruit fly is not present in the area. The period should be specified based on scientific information, such as:

- trapping sensitivity;
- the number of offspring per female and number of generations in a year;
- environmental conditions, including temperature (e.g. using degree-day models); and
- the level of confidence required by the NPPO of the importing country.

Detections of sterile fruit flies do not affect the establishment of an FF-PFA, as they are not the “target fruit fly” (see Definitions).

6.5 Official designation of the fruit fly pest free area

The NPPO of the exporting country may designate the area as an FF-PFA when it has been established in accordance with this standard and a programme of maintenance is in place.

7. Maintenance of the fruit fly pest free area

The NPPO of the exporting country should develop and implement a programme to ensure maintenance of the FF-PFA. This programme should be risk-based and should incorporate at least the following elements:

- a regulatory framework to control the movement of regulated articles;
- surveillance and collection of relevant data to maintain the FF-PFA, including a framework for reporting detections of the target fruit fly; and
- a corrective action plan, with associated provisions for suspension and reinstatement of the FF-PFA in accordance with this standard.

7.1 Controls on the movement of regulated articles

Controls on the movement of regulated articles are the same as for the establishment of the FF-PFA (see section 6.2).

7.2 Surveillance for maintaining the fruit fly pest free area

After establishing the FF-PFA, the surveillance programme should be continued at a level assessed as providing sufficient confidence that the FF-PFA is being maintained. Surveillance records should be well maintained. Reports on surveillance activities should be made available to the NPPOs of relevant importing countries on request.

For more information on surveillance, see section 6.1 and Annex 1.

7.3 Corrective action plan

The NPPO of the exporting country should prepare a corrective action plan for incursions, interceptions and maintenance issues. The plan should be implemented if the target fruit fly is detected in the FF-PFA, if the target fruit fly is intercepted in host material from the FF-PFA (see Annex 2), or if procedures are found to be inadequate to maintain the FF-PFA. This plan should cover:

- when the FF-PFA – the whole area or a part of it – should be suspended;
- notifying affected parties and NPPOs that the entire FF-PFA or a part of the FF-PFA has been suspended (in accordance with ISPM 17 (*Pest reporting*));
- the appropriate response to an incursion, depending on the biology and ecology of the target fruit fly and the characteristics of the FF-PFA (in whole or part), including:
  - where possible, identifying and addressing the cause of the incursion,
  - determining the extent of the infested area with delimiting surveys (trapping and host-material sampling) and determining whether the target fruit fly has established a population,
  - eradicating the fruit fly (see Annex 3),
  - if a breeding population is found, increasing surveillance to determine the effectiveness of eradication measures in the infested area and any buffer zone and hence whether the FF-PFA may be reinstated,
  - imposing movement controls on host material,
  - communicating and engaging with affected stakeholders; and
- the appropriate responses to interceptions of the target fruit fly in consignments originating from the FF-PFA, including:
  - where possible, identifying the cause of the interception (traceback investigation) and addressing it.

The corrective action plan may include interim measures proportionate to the number of detections in a specified period, agreed between relevant NPPOs to enable the continuation of trade. In some cases, the NPPO of the exporting country may consider that the target fruit fly is unable to establish a

permanent breeding population within the FF-PFA, for example if the fruit fly would normally die off in winter and a breeding population is found shortly before winter. In such cases, the relevant NPPOs may agree that no action is needed, unless a scientific assessment shows that the presence of the target fruit fly poses an unacceptable risk to trade.

The corrective action plan should be initiated as soon as possible after the confirmed identification of the target fruit fly.

8. Suspension, reinstatement or withdrawal of the fruit fly pest free area

8.1 Suspension

The FF-PFA should be suspended, in whole or in part, when the presence of a breeding population of the target fruit fly is determined based on one of the following triggers:

- detection of an immature life stage;
- detection of a female with viable eggs;
- detection of a specified number of adults (not including sterile adults); or
- interception in consignments originating from the FF-PFA.

The number of captured adults required to indicate the presence of a breeding population may be determined in advance by the NPPO of the exporting country. This number will depend on the biology and ecology of the target fruit fly, the trapping sensitivity (determined by the trapping density and the response of the target fruit fly to attractants), the distance and time between detections, the climate, the season, and the geographical location. Other information obtained, such as from modelling, may also be used to help determine whether a breeding population is present.

The FF-PFA should also be suspended, in whole or in part, if procedures have been implemented incorrectly (e.g. inadequate measures, such as trapping, movement controls or treatments, required to manage the target fruit fly within the FF-PFA).

If there is a detection, the corrective action plan should be implemented as specified in this standard (see Annex 2). If the presence of a breeding population that poses a risk to trade is confirmed, the NPPOs of relevant importing countries should be notified in accordance with ISPM 17. If the FF-PFA has been suspended, the notification should include criteria for lifting the suspension.

8.2 Reinstatement

Reinstatement of the FF-PFA should be based on the same requirements as for establishment (section 6), with the following conditions:

- there has been no further detection of the target fruit fly (other than sterile fruit flies) in the suspended area for a specified period; and
- in the case of a fault in the procedures, the fault has been corrected, and the consequences have been mitigated.

The period should consider the biology and ecology of the species, the prevailing environmental conditions, and the effectiveness of the surveillance system (see Annex 1).

The NPPO of the exporting country should notify the NPPOs of relevant importing countries when the FF-PFA has been reinstated, in accordance with ISPM 17.

8.3 Withdrawal

If the target fruit fly becomes established in the whole or a part of the FF-PFA, and if eradication is no longer pursued, the NPPO of the exporting country should either withdraw the whole FF-PFA or change its boundaries to remove the affected part of it.

In this event, the NPPO of the exporting country should notify the NPPOs of relevant importing countries, in accordance with ISPM 17, as well as domestic stakeholders.

This annex is a prescriptive part of the standard.

ANNEX 1: Specific surveillance for fruit flies (trapping and host-material sampling)

This annex contains general information on specific surveillance for fruit flies.

Trapping using attractants (such as lures) is generally the most effective surveillance method. However, some target fruit flies are not lure-responsive or only weakly lure-responsive.

Trapping should only be used as the sole method for fruit fly surveys if it can provide confidence that an FF-PFA is free from breeding populations, if it can rapidly detect any new breeding populations, and if it can support incursion response and the reinstatement of the FF-PFA when needed. If trapping does not provide sufficient confidence, it may be combined with host-material sampling. Host-material sampling may be used on its own if trapping is not an option.

1. Trapping procedures

Trapping procedures should contain enough information to give confidence that when the procedures are followed, the trapping network will work as designed. Factors to consider when developing procedures include:

- the biology and ecology of the target fruit fly;
- the conditions in the survey area (e.g. climate, environment, geography);
- the trap types and attractants;
- the trap density (number of traps per unit area), distribution and rotation between hosts;
- the presence of hosts of the target fruit fly;
- trap servicing (maintaining the traps);
- trap examination and specimen collection;
- record-keeping (including records of trap locations, examinations, and specimen collections);
- the diagnostic capacity and capability of the NPPO to identify target fruit fly species; and
- quality assurance for all procedures.

1.2 Traps and attractants

The type of trap selected should be appropriate for the target fruit fly, the environmental conditions, and the nature of the attractant.

When trapping multiple species of fruit fly, more than one attractant may be used. However, the potential for interference and cross-contamination between attractants, and the consequential reduction in trap effectiveness, should be considered.

1.3 Trap density

Trap density (number of traps per unit area) is a critical factor for effective fruit fly surveys. Trap density should be based on:

- the effectiveness of the trap (including attractant) at detecting the target fruit fly;
- host-cultivation practices;
- the availability of resources;
- the geography of the area;
- the climate;
- the time of year;
- existing pest-management practices; and
- any other factors that may affect the effectiveness of the survey.

Trap density may change depending on the phase of the FF-PFA programme, with the density required during the establishment phase being different to that required during the maintenance phase.

1.4 Trap deployment

Traps should be placed where they are most likely to detect a breeding population. Trap locations should be focused on places that are favourable to fruit fly breeding and potential incursions. The exact placement of traps within a network should be guided by:

- the climate, environment, geography and accessibility of the area;
- host presence and distribution;
- commercial crop-management practices; and
- the biology and ecology of the target fruit fly.

Trap locations, including rotation between hosts, should align with the sequence of fruit maturity in those hosts. In commercial-production areas, producers should take into account the location of traps when undertaking pest management, such as when applying pesticides (or other chemicals). The NPPO should also consider commercial pest-management practices when interpreting the results of the trapping programme and consider whether these practices are causing false-negative results.

Where feasible, the geographical coordinates of deployed traps should be recorded to help manage the trapping network.

1.5 Trap servicing

The frequency of trap servicing (maintaining traps and refreshing the lures or baits) should be determined according to:

- the longevity of the attractants (attractant persistency) and killing agents;
- the number of fruit flies the trap can hold;
- the rate of catch of target and non-target species;
- the placement of the traps;
- the biology and ecology of the target fruit fly;
- economic considerations; and
- environmental conditions.

The traps should be replaced when damaged.

When servicing traps, measures should be taken to avoid cross-contamination between different attractant types (e.g. cue-lure and methyl eugenol). Cross-contamination may reduce trap effectiveness and may delay corrective actions. Some attractants are highly volatile and care should be taken when storing, packaging, handling and disposing of attractants to avoid compromising the attractant effectiveness and operator safety. The used traps should be collected, checked and then disposed of securely.

1.6 Examining traps for fruit flies

The frequency with which traps are examined for the presence of fruit flies should be determined and adjusted according to:

- the prevailing environmental conditions;
- the likely catch rate; and
- the biology and ecology of the target fruit fly.

2. Host-material sampling procedures

To maximize the ability to detect breeding populations, procedures for sampling hosts as part of a target fruit fly survey should take into consideration:

- host status determination (in accordance with ISPM 37);
- factors related to the preferred hosts of the target fruit fly:
  - rate of infestation,

  - the effect of fruit maturity on infestation,
  - the signs or symptoms of infestation of host material;
- areas likely to be at risk of infestation:
  - backyards and gardens,
  - abandoned places of production,
  - host-waste collection sites,
  - fruit markets,
  - host packing, storage, processing and treatment facilities,
  - sites with a high concentration of cultivated or wild hosts,
  - where appropriate, locations where goods, people or vehicles enter the FF-PFA; and
- the sample size and selection, including consideration of:
  - the required level of statistical confidence,
  - the availability of hosts in the survey area,
  - the sampling of hosts with symptoms of fruit fly damage (e.g. fruit rejected at packing facilities), where appropriate.

3. Handling host samples and identification of fruit fly species

Samples of host material and the contents of traps should be labelled, transported and held in a secure manner to avoid mixing up host material or specimens and to protect the physical integrity of the contents. Samples of host material should be handled, transported and held in suitable conditions to maintain the viability of all immature stages of fruit flies in infested host material for identification.

Samples of host material collected in the field and specimens from traps should be taken to a secure facility for fruit flies to be recovered and the species identified. Host samples may be dissected, mashed up or sieved immediately or they may be maintained until identifiable fruit fly life stages develop.

Information about the sample taken should be recorded, such as:

- the date and location the sample was taken;
- the type of sample taken (host material or trap sample);
- the type of trap and type of attractant, if applicable;
- the number, sex and developmental stage of fruit fly individuals;
- host information (species and number of host plants);
- the condition of the sample (fresh or decayed);
- the name and contact details of the person who collected the sample; and
- any other relevant observations (e.g. trap density, quantity of samples, frequency of result).

Specimens can be identified using molecular techniques at any life stage, depending on the species, or they can be reared to adults and then identified using morphological techniques. Immature stages should be reared until they reach a life stage that allows for identification with the technology available to the NPPO (molecular or morphological).

Diagnostic protocols adopted as annexes to ISPM 27 (*Diagnostic protocols for regulated pests*) are available for pest diagnosis.

Once the results have been recorded, samples and specimens should be disposed of securely.

4. Quality assurance of trapping and host-material sampling

The NPPO of the exporting country may establish a quality-assurance strategy for the survey to confirm and document that all trapping and host-material sampling protocols have been met. The key elements of the quality-assurance strategy may include verification of ingredients in attractants and

their effectiveness, placement and recovery of sterile fruit flies to assess trap effectiveness, regular reviews of survey documentation, audits of trap placement and servicing and of host-material sampling, and confirmation of diagnostic competency.

This annex is a prescriptive part of the standard.

ANNEX 2: Corrective action plans

1. General considerations

If the target fruit fly is detected either in an FF-PFA or in host material from that area, the NPPO of the exporting country should implement a corrective action plan. However, no action is required if the detection is solely of sterile fruit flies.

If the target fruit fly that has been detected is not able to establish a permanent population (pest status "present: transient" according to ISPM 8), then it may not be necessary to take any action. However, if the presence of the target fruit fly poses an unacceptable risk to trade, a delimiting survey should be conducted immediately after the detection.

Once it is determined that the detection represents a breeding population, the objective of the corrective action plan should be to eradicate the target fruit fly to enable reinstatement of the FF-PFA.

The corrective action plan should consider:

- the biology and ecology of the target fruit fly;
- the prevailing environmental conditions in the FF-PFA (e.g. climate, geography);
- the distribution of the target fruit fly within the FF-PFA; and
- the distribution of hosts within the FF-PFA.

For more information, see ISPM 9.

Before implementing the corrective action plan, the NPPO of the exporting country should ensure that the following elements are in place:

- a regulatory framework under which the corrective action plan can be implemented;
- technical criteria for the determination of a breeding population;
- technical criteria for:
  - the selection of survey (trapping or host-material sampling) parameters,
  - the application of corrective actions for eradication,
  - the establishment of regulatory measures;
- the availability of sufficient operational resources and expertise;
- pest diagnostic capacity and capability to identify the target fruit fly; and
- effective communication within the NPPO of the exporting country and with the NPPOs of importing countries.

2. Actions to implement the corrective action plan

2.1 Determination of the pest status upon detection

If the detection of the target fruit fly could constitute a breeding population that is not transient (i.e. one of the other "present" categories described in ISPM 8), a delimiting survey should be conducted immediately after detection. The delimiting survey may include placement of additional traps and an increased frequency of trap examination and host-material sampling activities.

The outcome of the delimiting survey will determine necessary corrective actions. In cases where an established population is present, the delimiting survey is also used to determine the size of the infested area for eradication of the target fruit fly.

2.2 Suspension or withdrawal of the fruit fly pest free area

If a breeding population has established (i.e. if any of the triggers specified in sections 8.1 or 8.3 of the core text of this standard have been reached), the affected area should be either suspended or withdrawn from the FF-PFA. The affected area – including the infested area and, where necessary, a buffer zone – may be the whole FF-PFA or part of it. In most cases, the affected area may be delimited by applying a suspension radius that depends on the biology and ecology of the target fruit fly. The same radius may apply for all FF-PFAs for a given target fruit fly unless scientific evidence supports a deviation.

2.3 Application of control measures in the affected area

Specific corrective actions to eradicate the target fruit fly from the affected area should be applied immediately and adequately communicated to stakeholders. These actions may include one or more of the following:

- harvest and destruction, treatment or removal of host fruit;
- removal of fallen host fruit;
- destruction of other host material (e.g. flowers);
- soil treatment (chemical or physical);
- insecticide application, including selective insecticide bait treatments;
- biological controls;
- male annihilation technique;
- sterile fly release; or
- mass trapping.

Phytosanitary measures should be immediately enforced to control the movement of regulated articles that can host the target fruit fly. These measures may include, as appropriate, host disinfestation and the operation of roadblocks to prevent the movement of infested host material from the affected area to the rest of the FF-PFA. Other measures may be applied, such as increased surveys, supplementary trapping or phytosanitary treatment of host consignments from the affected area. Interim measures (e.g. phytosanitary treatments, systems approaches) may be agreed with importing countries before a breeding population occurs within the FF-PFA to minimize disruption to trade.

Details about control measures for a breeding population within an FF-PFA are given in Annex 3.

2.4 Criteria for reinstatement of the fruit fly pest free area and actions to be taken

The criteria for determining that eradication from the affected area has been successful are specified in section 8.2 of the core text of this standard and should be included in the corrective action plan for the target fruit fly. The length of time before eradication may officially be declared successful depends on the biology and ecology of the species, the prevailing environmental conditions, and the effectiveness of the surveillance used to detect the target fruit fly. Once the criteria have been fulfilled, the NPPO of the exporting country should reinstate the FF-PFA and surveillance levels for the maintenance of the FF-PFA.

2.5 Reporting of changes in the fruit fly pest free area

The NPPO of the exporting country should continue to inform all affected parties of changes to the FF-PFA, as appropriate. This includes the NPPOs of relevant importing countries, entities authorized to undertake relevant activities on behalf of the NPPO of the exporting country (see ISPM 45), and domestic stakeholders. Pest reporting obligations should be observed (see ISPM 17).

This annex is a prescriptive part of the standard.

ANNEX 3: Control measures when a breeding population is detected within a fruit fly pest free area

The objective of the control measures should be to eradicate the population of the target fruit fly and reinstate the FF-PFA, protect the FF-PFA surrounding the affected area, and meet the phytosanitary import requirements of importing countries. The area in which the control measures will be applied is known as the "eradication area". Control measures are needed because movements of regulated articles out of and through an eradication area pose a risk of spreading the target fruit fly.

If eradication is not possible, then either the whole FF-PFA should be withdrawn or its boundaries should be changed to remove the affected part of it.

1. Initiation of an eradication area

The eradiation area should be larger than the infested area.

The size of the eradication area (see Figure 1) should be based on a technical evaluation and that part of the FF-PFA should be suspended until successful eradication has been demonstrated.

A boundary delimiting the minimum size of the eradication area should be drawn, centred on the actual detected population of the target fruit fly and with a radius large enough to cover the area suspected to be infested and some distance beyond, as determined by the NPPO of the exporting country. In the case of several population detections, several (possibly overlapping) boundaries may be drawn accordingly, as illustrated in Figure 1.

If necessary for the practical implementation of the eradication area, the NPPO of the exporting country may adjust the eradication area to correspond to administrative boundaries or topography.

A map with geographical coordinates should be used for delimiting, and enabling recognition of, the eradication area. Signposts may be placed along boundaries and on roads to alert the public, and notices may be published to raise public awareness.

