



Food and Agriculture
Organization of the
United Nations



International Plant Protection Convention
Protecting the world's plant resources from pests

Report of the Standards Committee meeting

**Rome, Italy
8-12 May 2017**

IPPC Secretariat

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1. Opening of the meeting

1.1 Welcome by the IPPC Secretariat

- [1] The IPPC Secretary, Mr Jingyuan XIA, welcomed the Standards Committee (SC) members. He highlighted a number of achievements from the Twelfth Session of the Commission on Phytosanitary Measures (CPM-12, 2017), which was the first CPM held outside of Rome. In particular, he stressed the adoption of an unprecedented 15 standards (including annexes) and the noting of 10 diagnostic protocols (DPs) adopted by the SC on behalf of the CPM since the last CPM session, which was a record number in the history of the IPPC progressed in a single year. The IPPC Secretary also highlighted major achievements of the CPM and the IPPC Secretariat over the past 65 years. In particular, the 94 standards that have been adopted over the years, including 41 ISPMs, 22 DPs and 31 PTs.
- [2] The IPPC Secretary briefed the SC members that the main task for implementing the Action Plan on the Enhancement Evaluation of the IPPC Secretariat in 2017 was to regroup staff and their responsibilities into two main units and a support team. He mentioned that two new standard setting positions had been created with the vacancies to be announced soon.
- [3] The IPPC Secretary urged all SC members to continue (i) to increase cooperation with the IC, (ii) prioritize the standard setting work to accommodate the needs of CPs in spite of resource constraints and (iii) focus on key issues such as commodity standards. He recalled that 2017 is the year of “Plant Health and Trade Facilitation” and he requested all SC members to think of ways to promote safe and fast trade.
- [4] The IPPC Secretary expressed his high appreciation to all SC members for their active work and positive contribution, and he also thanked all Standard Setting staff for their hard and team work.
- [5] The IPPC Standards Officer thanked Canada for contributing to making this SC meeting possible. He also welcomed all and in particular the new SC members Mr Lupeomanu Pelenato FONOTI (Samoa), Mr Bruce HANCOCKS (Australia), Mr Masahiro SAI (Japan) and, the returning member, Mr David OPATOWSKI (Israel).
- [6] He acknowledged the absence of Mr Moses Adegboyega ADEWUMI (Nigeria), Ms Esther KIMANI (Kenya), Mr Ali Amin KAFU (Libya) and Ms Walaikorn RATTANADECHAKUL (Thailand), and noted that two observers attended the meeting.

1.2 Election of the Chairperson

- [7] The SC elected Mr Ezequiel FERRO (Argentina) as Chairperson to the SC.

1.3 Election of the Rapporteur

- [8] The SC elected Ms Laurence BOUHOT-DELDUC (France) as rapporteur.

1.4 Adoption of the Agenda

- [9] The SC adopted the agenda (Appendix 1).

2. Administrative Matters

- [10] The IPPC Secretariat (hereafter “Secretariat”) introduced the Documents list (Appendix 2) and the Participants list (Appendix 3).
- [11] The Secretariat provided a document on local information¹ and invited participants to notify the Secretariat of any information that required updating or was missing.

¹ Link to [local information](#)

- [12] The Secretariat then introduced the Standard Setting staff² and thanked the FAO/International Atomic Energy Agency (IAEA) joint division, France, New Zealand and USA for their in-kind contributions. He particularly highlighted the crucial contribution from France in the form of a full time staff resource for the past five years renewed for a consecutive sixth year, which helped ensure the delivery of the Standard setting work programme.

3. Updates

3.1 Items arising from governance bodies

- [13] The Secretariat introduced the papers³ highlighting items of particular importance to the SC.
- [14] **Strategic framework.** The drafting of the IPPC strategic framework 2020-2030 had been initiated and the SC members were encouraged to engage through the appropriate channels to influence the future strategic direction of the IPPC.
- [15] **Sea containers complementary action plan.** CPM-12 agreed to set up a Sea Containers Task Force in 2017 according to a project and funding plan agreed by the CPM Bureau for a five-year period. The SC was invited to select a representative for this task force to work together with the IPPC Implementation and Capacity Development Committee (IC) to finalize the Rules of Procedure and Terms of Reference of this task force, according to CPM-12 decision.
- [16] The SC felt that it would be beneficial if Mr John HEDLEY, who was the steward of the draft ISPM, participated in the task force as an invited expert to transfer his ample knowledge on sea containers.
- [17] **CPM Recommendations.** The CPM agreed to the revisions of all adopted CPM Recommendations and to a new format. The revised CPM Recommendations were posted in English on the IPP⁴ on 2 May 2017 and other FAO languages will follow.
- [18] **IPPC Implementation and Capacity Development Committee.** The CPM established the IC and agreed to dissolve the National Reporting Obligations Advisory Group, the Tri-annual Review Group and the Subsidiary Body on Dispute Settlement as well as the Capacity Development Committee but only after the IC has been fully established. The CPM agreed that the call for topics be delayed so that a joint SC/IC call for topics for standards and issues for implementation can be held. As a priority task the SC and IC were to develop joint criteria for this call and present them for approval at the next CPM (CPM-13, 2018).
- [19] The SC was invited to select a representative for the IC. The SC noted that having an SC representative at the IC meeting provided a good opportunity for the SC to provide suggestions for implementation discussions. In this context, an SC member noted that the International Seed Federation expressed interest in collaborating with IPPC on implementation on ISPM 38 (*International movement of seeds*). The SC also agreed that there would be benefits to having a representative from the IC attend its meetings.
- [20] The SC discussed whether this representation should be by one assigned SC member, which could help ensure active involvement or, based on a rotation system, by various SC members because this would lessen the time and resources needed for the engagement and allow more SC members to be exposed to the IC. It was also recalled that the IC meetings are held in various geographical regions, and that there would be an opportunity for SC members from that specific region to attend. The SC agreed to assign this responsibility to one SC member (and one alternate) for the first two meetings to ensure continuity during the initiation period of the IC, and then revisit the decision in their May 2018 meeting. The SC also agreed it would be essential that the timing of the SC and IC meetings would allow the SC member

² Link to [standard setting staff](#)

³ 19_SC_2017_May; link to the [CPM Bureau April 2017 report](#)

⁴ Link to [CPM recommendations](#)

to participate in the IC meeting without jeopardizing the member's participation in the SC meeting, and requested the Secretariat to coordinate the timing of these meetings.