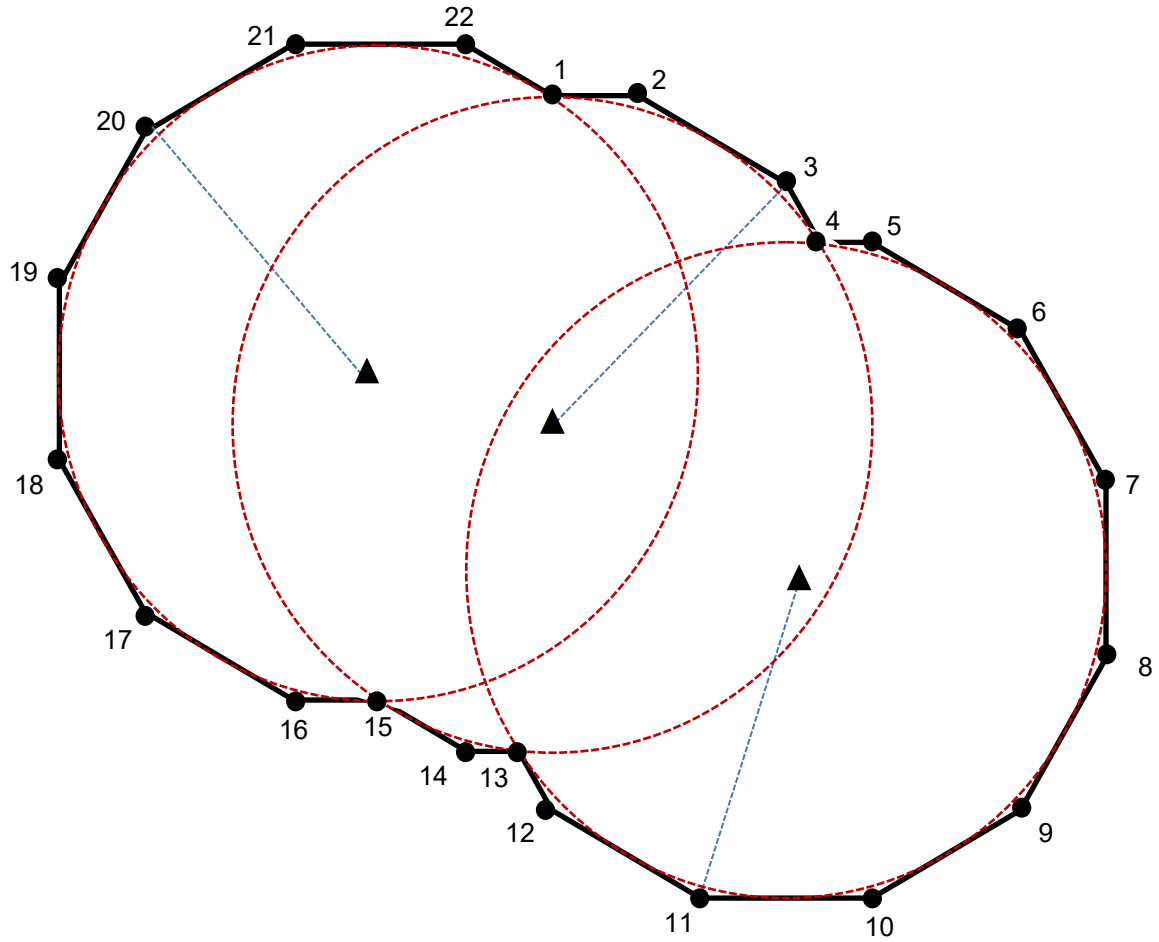

Figure 1. Example of circles delimiting the eradication area around three detected pest populations.

Notes: The centres of three detected fruit fly populations are marked by triangles (▲), with a delimiting circle (red dotted lines) around each one. The solid circles (●) and associated numbers indicate places with geo-referenced coordinates, and the black line is the boundary of the entire eradication area.

2. Control measures

Each stage of the production chain (e.g. growing, sorting, packing, transporting, distribution) may lead to the target fruit fly entering the FF-PFA from the eradication area. Appropriate control measures should be applied to manage the pest risk to the surrounding FF-PFA and any importing countries.

Control measures applied at each stage of the production chain are described in the following sections.

2.1 Production

During the production period within the eradication area, the NPPO of the exporting country may require the application of control measures to avoid infestation, such as mechanical and cultural controls (e.g. removal and destruction of host fruit, soil swamping and ploughing), chemical treatment of soil, fruit bagging, insecticide baits, bait stations, male annihilation technique, mass trapping, sterile insect technique, biological control.

2.2 Movement of regulated articles

To prevent the spread of the target fruit fly, regulated articles (e.g. host fruit, soil, contaminated equipment and waste) being moved from, through or within the eradication area should be transported in a way that prevents infestation and contamination. For example, packhouses could be required to bag fruit; transporters could be required to use insect proofing, cover the load or use fully enclosed transport. This also pertains to moving regulated articles for phytosanitary certification.

2.3 Packing, storage, processing and treatment facilities

Facilities for packing, storing, processing or treating fruit fly host material may be located within the eradication area or in the FF-PFA. Control measures to prevent the target fruit fly entering the FF-PFA from the eradication area should be considered for each type of facility. The NPPO of the exporting country should have a clear overview of all facilities located within the FF-PFA and eradication area. The NPPO should require that all facilities within the FF-PFA and eradication area are registered and audited. The NPPO should also require the facilities to have appropriate control measures in place to do the following:

- maintain traceability of host material;
- prevent the target fruit fly from entering or escaping the facility;
- monitor regularly for the presence or absence of the target fruit fly in and around the facility;
- eliminate fruit flies if detected in and around the facility;
- prevent mixing of host material originating from areas of different pest status (e.g. by consignment segregation, insect proofing to prevent contamination);
- securely dispose of rejected host material; and
- ensure that any packaging, containers and conveyances are insect-proof and clean.

2.4 Sale inside the eradication area

Host material sold within the eradication area may be at risk of infestation if exposed before being sold (e.g. placed on display in an open-air market) and may therefore need to be physically protected to avoid spread of the target fruit fly while on display and being stored. If at risk of infestation and not physically protected, the host material should not be moved outside the eradication area after being exposed.

3. Documentation and record-keeping

The control measures, including corrective actions, used in the eradication area should be adequately documented, reviewed and updated (see also ISPM 4) and these records should be retained for at least 24 months. Such documents should be made available to the NPPOs of relevant importing countries on request.

4. Termination of control measures in the eradication area

To be considered successful, eradication of the target fruit fly in the eradication area should meet the requirements for reinstatement of the FF-PFA after a breeding population is detected, in accordance with this standard (see section 8.2 of the core text of this standard).

Any control measures that could interfere significantly with the effectiveness of the surveillance network should be removed for a specified period before eradication is declared. The other control measures should remain in force until eradication is declared. If eradication is successful, the control measures in the eradication area may be terminated and the FF-PFA may be reinstated. If eradication is unsuccessful, then either the whole FF-PFA should be withdrawn or its boundaries should be changed to remove the affected part of it. The NPPOs of relevant importing countries should be notified, as well as other affected parties.

ATTACHMENTS

Guidance material for further reading

It is intended that Annex 3, Appendix 1 and Appendix 2 of ISPM 26 as adopted in 2015 are moved to guidance material so that they can be updated more easily. To ensure that this information is not lost in the interim period, it is provided as attachments to this standard. Once the information has been updated and made available as guidance material, these attachments will be removed from this standard.

This attachment is for reference purposes only and is not a prescriptive part of this standard.

ATTACHMENT 1: Phytosanitary procedures for fruit fly management (formerly Annex 3 of ISPM 26, adopted in 2015)

This annex provides guidance for the application of phytosanitary procedures for fruit fly management.

Various phytosanitary procedures are used for fruit fly suppression, containment, eradication and exclusion. These procedures may be applied to establish and maintain FF-PFAs (this standard), and to develop a systems approach for fruit flies, which may include the establishment and maintenance of fruit fly areas of low pest prevalence (FF-ALPPs) (ISPM 35 (*Systems approach for pest risk management of fruit flies (Tephritidae)*)).

The phytosanitary procedures include mechanical and cultural controls, insecticide bait application technique (BAT), bait stations, male annihilation technique (MAT), mass trapping, sterile insect technique (SIT), biological control, and controls on the movement of regulated articles. Many of these procedures can be environmentally friendly alternatives to insecticide application for managing fruit flies.

1. Objectives of Fruit Fly Management Strategies

The four strategies used to manage target fruit fly populations are suppression, containment, eradication and exclusion. One or more of these strategies can be used depending on the circumstances and objectives. The corresponding phytosanitary procedures used for fruit fly management should take into account the phytosanitary import requirements of the importing country, fruit fly status in the target area, hosts, host phenology and host susceptibility, pest biology, and economic and technical feasibility of the available phytosanitary procedures, as relevant.

1.1 Suppression

Suppression strategies may be applied for purposes such as to:

- reduce a target fruit fly population to below an acceptable level
- establish an FF-ALPP (ISPM 22 (*Requirements for the establishment of areas of low pest prevalence*); ISPM 35)
- implement a corrective action in an FF-ALPP when the specified level of low pest prevalence has been exceeded (ISPM 22; ISPM 35)
- reduce a target fruit fly population in order to achieve a specified pest population level that can be used as part of a systems approach (ISPM 14 (*The use of integrated measures in a systems approach for pest risk management*); ISPM 35)
- precede, as part of a process, target fruit fly population eradication in order to establish an FF-PFA (ISPM 4).

1.2 Containment

Containment strategies may be applied for purposes such as to:

- prevent the spread of a target fruit fly from an infested area to an adjacent FF-PFA
- contain an incursion of a target fruit fly into non-infested areas
- protect, as a temporary measure, individual areas where target fruit flies have been eradicated as part of an ongoing eradication programme in a larger area.

1.3 Eradication

Eradication strategies may be applied for purposes such as to:

- eliminate a fruit fly population in order to establish an FF-PFA (ISPM 4)

- eliminate an incursion of a fruit fly species that is a quarantine pest before establishment can occur (this may be part of a corrective action plan in an FF-PFA if the target fruit fly species is detected).

1.4 Exclusion

Exclusion strategies may be applied to prevent the introduction of a fruit fly into an FF-PFA.

2. Requirements for the Application of the Phytosanitary Procedures

The following requirements should be considered when applying phytosanitary procedures for fruit fly management:

2.1 Fruit fly identification capabilities

Accurate identification of the target fruit fly species should be ensured so that the appropriate strategies and phytosanitary procedures can be selected and applied. NPPOs should have access to trained personnel to identify detected specimens of adult and, where possible, immature stages of the target fruit fly species in an expeditious manner (ISPM 6 (*Guidelines for surveillance*)).

2.2 Knowledge of fruit fly biology

The biology of the target fruit fly species should be known in order to determine the appropriate strategy to address its management and select the phytosanitary procedures that will be applied. Basic information on the target fruit fly species may include life cycle, hosts, host sequence, host distribution and abundance, dispersal capacity, geographical distribution and population dynamics. The climatic conditions may also affect the strategy adopted.

2.3 Area delimitation

The area in which the phytosanitary procedures will be applied should be delimited. Geographical characteristics and host distribution within this area should be known.

2.4 Stakeholder participation

Successful implementation of fruit fly phytosanitary procedures requires active and coordinated participation of interested and affected groups, including government, local communities and industry.

2.5 Public awareness

An ongoing public awareness programme should be put in place to inform interested and affected groups about the pest risk and phytosanitary procedures that will be implemented as part of the fruit fly management strategy. Such a programme is most important in areas where the risk of introduction of the target fruit fly species is high. For the success of the management programme it is important to have the support and participation of the public (especially the local community) within the management programme area and of individuals who travel to or through the area.

2.6 Operational plans

An official operational plan that specifies the required phytosanitary procedures should be developed. This operational plan may include specific requirements for the application of phytosanitary procedures and describe the roles and responsibilities of the interested and affected groups (ISPM 4; ISPM 22).

3. Phytosanitary Procedures Used in Fruit Fly Management Strategies

Fruit fly management strategies may involve the use of more than one phytosanitary procedure.

Phytosanitary procedures may be applied in an area, at a place of production or at a production site; during the pre- or post-harvest period; at the packing house; or during shipment or distribution of the commodity. Pest free areas, pest free places of production and pest free production sites may require

the establishment and maintenance of an appropriate buffer zone. Appropriate phytosanitary procedures may be applied in the buffer zone if necessary (this standard and ISPM 10 (*Requirements for the establishment of pest free places of production and pest free production sites*)).

3.1 Mechanical and cultural controls

Mechanical and cultural control procedures may be applied in order to reduce the level of fruit fly populations. These controls include phytosanitary procedures such as orchard and field sanitation, fruit stripping, pruning, host plant removal or netting, fruit bagging, host-free periods, use of resistant varieties, trap cropping, ploughing and ground swamping.

The effectiveness of field sanitation increases when the collection and disposal of fallen fruit are focused on the preferred hosts and are done continuously on an area-wide basis. For good results, collection and disposal should be done before, during and after harvest.

Fruit that remains on the host plants after harvest, fruit rejected because of poor quality during harvest and packing, and fruit on host plants present in the surrounding area should be collected and safely disposed of (e.g. by deep burial).

Elimination or maintaining a low level of vegetation at the place of production will facilitate collection of fallen fruit. In addition, when vegetation is kept low fallen fruit with larvae may be more exposed to direct sunlight and natural enemies, which will contribute to fruit fly larvae mortality.

Bagging of fruit and use of exclusion netting can prevent fruit fly infestation of the fruit. Where used, bagging or exclusion netting should be carried out before the fruit becomes susceptible to fruit fly infestation.

The pupae of many fruit flies can be targeted by disturbing the soil medium in which they pupate. This can be done by ground swamping (causing pupae anoxia) or ploughing (causing physical damage, desiccation to the pupae and exposing them to natural enemies).

3.2 Insecticide bait application technique

BAT uses an appropriate insecticide mixed together with a food bait. Commonly used food baits include attractants such as hydrolysed protein, high-fructose syrup and molasses, used alone or in combination. This technique is an effective control of adult fruit fly populations and reduces the negative impacts on non-target insects and the environment.

Insecticide bait applications should start in time to target maturing adults and to prevent the infestation of fruit. For fruit protection this may be up to three months before the beginning of the harvesting season for fruit intended for export or on detection of the first adult flies or larvae in the field or urban area. Maturing adults should be targeted as this is when protein demands are at their highest. The number of and intervals between applications will depend on the characteristics of the target fruit fly species (biology, abundance, behaviour, distribution, life cycle, etc.), host phenology and weather conditions.

Insecticide baits can be applied from the ground or from the air.

3.2.1 Ground application

Ground application of insecticide bait is usually used for relatively small production areas, such as individual orchards, or in urban areas.

The insecticide bait should generally be applied on or inside the middle to top part of the canopy of host and shelter plants, but specific application should relate to the height of the host plant. For low-growing host plants (e.g. cucurbits, tomatoes, peppers), the insecticide bait should be applied on taller plants surrounding the cultivated area that serve as shelter and a source of food. In FF-PFAs, as part of an emergency action plan to eliminate an outbreak, the insecticide bait can also be applied to non-host plants or other appropriate surfaces around the detection site.

3.2.2 Aerial application

Aerial application of insecticide bait may be used on large production areas and in areas where hosts are scattered in patches over large areas of land. Aerial spraying may be more cost-effective than ground spraying for large-scale programmes, and a more uniform coverage of bait in the target area may be achieved. In some countries, however, aerial spraying may be subject to restrictions due to environmental considerations.

Once the treatment area is selected, it may be defined using a georeferencing device and recorded in digitized maps using GIS software in order to ensure the efficient application of bait sprays and reduce the environmental impact.

To treat the target area, insecticide bait may not need to be applied as full coverage but only in some swathes, such as every second or third swathe. The altitude and speed of aerial application should be adjusted to conditions such as bait viscosity and nozzle specifications, wind velocity, temperature, cloud cover and topography of the terrain.

3.3 Bait stations

Lure and kill devices known as “bait stations” may be a more environmentally friendly control procedure for fruit fly suppression than BAT. Bait stations consist of an attractant and a killing agent that may be contained in a device or directly applied to an appropriate surface. Unlike traps, bait stations do not retain the attracted fruit flies.

Bait stations are suitable for use in, for example, commercial fruit production operations, area-wide fruit fly management programmes, public areas and, in many cases, organic groves. Bait stations may be used in FF-PFAs for population suppression of localized and well-isolated outbreaks. In infested areas known to be fruit fly reservoirs and sources of incursions into FF-ALPPs and FF-PFAs, bait stations should be deployed at high densities.

It is recommended that the attractant used in the bait station be female-biased, thereby directly reducing the overall fruit infestation.

3.4 Male annihilation technique

MAT involves the use of a high density of bait stations consisting of a male lure combined with an insecticide to reduce the male population of target fruit flies to such a low level that mating is unlikely to occur (FAO, 2017).

MAT may be used for the control of those fruit fly species of the genera *Bactrocera* and *Dacus* that are attracted to male lures (cuelure or methyl eugenol). Methyl eugenol is more effective than cuelure for male annihilation of species attracted to these lures.

3.5 Mass trapping

Mass trapping uses trapping systems at a high density to suppress fruit fly populations. In general, mass trapping procedures are the same as for trapping used for survey purposes (Appendix 1 of this standard). Traps should be deployed at the place of production early in the season when the first adult flies move into the field and populations are still at low levels and should be serviced appropriately.

Trap density should be based on such factors as fruit fly density, physiological stage of the fruit fly, efficacy of the attractant and killing agent, phenology of the host and host density. The timing, layout and deployment of traps should be based on the target fruit fly species and host ecological data.

3.6 Sterile insect technique

The SIT is a species-specific environmentally friendly technique that can provide effective control of target fruit fly populations (FAO, 2017).

SIT is effective only at low population levels of the target species and may be used for:

- suppression, where SIT may be a stand-alone phytosanitary procedure or combined with other phytosanitary procedures to achieve and maintain low population levels
- containment, where SIT may be particularly effective in areas that are largely pest free (such as buffer zones) but that are subjected to regular pest entries from adjacent infested areas
- eradication, where SIT may be applied when population levels are low to eradicate the remaining population
- exclusion, where SIT may be applied in endangered areas that are subject to high pest pressure from neighbouring areas.

3.6.1 Sterile fruit fly release

Sterile fruit flies may be released from the ground or from the air. Release intervals should be adjusted according to the longevity of the insect. Sterile fruit flies are generally released once or twice per week but the frequency of release may be influenced by circumstances such as pupae supply, staggered adult fly emergence and unfavourable weather. To establish sterile fruit fly release density, the quality of the sterile fruit flies, the level of the wild population and the desired sterile: wild fruit fly ratio should be considered.

After release of the sterile fruit flies, trapping and identification of the sterile and wild flies should be performed in order to evaluate the effectiveness of the release procedure and also to prevent unnecessary corrective actions. Released sterile flies should be recaptured in the same traps that are used for detection of the wild population as this provides feedback on whether the desired sterile fruit fly density and sterile: wild fly ratio were attained (FAO, 2017).

Ground release may be used when aerial release is neither cost-effective nor efficient (i.e. discontinuous distribution or relatively small area), or where additional releases are required to provide a higher density of fruit flies for a particular reason (e.g. in areas where a specified level of low pest prevalence is exceeded).

Aerial release is more cost-effective than ground release for large-scale programmes and it provides a more uniform sterile fruit fly distribution than ground release, which may clump sterile fruit flies in localized sites or along release routes. Once the release area is selected, it may be defined using a georeferencing device and recorded in digitized maps using GIS software: this will help ensure the efficient distribution of sterile flies. The most common methods for aerial release are chilled adult and paper bag systems (FAO, 2017).

To determine the release altitude, several factors should be considered, including wind velocity, temperature, cloud cover, topography of the terrain, vegetation cover, and whether the target area is urban or rural. Release altitudes range from 200 to 600 m above ground level. However, lower release altitudes should be preferred, especially in areas subjected to strong winds (to prevent excessive sterile fruit fly or bag drift) and in areas where predation by birds is high and frequent. Release in the early morning, when winds and temperature are moderate, is preferable.

3.6.2 Sterile fruit fly quality control

Routine and periodic quality control tests should be carried out to determine the effect of mass rearing, irradiation, handling, shipment duration, holding and release on the performance of the sterile fruit flies, according to desired quality parameters (FAO/IAEA/USDA, 2014).

3.7 Biological control

Classic biological control may be used to reduce fruit fly populations. For further suppression, inundative release may be used. During inundative release, large numbers of natural enemies, typically parasitoids, are mass reared and released during critical periods to reduce pest populations. The use of biological control by inundation is limited to those biological control agents for which mass-rearing technology is available. The mass-reared natural enemies should be of high quality so that suppression

of the target fruit fly population can be effectively achieved. The release of the biological control agents should be directed towards marginal and difficult to access areas that have high host density and that are known to be fruit fly reservoirs and sources of infestation for commercial fruit production or urban areas.

3.8 Controls on the movement of regulated articles

For FF-PFAs, and under certain circumstances for FF-ALPPs, controls on the movement of regulated articles should be implemented to prevent the entry or spread of target fruit fly species (see details in Annex 1 of this standard).

4. Materials Used in the Phytosanitary Procedures

The materials used in the phytosanitary procedures should perform effectively and reliably at an acceptable level for an appropriate period of time. The devices and equipment should maintain their integrity for the intended duration that they are deployed in the field. The attractants and chemicals should be certified or bio-assayed for an acceptable level of performance.

5. Verification and Documentation

The NPPO should verify the effectiveness of the chosen strategies (suppression, containment, eradication and exclusion) and relevant phytosanitary procedures. The main phytosanitary procedure used for verification is adult and larval surveillance, as described in ISPM 6.

NPPOs should ensure that records of information supporting all stages of the suppression, containment, eradication and exclusion strategies are kept for at least 24 months.

6. References

FAO/IAEA (International Atomic Energy Agency)**. 2017.** *Guideline for packing, shipping, holding and release of sterile flies in area-wide fruit fly control programmes*, Second edition, by Zavala-López J.L. and Enkerlin W.R. (eds.). Rome, Italy. 140 pp.

FAO/IAEA (International Atomic Energy Agency)/**USDA** (United States Department of Agriculture)**.** 2014. *Product quality control for sterile mass-reared and released tephritid fruit flies*. Version 6.0. Vienna, IAEA. 164 pp.

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

ATTACHMENT 2: Fruit fly trapping (formerly Appendix 1 of ISPM 26, adopted in 2011)

This appendix provides detailed information for trapping procedures for fruit fly species (Tephritidae) of economic importance under different pest statuses. Specific traps, in combination with attractants and killing and preserving agents, should be used depending on the technical feasibility, the species of fruit fly and the pest status of the area, which can be an infested area, an FF-ALPP, or an FF-PFA. It describes the most widely used traps, including materials such as trapping devices and attractants, and trap densities, as well as procedures including evaluation, data recording and analysis.

Additional information about fruit fly trapping is available in the following publication of the Food and Agriculture Organization of the United Nations (FAO) and the International Atomic Energy Agency (IAEA) (in English only):

FAO/IAEA (International Atomic Energy Agency). 2018. *Trapping guidelines for area-wide fruit fly programmes*, 2nd edn, eds W.R. Enkerlin & J. Reyes-Flores. Rome, FAO. 65 pp. Available at https://www.iaea.org/about/insect-pest-control-section (last accessed 1 October 2018).

Diagnostic protocols adopted as annexes to ISPM 27 (*Diagnostic protocols for regulated pests*) may be useful tools to diagnose the adult fruit fly specimens.

1. Pest Status and Survey Types

There are five pest statuses where surveys may be applied:

A. Pest present without control. The pest is present but not subject to any control measures.

B. Pest present under suppression. The pest is present and subject to control measures. Includes FF-ALPP.

C. Pest present under eradication. The pest is present and subject to control measures. Includes FF-ALPP.

D. Pest absent and FF-PFA being maintained. The pest is absent (e.g. eradicated, no pest records, no longer present) and measures to maintain pest absence are being applied.

E. Pest transient. Pest under surveillance and actionable, under eradication.

The three types of surveys and corresponding objectives are:

- **monitoring surveys**, conducted to verify the characteristics of the pest population
- **delimiting surveys**, conducted to establish the boundaries of an area considered to be infested by or free from the pest
- **detection surveys**, conducted to determine if the pest is present in an area.

Monitoring surveys are necessary to verify the characteristics of the pest population before the initiation or during the application of suppression and eradication measures to verify the population levels and to evaluate the efficacy of the control measures. These surveys are necessary for situations A, B and C. Delimiting surveys are conducted to determine the boundaries of an area considered to be infested by or free from the pest such as boundaries of an established FF-ALPP (situation B) (Annex 1 of ISPM 35) and as part of a corrective action plan when the pest exceeds the established low pest prevalence level or in an FF-PFA (situation E) as part of a corrective action plan when a detection occurs. Detection surveys are conducted to determine if the pest is present in an area, that is, to demonstrate pest absence (situation D) and to detect a possible entry of the pest into the FF-PFA (pest transient, actionable) (ISPM 8 (*Determination of pest status in an area*)).

Additional information on how or when specific types of surveys should be applied can be found in other standards dealing with specific topics such as pest status, eradication, pest free areas or areas of low pest prevalence.

2. Trapping Scenarios

As the pest status may change over time, the type of survey needed may also change:

- Pest present. Starting from an established population with no control (situation A), phytosanitary measures may be applied, and potentially lead to an FF-ALPP (situation B and C) or an FF-PFA (situation D).
- Pest absent. Starting from an FF-PFA (situation D), either the pest status is maintained or a detection occurs (situation E), where measures aimed at restoring the FF-PFA would be applied.

3. Trapping Materials

The effective use of traps relies on the proper combination of trap, attractant and killing agent to attract, capture, kill and preserve the target fruit fly species for effective identification, counting and data analysis. Traps for fruit fly surveys use the following materials, as appropriate:

- a trapping device
- attractants (pheromones, male lures and food attractants)
- killing agents in wet and dry traps (with physical or chemical action)
- preservation agents (wet or dry traps).

3.1 Attractants

Some fruit fly species of economic importance and the attractants commonly used to capture them are presented in Table 1. The presence or absence of a species from this table does not indicate that pest risk analysis has been performed and in no way is presence or absence indicative of the regulatory status of a fruit fly species.

Table 1. A number of fruit fly species of economic importance and commonly used attractants

Species	Attractant
Anastrepha fraterculus (Wiedemann)[4]	Protein attractant (PA)
Anastrepha grandis (Macquart)	PA
Anastrepha ludens (Loew)	PA, 2C-1[1]
Anastrepha obliqua (Macquart)	PA, 2C-1[1]
Anastrepha serpentina (Wiedemann)	PA
Anastrepha striata (Schiner)	PA
Anastrepha suspensa (Loew)	PA, 2C-1[1]
Bactrocera carambolae (Drew & Hancock)	Methyl eugenol (ME)
Bactrocera caryeae (Kapoor)	ME
Bactrocera correcta (Bezzi)	ME
Bactrocera dorsalis (Hendel)[4]	ME, 3C[2]
Bactrocera kandiensis (Drew & Hancock)	ME
Bactrocera musae (Tryon)	ME
Bactrocera occipitalis (Bezzi)	ME
Bactrocera umbrosa (Fabricius)	ME
Bactrocera zonata (Saunders)	ME, 3C[2], ammonium acetate (AA)
Bactrocera cucurbitae (Coquillett)	Cuelure (CUE), 3C[2], AA
Bactrocera neohumeralis (Hardy)	CUE
Bactrocera tau (Walker)	CUE
Bactrocera tryoni (Froggatt)	CUE
Bactrocera minax (Enderlein)	PA
Bactrocera cucumis (French)	PA

Species	Attractant
Bactrocera jarvisi (Tryon)	PA, zingerone
Bactrocera latifrons (Hendel)	PA
Bactrocera oleae (Gmelin)	PA, ammonium bicarbonate (AC), spiroketal (SK)
Bactrocera tsuneonis (Miyake)	PA
Ceratitis capitata (Wiedemann)	Trimedlure (TML), Capilure (CE), PA, 3C[2], 2C-2[3]
Ceratitis cosyra (Walker)	PA, 3C[2], 2C-2[3]
Ceratitis rosa (Karsch)	TML, PA, 3C[2], 2C-2[3]
Dacus ciliatus (Loew)	PA, 3C[2], AA
Myiopardalis pardalina (Bigot)	PA
Rhagoletis cerasi (Linnaeus)	Ammonium salts (AS), AA, AC
Rhagoletis cingulata (Loew)	AS, AA, AC
Rhagoletis indifferens (Curran)	AA, AC
Rhagoletis pomonella (Walsh)	Butyl hexanoate, AS
Toxotrypana curvicauda (Gerstaecker)	2-Methyl-vinylpyrazine

[1] Two-component (2C-1) synthetic food attractant (ammonium acetate and putrescine), mainly for female captures.

[2] Three-component (3C) synthetic food attractant (ammonium acetate, putrescine, trimethylamine), mainly for female captures.

[3] Two-component (2C-2) synthetic food attractant (ammonium acetate and trimethylamine), mainly for female captures.

[4] Taxonomic status of some listed members of the *Bactrocera dorsalis* complex and of *Anastrepha fraterculus* is uncertain.

3.1.1 Male-specific attractants

The most widely used attractants are pheromones or male lures that are male-specific. The male lure trimedlure (TML) captures species of the genus *Ceratitis* (including *C. capitata* and *C. rosa*). The male lure methyl eugenol (ME) captures a large number of species of the genus *Bactrocera* (including *B. carambolae, B. dorsalis, B. musae,* and *B. zonata*). The pheromone spiroketal captures *B. oleae*. The male lure cuelure (CUE) captures a large number of other *Bactrocera* species, including *B. cucurbitae* and *B. tryoni*. Male lures are generally highly volatile and can be used with a variety of traps (examples are listed in Table 2a). Controlled-release formulations exist for TML, CUE and ME, providing a longer-lasting attractant for field use. It is important to be aware that some inherent environmental conditions may affect the longevity of pheromone and male lures.

3.1.2 Female-biased attractants

Female-specific pheromones are not usually commercially available (except, for example, 2-methyl-vinylpyrazine). Therefore, the female-biased attractants (natural, synthetic, liquid or dry) that are commonly used are based on food or host odours (Table 2b). Historically, liquid protein attractants (PAs) have been used to capture a wide range of fruit fly species. Liquid PAs capture both females and males. These liquid PAs are generally less sensitive than the male lures. In addition, liquid PAs capture high numbers of non-target insects and require more frequent servicing.

Several food-based synthetic attractants have been developed using ammonia and its derivatives. These may reduce the number of non-target insects captured. For example, for capturing *C. capitata* a synthetic food attractant consisting of three components (ammonium acetate, putrescine and trimethylamine) is used. For capturing *Anastrepha* species the trimethylamine component may be removed. A synthetic attractant lasts approximately four to ten weeks, depending on climatic conditions. It captures few non-target insects and significantly fewer male than female fruit flies, making this attractant suited for use in sterile fruit fly release programmes. New synthetic food attractant technologies are available, including the long-lasting three-component and two-component

mixtures contained in the same patch, as well as the three component mixture incorporated in a single cone-shaped plug.

Because food-foraging female and male fruit flies respond to synthetic food attractants at the sexually immature adult stage, these attractant types are capable of detecting female fruit flies earlier and at lower population levels than liquid PAs.

Table 2a. Attractants and traps for male fruit fly surveys

Fruit fly species	Attractant and trap																									
	TML/CE											ME								CUE							
	CC	CH	ET	JT	LT	MM	ST	SE	TP	YP	VARs+	CH	ET	JT	LT	MM	ST	TP	YP	CH	ET	JT	LT	MM	ST	TP	YP
Anastrepha fraterculus																											
Anastrepha ludens																											
Anastrepha obliqua																											
Anastrepha striata																											
Anastrepha suspensa																											
Bactrocera carambolae												x	x	x	x	x	x	x	x								
Bactrocera caryeae												x	x	x	x	x	x	x	x								
Bactrocera minax																											
Bactrocera correcta												x	x	x	x	x	x	x	x								
Bactrocera cucumis																											
Bactrocera cucurbitae																				x	x	x	x	x	x	x	x
Bactrocera dorsalis												x	x	x	x	x	x	x	x								
Bactrocera kandiensis												x	x	x	x	x	x	x	x								
Bactrocera latifrons																											
Bactrocera occipitalis												x	x	x	x	x	x	x	x								
Bactrocera oleae																											
Bactrocera tau																				x	x	x	x	x	x	x	x
Bactrocera tryoni																				x	x	x	x	x	x	x	x
Bactrocera tsuneonis																											
Bactrocera umbrosa												x	x	x	x	x	x	x	x								
Bactrocera zonata												x	x	x	x	x	x	x	x								
Ceratitis capitata		x	x	x	x	x	x	x	x	x	x																
Ceratitis cosyra																											
Ceratitis rosa		x	x	x	x	x	x	x	x	x	x																
Dacus ciliatus																											
Myiopardalis pardalina																											
Rhagoletis cerasi																											
Rhagoletis cingulata																											
Rhagoletis indifferens																											
Rhagoletis pomonella																											

Fruit fly species	Attractant and trap																								
	TML/CE											ME								CUE							
	CC	CH	ET	JT	LT	MM	ST	SE	TP	YP	VARs+	CH	ET	JT	LT	MM	ST	TP	YP	CH	ET	JT	LT	MM	ST	TP	YP
Toxotrypana curvicauda																											

Attractant abbreviations

CE	Capilure
CUE	Cuelure
ME	Methyl eugenol
TML	Trimedlure

Trap abbreviations

CC	Cook and Cunningham trap
CH	ChamP trap
ET	Easy trap
JT	Jackson trap
LT	Lynfield trap
MM	Maghreb-Med or Morocco trap
SE	Sensus trap
ST	Steiner trap
TP	Tephri trap
VARs+	Modified funnel trap
YP	Yellow panel trap

Table 2b. Attractants and traps for female-biased fruit fly surveys

Fruit fly species	Attractant and trap (see below for abbreviations)																								
	3C							2C-2					2C-1	PA			SK+AC		AS (AA, AC)				BuH			MVP
	ET	SE	MLT	OBDT	LT	MM	TP	ET	MLT	LT	MM	TP	MLT	ET	McP	MLT	CH	YP	RB	RS	YP	PALz	RS	YP	PALz	GS
Anastrepha fraterculus															x	x										
Anastrepha grandis															x	x										
Anastrepha ludens													x		x	x										
Anastrepha obliqua													x		x	x										
Anastrepha striata															x	x										
Anastrepha suspensa													x		x	x										
Bactrocera carambolae															x	x										
Bactrocera caryeae															x	x										
Bactrocera minax															x	x										
Bactrocera correcta															x	x										
Bactrocera cucumis															x	x										
Bactrocera cucurbitae			x												x	x										
Bactrocera dorsalis															x	x										
Bactrocera kandiensis															x	x										
Bactrocera latifrons															x	x										
Bactrocera occipitalis															x	x										
Bactrocera oleae														x	x	x	x	x			x	x				
Bactrocera tau															x	x										
Bactrocera tryoni															x	x										
Bactrocera tsuneonis															x	x										
Bactrocera umbrosa															x	x										
Bactrocera zonata			x												x	x										
Ceratitis capitata	x	x	x	x	x	x	x	x	x	x	x	x		x	x	x										
Ceratitis cosyra			x						x						x	x										
Ceratitis rosa		x	x						x						x	x										
Dacus ciliatus			x												x	x										

Fruit fly species	Attractant and trap (see below for abbreviations)																								
	3C							2C-2					2C-1	PA			SK+AC		AS (AA, AC)				BuH			MVP
	ET	SE	MLT	OBDT	LT	MM	TP	ET	MLT	LT	MM	TP	MLT	ET	McP	MLT	CH	YP	RB	RS	YP	PALz	RS	YP	PALz	GS
Myiopardalis pardalina															x	x										
Rhagoletis cerasi																			x	x	x	x	x	x	x	
Rhagoletis cingulata																					x	x		x	x	
Rhagoletis indifferens																				x	x					
Rhagoletis pomonella																			x		x	x	x			
Toxotrypana curvicauda																										x

Attractant abbreviations

2C-1	(AA+Pt)
2C-2	(AA+TMA)
3C	(AA+Pt+TMA)
AA	ammonium acetate
AC	ammonium (bi)carbonate
AS	ammonium salts
BuH	butyl hexanoate
MVP	papaya fruit fly pheromone (2-methyl vinylpyrazine)
PA	protein attractant
Pt	putrescine
SK	spiroketal
TMA	trimethylamine

Trap abbreviations

CH	ChamP trap
ET	Easy trap
GS	Green sphere trap
LT	Lynfield trap
McP	McPhail trap
MLT	Multilure trap
MM	Maghreb-Med or Morocco trap
OBDT	Open bottom dry trap
PALz	Fluorescent yellow sticky “cloak” trap
RB	Rebell trap
RS	Red sphere trap
SE	Sensus trap
TP	Tephri trap
YP	Yellow panel trap

Table 3. List of attractants and field longevity

Common name	Abbreviation	Formulation	Field longevity[1] (weeks)
Male lures			
Trimedlure	TML	Polymeric plug	4–10
		Laminate	3–6
		Liquid	1–4
		Polyethylene bag	4-5
Methyl eugenol	ME	Polymeric plug	4–10
		Liquid	4–8
Cuelure	CUE	Polymeric plug	4–10
		Liquid	4–8
Capilure (TML plus extenders)	CE	Liquid	12–36
Pheromones			
Papaya fruit fly (*Toxotrypana curvicauda*) (2-methyl-6-vinylpyrazine)	MVP	Patches	4–6
Olive fly (spiroketal)	SK	Polymer	4–6
Food-based attractants			
Torula yeast/borax	PA	Pellet	1–2
Protein derivatives	PA	Liquid	1–2
Ammonium acetate	AA	Patches	4–6
		Liquid	1
		Polymer	2–4
Ammonium (bi)carbonate	AC	Patches	4–6
		Liquid	1
		Polymer	1–4
Ammonium salts	AS	Salt	1
Putrescine	Pt	Patches	6–10
Trimethylamine	TMA	Patches	6–10
Butyl hexanoate	BuH	Vial	2
Ammonium acetate + Putrescine + Trimethylamine	3C (AA+Pt+TMA)	Cone/patches	6–10
Ammonium acetate + Putrescine + Trimethylamine	3C (AA+Pt+TMA)	Long-lasting patches	18–26
Ammonium acetate + Trimethylamine	2C-2 (AA+TMA)	Patches	6–10
Ammonium acetate + Putrescine	2C-1 (AA+Pt)	Patches	6–10
Ammonium acetate / Ammonium carbonate	AA/AC	Polyethylene bag with Aluminium foil cover	3–4

[1] Based on half-life. Attractant longevity is indicative only. Actual timing should be supported by field testing and validation.