- [21] The SC agreed to assign an SC member the task of considering the IC terms of reference in view of aligning the SC terms of reference, if necessary.
- [22] **Adopted standards.** During CPM-12, some contracting parties pointed out that there were some issues related to some of the draft ISPMs presented for adoption that could impede the easy implementation of them. It was noted these issues would be considered under section 9 of this report.
- [23] It was also recalled that some countries had suggested some minor modifications to a standard (presented in a paper prior to CPM), which were not submitted as objections, but were intended to improve the standard. The current standard setting procedure does not foresee redrafting of standards during CPM, and the suggestions were therefore not considered by the CPM but would be considered when the standard would be revised. The SC Chairperson suggested that this may be discussed further by the SC who agreed that a discussion paper should be prepared for the next SPG meeting outlining the need for a possible change to the standard setting procedure. In this context, the Secretariat recalled that the CPM would need to agree to opening up the standard setting procedure for revision.
- [24] An SC member suggested that one objection should not have been accepted as it did not propose solutions or improvements to facilitate the adoption of the standard. The Secretariat recalled that the IPPC Secretariat presents them to the CPM who decides whether to accept them. Therefore, in this case, a contracting party should have questioned whether the objection satisfied the requirements set out in the standard setting procedure.
- [25] **Availability of documents in the standard setting process.** The CPM briefly discussed the possibility of making some TP working papers (currently confidential) available to contracting parties because some contracting parties felt that having access to these (e.g. underlying data for treatments) would help prevent objections and thus advance the adoption of standards. The CPM Bureau would discuss this issue in June 2017. See section 6.1 of this report for the full SC discussion on this issue.
- [26] **The reorganization, harmonization and minor technical updates of the fruit fly ISPMs.** The CPM did not reach agreement on the reorganization as proposed. COSAVE would lead a virtual working group with Australia, Europe and Japan to develop and submit a revised proposal to the IPPC Secretariat by 30 September 2017 for the SC to discuss and review at their November 2017 meeting. The SC would then decide whether this revised proposal will be presented to CPM-13 (2018) for consideration. If the proposal needs to be reviewed by the Technical Panel on Pest Free Areas and Systems Approaches for Fruit Flies (TPFF), extra-budgetary resources would be required.
- [27] **Ink amendments to adopted ISPMs.** The CPM noted the following ink amendments that would be incorporated in the various standards, republished and the previous versions revoked:
- To avoid the term “trading partner” by using alternative wording in ISPM 4 (*Requirements for the establishment of pest free areas*), ISPM 8 (*Determination of pest status in an area*), ISPM 9 (*Guidelines for pest eradication programmes*), ISPM 11 (*Pest risk analysis for quarantine pests*), ISPM 14 (*The use of integrated measures in a systems approach for pest risk management*), ISPM 15 (*Regulation of wood packaging material in international trade*), ISPM 17 (*Pest reporting*), ISPM 24 (*Guidelines for the determination and recognition of equivalence of phytosanitary measures*), ISPM 29 (*Recognition of pest free areas and areas of low pest prevalence*) and ISPM 30 (*Establishment of areas of low pest prevalence for fruit flies (Tephritidae)*).
 - To replace “quarantine facility” with the Glossary term “quarantine station” in ISPM 3 (*Guidelines for the export, shipment, import and release of biological control agents and other beneficial organism*).
 - To replace “protected area” with “regulated area” in ISPM 5 (*Glossary of phytosanitary terms*), ISPM 11 (*Pest risk analysis for quarantine pests*) and ISPM 30 (*Establishment of areas of low pest prevalence for fruit flies (Tephritidae)*).

- To revise “practically free” in ISPM 5.

[28] The Secretariat also stressed that processing ink amendments was an extremely complex and resource demanding process that should be kept to a minimum. This would mean that, in the future, suggested ink amendments may be filed for when a standard is revised.

[29] **Topics for IPPC standards.** The CPM discussed the SC proposal for additions to the *List of topics for IPPC standards* and some contracting parties had some concerns regarding what they felt was an inconsistent approach taken when the SC reviewed three submitted topics in November 2016. As the criteria for inclusion of topics would be reviewed in the future by the SC and the IC, these concerns may be addressed then. The Secretariat suggested that a task force composed of two SC members, two IC members and Secretariat staff be formed to progress the work on the draft criteria so they could be presented to SPG in October 2017.

[30] The CPM agreed to include one of the topics suggested by the SC (see also section 7 of this report).

[31] **Language review groups (LRGs).** The Secretariat noted that with the nomination of a new LRG Coordinator for Russian, there were active LRGs for all official FAO languages. He also noted that 2017 would be a very busy year for the LRG with so many new standards having been adopted. He recalled that the CPM had agreed to modify the procedure so that in the future, the LRG proposals for changes to the translations would no longer be presented to the CPM but posted on the IPP directly, with an email going out to contracting parties informing them of this. The CPM will continue to note that the LRGs have provided adjustments to the translations of specific standards, but the actual translations will no longer be attached to the CPM paper. The adjusted procedure will be posted on the IPP soonest.

[32] **International Year of Plant Health in 2020 (IYPH 2020).** The first meeting of the IYPH Steering Committee was held from 9-11 November 2016 and the second meeting following the CPM-12. The SC should consider how it plans to contribute to IYPH 2020 (see also section 5.1 of this report).

[33] **Certificates of compliance.** The CPM discussed the concept of certificates of compliance and agreed that further work on this concept should not be carried out at this moment, just as the CPM requested that this concept not be included in any draft ISPM at this time. The Secretariat noted that this affected the development of the draft ISPM on the *International movement of wood products and handicrafts made from wood* (2008-008). The SC discussed the priorities of the topics, including how to progress this specific draft ISPM, under section 7 of this report.

[34] The SC:

- (1) *selected* Mr Jesulindo Nery DE SOUZA JUNIOR as SC representative in the Sea Containers Task Force.
- (2) *agreed* to request the CPM Bureau to invite Mr John HEDLEY as an invited expert on the Sea Containers Task Force.
- (3) *agreed* that one SC member (and one alternate) be assigned as SC representative on the Implementation and Capacity Development Committee (IC) for the first two meetings and revisit the decision in the SC May 2018 meeting.
- (4) *selected* Mr Sam BISHOP as SC representative and Mr Álvaro SEPÚLVEDA LUQUE as alternate SC representative on the IC.
- (5) *agreed* it would be essential that the timing of the SC and IC meetings was carefully considered and *asked* that the Secretariat coordinate this.
- (6) *agreed* that Mr Álvaro SEPÚLVEDA LUQUE should draft a paper on a review of the IC terms of reference and possible changes to the SC terms of reference for presentation to the SC November 2017 meeting.
- (7) *agreed* to assign Mr Rajesh RAMARATHNAM and Mr Stephen BUTCHER as members of a joint SC and IC task force to draw up criteria for a joint call for topics.

- (8) *agreed* that Mr Jesulindo Nery DE SOUZA JUNIOR (assisted by Mr Álvaro SEPÚLVEDA LUQUE and Mr Ezequiel FERRO) would draft a paper outlining the reasons for a need to revise the IPPC Standard setting procedure to be considered by the SPG in 2017.

3.2 Briefings from the IPPC Secretariat

- [35] **Standard setting unit.** The Secretariat informed the SC of the current standard setting workload and planned meetings for 2017 as well as some tentatively planned activities for 2018. In addition, he noted that the IPPC Secretary had suggested that the SC organize a seminar on trade facilitation in conjunction with the SC meeting in November 2017. The SC felt this would be a good opportunity and agreed to organize the seminar.
- [36] The Secretariat also informed the SC that a new standard setting home page on the IPP had been launched with the intent of improving navigability and usability of the website.
- [37] The Secretariat recalled that a call for treatments had been launched in February 2017⁵. Treatments that are submitted will either be developed as phytosanitary treatments under ISPM 28 (*Phytosanitary treatments for regulated pests*) or posted as “contributed resources” on the Phytosanitary Resources page⁶. The Secretariat noted that no submissions had been received as of yet, and urged all SC members to liaise with interested parties in their regions to encourage submissions.
- [38] **General update from the IPPC Secretariat.** The Secretariat provided a general update on the IPPC Secretariat activities highlighting the successful progress on efforts to mobilize additional resources and raising awareness about the IPPC.
- [39] The Secretariat also briefed the SC on the various implementation facilitation and capacity development activities, such as the third cycle of IRSS, which was going ahead, and the planned development of four technical resources on: pest free areas, pest status (ISPM 8), remote microscopy and risk communication. As to ePhyto, the project is being implemented and progressing although long-term sustainable funding solutions still need to be identified.
- [40] He concluded stressing the importance of developing commodity standards with strong requirements in response to the needs that contracting parties.
- [41] **2017 IPPC Regional Workshops.** The Secretariat introduced a paper outlining tentative dates and venues for the 2017 IPPC Regional Workshops and highlighted the importance of having SC members attending regional workshops⁷.
- [42] One SC member queried whether the tentative agenda could be modified and who would be in charge of deciding on the content of the agenda. In particular, he noted that only one day was allocated to discussing the draft ISPMs, whereas he felt this was the most important part of the RWS. The Secretariat clarified that some years ago the CPM Bureau had decided that the RWS should have three objectives, of which one was for reviewing and preparing comments on draft ISPMs.
- [43] Nevertheless, the SC felt that one day for reviewing and discussing draft ISPMs was insufficient, and the SC hoped that there would be possibility to provide further input on the content of the agenda, or that the proposed agenda would allow some flexibility for the regions to decide on the content of the schedule. It was noted that some regions allocate two days to review draft standards.
- [44] The SC:
- (9) *agreed* to prepare a seminar on “Plant health standards and trade facilitation” to be held during the SC November 2017 meeting, and assigned Mr Nico HORN (presentation on ePhyto),