3.2 Killing and preserving agents

Traps retain attracted fruit flies through the use of killing and preserving agents. In some dry traps, killing agents are a sticky material or a toxicant. Some organophosphates may act as a repellent at higher doses. The use of insecticides in traps is subject to the registration and approval of the product in the respective national legislation.

In other traps, liquid is the killing agent. When liquid PAs are used, borax to 3% concentration is mixed in to preserve the captured fruit flies. Some PAs are formulated with borax, and thus no additional borax is required. When water is used in hot climates, 10% propylene glycol is added to prevent evaporation of the attractant and to preserve captured flies.

3.3 Commonly used fruit fly traps

This section describes commonly used fruit fly traps. The list of traps is not comprehensive; other types of traps may achieve equivalent results and may be used for fruit fly trapping.

Based on the killing agent, there are three types of traps commonly used:

- **Dry traps.** The fly is caught on a sticky material board or killed by a chemical agent. Some of the most widely used dry traps are Cook and Cunningham (C&C) trap, ChamP (CH) trap, Jackson trap (JT) or Delta trap, Lynfield trap (LT), open bottom dry trap (OBDT) or Phase IV trap, red sphere (RS) trap, Steiner trap (ST), and yellow panel (YP) trap and Rebell (RB) trap.
- **Wet traps.** The fly is captured and drowns in the attractant solution or in water with surfactant. One of the most widely used wet traps is the McPhail (McP) trap. The Harris trap is also a wet trap with a more limited use.
- **Dry or wet traps.** These traps can be used either dry or wet. Some of the most widely used are easy trap (ET), Multilure trap (MLT) and Tephri (TP) trap.

3.3.1 Cook and Cunningham trap

Description

The C&C trap consists of three removable creamy white panels, spaced approximately 2.5 cm apart. The two outer panels are made of rectangular paperboard measuring 22.8 cm × 14.0 cm. One or both panels are coated with sticky material (Figure 1). The adhesive panel has one or more holes that allow air to circulate. The trap is used with a polymeric panel containing an olfactory attractant (usually TML), which is placed between the two outer panels. The polymeric panels come in two sizes – standard and half. The standard panel (15.2 cm × 15.2 cm) contains 20 g TML, while the half size panel (7.6 cm × 15.2 cm) contains 10 g. The entire unit is held together with clips and is suspended in the tree canopy with a wire hanger.

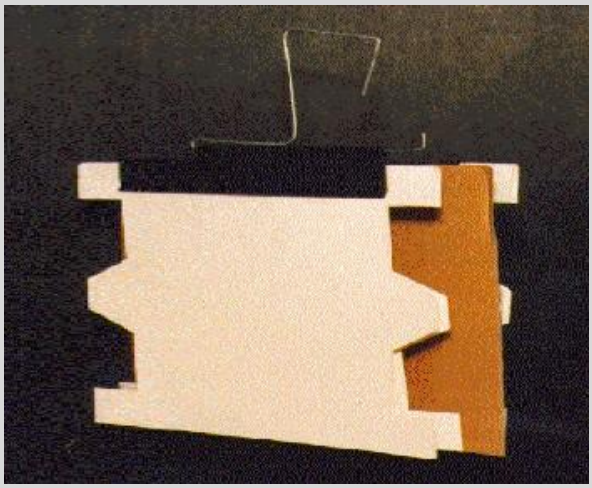

Figure 1. Cook and Cunningham (C&C) trap.

Use

As a result of the need for economical highly sensitive delimiting trapping of *C. capitata*, polymeric panels were developed for the controlled release of greater amounts of TML. These keep the release rate constant for a longer period of time, reducing hand labour and increasing sensitivity. The C&C trap with its multipanel construction has significant adhesive surface area for fly capture.

- For the species for which the trap and attractant is used, see Table 2a.
- For rebaiting (field longevity), see Table 3.

- For use under different scenarios and recommended densities, see Table 4d.

3.3.2 ChamP trap

Description

The CH trap is a hollow, YP-type trap with two perforated sticky side panels. When the two panels are folded, the trap is rectangular in shape (18 cm × 15 cm), and a central chamber is created to place the attractant (Figure 2). A wire hanger placed at the top of the trap is used to place it on branches.

Figure 2. ChamP trap.

Use

The CH trap can accommodate patches, polymeric panels, and plugs. It is equivalent to a YP trap and Rebell trap in sensitivity.

- For the species for which the trap and attractant is used, see Table 2 (a and b).
- For rebaiting (field longevity), see Table 3.
- For use under different scenarios and recommended densities, see Table 4 (b and c).

3.3.3 Easy trap

Description

The ET is a two-part rectangular plastic container with an inbuilt hanger. It is 14.5 cm high, 9.5 cm wide and 5 cm deep and can hold 400 ml of solution (Figure 3). The front part is transparent and the rear part is yellow. The transparent front of the trap contrasts with the yellow rear enhancing the trap's ability to catch fruit flies. It combines visual effects with male lure and food-based attractants.

Figure 3. Easy trap.

Use

The trap is multipurpose. It can be used dry baited with male lures (e.g. TML, CUE, ME) or synthetic food attractants (e.g. 3C and both combinations of 2C attractants) and a retention system such as dichlorvos. It can also be used wet baited with liquid PAs, holding up to 400 ml of mixture. When synthetic food attractants are used, one of the dispensers (the one containing putrescine) is attached inside the yellow part of the trap and the other dispensers are left free.

The ET is one of the most economical traps commercially available. It is easy to carry, handle and service, providing the opportunity to service a greater number of traps per person-hour than some other traps.

- For the species for which the trap and attractant is used, see Table 2 (a and b).
- For rebaiting (field longevity), see Table 3.
- For use under different scenarios and recommended densities, see Table 4d.

3.3.4 Fluorescent yellow sticky “cloak” trap

Description

The fluorescent yellow sticky “cloak” trap (PALz) trap is prepared from fluorescent yellow plastic sheets (36 cm × 23 cm). One side is covered with sticky material. When setting the trap up, the sticky sheet is placed around a vertical branch or a pole in a “cloak-like” manner (Figure 4), with the sticky side facing outward, and the back corners are fastened together with clips.

Figure 4. Fluorescent yellow sticky cloak trap.

Use

The trap uses the optimal combination of visual (fluorescent yellow) and chemical (cherry fruit fly synthetic bait) attractant cues. The trap is kept in place by a piece of wire, attached to the branch or pole. The bait dispenser is fastened to the front top edge of the trap, with the bait hanging in front of the sticky surface. The sticky surface of the trap has a capture capacity of about 500 to 600 fruit flies. Insects attracted by the combined action of these two stimuli are caught on the sticky surface.

- For the species for which the trap and attractant is used, see Table 2b.
- For rebaiting (field longevity), see Table 3.
- For use under different scenarios and recommended densities, see Table 4e.

3.3.5 Jackson trap or Delta trap

Description

The JT is hollow, delta-shaped and made of a white waxed cardboard. It is 8 cm high, 12.5 cm long and 9 cm wide (Figure 5). Additional parts include a white or yellow rectangular insert of waxed cardboard, which is covered with a thin layer of adhesive used to trap fruit flies once they land inside the trap body; a polymeric plug or cotton wick in a plastic basket or wire holder; and a wire hanger placed at the top of the trap body.

Use

This trap is mainly used with male lures to capture male fruit flies. The attractants used with JT or Delta traps are TML, ME and CUE. When ME and CUE are used a toxicant must be added.

Figure 5. Jackson trap or Delta trap.

For many years this trap has been used in exclusion, suppression or eradication programmes for multiple purposes, including population ecology studies (seasonal abundance, distribution, host sequence, etc.); detection and delimiting trapping; and surveying sterile fruit fly populations in areas subjected to sterile fly mass releases. JT or Delta traps may not be suitable for some environmental conditions (e.g. rain or dust).

The JT or Delta traps are some of the most economical traps commercially available. They are easy to carry, handle and service, providing the opportunity of servicing a greater number of traps per person-hour than some other traps.

- For the species for which the trap and attractant is used, see Table 2a.
- For rebaiting (field longevity), see Table 3.
- For use under different scenarios and recommended densities, see Table 4 (b and d).

3.3.6 Lynfield trap

Description

The conventional LT consists of a disposable, clear plastic, cylindrical container measuring 11.5 cm high with a 10 cm diameter base and 9 cm diameter screw-top lid. There are four entry holes evenly spaced around the wall of the trap (Figure 6). Another version of the LT is the Maghreb-Med trap, also known as the Morocco trap (Figure 7).

Figure 6. Lynfield trap.

Figure 7. Maghreb-Med trap or Morocco trap.

Use

The trap uses an attractant and insecticide system to attract and kill target fruit flies. The screw-top lid is usually colour-coded to the type of attractant being used (red, Capilure (CE)/TML; white, ME; yellow, CUE). To hold the attractant a 2.5 cm screw-tip cup hook (opening squeezed closed) screwed through the lid from above is used. The trap uses the male lures CUE, CE, TML and ME.

CUE and ME attractants, which are ingested by the male fruit fly, are mixed with malathion. However, because CE and TML are not ingested by either *C. capitata* or *C. rosa*, a dichlorvos-impregnated matrix is placed inside the trap to kill fruit flies that enter.

- For the species for which the trap and attractant is used, see Table 2 (a and b).
- For rebaiting (field longevity), see Table 3.
- For use under different scenarios and recommended densities, see Table 4 (b and d).

3.3.7 McPhail trap

Description

The conventional McP trap is a transparent glass or plastic pear-shaped invaginated container. The trap is 17.2 cm high and 16.5 cm wide at the base and holds up to 500 ml of solution (Figure 8). The trap parts include a rubber cork or plastic lid that seals the upper part of the trap and a wire hook to hang the trap on tree branches. A plastic version of the McP trap is 18 cm high and 16 cm wide at the base and holds up to 500 ml of solution (Figure 9). The top part is transparent and the base is yellow.

Figure 8. McPhail trap.

Use

For this trap to function properly it is essential that the body stays clean. Some designs have two parts in which the upper part and base of the trap can be separated, allowing for easy rebaiting and inspection of fruit fly captures.

This trap uses a liquid food attractant, based on hydrolysed protein or torula yeast/borax tablets. Torula tablets are more effective than hydrolysed protein over time because the pH is stable at 9.2. The level of pH in the mixture plays an important role in attracting fruit flies. Fewer fruit flies are attracted to the mixture as the pH becomes more acidic.

Figure 9. Plastic McPhail trap.

To bait with yeast tablets, mix three to five torula tablets in 500 ml of water or follow the manufacturer's recommendation. Stir to dissolve the tablets. To bait with protein hydrolysate, mix protein hydrolysate and borax (if not already added to the protein) in water to reach 5–9% hydrolysed protein concentration and 3% borax.

The nature of its attractant means this trap is more effective at catching females. Food attractants are generic by nature, and so McP traps tend to also catch a wide range of other non-target tephritid and non-tephritid fruit flies in addition to the target species.

McP traps are used in fruit fly management programmes in combination with other traps. In areas subjected to suppression and eradication actions, these traps are used mainly to monitor female populations. Female catches are crucial in assessing the amount of sterility induced to a wild population in a sterile insect technique (SIT) programme. In programmes releasing only sterile males or in a male annihilation technique programme, McP traps are used as a population detection tool by targeting feral females, whereas other traps (e.g. JT), used with male-specific attractants, catch the released sterile males, and their use should be limited to programmes with an SIT component. Furthermore, in fruit fly free areas, McP traps are an important part of the non-indigenous fruit fly trapping network because of their capacity to capture fruit fly species of quarantine importance for which no specific attractants exist.

McP traps with liquid PA are labour-intensive. Servicing and rebaiting take time, and the number of traps that can be serviced in a normal working day is half that of some of the other traps described in this appendix.

- For the species for which the trap and attractant is used, see Table 2b.
- For rebaiting (field longevity), see Table 3.
- For use under different scenarios and recommended densities, see Table 4 (a, b, d and e).

3.3.8 Modified funnel trap

Description

The modified funnel trap (VARs+) consists of a plastic funnel and a lower catch container (Figure 10). The top roof has a large (5 cm diameter) hole, over which an upper catch container (transparent plastic) is placed.

Figure 10. Modified funnel trap.

Use

As it is a non-sticky trap design, it has a virtually unlimited catch capacity and very long field life. The bait is attached to the roof, so that the bait dispenser is positioned in the middle of the large hole on the roof. A small piece of matrix impregnated with a killing agent is placed inside both the upper and the lower catch containers to kill fruit flies that enter.

- For the species for which the trap and attractant is used, see Table 2a.
- For rebaiting (field longevity), see Table 3.
- For use under different scenarios and recommended densities, see Table 4d.

3.3.9 Multilure trap

Description

The MLT is a version of the McP trap described previously. The trap is 18 cm high and 15 cm wide at the base and can hold up to 750 ml of solution (Figure 11). It consists of a two-piece plastic invaginated cylindrical container. The top part is transparent and the base is yellow. The upper part and base of the trap separate, allowing the trap to be serviced and rebaited. The transparent upper part of the trap contrasts with the yellow base enhancing the trap's ability to catch fruit flies. A wire hanger, placed on top of the trap body, is used to hang the trap from tree branches.

Use

This trap follows the same principles as those of the McP trap. However, an MLT used with dry synthetic attractant is more efficient and selective than an MLT or McP trap used with liquid PA. Another important difference is that an MLT with a dry synthetic attractant allows for cleaner servicing and is much less labour-intensive than a McP trap. When synthetic food attractants are used, dispensers are attached to the inside walls of the upper cylindrical part of the trap or hung from a clip at the top. For this trap to function properly it is essential that the upper part stays transparent.

Figure 11. Multilure trap.

When the MLT is used as a wet trap a surfactant should be added to the water. In hot climates 10% propylene glycol can be used to decrease water evaporation and decomposition of captured fruit flies.

When the MLT is used as a dry trap, a suitable (non-repellent at the concentration used) insecticide such as dichlorvos or a deltamethrin (DM) strip is placed inside the trap to kill the fruit flies. DM is applied to a polyethylene strip placed on the upper plastic platform inside the trap. Alternatively, DM may be used in a circle of impregnated mosquito net and will retain its

killing effect for at least six months under field conditions. The net must be fixed on the ceiling inside the trap using adhesive material.

- For the species for which the trap and attractant is used, see Table 2b.
- For rebaiting (field longevity), see Table 3.
- For use under different scenarios and recommended densities, see Table 4 (a-d).

3.3.10 Open bottom dry trap or Phase IV trap

Description

The OBDT or Phase IV trap is an open-bottom cylindrical dry trap that can be made from opaque green plastic or wax-coated green cardboard. The cylinder is 15.2 cm high and 9 cm in diameter at the top and 10 cm in diameter at the bottom (Figure 12). It has a transparent top, three holes (each of 2.5 cm diameter) equally spaced around the wall of the cylinder midway between the ends, and an open bottom, and is used with a sticky insert. A wire hanger, placed on top of the trap body, is used to hang the trap from tree branches.

Figure 12. Open bottom dry trap (Phase IV).

Use

A food-based synthetic chemical female-biased attractant can be used to capture *C. capitata*. However, it also serves to capture males. Synthetic attractants are attached to the inside walls of the cylinder. Servicing is easy because the sticky insert permits easy removal and replacement, similar to the inserts used in the JT. This trap is less expensive than the plastic or glass McP traps.

- For the species for which the trap and attractant is used, see Table 2b.
- For attractants used and rebaiting (field longevity), see Table 3.
- For use under different scenarios and recommended densities, see Table 4d.

3.3.11 Red sphere trap

Description

The RS trap is a red sphere 8 cm in diameter (Figure 13). The trap mimics the size and shape of a ripe apple. A green version of this trap is also used. The trap is covered with a sticky material and baited with the synthetic fruit odour butyl hexanoate, which has a fragrance like a ripe fruit. Attached to the top of the sphere is a wire hanger used to hang it from tree branches.

Figure 13. Red sphere trap.

Use

The red or green traps can be used unbaited, but they are much more efficient in capturing fruit flies when baited. Fruit flies that are sexually mature and ready to lay eggs are attracted to this trap.

Many types of insects will be caught by these traps. It will be necessary to positively identify the target fruit fly from the non-target insects likely to be present on the traps.

- For the species for which the trap and attractant is used, see Table 2b.
- For rebaiting (field longevity), see Table 3.
- For use under different scenarios and recommended densities, see Table 4e.

3.3.12 Sensus trap

Description

The Sensus (SE) trap consists of a vertical plastic bucket 12.5 cm high and 11.5 cm in diameter (Figure 14). It has a transparent body and a blue overhanging lid, which has a hole just underneath it. A wire hanger placed on top of the trap body is used to hang the trap from tree branches.

Figure 14. Sensus trap.

Use

The trap is dry and uses male lures or, for female-biased captures, dry synthetic food attractants. A dichlorvos block is placed in the comb on the lid to kill the flies.

- For the species for which the trap and attractant is used, see Table 2 (a and b).
- For rebaiting (field longevity), see Table 3.
- For use under different scenarios and recommended densities, see Table 4d.

3.3.13 Steiner trap

Description

The ST is a horizontal clear plastic cylinder with openings at each end. The conventional ST is 14.5 cm long and 11 cm in diameter (Figure 15). There are a number of versions of this trap. These include one that is 12 cm long and 10 cm in diameter (Figure 16) and one 14 cm long and 8.5 cm in diameter (Figure 17). A wire hanger, placed on top of the trap body, is used to hang the trap from tree branches.

Figure 15. Conventional Steiner trap.

Figure 16. Steiner trap version.

Figure 17. Steiner trap version.

Use

This trap uses the male lures TML, ME and CUE. The attractant is suspended from the centre of the inside of the trap. The attractant may be a cotton wick soaked in 2-3 ml of a mixture of male lure or a dispenser with the attractant and an insecticide (usually malathion, dibrom or DM) as a killing agent.

- For the species for which the trap and attractant is used, see Table 2a.
- For rebaiting (field longevity), see Table 3.
- For use under different scenarios and recommended densities, see Tables 4 (b and d).