⁵ Link to 2017 [Call for treatments page](#)

⁶ Link to [Phytosanitary Resources page - contributed resources](#)

⁷ 12_SC_2017_May

Ms Thanh Huong HA (Asian perspective) and Mr David KAMANGIRA (African perspective) as speakers.

- (10) *agreed* that the following SC members would attend the 2017 IPPC Regional workshops to help regions comment on draft standards.

| Region | Dates | Venue | SC member (lead in bold) |
|---|------------------------|------------------------|--|
| Southwest Pacific | 07 – 09 August 2017 | Nadi, Fiji | Mr Bruce HANCOCKS |
| Near East and North Africa | 21 – 24 August 2017 | Cairo, Egypt | Ms Shaza OMAR |
| Asia | 04 – 08 September 2017 | Busan, South Korea | Ms Thanh Huong HA Mr Bruce HANCOCKS Mr Masahiro SAI |
| Latin America | 04 – 08 September 2017 | Cusco, Peru | Mr Jesulindo DE SOUZA JUNIOR Mr Ezequiel FERRO Ms Ana Lilia MONTEALEGRE LARA Mr Alvaro SEPULVEDA LUQUE |
| Central and Eastern Europe and Central Asia | 04 – 08 September 2017 | Georgia | Mr Sam BISHOP Ms Laurence BOUHOT-DELDUC Mr Nico HORN Mr David OPATOWSKI |
| Africa | 04 – 08 September 2017 | Abidjan, Cote d'Ivoire | Mr David KAMANGIRA Ms Alphonsine LOUHOARI TOKOZABA |
| Caribbean | 13 – 15 September 2017 | Trinidad and Tobago | Mr Jesulindo Nery de Souza Junior |

4. Draft ISPMs from expert drafting groups (EWG/TP) for the first consultation

[45] All draft ISPMs approved by the SC for first consultation are listed in Appendix 04.

4.1 International movement of cut flowers and foliage (2008-005), Priority 4

[46] The Steward introduced the draft ISPM and supporting documents⁸. She recalled that this was the fifth time the draft ISPM was presented to the SC and that it had been revised by several small SC groups.

[47] The SC discussed the following substantial issues.

[48] **Requirements and scope of the standard.** Several SC members were concerned with the lack of requirements in the standard. They felt it should be possible to identify requirements that would work as a basis for global trade, for instance to set a fixed number of days within which to communicate non-compliance or to list the most common pests affecting certain species of cut flowers.

[49] In response to this, the SC had a conceptual discussion on how to move forward because the original scope of the standard was to provide pest risk analysis guidance, whereas the draft standard was now trying to also determine the actual pest risks. The SC acknowledged that any divergence from the specification was primarily due to the numerous rounds of redrafting and taking into consideration the

⁸ 2008-005; Link to [Specification 56: 11_SC_2017_May](#)

CPM's desire to develop more commodity-specific standards. In addition, the specification for this draft ISPM was approved in 2012 (and the topic included on the work programme in 2008) and ideas around what commodity-specific standards should address had changed significantly since then.

- [50] The SC considered whether it would be appropriate to revise the specification to address these concerns and then redraft the standard, whether the topic should be reviewed for relevance or whether to proceed with the standard as currently proposed. While the SC acknowledged that the topic had originally been submitted due to an identified need for pest risk analysis guidance, the SC agreed to proceed with the draft as it was currently developed (i.e. also providing specific guidance on identified pest risks). Otherwise, the standard could potentially end up not providing any specific requirements for cut flowers, as the guidance would tend to be more general in nature (and repeat text from other standards).
- [51] The SC discussed the following specific points.
- [52] **Scope.** One SC member felt it was unclear what was intended by “non-woody foliage”. However, since the SC had had significant discussions on this point in the past, the SC agreed not to modify the scope at this stage, but await possible consultation comments.
- [53] **Outline of requirements.** The SC clarified that this standard sets requirements for factors that are specific to the international movement of cut flowers to be taken into consideration when performing pest risk analysis.
- [54] **Background.** The SC modified the section for conciseness and relevance.
- [55] **Pest risk analysis.** The SC agreed that when performing a PRA, the short-lived characteristics and the intended use (for decoration or ornamentation) of cut flowers and foliage were important factors to consider. The SC discussed whether to mention that new measures should only be applied after the PRA would be completed, as one SC member worried that this would not always be the case, e.g. in emergency situations. The SC agreed not to include this as it was in any case covered by other standards.
- [56] **Specific factors to consider when conducting PRA.** The SC modified this section to include only specific guidance related to cut flowers, and thus excluded information included elsewhere (e.g. in ISPM 11). The SC discussed how to include guidance on the fact that the genus and species of cut flowers may affect the possibility of detecting pests. One SC member found this type of guidance was not suitable under the PRA section. The SC agreed to include the guidance as it was a genuine part of the PRA process.
- [57] **Pathway.** The SC considered how to clarify that cut flowers may be a pathway for pest establishment since the term “pathway” is defined in ISPM 5 as the “entry or spread of a pest” but does not cover “establishment”. The SC agreed to limit the use of the term in the draft because it might be in conflict with the current ISPM 5 definition. Some SC members pointed out that the current definition should be reviewed for accuracy and that the general meaning of the term would fit the content of the standard well (see also section 7 of this report regarding the suggested inclusion of the term on the TPG work programme).
- [58] **Risk ranking.** The SC modified the text of this section to clarify that pest risk would differ within the broad category of cut flowers, depending on the plant taxon and the pest species. The SC also agreed to add some examples of types of material moved that would influence the pest risk.
- [59] The SC discussed whether to include mention that some pests (e.g. aphids or thrips) may be vectors for other pests such as viruses, because some SC members felt that this was not useful guidance for PRA purposes (e.g. there may be high risk of entry but low risk of establishment so there would be a combination of risks, which is not normally tackled in one PRA). Other SC members argued that this was an important point that NPPOs should consider when doing their PRA and the SC agreed to retain the information.

- [60] The SC discussed the reason for whiteflies being considered low risk, as the text was similar to that of thrips, which was considered higher risk. One SC member suggested that nymphs of thrips are normally not considered high risk because it is unlikely that they will develop to adults due to the cold storage and the perishability of the commodity. The SC considered that the risk from adult insects is generally higher than from juvenile stages (except for aphids). The SC agreed that this type of guidance was useful and that it should be added for all relevant pests. In addition, the SC agreed to include a general chapeau to explain that this was generally the case for insect pests.
- [61] **Prevention of pest infestations.** The SC agreed to delete mention of the prevention of pest infestations because it did not offer any guidance specific to cut flowers.
- [62] **Pest groups.** The SC agreed that the pest groups listed in Table 1 were logically connected to the risk ranking, and thus should be included in that section. The SC discussed moving the table to the end of the draft standard, as it was long and would disrupt the flow of the text. The SC agreed to keep it in the text and moved it to its own section following the pest ranking.
- [63] **Source of the cut flower and foliage.** This section was restructured for clarity and the SC agreed that it should be moved to be part of the section on PRA.
- [64] **Perishability.** The SC changed the draft throughout to clarify how perishability influences the pest risk and thus the pest risk management options, considering this was a commodity-specific point of importance.
- [65] **Pre-harvest options.** The SC ensured that this section was clarified in terms of phytosanitary measures applicable to cut flowers during production or pre-harvest, which may help mitigate the pest risk (e.g. growing media treatment), versus measures applicable to the actual cut flowers.
- [66] **Pre-dispatch treatment options.** The SC discussed whether to include “inspection” in this section but agreed it was not necessary as inspection was already included in the section on “harvest and post-harvest options”.
- [67] **Sections containing information not specific to cut flowers.** The SC agreed to delete some sections containing general information, such as on inspection, certification, auditing and non-compliance, because these were not specific to the international movement of cut flowers and provided no requirements that were not already in other ISPMs.
- [68] **Record keeping.** The SC discussed the length of the record keeping period as cut flowers are normally traded within a few weeks of harvest because of the perishable nature of the commodity. One SC member suggested that it was important to be able to trace back a possible pest incursion that would be detected only much later, and thus wished to include a requirement of minimum 24 months. Other SC members argued that this would be too long and that it should be limited to a maximum of six months. The SC agreed that due to the nature of the cut flowers as well as their intended use, 12 months should be sufficient (although for traceability purposes six months would suffice).
- [69] **Potential implementation issues.** The SC noted that they did not identify particular implementation issues as cut flowers are generally perceived as a low risk commodity. The SC considered that the main possible implementation issue pertained to NPPOs setting up efficient and swift procedures for import inspections (e.g. designated areas for inspections at the points of entry) that take into account the perishability of the commodity.
- [70] The SC:
- (11) *approved* the draft ISPM on the *International movement of cut flowers and foliage* (2008-005) as modified in this meeting for submission to the first consultation (Appendix 05).
 - (12) *expressed* gratitude to the steward for her patience considering the time it has taken for the draft to be developed.

- (13) *asked* the Secretariat to forward the implementation issues identified on the draft ISPM on the *International movement of cut flowers* (2008-005) to the Implementation Facilitation Unit (IFU).

4.2 Requirements for the use of fumigation treatments as a phytosanitary measure (2014-004), Priority 1

- [71] The Steward introduced the draft ISPM and supporting documents⁹. He noted that the draft had been prepared by the Technical Panel for Phytosanitary Treatments (TPPT), that the draft proposed several requirements and that it may be hard to reach agreement on these although he hoped the SC would make an effort to do so. He also noted the challenges related to having five draft treatment requirements standards in various stages of the standard setting process, considering there were several overlaps and that any possible suggestions for improvements on one draft standard might also be useful for others. The SC agreed to try to ensure consistency across these standards when relevant, and agreed to some changes throughout the draft that were the result of consultation comments on the draft ISPM on *Requirements for temperature treatments as a phytosanitary measures* (2014-005).
- [72] The SC discussed the following points:
- [73] **Scope.** The SC discussed how to clarify the description of fumigation because this seemed to also cover modified atmosphere treatments and that this could lead to confusion. The SC noted that modified atmosphere treatments were when the concentration of carbon dioxide or oxygen are changed. The SC agreed to add a sentence to clarify that the standard did not describe requirements for treatments using modified atmosphere except when in combination with fumigation.
- [74] In this context, it was noted that another draft ISPM was being developed on *Requirements for modified atmosphere treatments as a phytosanitary measure* (2014-006).
- [75] **Outline of requirements.** The SC ensured that this section did not contain information that was better placed in the scope or background sections. The SC considered whether it was appropriate that this section contained actual requirements rather than clarifying that the standard described these requirements. Previously adopted standards include a summary of the requirements, where “should” is used frequently, but the SC agreed that efforts should be made to provide only a summary of the requirements and thus modified the text.
- [76] The SC also noted that the TPG had recommended using “pest management” instead of “pest risk management” when reviewing the draft ISPM on *Requirements for temperature treatments as a phytosanitary measures* (2014-005) and adjusted the text accordingly.
- [77] **Background.** The SC added wording to clarify what was intended by “fumigation treatments”, noting that using “chemical” in relation to “gas” was unnecessary. The SC considered if it was appropriate to state that the gas is “toxic” because all gasses may be toxic, depending on their concentration. The SC agreed to mention “toxic” as fumigants are intended to kill pests.
- [78] The SC agreed that “inactivation” (of pests) was not applicable for fumigation, which is carried out to kill pests, and thus deleted mention of this.
- [79] **Impacts on biodiversity and the environment.** The SC agreed to delete mention of the impact of fumigation on “human health” as it is not related to recapture technology. The SC agreed to mention the CPM recommendation on the replacement or reduction of the use of methyl bromide as a phytosanitary measure¹⁰, and also agreed to delete mention of methyl bromide where possible throughout the draft.
- [80] **Requirements.** The SC had a discussion on whether to keep the reference to ISPM 28, and decided to keep it.

⁹ 2014-004; 06_SC_2017_May; link to [Specification 62](#); [Link to the TPPT meeting reports](#)

¹⁰ Link to [CPM recommendation R-03](#)

- [81] **Treatment application.** The SC discussed whether this section should specify the locations where treatments are applied or the stages of the supply chain when treatments may be applied. The SC also discussed aligning this section to that of the draft ISPM on *Requirements for the use of temperature treatments as a phytosanitary measures* (2014-005), but agreed that it was useful providing guidance on when (more than where) fumigation may be applied. Nevertheless, the SC also recognized that fumigation may be applied at all stages throughout the supply chain, and thus modified the section accordingly.
- [82] **“Fumigation entities”.** The SC noted there was confusion in the use of the terms “fumigation facility” and “operator”. Consequently, the SC added a new paragraph to allow for explanations of by whom and where fumigations can be undertaken and decided to combine these two terms into “fumigation entities” as fumigation is not always applied in a facility.
- [83] **Fumigation enclosure.** The SC considered if the enclosures should maintain not only the fumigant concentrations but also the required temperature. The SC agreed to avoid mention of temperature in this section because requirements around heating equipment and fumigation temperature were considered in separate sections.
- [84] **Gas circulation equipment.** The SC agreed to clarify that rapid gas circulation is required for fumigation of perishable commodities or commodities that sustain damage from extended fumigation.
- [85] **Gas monitoring.** The SC discussed whether it was possible to ensure +/- 5% accuracy of the required fumigant concentration, but agreed to leave the requirement in the draft to gather comments during consultation.
- [86] **Fumigant impenetrable packaging.** One SC member suggested deleting the description of the perforation densities, which make impenetrable packaging sufficiently penetrable, but the SC preferred to include it as it had been proposed by experts and because they felt it provided good guidance. The SC also agreed to note that any perforated wrapping should not be overlapped as it might obstruct fumigant penetration.
- [87] **Fumigation temperature.** The SC agreed to clarify that the effectiveness of fumigants can depend on the temperature and added an introductory sentence to this effect.
- [88] **Gas tightness.** The SC discussed if the requirements as proposed were correct in terms of the suggested frequency and as to when fumigation would be applied in tents. The SC noted that the text was correct and allowed for flexibility.
- [89] **Introduction of the fumigant gas.** The SC discussed modifications to the calculation formula as proposed by experts, and agreed modifying “kg” to “g”, “dosage” to “target dosage” and “release” to “purity”. The SC discussed whether it was appropriate that the product of the volume and the dosage was divided by a percentage and not by a fraction in terms of how the fumigant purity is expressed, and decided to multiply the equation by one hundred.
- [90] **Prevention of possible infestation.** The SC noted that the Glossary term “phytosanitary security” concerns consignments and not commodities (and the term is also under revision) and thus the SC made changes to the text to avoid using this term. The SC also simplified the section for clarity, to avoid overlaps and to better illustrate how to prevent infestation.
- [91] **Environment, health and safety.** The SC added a paragraph on requirements for reviewing the possible health and safety risks associated with handling fumigated consignments.
- [92] **Monitoring and auditing.** This section was aligned to the draft ISPM on *Requirements for the use of temperature treatments as a phytosanitary measures* (2014-005) although the SC agreed not to place the responsibility for the monitoring and auditing of the fumigation with the exporting country. Instead, the SC clarified that this was the responsibility of the NPPO of the country where fumigation was conducted.