3.3.14 Tephri trap

Description

The TP is similar to the McP trap. It is a vertical cylinder 15 cm high and 12 cm in diameter at the base and can hold up to 450 ml of solution (Figure 18). It has a yellow base and a clear top, which can be separated to facilitate servicing. There are entrance holes around the top of the periphery of the yellow base, and an invaginated opening in

the bottom. Inside the top is a platform to hold attractants. A wire hanger, placed on top of the trap body, is used to hang the trap from tree branches.

Use

The trap is baited with hydrolysed protein at 9% concentration; however, it can also be used with other liquid PAs as described for the conventional glass McP trap or with the female dry synthetic food attractant and with TML in a plug or liquid as described for the JT or Delta trap and YP trap. If the trap is used with liquid PAs or with dry synthetic attractants combined with a liquid retention system and without the side holes, the insecticide will not be necessary. However, when used as a dry trap and with side holes, an insecticide solution (e.g. malathion) soaked into a cotton wick or other killing agent is needed to avoid escape of captured insects. Other suitable insecticides are dichlorvos or DM strips placed inside the trap to kill the fruit flies. DM is applied in a polyethylene strip, placed on the plastic platform inside the top of the trap. Alternatively, DM may be used in a circle of impregnated mosquito net and will retain its killing effect for at least six months under field conditions. The net must be fixed on the ceiling of the inside of the trap using adhesive material.

Figure 18. Tephri trap.

- For the species for which the trap and attractant is used, see Table 2 (a and b).
- For rebaiting (field longevity), see Table 3.
- For use under different scenarios and recommended densities, see Table 4 (b and d).

3.3.15 Yellow panel trap and Rebell trap

Description

The YP consists of a yellow rectangular cardboard plate (23 cm × 14 cm) coated with plastic (Figure 19). The rectangle is covered on both sides with a thin layer of sticky material. The RB trap is a three-dimensional YP-type trap with two crossed yellow rectangular plates (15 cm × 20 cm) made of plastic (polypropylene), making them extremely durable (Figure 20). The trap is also coated with a thin layer of sticky material on both sides of both plates. A wire hanger, placed on top of the trap body, is used to hang it from tree branches.

Figure 19. Yellow panel trap.

Use

Figure 20. Rebell trap.

These traps can be used as visual traps alone and baited with TML, spiroketal or ammonium salts (ammonium acetate). The attractants may be contained in controlled-release dispensers such as a polymeric plug. The attractants are attached to the face of the trap. The attractants can also be mixed into the cardboard's coating. The two-dimensional design and greater contact surface make these traps more efficient, in terms of fly captures, than the JT and McP trap. It is important to consider that these traps require special procedures for transportation, submission and fruit fly screening methods because they are so sticky that specimens can be destroyed in handling. Although these traps can be used in most types of control programme applications, their use is recommended for the post-eradication phase and for fruit fly free areas, where highly sensitive traps are required. These traps should not be used in areas subjected to mass release of sterile fruit flies because of the large number of released fruit flies that would be caught. It is important to note that their yellow colour and open design allow them to catch other non-target insects including natural enemies of fruit flies and pollinators.

- For the species for which the trap and attractant is used, see Table 2 (a and b).
- For rebaiting (field longevity), see Table 3.
- For use under different scenarios and recommended densities, see Table 4 (b-e).

4. Trapping Procedures

4.1 Spatial distribution of traps

The spatial distribution of traps will be guided by the purpose of the survey, the intrinsic characteristics of the area, the biological characteristics of the fruit fly and its interactions with its hosts, as well as the efficacy of the attractant and trap. In areas where continuous compact blocks of commercial orchards are present and in urban and suburban areas where hosts exist, traps are usually deployed in a grid system, which may have a uniform distribution.

In areas with scattered commercial orchards, in rural areas with hosts and in marginal areas where hosts exist, trap networks are normally distributed along roads that provide access to host material.

In suppression and eradication programmes, an extensive trapping network should be deployed over the entire area that is subject to surveillance and control actions.

Trapping networks are also placed as part of early detection programmes for target fruit fly species. In this case traps are placed in high-risk areas such as points of entry, fruit markets, urban areas and garbage dumps, as appropriate. Traps in these locations can be supplemented by traps placed along roadsides to form transects and in production areas close to or adjacent to land borders, ports of entry and national roads.

4.2 Trap deployment

Trap deployment involves the actual placement of the traps in the field. One of the most important factors of trap deployment is selecting an appropriate trap site. It is important to have a list of the primary, secondary and occasional fruit fly hosts, and their phenology, distribution and abundance. With this basic information, it is possible to properly place and distribute the traps in the field, and this information also allows for effective planning of a programme of trap relocation.

When possible, pheromone traps should be placed in mating areas. Fruit flies normally mate in the crown of host plants or close by, selecting semi-shaded spots usually on the upwind side of the crown. Other suitable trap sites are the eastern side of the tree, which gets the sunlight in the early hours of the

day, and resting and feeding areas in plants that provide shelter and protect fruit flies from strong winds and predators. In specific situations trap hangers may need to be coated with an appropriate insecticide to prevent ants from eating captured fruit flies.

PA traps should be deployed in shaded areas in host plants. In this case traps should be deployed in primary host plants during their fruit maturation period. In the absence of primary host plants, secondary host plants should be used. In areas with no host plants identified, traps should be deployed in plants that can provide shelter, protection and food to adult fruit flies.

Traps should be deployed in the middle to the top part of the host plant canopy, depending on the height of the host plant, and oriented towards the upwind side. Traps should not be exposed to direct sunlight, strong winds or dust. It is of vital importance to have the trap entrance clear from twigs, leaves and other obstructions such as spider webs to allow proper airflow and easy access for the fruit flies.

Placement of traps in the same tree baited with different attractants should be avoided because it may cause interference among attractants and a reduction of trap efficiency. For example, placing a *C. capitata* male-specific TML trap and a PA trap in the same tree will cause a reduction of female capture in the PA trap because TML acts as a female repellent.

Traps should be relocated following the maturation phenology of the fruit hosts present in the area and biology of the fruit fly species. By relocating the traps it is possible to follow the fruit fly population throughout the year and increase the number of sites being checked for fruit flies.

4.3 Trap mapping

Once traps are deployed at carefully selected sites at the correct density and distributed in an appropriate pattern, the location of the traps must be recorded. It is recommended that the location of traps should be geo-referenced with the use of GPS equipment, where available. A map or sketch of the trap location and the area around the traps should be prepared.

GPS and GIS have proven to be very powerful tools in the management of trapping networks. GPS allows each trap to be geo-referenced through geographical coordinates, which are then used as input information in a GIS.

In addition to GPS location data or in the event that GPS data are not available for trap location, reference for the trap location should include visible landmarks. In the case of traps placed in host plants located in suburban and urban areas, references should include the full address of the property where the traps were placed. Trap reference should be clear enough to allow control teams and supervisors who service the traps to find the trap easily.

A database or trapping book of all traps with their corresponding coordinates should be kept, together with the records of trap services, date of collection, collector, rebaiting, trap captures, and if possible notes on the collection site such as ecological characteristics. GIS provides high-resolution maps showing the exact location of each trap and other valuable information such as exact location of fruit fly detections, historical geographical distribution patterns of the fruit flies, relative size of the populations in given areas and spread of the fruit fly population in case of an outbreak. This information is extremely useful in planning control activities, ensuring that bait sprays and sterile fruit fly releases are accurately placed and cost-effective in their application.

4.4 Trap servicing and inspection

Trap servicing intervals are specific to each trapping system and are based on the half-life of the attractant, noting that actual timings should be supported by field testing and validation (see Table 3). Capturing fruit flies will depend, in part, on how well the trap is serviced. Trap servicing includes rebaiting and maintaining the trap in a clean and appropriate operating condition. Traps should be in a condition to consistently kill and retain in good condition any target flies that have been captured.

Attractants have to be used in the appropriate volumes and at the appropriate concentrations and replaced at the recommended intervals, as indicated by the manufacturer. The release rate of attractants varies considerably with environmental conditions. The release rate is generally high in hot and dry areas, and low in cool and humid areas. Thus, in cool climates traps may have to be rebaited less often than in hot conditions.

Inspection intervals (i.e. checking for fruit fly captures) should be adjusted according to the prevailing environmental conditions, pest situation and biology of fruit flies, on a case-by-case basis. The interval can range from one day up to 30 days, for example, seven days in areas where fruit fly populations are present and 14 days in fruit fly free areas. In the case of delimiting surveys inspection intervals may be more frequent, with two to three days being the most common interval.

It is recommended to avoid handling more than one lure type at a time if more than one lure type is being used at a single locality. Cross-contamination between traps of different attractant types (e.g. CUE and ME) reduces trap efficacy and makes laboratory identification unduly difficult. When changing attractants, it is important to avoid spillage or contamination of the external surface of the trap body or the ground. Attractant spillage or trap contamination would reduce the chance of fruit flies entering the trap. For traps that use a sticky insert to capture fruit flies, it is important to avoid contaminating areas in the trap that are not meant for capturing fruit flies with the sticky material. This also applies to leaves and twigs that surround the trap. Attractants, by their nature, are highly volatile and care should be taken when storing, packaging, handling and disposing of lures to avoid compromising the attractant efficacy and operator safety.

The number of traps serviced per day per person will vary depending on the type of trap, trap density, environmental and topographic conditions and experience of the operators. Where a large trap network is in place, it may need to be serviced over a number of days. In this case, the network may be serviced through a number of “routes” or “runs” that systematically ensure all traps within the network are inspected and serviced and none is missed.

4.5 Trapping records

The following information should be included in proper trapping records that provide confidence in the survey results: trap location, plant where the trap is placed, trap and attractant type, servicing and inspection dates, and target fruit fly capture. Any other information considered necessary can be added to the trapping records. Retaining results over a number of seasons can provide useful information on spatial changes in fruit fly populations.

4.6 Flies per trap per day

Flies per trap per day (FTD) is a population index that indicates the average number of flies of the target species captured per trap per day during a specified period in which the trap was exposed in the field (see also Annex 2 of ISPM 35).

The function of this population index is to have a comparative measure of the size of the adult pest population in a given space and time.

It is used as baseline information to compare the size of the population before, during and after the application of a fruit fly control programme. FTD should be used in all reports of trapping.

FTD is comparable within a programme; however, for meaningful comparisons between programmes, it should be based on the same fruit fly species, trapping system and trap density.

In areas where sterile fruit fly release programmes are in operation FTD is used to measure the relative abundance of the sterile and wild fruit flies.

FTD is the result of dividing the total number of fruit flies captured (F) by the product obtained from multiplying the total number of inspected traps (T) by the average number of days between trap inspections (D). The formula is as follows:

$$FTD = \frac{F}{T \times D}$$

5. Trap Densities

Establishing a trapping density appropriate to the purpose of the survey is critical and underpins confidence in the survey results. Trap density needs to be adjusted based on many factors including type of survey, trap efficiency, location (type and presence of host, climate and topography), pest situation and lure type. In terms of type and presence of host, as well as the risk involved, the following types of location may be of concern:

- production areas
- marginal areas
- urban areas
- points of entry (and other high-risk areas such as fruit markets).

Trap density may also vary as a gradient from production areas to marginal areas, urban areas and points of entry. For example, in a pest free area, a higher density of traps is required at high-risk points of entry and a lower density in commercial orchards. Or, in an area where suppression is applied, such as in an ALPP or an area under a systems approach where the target species is present, the reverse occurs, and trap density for that pest should be higher in the place of production and decrease towards points of entry. Other situations such as high-risk urban areas should be taken into consideration when assessing trapping density.

Table 4 (a–f) shows suggested trap densities for various fruit fly species based on common practice. These densities have been determined taking into consideration research results, feasibility and cost-effectiveness. Trap densities are dependent on associated surveillance activities, such as the type and intensity of fruit sampling to detect immature stages of fruit flies. In cases where trapping surveillance programmes are complemented with fruit sampling activities, trap densities could be lower than the suggested densities shown in Table 4 (a–f).

The suggested trap densities presented in Table 4 (a–f) take into account the following technical factors:

- various survey objectives and pest status
- target fruit fly species (Table 1)
- pest risk associated with working areas (production and other areas).

Within the delimited area, the suggested trap density should be applied in areas with a significant likelihood of capturing fruit flies such as areas with primary hosts and possible pathways (e.g. production areas versus industrial areas).

Table 4a. Trap densities suggested for *Anastrepha* spp.

Trapping	Trap type[1]	Attractant	Trap density/km² (2)			
			Production area	Marginal	Urban	Points of entry[3]
Monitoring survey, no control	McP/MLT	2C-1/PA	0.25–1.00	0.25–0.50	0.25–0.50	0.25–0.50
Monitoring survey for suppression	McP/MLT	2C-1/PA	2–4	1–2	0.25–0.50	0.25–0.50
Delimiting survey in an FF-ALPP after an unexpected increase in population	McP/MLT	2C-1/PA	3–5	3–5	3–5	3–5
Monitoring survey for eradication	McP/MLT	2C-1/PA	3–5	3–5	3–5	3–5
Detection survey in an FF-PFA to verify pest absence and for exclusion	McP/MLT	2C-1/PA	1–2	2–3	3–5	5–12
Delimiting survey in an FF-PFA after a detection in addition to detection survey[4]	McP/MLT	2C-1/PA	20–50	20–50	20–50	20–50

1 Different traps can be combined to reach the total number.

(2) Refers to the total number of traps.

3 Also other high-risk sites.

4 This range includes high-density trapping in the immediate area of the detection (core area). However, it may decrease towards the surrounding trapping zones.

Trap type		Attractant	
McP	McPhail trap	2C-1	AA+Pt
MLT	Multilure trap	AA	Ammonium acetate
		PA	Protein attractant
		Pt	Putrescine

Table 4b. Trap densities suggested for *Bactrocera* spp. responding to cuelure, methyl eugenol and food attractants

Trapping	Trap type[1]	Attractant	Trap density/km² (2)			
			Production area	Marginal	Urban	Points of entry[3]
Monitoring survey, no control	ET/JT/LT/McP/MLT/ MM/ST/TP	CUE/ME/PA	0.25–1.00	0.2–0.5	0.2–0.5	0.2–0.5
Monitoring survey for suppression	ET/JT/LT/McP/MLT/ MM/ST/TP	CUE/ME/PA	2–4	1–2	0.25–0.50	0.25–0.50
Delimiting survey in an FF-ALPP after an unexpected increase in population	ET/JT/LT/McP/MLT/ MM/ST/TP/YP	CUE/ME/PA	3–5	3–5	3–5	3–5
Monitoring survey for eradication	ET/JT/LT/McP/MLT/ MM/ST/TP	CUE/ME/PA	3–5	3–5	3–5	3–5
Detection survey in an FF-PFA to verify pest absence and for exclusion	CH/ET/JT/LT/McP/ MLT/MM/ST/TP/YP	CUE/ME/PA	1	1	1–5	3–12
Delimiting survey in an FF-PFA after a detection in addition to detection survey[4]	ET/JT/LT/McP/MLT/ MM/ST/TP/YP	CUE/ME/PA	20–50	20–50	20–50	20–50

1 Different traps can be combined to reach the total number.

(2) Refers to the total number of traps.

3 Also other high-risk sites.

4 This range includes high-density trapping in the immediate area of the detection (core area). However, it may decrease towards the surrounding trapping zones.

Trap type		Attractant	
CH	ChamP trap	CUE	Cuelure
ET	Easy trap	ME	Methyl eugenol
JT	Jackson trap	PA	Protein attractant
LT	Lynfield trap		
McP	McPhail trap		
MLT	Multilure trap		
MM	Maghreb-Med or Morocco trap		
ST	Steiner trap		
TP	Tephri trap		
YP	Yellow panel trap		

Table 4c. Trap densities suggested for *Bactrocera oleae*

Trapping	Trap type[1]	Attractant	Trap density/km² (2)			
			Production area	Marginal	Urban	Points of entry[3]
Monitoring survey, no control	CH/ET/McP/MLT/YP	AC+SK/PA	0.5–1.0	0.25–0.50	0.25–0.50	0.25–0.50
Monitoring survey for suppression	CH/ET/McP/MLT/YP	AC+SK/PA	2–4	1–2	0.25–0.50	0.25–0.50
Delimiting survey in an FF-ALPP after an unexpected increase in population	CH/ET/McP/MLT/YP	AC+SK/PA	3–5	3–5	3–5	3–5
Monitoring survey for eradication	CH/ET/McP/MLT/YP	AC+SK/PA	3–5	3–5	3–5	3–5
Detection survey in an FF-PFA to verify pest absence and for exclusion	CH/ET/McP/MLT/YP	AC+SK/PA	1	1	2–5	3–12
Delimiting survey in an FF-PFA after a detection in addition to detection survey[4]	CH/ET/McP/MLT/YP	AC+SK/PA	20–50	20–50	20–50	20–50

1 Different traps can be combined to reach the total number.

(2) Refers to the total number of traps.

3 Also other high-risk sites.

4 This range includes high-density trapping in the immediate area of the detection (core area). However, it may decrease towards the surrounding trapping zones.

Trap type		Attractant	
CH	ChamP trap	AC	Ammonium bicarbonate
ET	Easy trap	PA	Protein attractant
McP	McPhail trap	SK	Spiroketal
MLT	Multilure trap		
YP	Yellow panel trap		

Table 4d. Trap densities suggested for *Ceratitis* spp.

Trapping	Trap type[1]	Attractant	Trap density/km² (2)			
			Production area	Marginal	Urban	Points of entry[3]
Monitoring survey, no control[4]	CH/ET/JT/LT/McP/MLT/OBDT/SE/ST/TP/VARs+	2C-2/3C/CE/PA/TML	0.5–1.0	0.25–0.50	0.25–0.50	0.25–0.50
Monitoring survey for suppression	CH/ET/JT/LT/McP/MLT/MM/OBDT/SE/ST/TP/VARs+	2C-2/3C/CE/PA/TML	2–4	1–2	0.25–0.50	0.25–0.50
Delimiting survey in an FF-ALPP after an unexpected increase in population	CH/ET/JT/LT/McP/MLT/MM/OBDT/ST/TP/VARs+/YP	3C/CE/PA/TML	3–5	3–5	3–5	3–5
Monitoring survey for eradication[5]	CH/ET/JT/LT/McP/MLT/MM/OBDT/ST/TP/VARs+	2C-2/3C/CE/PA/TML	3–5	3–5	3–5	3–5
Detection survey in an FF-PFA to verify pest absence and for exclusion[5]	CC/CH/ET/JT/LT/McP/MLT/MM/ST/VARs+	3C/CE/PA/TML	1	1–2	1–5	3–12
Delimiting survey in an FF-PFA after a detection in addition to detection survey[6]	CH/ET/JT/LT/McP/MLT/MM/OBDT/ST/TP/VARs+/YP	3C/CE/PA/TML	20–50	20–50	20–50	20–50

1 Different traps can be combined to reach the total number.

(2) Refers to the total number of traps.

3 Also other high-risk sites.

4 1:1 ratio (one female trap per male trap).

[5] 3:1 ratio (three female traps per male trap).

[6] This range includes high-density trapping in the immediate area of the detection (core area). However, it may decrease towards the surrounding trapping zones (ratio 5:1; five female traps per male trap).

Trap type		Attractant	
CC	Cook and Cunningham trap (with TML for male capture)	2C-2	(AA+TMA)
CH	ChamP trap	3C	(AA+Pt+TMA)
ET	Easy trap (with 2C and 3C attractants for female-biased captures)	AA	Ammonium acetate
JT	Jackson trap (with TML for male capture)	CE	Capilure
LT	Lynfield trap (with TML for male capture)	PA	Protein attractant
McP	McPhail trap	Pt	Putrescine
MLT	Multilure trap (with 2C and 3C attractants for female-biased captures)	TMA	Trimethylamine
MM	Maghreb-Med or Morocco trap	TML	Trimedlure
OBDT	Open bottom dry trap (with 2C and 3C attractants for female-biased captures)		
SE	Sensus trap (with CE for male captures and with 3C for female-biased captures)		
ST	Steiner trap (with TML for male capture)		
TP	Tephri trap (with 2C and 3C attractants for female-biased captures)		
VARs+	Modified funnel trap		
YP	Yellow panel trap		

Table 4e. Trap densities suggested for *Rhagoletis* spp.

Trapping	Trap type[1]	Attractant	Trap density/km² (2)			
			Production area	Marginal	Urban	Points of entry[3]
Monitoring survey, no control	PALz/RB/RS/YP	AS/BuH	0.5–1.0	0.25–0.50	0.25–0.50	0.25–0.50
Monitoring survey for suppression	PALz/RB/RS/YP	AS/BuH	2–4	1–2	0.25–0.50	0.25–0.50
Delimiting survey in an FF-ALPP after an unexpected increase in population	PALz/RB/RS/YP	AS/BuH	3–5	3–5	3–5	3–5
Monitoring survey for eradication	PALz/RB/RS/YP	AS/BuH	3–5	3–5	3–5	3–5
Detection survey in an FF-PFA to verify pest absence and for exclusion	PALz/RB/RS/YP	AS/BuH	1	0.4–3.0	3–5	4–12
Delimiting survey in an FF-PFA after a detection in addition to detection survey[4]	PALz/RB/RS/YP	AS/BuH	20–50	20–50	20–50	20–50

[1] Different traps can be combined to reach the total number.

[(2)] Refers to the total number of traps.

[3] Also other high-risk sites.

[4] This range includes high-density trapping in the immediate area of the detection (core area). However, it may decrease towards the surrounding trapping zones.

Trap type		Attractant	
RB	Rebell trap	AS	Ammonium salt
RS	Red sphere trap	BuH	Butyl hexanoate
PALz	Fluorescent yellow sticky “cloak” trap		
YP	Yellow panel trap		

Table 4f. Trap densities suggested for *Toxotrypana curvicauda*

Trapping	Trap type[1]	Attractant	Trap density/km² (2)			
			Production area	Marginal	Urban	Points of entry[3]
Monitoring survey, no control	GS	MVP	0.25–0.50	0.25–0.50	0.25–0.50	0.25–0.50
Monitoring survey for suppression	GS	MVP	2–4	1	0.25–0.50	0.25–0.50
Delimiting survey in an FF-ALPP after an unexpected increase in population	GS	MVP	3–5	3–5	3–5	3–5
Monitoring survey for eradication	GS	MVP	3–5	3–5	3–5	3–5
Detection survey in an FF-PFA to verify pest absence and for exclusion	GS	MVP	2	2–3	3–6	5–12
Delimiting survey in an FF-PFA after a detection in addition to detection survey[4]	GS	MVP	20–50	20–50	20–50	20–50

1 Different traps can be combined to reach the total number.

(2) Refers to the total number of traps.

3 Also other high-risk sites.

4 This range includes high-density trapping in the immediate area of the detection (core area). However, it may decrease towards the surrounding trapping zones.

Trap type		Attractant	
GS	Green sphere trap	MVP	Papaya fruit fly pheromone (2-methyl-vinylpyrazine)

6. Supervision Activities

Supervision of trapping activities includes assessing the quality of the materials used and reviewing the effectiveness of the use of these materials and trapping procedures.

The materials used should perform effectively and reliably at an acceptable level for a prescribed period of time. The traps themselves should maintain their integrity for the entire duration that they are anticipated to remain in the field. The attractants should be certified or bio-assayed by the manufacturer for an acceptable level of performance based on their anticipated use.

The effectiveness of trapping should be officially reviewed periodically by individuals not directly involved in conducting trapping activities. The timing of review will vary by programme, but it is recommended to occur at least twice a year in programmes that run for six months or longer. The review should address all aspects related to the ability of trapping to detect targeted fruit flies within the time frame required to meet programme outcomes, for example, early detection of a fruit fly entry. Aspects of a review include quality of trapping materials, record-keeping, layout of the trapping network, trap mapping, trap placement, trap condition, trap servicing, trap inspection frequency, and capability for fruit fly identification.

The trap deployment should be evaluated to ensure that the prescribed types and densities of traps are in place. Field confirmation is achieved through inspection of individual routes.

Trap placement should be evaluated for appropriate host selection, trap relocation schedule, height, light penetration, fruit fly access to trap, and proximity to other traps. Host selection, trap relocation and trap proximity to other traps can be evaluated from the records for each trap route. Host selection, trap relocation and trap proximity to other traps can be further evaluated by field examination.

Traps should be evaluated for their overall condition, correct attractant, appropriate trap servicing and inspection intervals, correct identifying markings (such as trap identification and date placed), evidence of contamination and proper warning labels. Evaluation is performed in the field at each site where a trap is placed.

Evaluation of identification capability can occur via target fruit flies that have been marked in some manner in order to distinguish them from wild trapped fruit flies. These marked fruit flies are placed in

traps in order to evaluate the operator's diligence in servicing the traps, competence in recognizing the targeted fruit fly species, and knowledge of the proper reporting procedures once a fruit fly is found. Commonly used marking systems are fluorescent dyes or wing clipping.

In some programmes that survey for eradication or to maintain FF-PFAs, the fruit flies may also be marked by using sterile irradiated fruit flies in order to further reduce the chance of the marked fruit flies being falsely identified as wild fruit flies resulting in unnecessary actions being taken by the programme. A slightly different method is necessary under a sterile fruit fly release programme in order to evaluate personnel on their ability to accurately distinguish target wild fruit flies from the released sterile fruit flies. The marked fruit flies used are sterile and lack fluorescent dye, but are marked physically by wing clipping or some other method. These fruit flies are placed into the trap samples after they have been collected in the field but before they are inspected by the operators.

The review should be summarized in a report detailing how many inspected traps on each route were found to be in compliance with the accepted standards in categories such as trap mapping, placement, condition, and servicing and inspection intervals. Specific recommendations should be made to correct aspects found to be deficient.

Proper record keeping is crucial to the appropriate functioning of trapping. The records for each trap route should be inspected to ensure that they are complete and up to date. Field confirmation can then be used to validate the accuracy of the records. Maintenance of voucher specimens of collected species of regulated fruit fly species is recommended.

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

ATTACHMENT 3: Fruit sampling (formerly Appendix 2 of ISPM 26, adopted in 2006)

Information about fruit sampling is available in *Fruit sampling guidelines for area-wide fruit fly programmes*, published in 2017 by FAO and the International Atomic Energy Agency (IAEA) (in English only) and available at: https://www.iaea.org/about/insect-pest-control-section.

IPPC Diagnostic protocols adopted as annexes to ISPM 27 (*Diagnostic protocols for regulated pests*) may be useful tools to diagnose the larvae of fruit fly specimens.

Appendix 5: DRAFT ANNEX TO ISPM 23: Field inspection (2021-018)

Status box

This is not an official part of the standard and it will be modified by the IPPC Secretariat after adoption.	
Date of this document	2025-12-30
Document category	Draft annex to ISPM 23
Current document stage	*To* CPM-20 (2026) for adoption
Major stages	2022-04 CPM-16 added topic *Field inspection (including growing season inspection) (Annex to ISPM 23: Guidelines for inspection)* (2021-018) with priority 2. 2022-11 Standards Committee (SC) approved Specification 74 (*Field inspection*). 2023-10 Expert working group drafted the annex. 2024-05 SC revised and approved for first consultation. 2024-07 First consultation. 2025-05 SC-7 revised and approved for second consultation. 2025-07 Second consultation. 2025-10 Steward revised. 2025-11 SC revised and approved for adoption.
Steward history	2022-04 Masahiro SAI (JP, Lead Steward) 2022-05 Mariangela CIAMPITTI (IT, Assistant Steward)
Notes	This section will remain on the drafts going for consultation but will be deleted before adoption. 2022-11 SC removed reference to growing season from the title of the specification 2023-11 Edited 2024-05 Edited 2025-06 Edited 2025-11 Edited

This annex was adopted by the [XXX] Session of the Commission on Phytosanitary Measures in [XXX 20XX].

The annex is a prescriptive part of the standard.

1. Scope

This annex provides requirements for field inspection. The purpose of field inspection is to detect pests, their signs or symptoms, or to meet phytosanitary import requirements. Field inspection may be applied as a stand-alone phytosanitary measure, as a component of a systems approach, or in combination with another phytosanitary measure or measures.

The annex outlines assumptions involved in the application of field inspection as well as the requirements of the field-inspection process and the associated documentation.

In the context of this annex, the term “field inspection” applies to the inspection of plants in fields (including plants in open fields, in nurseries, and in controlled environments) during the growing period or dormant stage. The term “pest” may refer to a single regulated pest species or multiple regulated pest species.

During field inspection, it may be necessary to take samples for testing to determine the presence or absence of the pest. The annex does not cover testing of samples or inspection of consignments.

2. Objectives of field inspection

National plant protection organizations (NPPOs) may use field inspection as a phytosanitary measure to meet objectives including:

- the detection of pests, or their signs or symptoms; and

- meeting phytosanitary import requirements, for example:
  - as part of a systems approach (ISPM 14 (*The use of integrated measures in a systems approach for pest risk management*)),
  - for the establishment and maintenance of a pest free place of production or production site (ISPM 10 (*Requirements for the establishment of pest free places of production and pest free production sites*)),
  - for verification that plants in a field are free from a specified pest, or
  - in certification programmes for plants for planting, to verify that the infestation by a specified pest has not exceeded the specified tolerance level.

3. Assumptions involved in the application of field inspection

In addition to the assumptions outlined in section 1.2 of the core text of this standard, the use of field inspection is based on the following assumptions:

- The pest targeted by inspection, or its signs or symptoms, is visually detectable at a certain stage of plant growth.
- If the pest is detected in a field during field inspection, the commodity derived from that field may be infested.
- If the pest is detected on plants during field inspection, the commodity derived from those plants is infested.
- For some commodities, field inspection may be more effective than inspection or testing of consignments (e.g. for some viruses associated with rootstocks or seeds).

4. Other considerations for field inspection

In addition to the relevant factors listed in section 1.5 of the core text of this standard, NPPOs may consider the following when deciding whether to use field inspection as a phytosanitary measure:

- the pest status in the area (present or absent);
- the pest incidence in the field;
- pest biology;
- the phenological stage of plants;
- the susceptibility of the plant species and variety or cultivar to the pest targeted by inspection;
- the origin of the plants being inspected;
- the inspection method, timing and frequency, and the technical equipment needed;
- the field location, size, configuration (layout) and accessibility;
- other biotic factors (e.g. presence of other pests, vectors, natural enemies, hosts in the vicinity) and abiotic factors;
- the specific growing conditions and cultural practices;
- treatments and control measures; and
- the length of time between inspection and harvest.

5. Specific requirements for field inspection

The following requirements (sections 5.1–5.4 of this annex) should be considered when planning a field inspection.

5.1 Examination of relevant documents

Relevant documents associated with field inspection may include the following:

- field maps, field-identity documents, geographical coordinates;
- producer or farm records;

- documents confirming registration of the field;
- previous test and inspection reports;
- pest-management records (e.g. types and dates of treatments);
- treatment documents or certificates;
- certificates of origin of plants and plant material;
- certification-programme documentation;
- phytosanitary import requirements; and
- records that ensure traceability.

5.2 Verification of the identity of the field and plants

The identity of the field and plants that are subject to field inspection should be verified to ensure that they match and are correctly recorded (e.g. location of field; species, varieties and cultivars).

5.3 Detection of pests

The NPPO should select an inspection method, timing and intensity that will allow the NPPO to determine whether the pest targeted by inspection is present in the field or its vicinity, or whether its incidence exceeds a specified tolerance level (see section 6) .

5.4 Verification of conformity with other phytosanitary requirements

National plant protection organizations may conduct field inspection to verify conformity with other aspects of phytosanitary import requirements, such as those relating to:

- the growing medium for the plants;
- the phenological stage and size of the plants;
- the distance between the field and any specific host plants;
- the presence of weeds and other plant species;
- pest-management practices in the vicinity of the field;
- specific production conditions in the field;
- specific cultural practices; or
- sanitation and hygiene.

6. Field-inspection methods

The method, timing and the intensity of inspection should allow the pest targeted by inspection to be detected at the desired level of detection with the desired level of confidence. The ability of the method to do this depends on practical and statistical considerations, such as the effectiveness of the method at detecting the pest, the growing conditions, and the number of plants or the size of the field. The NPPO should review the method as necessary to take into account the experience gained and new technical developments. The method may include one or more of the following:

- a general visual assessment of a field, or part thereof, to check the physiological condition of the plants, looking for noticeable anomalies within the crop (e.g. poorly growing plants or patches of plants or those with obvious signs or symptoms of pests);
- inspection of the field, a part of the field, or the field and its vicinity, depending on phytosanitary import requirements;
- an inspection scheme that ensures that relevant parts of the field are adequately and proportionally represented, and that is appropriate for detecting the pest; and
- targeted inspection of individual plants or specific plant parts (including underground parts) that are expected to show signs or symptoms of pests.

Field inspection may not be sufficient to verify absence of the pest. Examples of such circumstances include the following:

- the pest is known to exhibit latency;
- infested plants can be asymptomatic;
- the phenological stage of the plants is not appropriate for pest detection (e.g. young plants);
- suspicious signs or symptoms cannot be immediately identified; and
- the life stage of the pest at the time of inspection is difficult to detect.

In such circumstances, the NPPO may carry out field inspection in combination with another phytosanitary measure (e.g. testing, treatment) to provide a specified level of assurance that plants are free from the pest.

7. Field-inspection outcome

The result of the field inspection may contribute to the decision on whether the plants meet phytosanitary import requirements.

If the pest targeted by inspection is detected or its incidence exceeds the specified tolerance level, or if conformity with other aspects of phytosanitary import requirements is not verified, the NPPO may take further actions to meet phytosanitary import requirements.

8. Documentation

Field inspection should be based on reliable, documented, technical and operational criteria, and the NPPO should apply it consistently. National plant protection organizations should develop official documentation for conducting field inspections and recording the results. Such documentation is essential for promoting consistency, improving the interpretation and reliability of results, and facilitating the audit and verification of field-inspection activities.

The NPPO should retain all records about each field inspection to allow trace-back from a non-compliant consignment or to facilitate a later review of results if necessary. Such records should be made available to the NPPO of an importing country on request.

9. Responsibilities of national plant protection organizations

The responsibilities of the NPPO in the country where the field inspection is conducted should include the following:

- deciding on whether to use a field inspection in accordance with the factors listed in section 1.5 of the core text of this standard and other considerations in section 4 of this annex;
- designing a field-inspection programme;
- sharing the field-inspection programme with the NPPOs of importing countries, if requested;
- ensuring that the field-inspection programme is consistently implemented;
- providing sufficient operational resources, including personnel, equipment and logistics, to design and implement the field-inspection programme;
- training personnel to ensure that their skills and expertise are maintained at an adequate level to plan and conduct field inspections effectively and consistently;
- ensuring that inspectors can fulfil the requirements described in section 1.4 of the core text of this standard;
- developing, reviewing and evaluating field-inspection processes as needed;
- determining the roles and responsibilities of producers with regard to field inspections; and
- if using entities to perform field inspections on behalf of the NPPO:
    - authorizing the entities in accordance with ISPM 45 (*Requirements for national plant protection organizations if authorizing entities to perform phytosanitary actions*), and

- ensuring that the entities are audited in accordance with ISPM 47 (*Audit in the phytosanitary context*).

Appendix 6: Specification 78 (Annex *Remote audits* to ISPM 47 (*Audit in the phytosanitary context*)) (2023-031)

Title

Annex *Remote audits* (2023-031) to ISPM 47 (*Audit in the phytosanitary context*).

Reason for the annex to the standard

An audit in the phytosanitary context is a documented, systematic review of a phytosanitary system or procedure to evaluate the level of control, ensure that it conforms with the requirements set by the auditing national plant protection organization (NPPO), and evaluate whether the system or procedure is achieving the expected phytosanitary objectives. New technological advancements have allowed contracting parties to conduct remote audits when in-person audits are not possible or practical because of challenges such as travel restrictions, emergency situations, financial constraints or availability of experts. Although remote auditing presents some challenges, it can offer significant benefits to contracting parties while still providing an appropriate level of oversight. For example, remote audits can ensure continuity of audit-related activities (e.g. implementation of corrective actions to address nonconformities), provide a flexible framework within which to achieve audit objectives, and allow additional experts to participate. However, ISPM 47 (*Audit in the phytosanitary context*) provides no guidance specifically on conducting remote audits. This annex is being developed to outline minimum requirements for remote audits and should be read in conjunction with ISPM 47.

Scope

The annex should provide guidance for defining and conducting various remote audits (hybrid, fully remote, desk, etc.) in the context of ISPM 47. It should also cover remote audits conducted by entities that have been authorized by an NPPO to conduct audits on its behalf.

Purpose

The annex aims to support a common approach to conducting remote audits. The annex is not intended to replace in-person audits, especially in contexts where physical verification is deemed essential, thereby increasing trust and understanding among importing and exporting countries.

Tasks

The expert working group (EWG) should undertake the following tasks:

(81) Define and describe what a remote audit is and the types of remote audits, clearly distinguishing fully remote audits from desk audits and hybrid audits.

(82) Define and describe when remote audits may be used and when they should not be used.

(83) Provide guidance to allow NPPOs to identify and agree which activities are most suitable to be audited remotely.

(84) Review current best practices, examples and approaches for remote audits, including how other international organizations approach remote audits (e.g. Codex Alimentarius Commission, International Accreditation Forum, International Standards Organization).

(85) Identify the advantages, limitations and risks of using remote-audit technologies.