- [93] **Documentation of procedures.** The SC discussed if the requirements around written procedures should include staff training and authorization of the fumigation entities. The SC agreed to include only staff training but not authorization of the fumigation entities, because it was not in the correct section.
- [94] The SC also discussed if the procedures should be “agreed” or “approved”, and whether it was clear that the agreement should be between NPPO and the fumigation entities. The SC noted that some sort of “agreement” would underpin the procedures, and that it was not necessary to specify that these needed to be “agreed”. As to the stakeholders of the agreement, the SC felt that this was sufficiently clearly stated in the chapeau of the overall documentation section.
- [95] **Record keeping.** The SC discussed if all the records mentioned in this section “may be included” or if some of the records “should be included”. The SC agreed to leave all indents as “should” for first consultation, which was also consistent with the draft ISPM on *Requirements for temperature treatments as a phytosanitary measures* (2014-005).
- [96] **Inspection.** The SC agreed to keep only the information specific to fumigation treatments, and thus combined the guidance for export and import inspection into the section on “inspection”.
- [97] **Phytosanitary certification.** The SC noted that the section described requirements already included in ISPM 12 and agreed that, although the issue related to the data on the treated lot is an important point, it was currently not always possible to get this information and there is not a dedicated place for this on the phytosanitary certificate. The SC agreed to delete the section.
- [98] **Appendix 1.** The SC discussed if the proposed appendix 1 should be developed as technical resources rather than as part of an international standard. Some SC members felt that the content of the appendix did not conform with that of an ISPM. They pointed out that the entity implementing the standard would not be the same as the one developing the treatments, and thus questioned the utility of having the protocol in the standard. With reference to the resources involved in developing and adopting ISPMs (e.g. for translation), and the fact that an appendix is not a prescriptive part of the standard in any case, they felt that careful consideration should be given to the use of the appendix. Lastly, they also felt that there could be a possibility here to strengthen the link between the SC and the IC, for instance by cross-references between standards and technical resources.
- [99] Other SC members disagreed, pointing out the usefulness of having standardized information that researchers may use to set up research protocols as this should help countries have confidence in fumigation treatments. They also felt that the appendix would help interpret phytosanitary import requirements because countries would be harmonizing the underlying data collection. Thus, the benefits of including the appendix were linked to the implementation of the core standard and consequently, it should be retained as part of the standard.
- [100] The SC agreed that the discussion was important on a conceptual level. The SC felt that since the IC had not yet been formed (as regards representation and terms of reference) it would not be able to take on the task of developing the appendix as a technical resource in a swift manner that would allow for it to be processed along with the standard.
- [101] The SC Chairperson recalled that the SC had already made a deliberation regarding the research protocol annexes being important elements to include in the five draft ISPMs on treatment requirements, and the SC agreed to retain appendix 1 in the draft standard.
- [102] The Secretariat noted that such conceptual discussions were important in terms of streamlining and enhancing cohesion between standard setting and implementation facilitation, and that these points could be further considered when reviewing the Framework for Standards and Implementation.
- [103] **Large-scale or extrapolation.** The SC agreed to delete text stating that efficacy of a treatment would need to be established between the NPPOs because the efficacy is based on data, not on an agreement.

- [104] **Appendix 2 and Appendix 3.** The SC discussed whether to delete these two appendixes as some SC members felt that it was not necessary to include information on the chemical properties of fumigants or formulas for calculating volumes. While considered useful, the SC members found this type of information to be readily available online or in textbooks and not appropriate for an ISPM.
- [105] Other members supported their inclusion as in some countries Internet is not always available and because they contained important information required for the overseeing by NPPOs.
- [106] Some SC members suggested a compromise solution where the appendixes would remain in the draft ISPM until they could be moved to a more appropriate guidance document. The Secretariat recalled that this would not be foreseen in the standard setting procedure and may be challenging to implement.
- [107] The SC agreed to retain the appendixes in the draft standard for consultation, noting that further decision on this matter could be taken at a later stage. The Steward stressed that comments are normally only provided when countries have deletions or improvements to suggest, but that comments are not necessarily provided if countries are satisfied with the content, and that this should be considered when reviewing the comments on the appendixes. The SC invited the steward to include this point of discussion to the presentation for the regional workshops.
- [108] The SC:
- (14) *approved the draft ISPM on Requirements for the use of fumigation treatments as a phytosanitary measure (2014-004) as modified in this meeting for submission to the first consultation (Appendix 06).*

4.3 International movement of grain (2008-007), Priority 1

- [109] The Steward introduced the draft ISPM and supporting documents¹¹. He noted that the EWG had struggled to finalize the draft in time for this SC meeting. He highlighted that the experts had not been able to agree on some key issues.
- [110] The SC Chairperson indicated that the SC should be able to consider the remaining contentious issues, and determine the way forward. A small SC group was convened to work on this.
- [111] The SC discussed the following key issues that required further consideration:
- [112] **Scope.** The SC discussed the scope of the standard and agreed that unprocessed grain as animal feed should not be included, as this intended use does not mitigate the pest risk in comparison to grain for processing or human consumption.
- [113] **“Quarantine pests” or “pests”.** The SC discussed the proposal from the steward and some of the experts to set requirements for “pests” and not “quarantine pests”. This proposal was based on the argument that detection of any live pest in an official sample might be an indicator of a problem in the grain. To help ensure safe international movement of grain samples should be taken and no pests detected. This would also lessen the need for PRAs that would need to take into account pest risks, potentially, of grain coming from many areas being combined. In practical terms, if a pest would be detected in an official sample, an option would be to treat independently of phytosanitary import requirements. He also noted that a standard which targets “pests” could help harmonize phytosanitary import requirements, where currently countries may set different requirements for the same type of grain.
- [114] The SC considered analogies to ISPM 15 where treatments are applied to wood packaging material irrespective of the detection of quarantine pests. Some SC members disagreed as grain, unlike wood packaging material, comes from a known country. One member also pointed out that the treatments under ISPM 15 are used against quarantine pests, specifically quarantine pests of raw wood, not all pests of wood.

¹¹ 2008-007 Link to [Specification 60](#); Link to the EWG on [Grain report](#); 04_SC_2017_May

- [115] Several SC members stressed that under both the SPS-agreement and the IPPC, phytosanitary import requirements need to be technically justified and thus should not concern any pests but quarantine pests identified through a PRA. They also felt that an ISPM setting requirements for all pests was disproportionate to the low risk of grain, especially due to the intended use.
- [116] **Foreign material.** Some SC members raised concerns on the inclusion of foreign material and associated tolerance in the standard. They indicated that the inclusion of a tolerance is not technically justified.
- [117] **Contaminating pests.** Some SC members expressed concern over the inclusion of contaminating pests in the standard, specifically in relation to weed species of non-quarantine concern. It was pointed out that this issue should be further discussed in order to be addressed better in the draft.
- [118] **Industry practices vs NPPO requirements.** Some SC members felt that the draft standard mixed industry practices and NPPO requirements and agreed this should be clarified throughout.
- [119] **Sampling, inspection, storage facilities.** Some SC members felt that it was important to provide requirements for the harmonization of sampling and inspection, and for storage facilities.
- [120] **Grain supply chain.** The SC felt that the standard should include guidance on how the various stages of the grain supply chain in the exporting country may affect the pest risk. The standard should elaborate on measures during production (e.g. pest free areas).
- [121] **Traceability.** The SC discussed traceability as several SC members felt it was an important point that was not adequately addressed and that it should be possible to set some requirements in this regard. The Steward explained that some of the experts recommended traceability starting only from the point of consolidation. In addition, one SC member recalled that the concept of traceability had been discussed by various IPPC bodies and that traceability should be considered a tool to identify the origin, and not a phytosanitary measure.
- [122] The SC discussed that mixed grain may originate from different production areas in a country, and that it was clearly a challenge to know exactly from where the grain originated.
- [123] **Import systems.** The SC agreed that the section on import systems should be further discussed.
- [124] **Intended use.** The SC agreed that the intended use is an essential factor to consider when setting phytosanitary import requirements for grain and should be included in the standard.
- [125] **Way forward.** The SC agreed to have an online forum on this draft standard to collect further comments to improve the draft and come to an agreement on some of the more contentious issues. The SC Chairperson encouraged the SC members to provide specific comments and propose text that would be easily incorporated and understood.
- [126] The SC agreed to review the revised draft in their SC November 2017 meeting.
- [127] The SC:
- (15) *asked* the Secretariat to open a discussion SC forum to gather comments on the draft ISPM on the *International movement of grain* (2008-007).
 - (16) *tasked* a small SC group (Mr Bruce HANCOCKS, Mr Nico HORN and Mr Rajesh RAMARATHNAM) to assist the steward as needed with the revision of the draft standard.
 - (17) *asked* the steward to submit a revised draft ISPM on the *International movement of grain* (2008-007) to the SC November by 6 October 2017.

4.4 2017 Amendments to ISPM 5 (1994-001)

- [128] The TPG Steward introduced the draft 2017 Amendments to ISPM 5 (*Glossary of phytosanitary terms*)¹² that had been drafted in the TPG December 2016 meeting. The SC discussed the following points.
- [129] **“growing period”** (2016-004). One SC member noted that some phytosanitary import requirements foresee that a plant has been inspected in two “growing periods”. With the original definition this would mean over two years, whereas with the new definition these inspections could be carried out during the same year, for instance if the plant was moved to a different place of production. The TPG steward explained that the proposed revised definition provided improved guidance for inspection on a global level, and that there would be situations where using the term “growing season” (in its common English meaning) would be more appropriate.
- [130] The SC agreed with the TPG proposal for revision and did not make any changes.
- [131] **“survey”** (2013-015). One SC member suggested adding “boundaries of distribution” to make the definition clearer, but this was not agreed to by the SC. The SC discussed if the definition should be restricted to “the presence or absence of pest populations” instead of the proposed broader definition “presence or absence of pests”. The SC recognized that the definition had been aligned to the draft revision of ISPM 6 (2009-004) and that the SC May 2013 had requested the TPG to include the concept of pest presence or absence in the definition.
- [132] The SC discussed whether to delete “boundaries” from the proposed revision. The TPG steward explained that this had been added to ensure the definition encompassed the three types of specific surveys, without directly referencing them.
- [133] One SC member queried if “surveillance” should be included in the definition. The TPG steward explained that since “surveillance” refers to “survey”, having a reference to “surveillance” in “survey” would make it a circle reference, which should be avoided.
- [134] The SC discussed if it was appropriate to consider the revision of this term for consultation before the revised ISPM 6 had been adopted. The SC agreed that there would be good opportunity for the revision of the term and the revision of the standard to be aligned by submitting the proposed revision of the term for first consultation in 2017. This would also help avoid a possible contradictory definition of “survey” once the revised ISPM 6 was adopted.
- [135] The SC discussed if the second “in an area” should be “in this area”. The SC did not agree as there may be cases where pest presence is known and the scope of the survey is to determine the boundaries or characteristics of a pest population. The change would provide for a survey to have two mandatory steps, one depending on the other, instead of providing for two different situations where surveys may be carried out. In addition, the repetition of “in an area” ensured there was no ambiguity as to both situations being linked to an area.
- [136] The SC agreed with the TPG proposal for revision.
- [137] **“confinement (of a regulated article)”** (2016-002). The SC agreed with the proposal for deletion.
- [138] **“growing season”** (2016-004). The SC agreed with the TPG proposal for deletion.
- [139] **“mark”** (2013-007). The SC agreed with the TPG proposal for deletion.
- [140] The Secretariat noted that the TPG recommended that the historic background information should not be included in the draft amendments when submitted for consultation. Some SC members disagreed with this, and asked that the background information be maintained because they felt it was useful to build an understanding of the TPG proposals. One SC member felt that the proposals for revisions or deletions of Glossary terms should be reviewed in their own right, and that the background information

¹² 1994-001 Link to the [TPG December 2016 report](#)

did not necessarily help when reviewing the TPG proposals. The SC agreed to retain the background information.

[141] The SC:

- (18) *approved* the draft 2017 Amendments to ISPM 5 for submission to the first consultation (Appendix 07).

5. Standards Committee

5.1 Report of the SC November 2016

[142] There were no comments on the report¹³.

[143] **Promotional paper.** The SC Vice-chairperson introduced a draft promotional paper on the positive impacts of phytosanitary standards on international trade, poverty reduction and the plant health situation globally¹⁴, which had been prepared by two SC representatives on the Steering Committee for the International Year of Plant Health (IYPH) as an effort to emphasize the importance of standard setting towards IYPH 2020.

[144] The SC applauded the SC leads for the initiative and for the ideas captured in the paper.

[145] A small SC group was convened to determine the target audience and the scope of the paper, as well as to set up an action plan.

[146] The SC discussed the outcomes and agreed that the paper should:

- target key stakeholders such as the general public, NPPOs, industry, policy makers and donors, and be a single document relevant to all key stakeholders
- be short and to the point with three to five main messages which could include: (i) quality, quantity and regularity of food availability; (ii) economic development and economic growth; (iii) protection of the environment and biodiversity
- have a catchy and brief title and use as work title “Positive impact of plant health standards”
- include a success story, for instance on “certification”
- include visual imagery to emphasize the point
- not use jargon but only plain language easily understandable to all audiences (possibly avoiding using “phytosanitary”)
- not explain the standard setting process in detail as it would be too long and too tricky to do
- possibly draw on country level experiences on implementation of ISPMs leading to improved food security and poverty reduction, such as those collected in Viet Nam under a national project (2012).

[147] The SC also noted that it would be important to tap into the branding efforts that FAO will do to promote IYPH.

[148] Lastly, the SC considered that other means of communication, such as a promotional video, might be interesting exploring at a later stage.

[149] The SC:

- (19) *agreed* that a small working group (Mr Sam BISHOP (lead), Mr Jesulindo Nery DE SOUZA JUNIOR, Mr Nico HORN, Ms Shaza OMAR, Mr Álvaro SEPÚLVEDA LUQUE, Ms Thanh Huong HA, Mr David KAMANGIRA and Mr Lupeomanu Pelenato FONOTI) should work on the paper virtually and submit the revised version to the IPPC Secretariat by 30 June 2017. Hereafter the SC would be provided the opportunity to comment on the paper in the OCS (during

¹³ Link to the SC [November 2016 report](#)

¹⁴ 18_SC_2017_May

July and August 2017) and SC comments would be reviewed by the group. The revised paper should be submitted to the Secretariat by 6 October for presentation for discussion in the SC November 2017 meeting.