(86) Describe techniques and technologies that can be used in the implementation of remote audits.

(87) Describe the requirements for conducting remote audits appropriately (e.g. internet connectivity, personnel) and outline options that countries may consider if these are not available.

(88) Describe and list the requirements for infrastructure and expertise in digital technology, cybersecurity and the handling of data privacy, and how to address situations where these are not available or possible.

(89) List the specific responsibilities of the auditor and auditee for remote audits.

(90) Consider implementation of the annex by contracting parties and identify potential operational and technical implementation issues. Provide information and possible recommendations on these issues to the Standards Committee.

Provision of resources

Funding for the meeting 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) (see https://www.ippc.int/en/core-activities).

Collaborator

To be determined.

Steward

Please refer to the *List of topics for IPPC standards* posted on the IPP (see https://www.ippc.int/core-activities/standards-setting/list-topics-ippc-standards).

Expertise

Members with collective knowledge of, and experience in:

- auditing phytosanitary systems or procedures within the provisions of the IPPC; and
- conducting or receiving remote phytosanitary audits, including the specific needs and limitations of the process.

Participants

Five to seven members.

A member of the Implementation and Capacity Development Committee (IC) should also be invited to attend as an invited expert or as an IC representative.

In addition, a representative from an organization experienced in the development of remote-audit guidance (e.g. Codex Alimentarius Commission or Secretariat, International Organization for Standardization) should be invited to share their experience of remote audits with the EWG by giving a presentation as an invited expert.

Bibliography

The IPPC, relevant ISPMs and other national, regional and international standards and agreements as may be applicable to the tasks, and discussion papers submitted in relation to this work.

References

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ISPM 45. 2021. *Requirements for national plant protection organizations if authorizing entities to perform phytosanitary actions*. IPPC Secretariat. Rome, FAO. https://www.ippc.int/en/publications/89734/

Discussion papers

Participants and interested parties are encouraged to submit discussion papers to the IPPC Secretariat (ippc@fao.org) for consideration by the EWG.

Publication history

This is not an official part of the specification

2024-04 CPM-18 added topic Annex *Remote audits* (2023-031) to ISPM 47 (*Audit in the phytosanitary context*).

2025-05 Standards Committee (SC) revised and approved for consultation.

2025-07 Consultation.

2025-11 SC revised and approved the specification.

Specification 78. 2026. *Remote audits*. IPPC Secretariat. Rome, FAO.

Publication history last updated: 2026-01

Appendix 7: Specification 79 (*Revision of ISPM 12 (*Phytosanitary certificates*)) (2023-020)*

Title

Revision of ISPM 12 (*Phytosanitary certificates*) (2023-020).

Reason for the revision

A focused revision of ISPM 12 (*Phytosanitary certificates*) was recently undertaken in relation to re-export and the revised ISPM was adopted by the Sixteenth Session of the Commission on Phytosanitary Measures in 2022. However, this revision did not address other issues that could further assist with the harmonization of the preparation and issuance of phytosanitary certificates. A revision of ISPM 12 is therefore needed to:

- promote ease of use of the standard among contracting parties;
- clarify and update requirements to reflect current operational processes of national plant protection organizations (NPPOs) and support the maintenance and harmonization of paper and electronic phytosanitary certificates;
- clarify requirements and provide guidance on the issuance of phytosanitary certificates for re-export of certain categories of consignments with multiple destinations or in cases of partial re-export or partial release of consignments; and
- clarify which inspection date should be included on a phytosanitary certificate when an importing country requests that the inspection date be given.

Scope

The revision of ISPM 12 should update and modernize the standard. This revision should include: updating the information in the standard; clarifying re-export requirements; clarifying what additional phytosanitary information may be included in phytosanitary certificates; and clarifying the options for issuing phytosanitary certificates in paper and electronic form. All the revisions to the standard should remain within the existing scope of ISPM 12.

Purpose

The purpose of this revision is to enhance implementation of, and compliance with, ISPM 12 by promoting harmonized phytosanitary certification practices and to facilitate the transition to electronic certification.

The revision further aims to ensure that phytosanitary certificates issued in paper and electronic form are harmonized and compliant with ISPM 12, and that security mechanisms are in place to avoid fraudulence, in support of the international trade of plants, plant products and regulated articles.

Tasks

The expert working group (EWG) should undertake the following tasks:

(91) Review the text of ISPM 12 to update information.

(92) Consider if more guidance is required regarding the duration of validity of phytosanitary certificates for export and phytosanitary certificates for re-export, and their certified copies and replacements. Refer to specific commodities and provide examples for different categories of commodities.

(93) Consider the inclusion of additional guidance on inspection dates, in case importing countries request that they are recorded on the phytosanitary certificate.

(94) Review the security and authentication requirements for phytosanitary certificates, including physical and electronic features (e.g. security of wet and printed signatures, stamps, identifying fraudulent and invalid certificates, the use of two-dimensional codes and other online validation tools), and update them as necessary. Encourage good practices (e.g. contracting parties placing a sample of the format of their phytosanitary certificates on the International Phytosanitary Portal (IPP)).

(95) Review requirements and provide guidance for the issuance of phytosanitary certificates for re-export to improve clarity and consistency. In doing so, consider the re-export of regulated articles such as seeds or grain that may have been stored for an extended period of time: specify categories of commodities and criteria for long-term storage (conditions, time frame, and duration of validity of the original phytosanitary certificate).

(96) Consider how the NPPOs of importing countries should manage phytosanitary certification in cases of partial consignment release and partial consignment re-export, including procedures for amending or reissuing phytosanitary certificates to maintain traceability and compliance.

(97) Review, revise and update the requirements to align phytosanitary certificates in paper and electronic form to better reflect their use by NPPOs (e.g. requirements for management of attachments in cases where, for re-export, both a paper and an electronic certificate are required for a consignment).

(98) Consider the management of non-phytosanitary attachments in electronic format.

(99) Establish criteria to determine the validity and compliance of electronically issued phytosanitary certificates that are not transmitted in Extensible Markup Language (XML) format (e.g. those transmitted in portable document format (PDF)).

(100) Review Appendix 1 of ISPM 12 to ensure that information on electronic phytosanitary certificates is up-to-date. Consider including provisions for a contingency plan when the electronic system used for issuing or transmitting electronic phytosanitary certificates is suspended because of maintenance or unexpected system failure.

(101) Review all references to ISPM 12 in other ISPMs to ensure that they are still relevant and propose consequential changes if necessary. Review all references to other ISPMs in ISPM 12 and amend as necessary.

(102) Consider implementation of the revised standard by contracting parties and identify potential operational and technical implementation issues. Provide information and possible recommendations on these issues to the Standards Committee.

Provision of resources

Funding for the meeting 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 IPP (see https://www.ippc.int/en/core-activities).

Collaborator

To be determined.

Steward

Please refer to the *List of topics for IPPC standards* posted on the IPP (see https://www.ippc.int/core-activities/standards-setting/list-topics-ippc-standards).

Expertise

Members with collective knowledge of, and experience in, phytosanitary regulation and certification (both paper and electronic) related to the import, export and re-export of regulated articles.

Participants

Six to eight members.

In addition, one technical expert from the ePhyto Steering Group should be invited to attend as an invited expert.

A member of the Implementation and Capacity Development Committee (IC) should also be invited to attend as an invited expert or an IC representative.

Bibliography

The IPPC, relevant ISPMs and other national, regional and international standards and agreements as may be applicable to the tasks, and discussion papers submitted in relation to this work.

ISPM 5. *Glossary of phytosanitary terms*. IPPC Secretariat. Rome, FAO. https://www.ippc.int/en/publications/622/

ISPM 7. 2016. *Phytosanitary certification system*. IPPC Secretariat. Rome, FAO. Adopted 2011. https://www.ippc.int/en/publications/613/

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Discussion papers

Participants and interested parties are encouraged to submit discussion papers addressing technical or policy aspects of phytosanitary certification, including electronic certificates, to the IPPC Secretariat (ippc@fao.org) for consideration by the EWG

Publication history

This is not an official part of the specification

2024-04 CPM-18 added topic *Revision of ISPM 12 (*Phytosanitary certificates*)* (2023-020).

2025-05 Standards Committee (SC) revised and approved for consultation.

2025-07 Consultation.

2025-11 SC revised and approved the specification.

Specification 79. 2026. *Revision of ISPM 12 (*Phytosanitary certificates*)*. IPPC Secretariat. Rome, FAO.

Publication history last updated: 2026-02

Appendix 8: 7.6.4 Procedure for developing phytosanitary treatments for ISPM 15 (Regulation of wood packaging material in international trade)

Taking into account the other sub-sections 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 NPPOs 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/absence of bark).
- environmental conditions (e.g. temperature, humidity, atmosphere).

To ensure these elements are addressed appropriately, when developing a treatment for ISPM 15, 4 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[58] 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.

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 for testing in Steps 3 and 4. Screening should follow the data gathering requirements prescribed in ISPM 28. Evidence on treatment efficacy should be provided on at least one species from each pest group listed in Table 1. Reasons for the selection of the species of test pests should be

[58] 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). However, for the purposes of phytosanitary treatments in ISPM 15, mortality should be considered the successful outcome.

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 family 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, etc.) 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, vigor 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 which 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.
- 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, etc.)
- Moisture inside and at the surface of the wood (e.g. wood moisture contents of freshly cut and dried wood).
- Dimensions of wood (e.g. sizes of wood used for pallets, boxes, or dunnage).

- Anatomy and density of wood (e.g. ring porous, diffuse porous, sapwood, heartwood, etc.).
- Wood species (e.g. tropical and temperate species; coniferous and broadleaf species).
- Presence or absence of bark.

In step 2 a single piece of wood used for testing should be considered a test sample. At least 5 test samples should be used for testing a single level of a physical parameter (e.g. one level of temperature, one species of wood etc.).

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 determined schedule in Step 2 may be higher than 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 step 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 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 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 which 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 4 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 a 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 level of 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 standard 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 (Ormsby 2022).

Type of pests	Minimum number
Bostrychidae	6,188
Buprestidae	5,700
Cerambycidae	7,470
Curculionidae (Scolytinae)	997
Siricidae	1,485
Nematoda	180 blocks
Fungi	180 blocks

References

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ISPM 5. *Glossary of phytosanitary terms*. IPPC Secretariat. Rome, FAO. https://www.ippc.int/en/publications/622/

ISPM 15. *Regulation of wood packaging material in international trade*. IPPC Secretariat. Rome, FAO. https://www.ippc.int/en/publications/640/

ISPM 28. *Phytosanitary treatments for regulated pests*. IPPC Secretariat. Rome, FAO. https://www.ippc.int/en/publications/591/

ISPM 31. *Methodologies for sampling of consignments*. IPPC Secretariat. Rome, FAO. https://www.ippc.int/en/publications/588/

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Meurisse N, Rassati D, Hurley BP, Brockerhof EG, Haack RA (2019) Common pathways by which non-native forest insects move internationally and domestically. J Pest Sci 92:13–27. https://doi.org/10.1007/s10340-018-0990-0

Schortemeyer M, Thomas K, Haack RA, Uzunovic A, Hoover K, Simpson JA, Grgurinovic CA (2011) Appropriateness of probit-9 in the development of quarantine treatments for timber and timber commodities. J Econ Ecol 104:717–731

Appendix 9: Draft agenda for the 2026 SC-7 meeting

Agenda Item		Document No.	Presenter
1.	**Opening of the Meeting**		Nersisyan
2.	**Meeting Arrangements**		Nersisyan
2.1	Election of the Chairperson		Nersisyan
2.2	Election of the Rapporteur		Chairperson
2.3	Adoption of the Agenda	01_SC7_2026_May	Chairperson
3.	**Administrative Matters**		Chairperson
3.1	Documents list	02_SC7_2026_May	Torella
3.2	Participants list	03_SC7_2026_May SC membership list	Torella
4.	**Draft ISPMs for Approval for Second Consultation**		Chairperson
4.1	**Draft annex International movement of fresh *Musa* spp. fruit (2023-028) to ISPM 46 (*Commodity-specific standards for phytosanitary measures*)** - Steward: André C.P. DA SILVA o Steward's responses to 2025 first consultation comments (2023-028) o Steward's notes and potential implementation issues (2023-028) o TPG recommendations to the steward on terminology and consistency (2023-028)	2023-028 XX_SC7_2026_May XX_SC7_2026_May XX_SC7_2026_May	C.P. Da Silva
4.2	**Draft annex International movement of fresh *Colocasia esculenta* corms (2023-023) to ISPM 46 (*Commodity-specific standards for phytosanitary measures*)** - Steward: Sophie PETERSON · Steward's responses to 2025 first consultation comments (2023-023) · Steward's notes and potential implementation issues (2023-023) · TPG recommendations to the steward on terminology and consistency (2023-023)	2023-023 XX_SC7_2026_May XX_SC7_2026_May XX_SC7_2026_May	Peterson
5.	**Items Requested by SC November 2025**		
5.1	Comparison between plain-language version of ISPM 26 with the draft submitted to CPM-20 (2026) for adoption	XX_SC7_2026_May	Wilson
5.2	Proposed options on the way forward for the draft annex Design and use of systems approaches for the phytosanitary certification of seeds (2018-009) to ISPM 38 (*International movement of seeds*) - Co-Stewards: Joanne WILSON; Matías GONZÁLEZ BUTTERA · Presentation by the International Seed Federation (ISF) representative	2018-009 XX_SC7_2026_May	Wilson/ González Buttera ISF Representative
5.3	Annotated template for draft specifications: - Review of the standard task for identifying potential implementation issues	Annotated template for draft specifications XX_SC7_2026_May	Secretariat/SC member
6.	**Items Deferred by SC November 2025**		

Agenda Item		Document No.	Presenter
6.1	Impacts on biodiversity and the environment that is in all ISPMs	XX_SC7_2026_May	Secretariat
7.	**Items Deferred by SC November 2025 if Not Discussed by SC May 2026**		
7.1	Specifications, functions, rules and guidance for technical panels	XX_SC_2026_May	Torella
7.2	TPG activities and timing for providing recommendations and translation on consultation comments	XX_SC_2026_May	Torella/C.P. Da Silva
8.	**Items Arising from SC May 2026**		Chairperson
9.	**Review of the Standard Setting Calendar**	IPP Calendar	Torella
10.	**Any Other Business**		Chairperson
11.	**Date and Venue of the Next Meeting**		Chairperson
12.	**Evaluation of the Meeting**	Survey	Chairperson
13.	**Close of the Meeting**		Chairperson

Appendix 10: Participants list Standards Committee Working Group (SC-7) 2026

Region, Role	Name, mailing address, telephone	Email address	Membership Confirmed	Term expires
Africa Member	**Edouard NYA** M. Sc. Ingénieur Agronome Chief National Laboratory for Analysis and Diagnosis of Agricultural Products and Inputs Directorate of Regulations and Quality Control of Agricultural Inputs and Products Ministry Of Agriculture and Rural Development Republic of Cameroon **CAMEROON** Tel: (+237) 696 18 99 73	nyaedouard@yahoo.fr	CPM-18 (2024) 1st term / 3 years	2027
Asia Member	**Masahiro SAI** Head of Narita Plant Protection Station Office, Yokohama Plant Protection Station, Ministry of Agriculture, Forestry and Fisheries (MAFF) Narita International Airport – Terminal 2 Building, 1-1 Furugome, Narita City. 282 0004 **JAPAN** Tel: +81456228693	masahiro_sai670@maff.go.jp	CPM-13 (2018) CPM-15 (2021) CPM-18 (2024) 3rd term / 3 years	2027
Europe Member	**David OPATOWSKI** Deputy Director (Pests, Trade and International Relations) Plant Protection and Inspection Services Ministry of Agriculture and Food Security **ISRAEL** Tel: +972-3-9681583 Mob: +972-506-241885	davido@moag.gov.il dopatowski@yahoo.com	CPM-1 (2006) CPM-4 (2009) CPM-12 (2017) CPM-15 (2021) CPM-18 (2024) 5th term / 3 years	2027
Latin America and Caribbean Member	**André Felipe C. P. da SILVA** Federal Inspector Quarantine Division Ministry of Agriculture, Live Stock and Food Supply **BRAZIL** Tel: (61) 3218-2925	andre.peralta@agro.gov.br	CPM-14 (2019) CPM-16 (2022) CPM-19 (2025) 3rd term / 3 years	2028
Near East Member	**Nader ELBADRY** Phytosanitary Specialist, Central Administration of Plant Quarantine, 6 Michel Bakhoum St., Dokki, Giza, **EGYPT** Tel: +201096799493	nader.badry@gmail.com	CPM-15 (2021) CPM-18 (2024) 2nd term / 3 years	2027

Region, Role	Name, mailing address, telephone	Email address	Membership Confirmed	Term expires
North America Member	**Steve CÔTÉ** National Manager, International Phytosanitary Standards Plant Export Division 59 Camelot Drive, Ottawa, Ontario, K1A 0Y9 **CANADA** Tel: (+1) 343-543-1432 Fax: (+1) 613-773-7576	Steve.Cote@inspection.gc.ca	CPM-15 (2021) CPM-18 (2024) 2nd term / 3 years	2027
Southwest Pacific Member	**Sophie PETERSON** Director, Pacific Engagement and International Plant Health | Australian Chief Plant Protection Office Department of Agriculture, Water and the Environment **AUSTRALIA** Tel: +61 2 6272 3769 Mob: +61 466 867 519	sophie.Peterson@aff.gov.au sophie.peterson@agriculture.gov.au	CPM-15 (2021) CPM-18 (2024) 2nd term / 3 years	2027

Others		
Joanne WILSON Principal Adviser, Risk Management Plant Imports Group Ministry for Primary Industries **NEW ZEALAND** Tel: +64 489 40528 Mob: +64 2989 40528	SC member Co-steward of the draft annex to ISPM 38	joanne.wilson@mpi.govt.nz
Matías GONZALEZ BUTTERA Dirección Nacional de Protección Vegetal - SENASA Venezuela 162 (C1063), City of Buenos Aires **ARGENTINA** Tel/Fax: (+54 9 11) 36661284	SC member Co-steward of the draft annex to ISPM 38	mbuttera@senasa.gob.ar

Appendix 11: Summary of Standard Committee e-decisions between 2025 May – 2025 November)

E-decision number	SC decision	SC members commenting in the forum	Polls (yes/no)
2025_eSC_Nov_01	Approval for adoption: Draft annex to ISPM 27: *Meloidogyne mali* (2018-019)	15	No
2025_eSC_Nov_02	Approval for adoption: Draft annex to ISPM 27: *Pospiviroid* species (2018-031)	15	No
2025_eSC_Nov_03	Approval for second consultation: Draft annex to ISPM 28: Irradiation treatment for *Pseudococcus baliteus* (2023-033)	16	No
2025_eSC_Nov_04	Approval for adoption: Draft annex to ISPM 28: Irradiation treatment for *Paracoccus marginatus* (2023-034)	17	No
2025_eSC_Nov_05	Approval for adoption: Draft annex to ISPM 28: Irradiation treatment for *Planococcus lilacinus* (2023-035)	18	No
2025_eSC_Nov_06	Adoption of the 2025 May SC meeting report	16	No
2025_eSC_Nov_07	Approval for adoption: Draft annexes to ISPM 28	19	Yes
2025_eSC_Nov_08	Membership of the Technical Panel on Diagnostic Protocols	19	Yes
2025_eSC_Nov_09	Selection of English and Arabic language experts for the TPG	19	Yes
2025_eSC_Nov_10	Approval to SPG: Position paper on the future of ISPMs	19	No
2025_eSC_Nov_11	International movement of Malus domestica fruit for consumption stewardship	20	No
2025_eSC_Nov_12	Membership and call for experts for the TPPT	18	No

2025_eSC_Nov_01: Approval for adoption: Draft annex to ISPM 27: *Meloidogyne mali* (2018-019)

Summary of SC e-forum discussion

During the SC e-decision the SC was invited to approve the responses to the consultation comments and the draft annex to ISPM 27: *Meloidogyne mali* (2018-019) for adoption.