5.2 Summary on polls and forums discussed on the e-decision site from December 2016 to April 2017

[150] The Secretariat presented a summary of polls and forums discussed on the SC e-decision site¹⁵.

[151] One SC member expressed appreciation for this summary, which he felt was very useful.

[152] Noting that SC member participation in the SC e-decision has increased over the years, the SC Chairperson still felt there was room for improvement and encouraged all SC members to fully participate in these discussions.

[153] The SC:

(20) *noted* the update on polls and forums discussed on the e-decision site (December 2016 - April 2017) (Appendix 08).

5.2.1 Composition of EWG membership

[154] One SC member presented concerns regarding the composition of the EWG memberships, suggesting that the SC may consider introducing regional representation along with the expertise needed¹⁶. He felt that it was essential that the EWG members have a global outlook on how the subject of a standard is performed in different regions of the world to help understand the constraints and thus help ensure the applicability and accepted practices of the draft standard worldwide. This global understanding should be achieved by the wide regional representation in the EWG but, all too often, not all regions are represented in the EWG.

[155] A small SC group was convened and presented their discussion points to the SC. The following points were discussed.

[156] The SC agreed that when selecting experts for EWG, the SC should firstly consider the expertise and secondly try to ensure members represent a wide geographic area. The SC felt that this was important because there may be experts with less actual technical experience in dealing with a particular issue, but who might bring views from different geographical areas and thus may be able to help the standard address diverse implementation challenges, and because also countries with less experience would need to implement the standard.

[157] The SC noted that as some regions often do not nominate experts, regional representation cannot be mandatory.

[158] One SC member suggested that this be a topic for the IPPC Regional workshops to discuss.

[159] One observer asked that, in general, further clarification be provided as to why specific experts were not selected, as it would be a valuable feedback for future nominations. The Secretariat reminded the SC that such feedback should be provided to the relevant people by the SC members of their region.

[160] The SC also noted that when experts come with inflexible positions it makes it difficult to obtain consensus.

[161] One SC member suggested that the SC discuss if there would be an opportunity to consider how to better tap into the EWG expertise. It was also noted that some experts may not provide any discussion papers or significant contributions during the face-to-face drafting meeting, which was a concern. The SC Chairperson noted that the steward, normally an SC member, should try to ensure the EWG is on the

¹⁵ 09_SC_2017_May

¹⁶ 23_SC_2017_May

right track and engage all members to participate actively. The SC considered that potentially two SC members could attend the EWG meetings, which would also help to ensure continuity.

[162] The Secretariat pointed out that the guidelines for EWGs had been agreed to by the CPM and that changes would thus also need to be agreed by the CPM. However, the SC did not find that any possible decisions made by the SC regarding good geographical representation, or participation of potentially more SC members in an EWG to help guide the group, or other such decision, would require changes to the guidelines.

[163] The SC agreed there would be value in the SC members having access to the EWG electronic forum discussions because they may be able to stimulate discussions and help the experts from their region prepare for the meeting, but more as observers and not as active participants.

[164] The SC also discussed whether the SC members should be given access also to the TP e-forum discussions, but felt this would not be necessary.

[165] The SC considered that, in the future, the IC might consider developing some training material to help experts tackle their role in the EWGs.

[166] The SC:

(21) *asked* the Secretariat to grant the SC members permission to follow EWG e-forum discussions.

5.2.2 Selection of experts

[167] The SC discussed the selection of experts to the **EWG for the Revision of ISPM 8** (2009-005). Some SC members considered that a nominated expert from EPPO had extensive experience but that this was not adequately reflected in the CV provided. An SC member clarified that she had long (20 years) and broad experience (working with 50 countries) in using pest status, advising EPPO members and compiling information on pest status and pest reporting. He noted that that he felt it was the responsibility of the SC member from each region to scrutinize their region's expert nominations, including providing any additional clarifications. The SC agreed to add her to the EWG membership.

[168] In this context, one SC member suggested that the Secretariat involve the SC members in the review of nominations from their respective regions, because the SC members oftentimes know the experts and would be able to confirm in advance of the SC discussions if the documentation for the nomination was adequate. This would help avoid situations where the CVs would not actually reflect the expertise of the candidate. The Secretariat stressed that this would be difficult to do due to the short time available for the selection of experts. The SC agreed not to involve the SC members of the region to review the documentation, noting also that the steward of the topic is involved in the review. The SC also stressed that the contracting parties were responsible for organizing themselves in such a manner to submit nominations with adequate supporting documentation.

[169] Some SC members suggested that an expert from CABI be invited to participate as an invited expert in this EWG due to CABI's expertise on pest mapping, and due to the ongoing collaboration between CABI and various countries and RPPOs over many years.

[170] Regarding the **EWG on Authorization of entities to perform phytosanitary actions** (2014-002) the SC was informed that one of the selected experts was no longer able to attend. The SC discussed if there was an opportunity to select another expert from the nominees.

[171] The Steward highlighted that according to the criteria set out in the selection of experts paper, the candidate from Belgium would seem to have higher expertise out of the two who were not recommended. However, he proposed that the other candidate, from Liberia, was selected due his NPPO experience and involvement in work with surveillance, diagnostics and training, which could provide valuable input. Taking into consideration this and the discussions on striving for a good geographical representation (see section 5.2.1 of this report), the SC agreed with this proposal.

[172] The SC:

- (22) *agreed* that the following experts be selected as members of the EWG for the draft ISPM on the *Revision of ISPM 8* (2009-005):
 Mr Pablo CORTESE (Argentina)
 Ms Christina DEVORSHAK (USA)
 Mr Robert FAVRIN (Canada)
 Ms Asenath Abigael KOECH (Kenya)
 Mr Nelson LAVILLE (Dominica)
 Ms Wendy ODGERS (Australia)
 Ms Anne Sophie ROY (EPPO)
 Ms Kyu Ock YIM (Republic of Korea)
 and that Ms Marian DOY (CABI) be invited as an invited expert.
- (23) *agreed* that the following experts be selected as members of the TPG for a five-year period:
 Ms Hong NING (China) for Chinese
 Ms Shaza OMAR (Egypt) for Arabic
 Ms Asenath Abigael KOECH (Kenya) for English.
- (24) *agreed* that the following expert be selected as a member of the EWG for the draft ISPM on *Authorization of entities to perform phytosanitary actions* (2014-002):
 Mr Oliver TEEKPEH (Liberia)
- (25) *noted* that the SC members should inform the unsuccessful nominees for the TPG and the EWGs from their regions that they had not been selected by the SC.

6. Review of technical panels (from May 2016 to April 2017)

[173] The SC thanked the TPs for the great amount of work that all members, stewards, technical leads and DP authors do and the significant results produced, as well as the organizations and contracting parties that provide in-kind support, fund TP meetings and support their experts to participate in this work. The SC also thanked the Secretariat, especially the panel leads.

[174] The Secretariat recalled that the TP presentations would be posted publicly on the IPP.

6.1 Technical Panel on Phytosanitary Treatments (TPPT)

[175] The Secretariat presented an overview of TPPT activities carried out since May 2016¹⁷.

[176] The TPPT steward thanked the efforts made by all the TPPT members and the Secretariat, especially the lead.

[177] The next TPPT face-to-face meeting was scheduled from 17 to 21 July 2017, in Vienna, Austria. The meeting would be partly funded and hosted by the Joint FAO/IAEA Division.