The SC e-forum was open from 29 May 2025 to 12 June 2025. 15 SC members provided their comments.

SC e-decision

Based on the forum discussions, the SC approved the responses to the consultation comments and the draft annex to ISPM 27: *Meloidogyne mali* (2018-019) for adoption

2025_eSC_Nov_02: Approval for adoption: Draft annex to ISPM 27: *Pospiviroid* species (2018-031)

Summary of SC e-forum discussion

During the SC e-decision the SC was invited to approve the responses to the consultation comments and the draft annex to ISPM 27: *Pospiviroid* species (2018-031) for adoption.

The SC e-forum was open from 29 May 2025 to 12 June 2025. 15 SC members provided their comments.

SC e-decision

Based on the forum discussions, the SC approved the responses to the consultation comments and the Draft annex to ISPM 27: *Pospiviroid* species (2018-031) for adoption.

2025_eSC_Nov_03: Draft annex to ISPM 28: Irradiation treatment for *Pseudococcus baliteus* (2023-033)

Summary of SC e-forum discussion

During the SC e-decision the SC was invited to approve the draft annex to ISPM 28: Irradiation treatment for *Pseudococcus baliteus* (2023-033) for second consultation.

The SC e-forum was open from 10 June 2025 to 24 June 2025. 16 SC members provided their comments.

SC e-decision

Based on the forum discussions, the SC approved the draft annex to ISPM 28: Irradiation treatment for *Pseudococcus baliteus* (2023-033) for second consultation.

2025_eSC_Nov_04: Approval for adoption: Draft annex to ISPM 28: Irradiation treatment for *Paracoccus marginatus* (2023-034)

Summary of SC e-forum discussion

During the SC e-decision the SC was invited to approve the responses to the consultation comments and the draft annex to ISPM 28: Irradiation treatment for *Paracoccus marginatus* (2023-034) for adoption.

The SC e-forum was open from 11 June 2025 to 25 June 2025. 17 SC members provided their comments.

SC e-decision

Based on the forum discussions, the SC approved the responses to the consultation comments and the draft annex to ISPM 28: Irradiation treatment for *Paracoccus marginatus* (2023-034) for adoption.

2025_eSC_Nov_05: Approval for adoption: Draft annex to ISPM 28: Irradiation treatment for *Planococcus lilacinus* (2023-035)

Summary of SC e-forum discussion

During the SC e-decision the SC was invited to approve the responses to the consultation comments and the Draft annex to ISPM 28: Irradiation treatment for *Planococcus lilacinus* (2023-035) for adoption.

The SC e-forum was open from 11 June 2025 to 25 June 2025. 18 SC members provided their comments.

SC e-decision

Based on the forum discussions, the SC approved the responses to the consultation comments and the draft annex to ISPM 28: Irradiation treatment for *Planococcus lilacinus* (2023-035) for adoption.

2025_eSC_Nov_06: Adoption of the 2025 May SC meeting report

Summary of SC e-forum discussion

During the SC e-decision the SC was invited to adopt the 2025 May SC report.

The SC e-forum was open from 30 June 2025 to 14 July 2025. 16 SC members provided their comments.

SC e-decision

Based on the forum discussions, the SC adopted the 2025 May SC report.

2025_eSC_Nov_07: Approval for adoption: Draft annexes to ISPM 28

Summary of SC e-forum discussion

During the SC e-decision the SC was invited to approve the addition of five PTs to the LOT.

The SC e-forum was open from 17 September 2025 to 01 October 2025. 19 SC members provided their comments.

A poll was held from 02 to 09 October 2025. Out of 25 SC members, five participated, with all casting a "Yes" vote and none against. One SC member added the following comment: “On the bases that our earlier concerns are considered and addressed”. As a result, the concerned five PTs are added to the LOT pending allocation of a priority, with the TPPT to review the assigned priorities for discussion at SC May 2026.

SC e-decision

Based on the forum discussions, the SC approved and added the five PTs to the LOT.

2025_eSC_Nov_08: Membership of the Technical Panel on Diagnostic Protocols

Summary of SC e-forum discussion

During the SC e-decision the SC was invited to review the nominations from the Call for TPDP expert in Virology and select one expert in the IPPC Technical Panel on Diagnostic Protocols (TPDP) for a 5-year term starting in 2025.

The SC e-forum was open from 17 September 2025 to 01 October 2025. 19 SC members provided their comments.

A poll was held from 02 to 09 October 2025. Out of 25 SC members, five participated, with all casting a "Yes" vote and none against. One SC member added the following comment: “In order to have regional representation in the TPDP”. As a result, the SC confirmed Mr. Hironobu Yanagisawa (Japan) as the new expert in Virology for the TPDP.

SC e-decision

Based on the forum discussions, the SC confirmed Mr. Hironobu Yanagisawa (Japan) as the new expert in Virology for the TPDP.

2025_eSC_Nov_09: Selection of English and Arabic language experts for the TPG

Summary of SC e-forum discussion

During the SC e-decision the SC was invited to review the nominations and select the experts in English and Arabic languages in the IPPC Technical Panel for the Glossary (TPG) for a 5-year term starting in 2025.

The SC e-forum was open from 17 September 2025 to 01 October 2025. 19 SC members provided their comments.

A poll was held from 02 to 09 October 2025. Out of 25 SC members, seven participated, with all casting a "Yes" vote and none against. As a result, Mr. Alan MACLEOD has been appointed as the third English language expert for the TPG and Ms Besma M'RABET has been appointed as the Arabic language expert for the TPG. Both experts will serve a 5-year term starting in 2025.

SC e-decision

Based on the forum discussions, the SC reviewed the nominations and selected Mr Alan MacLeod and Ms Besma M'Rabet to serve, respectively, as the third English language expert and Arabic language expert in the IPPC TPG for a 5-year term starting in 2025.

2025_eSC_Nov_10: Approval to SPG: Position paper on the future of ISPMs

Summary of SC e-forum discussion

During the SC e-decision the SC was invited to approve the position paper on the future of ISPMS to SPG 2025.

The SC e-forum was open from 25 September 2025 to 09 October 2025. 19 SC members provided their comments.

SC e-decision

Based on the forum discussions, the SC approved the position paper on the future of ISPMS to be presented to SPG 2025.

2025_eSC_Nov_11: International movement of *Malus domestica* fruit for consumption stewardship

Summary of SC e-forum discussion

During the SC e-decision, the SC was invited to consider and decide whether to agree to Ms Joanne WILSON undertaking the role of steward for the commodity standard on the international movement of *Malus domestica* fruit for consumption.

The SC e-forum was open from 25 September 2025 to 09 October 2025. 20 SC members provided their comments.

SC e-decision

Based on the forum discussions, the SC agreed to Ms Joanne WILSON undertaking the role of steward for the commodity standard on the international movement of *Malus domestica* fruit for consumption.

2025_eSC_Nov_12: Membership and call for experts for the TPPT

Summary of SC e-forum discussion

During the SC e-decision, the SC was invited extend the membership of Daojian YU (China) and Peter Llewellyn LEACH (Australia) for another 5-year term, commencing in 2024. The SC was also invited to agree to issue a call for two experts for the TPPT for a 5-year term, beginning in 2026.

The SC e-forum was open from 24 October 2025 to 07 November 2025. 18 SC members provided their comments.

SC e-decision

Based on the discussion, the SC agreed to extend the membership of Daojian YU (China) and Peter Llewellyn LEACH (Australia) for another 5-year term. The SC also agreed to issue a call for two additional TPPT experts for a 5-year term.

Appendix 12: list of action points arising from the meeting

Decisions & Actions	Agenda Item	Responsible
1. agreed to forward the SC position paper on rethinking ISPMs, as submitted to the SPG, to the bureau to support their preparation of the CPM paper	3.6	• Secretariat
2. agreed to forward the SC position paper on rethinking ISPMs, as submitted to the SPG, to CPM-20 (2026) for consideration under the relevant agenda item	3.6	• Secretariat
3. recommended the draft revision of ISPM 26 (*Establishment and maintenance of pest free areas for tephritid fruit flies*) (2021-010), for submission to CPM-20 (2026) for adoption	4.1	• Secretariat
4. requested that the secretariat archive the implementation issues identified for this draft ISPM in the repository of potential implementation issues on standards, for future consideration by the Implementation and Capacity Development Committee (IC)	4.1	• Secretariat
5. requested that the SC-7 compare the plain language version of ISPM 26 with the draft submitted to CPM-20 (2026) for adoption and make recommendations to the SC, based on this comparison, about the application of plain language principles in the development of future ISPMs;	4.1	• Secretariat
6. agreed that an item would be added to the agenda for the SC meeting May 2026 to provide input to the SC-7's discussion on the plain language version of ISPM 26	4.1	• Secretariat
7. agreed not to develop an ISPM 5 definition of "field inspection" but to describe it in the draft annex instead;	4..2	• Secretariat
8. recommended the draft annex Field inspection (2021-018) to ISPM 23 (*Guidelines for inspection*),for submission to CPM-20 (2026) for adoption	4.2	• Secretariat
9. requested that the secretariat archive the implementation issues identified for this draft ISPM in the repository of potential implementation issues on standards, for future consideration by the IC.	4.1	• Secretariat
10. invited the CPM to encourage contracting parties to submit pests and measures for inclusion in draft annexes to ISPM 46 during the call for information, with any additional pests and measures being proposed during the first consultation;	5	Secretariat
11. invited the TPCS to provide a draft list of criteria for exclusion of pests and measures in commodity standards, for consideration by the SC in May 2026; and	5	• Secretariat /TPCS
12. approved Specification 78 (Annex Remote audits to ISPM 47 (*Audit in the phytosanitary context*)) (2023-031)	6.1	• Secretariat
13. requested that the secretariat investigate the apparent technical glitches that had resulted in discrepancies	6.1	• Secretariat

between the steward's acceptance or rejection of comments on the draft specification and the resulting output.		
14. approved Specification 79 (Revision of ISPM 12 (*Phytosanitary certificates*)) (2023-020)	6.2	• Secretariat
15. approved the draft ISPM 15 criteria, for inclusion as section 7.6.4 in the *IPPC procedure manual for standard setting* subject to the inclusion of missing DOIs for references and checks to ensure that it was consistent with the *IPPC style guide*;	7.2	• Secretariat
16. invited the TPPT to consider whether additional guidance could be added to the *IPPC procedure manual for standard setting* on how extrapolation can be used in evaluating treatments for submission as annexes to ISPM 28;	7.2	• Secretariat TPPT
17. with regard to ISPM 15, *confirmed* that the TPPT (as per Task 8 of Specification TP 3 (*Technical Panel on Phytosanitary Treatments*)) may work on annexes to existing ISPMs on topics relating to phytosanitary treatments.	7.2	• Secretariat /TPPT
18. *requested* that the secretariat upload the draft revision of section 5.7 of the *IPPC procedure manual for standard setting* to the Online Comment System by 1 December, for feedback from the SC by the end of February and schedule a virtual meeting of the small working group in mid- to late March 2026 to discuss the feedback.	7.6	• Secretariat
19. added the revision of the ISPM 5 term "pest free area" as a subject to the work programme of the SC in the *List of topics for IPPC standards*;	7.7	• Secretariat
20. recommended to CPM-20 (2026) that the focused revision of ISPM 8 regarding the "pest absent" descriptions be added to the List of topics for IPPC standards, with priority 1, to resolve ambiguity with ISPM 5	7.7	• Secretariat
21. invited the TPCS to consider the suggestions made at this meeting on how phytosanitary import requirements of pest absence can be addressed in commodity standards, and to propose one or two solutions for consideration by the SC at its meeting in May 2026.	7.7	• Secretariat /TPCS
22. *requested* that the secretariat: for documents where the IPPC Secretariat is the author, ensure that the default setting in the Online Comment System for consultation periods is that comments are not visible to other users, and provide assurance to the SC chairperson that the secretariat's internal operating procedures have been updated to ensure that this setting is checked before each consultation;	7.8	• Secretariat
23. requested that the secretariat amend the OCS section of the *Procedure manual for standard setting* to reflect the SC's decision at this meeting about the sharing of	7.8	• Secretariat

comments within OCS.		
24. agreed to forward the paper from the TPDP on rethinking ISPMs to the CPM Bureau as part of the SC's input to the bureau's preparation of a CPM paper on the next steps for improving ISPMs; and	8.2	• Secretariat
25. agreed to invite the TPDP to include a summary table of minimum requirements, as suggested in the fourth bullet point of the TPDP paper to this meeting, in at least one current draft DP for consideration by the SC in November 2026.	8.2	• Secretariat
26. *recommended* to CPM-20 (2026) to add to the *List of topics for IPPC standards*: Revision of ISPM 3 (*Guidelines for the export, shipment, import and release of biological control agents and other beneficial organisms*) (2025-010), priority 1	9.1	• Secretariat
27. *agreed* that, in anticipation of the CPM adding the revision of ISPM 3 (*Guidelines for the export, shipment, import and release of biological control agents and other beneficial organisms*) (2025-010) to the *List of topics for IPPC standards*, the European members of the SC would refine the draft specification so that is ready for potential SC consideration in May 2026	9.1	• Emmanuel/ SC European members
28. *added* the following diagnostic protocols to the *List of topics for IPPC standards*: Tomato mottle mosaic virus (2025-013), priority 1, and *Begomovirus solanumdelhiense* (2025-014), priority 2;	9.1	• Secretariat
29. *invited* the TPDP to clarify the host material that would be tested using the two new DPs (seeds, plant material, or both); and	9.1	• Secretariat
30. *agreed* that potential confusion over the meaning of the terms "shipborne dunnage", "crate", "case", "pallet" and "spool" would be more appropriately addressed by a revision of the IPPC *Guide to the regulation of wood packaging material* rather than adding definitions to ISPM 5	9.1	• -
31. *recommended* to CPM-20 (2026) that the topic *Minimizing pest movement by air containers and aircraft* (2008-002) be assigned priority 2 and its pending status be lifted;	9.2	• Secretariat
32. recommended to CPM-20 (2026) that the priority for the revision of ISPM 23 (*Guidelines for inspection*) (2023-014) be changed from priority 2 to priority 1	-	• Secretariat
33. *agreed* that Mariangela CIAMPITTI (Italy, lead), Stephanie DUBON (United States of America), Nader ELBADRY (Egypt), Stavroula IOANNIDOU (Greece) and Edouard NYA (Cameroon) would form a small working group to develop a paper for CPM-20 (2026) on the rationale for the proposed change to the status of the topic *Minimizing pest movement by air*	9.2	• Secretariat

containers and aircraft (2008-002), based on the paper presented at this meeting with the addition of aspects including One Health, linkage to sea containers, and collaboration with the other "three sisters"; and		
34. *assigned* Nader ELBADRY (Egypt) as one of the assistant stewards for the Technical Panel on Commodity Standards (2019-009), to replace Eyad MOHAMMED (Syrian Arab Republic);	9.2	• Secretariat
35. *corrected* the entry for assistant steward for the International movement of *Citrus* fruit (2023-019).	9.2	• Secretariat
36. *agreed* that the paper on TPG activities and timing from this meeting (agenda item 7.5) would be added to the agenda of the SC meeting in May 2026, with the possibility of it being forwarded to the SC-7 the following week;	10.1	• Secretariat
37. agreed to the draft agenda for the 2026 SC-7 meeting and that the duration of the meeting would be four or five days (to be determined by the secretariat after liaison with SC-7 members);	10.1	• Secretariat
38. *agreed* that relevant stewards would be invited to participate virtually in the agenda item for their topics, with Joanne WILSON participating in person; and	10.1	• Secretariat
39. *agreed* that the SC representatives on the SC-7 would be Edouard NYA (Africa), Masahiro SAI (Asia), David OPATOWSKI (Europe), André Felipe C.P. da SILVA (Latin America and Caribbean), Nader ELBADRY (Near East), and Steve CÔTÉ (North America) and Sophie PETERSON (Southwest Pacific).	10.1	• Secretariat
40. *requested* that the secretariat invite the representatives from the International Seed Federation (ISF) attending the IPPC systems approach workshop in Chile in December 2025 to meet with the SC representatives attending the workshop (María José MONTELONGO (Uruguay), André Felipe C.P. da SILVA (Brazil) and David Alfonso TELLO CEPEDA (Ecuador)) to informally discuss the way forward for the annex	10.2	• Secretariat /LAC SC members
41. *agreed* that SC members attending CPM-20 (2026) would do the same during the week of the CPM session;	10.2	• SC members/ Secretariat
42. *agreed* that SC members would endeavour to consult representatives from their national seed associations to discuss the way forward for this annex;	10.2	• SC members/ Secretariat
43. agreed that feedback from the discussions with ISF and the national seed associations would be added as an item on the agenda of the SC meeting in May 2026, for the SC to provide its response	10.2	• SC members/ Secretariat
44. *requested* that the secretariat invite a representative from the ISF to give a presentation to the SC-7 during its meeting in May 2026; and	10.7	• Secretariat
45. *requested* that the SC-7 provide three or four options	10.7	• Secretariat

on the way forward, for consideration by the SC at its meeting in November 2026.		
46. *recommended* to CPM-20 (2026) that the SC terms of reference be revised from "IC member may attend as an observer" to "IC representative attends as an observer";	11.1	• Secretariat
47. *invited* the IC to reconsider the topic proposal for an IPPC guide on fruit fly pest free areas and incorporate guidance on fruit fly pest free areas, including the material from the annexes and appendix removed from ISPM 26, in a revision of the IPPC *Guide for establishing and maintaining pest free areas*.	11.1	• IC Rep to SC/ Secretariat
48. *requested* that the secretariat open an e-decision to approve the report from this meeting, following approval of the text by the rapporteur.		• Secretariat