[178] It was noted that for 2017, the TPPT planned to review:

- submissions from the 2017 call for treatments
- the draft ISPM on the *Requirements for the use of modified atmosphere treatments as a phytosanitary measure* (2014-006)
- the two remaining draft PTs on the work programme: (i) Vapour heat treatment for *Bactrocera dorsalis* on *Carica papaya* (2009-109) and (ii) Heat treatment of wood using dielectric heating (2007-114).

¹⁷ 10_SC_2017_May; Link to [TPPT Meeting Reports](#) (2016-07 virtual, 2016-09 face-to-face, 2016-10 virtual, 2016-12 virtual, 2017-01 virtual)

- [179] **Availability of information underpinning TPPT decisions.** The SC discussed the request from some contracting parties that all the documentation (calculations, CT schedules, TPPT meeting notes, etc.) supporting the TPPT decisions be made available publicly on the IPP or at least to contracting parties (see also section 3.1 of this report). The Secretariat recalled that the TPPT meeting reports, including those from virtual meetings, were all posted publicly. Other supporting information is provided by the submitting contracting parties or RPPOs and is not always public.
- [180] The SC acknowledged that some data, which is submitted in support of PTs may be unpublished and the researchers may not wish to make their data public. One SC member felt it would be in the interest of the submitter to make the data public, as it could help gain confidence in the data. The SC discussed if it would be possible to suggest that the data be made available to the SC, but recognized that the SC members would not necessarily have the expertise to review the data adequately and that it would be difficult to ensure that the data were not shared more widely. The SC also noted that as the TPPT experts are tasked to review the data, countries should have confidence in the panel's expertise, and that SC members can contact the TPPT members for additional information if needed. It was pointed out by one SC member that there was not necessarily enough time to contact TPPT members for clarifications when preparing comments and that this was a reason for the need to access the underlying data directly. It was noted by one SC member that availability of the relevant information to experts outside of the TPPT would improve the quality of the reviews during consultation.
- [181] The SC was concerned that if making the data publicly available be made a requirement, NPPOs or RPPOs may submit less PTs. Therefore, the SC agreed that it would be beneficial to include a note on the submission form for phytosanitary treatments to encourage submitters to make all supporting documentation available publicly and that the form should have a check box that authorized the public posting of the treatment submission and accompanying information.
- [182] One SC member pointed out that some of the documentation that the TPPT reviews is not necessarily confidential, but that it may be unclear where to retrieve it to review it (e.g. for the calculation of a specific formula). The SC member felt it would be helpful to have this type of information clearly included in the TPPT reports, noting that writing reports of such technical meetings may be a challenge.
- [183] The SC discussed whether the TPPT should only develop treatments based on published data although it would also mean that the time needed for the adoption of PTs would increase, and agreed to ask the TPPT to consider the pros and cons with this approach.
- [184] **Possible implementation issues identified for draft PT Heat treatment of wood using dielectric heating (2007-114).** The SC noted the TPPT discussions on the possible implementation issues that while dielectric heating may not be the most inexpensive treatment available, microwave treatments for wood and, in particular for wood packaging material are provided commercially, and the PT would provide for an alternative treatment option. Dielectric heating may become less costly in the future and several countries already use the treatment.
- [185] **Other issues with draft PT Heat treatment of wood using dielectric heating (2007-114) regarding the objection** received to this draft PT before CPM-12 (2017). An SC member queried how the SC should tackle it. The Secretariat explained that the additional data from the contracting party objecting to the draft PT had only just been received and that this material should be considered by the TPPT. The SC agreed with this approach.
- [186] Some SC members felt that the objection was not technically justified and the contracting party submitting the objection did not propose a solution, and thus had not followed the IPPC Standard setting procedure properly. Some SC members also stressed that the CPM had not fully discussed the issue. Other SC members considered that the Standard setting procedure had been followed and that contracting parties should have made interventions during the CPM, had they wished to challenge the objection.
- [187] **Possible implementation issues identified for PT 26** (Cold treatment for *Ceratitidis capitata* on *Citrus limon*) (2007-206C). The SC noted the TPPT considerations regarding operational implementation

challenges that may result in chilling injuries, and that TPPT had reviewed the treatment schedule when submitted and found that it was being used successfully by several countries.

[188] The SC:

- (26) *noted* the following TPPT meeting reports: 2016-07 virtual, 2016-09 face-to-face, 2016-10 virtual, 2016-12 virtual and 2017-01 virtual.
- (27) *noted* the TPPT 2016-2017 work plan presented in Appendix 07 of the TPPT September 2016 meeting report.
- (28) *noted* the TPPT work planned for May 2017 – April 2018 as outlined in the TPPT update.
- (29) *noted* the resignation of the TPPT steward, Mr Jan Bart ROSSEL (Australia), from the TPPT and *thanked* him for the services rendered to the panel.
- (30) *agreed* that the TPPT would review the objection to the draft PT *Heat treatment of wood using dielectric heating* (2007-114) and additional material received from the contracting party that submitted the objection prior to CPM-12.
- (31) *expressed concern* regarding the consideration of objections at CPM-12 and *recommended* the CPM allow more time during the session to review if an objection is technical justified and accompanied by suggestions for improvements, and requested the CPM Bureau to consider how to address this issue.
- (32) regarding the request that all the documentation supporting the TPPT decisions be made available publicly on the IPP,
 - a. *noted* that CPM-12 (2017) had also raised this issue and that the CPM Bureau would discuss it in June 2017 (see section 3.1 of this report).
 - b. *requested* TPPT to review and consider how often unpublished data and information is used in the development of IPPC phytosanitary treatments, and *requested* the Secretariat to share the relevant points of the SC report on this point with the CPM Bureau.
 - c. *agreed* to include a note on the submission form for phytosanitary treatments to encourage submitters to make all supporting documentation publicly available and add an option for the submitter to allow for public release of their submission and supporting documents.
- (33) *invited* the Secretariat to forward the implementation issues identified for the draft PT *Heat treatment of wood using dielectric heating* (2007-114) to the IFU.
- (34) *invited* the Secretariat to forward the implementation issues identified for the PT 26 Cold treatment for *Ceratitis capitata* on *Citrus limon* (2007-206C) to the IFU.
- (35) *noted* the recommendations and discussions on the issues raised by the SC-7 in May 2016 on the draft revision to Annex 1 and 2 of to ISPM 15 (*Regulation of wood packaging material in international trade*) for the inclusion of Sulphuryl fluoride fumigation of wood packaging material (2006-010A) and for the revision of the dielectric heating section in Annex 1 of ISPM 15 (2006-010B).
- (36) *asked* the SC-7 to consider the fact that some contracting parties during CPM-12 noted differences between PT 22 (*Sulphuryl fluoride fumigation treatment for insects in debarked wood*) and PT 23 (*Sulphuryl fluoride fumigation treatment for nematodes and insects in debarked wood*) (annexes to ISPM 28) and the draft revision to ISPM 15 sulphuryl fluoride fumigation, and asked that they be aligned.

6.2 Technical Panel for the Glossary (TPG)

[189] The Secretariat presented an overview of TPG activities carried out since May 2016¹⁸.

¹⁸ 15_SC_2017_May; Link to [TPG 2016-12 report](#)

[190] The TPG steward thanked the efforts made by all the TPG members and the Secretariat, especially the lead.

[191] The next TPG face-to-face meeting was scheduled from 4-7 December 2017, in FAO-HQ.

[192] It was noted that for 2017, the TPG planned to:

- Review all draft ISPMs and consultation comments for the use of terms and help ensure consistency, including translation issues.
- Discuss terms/definitions for inclusion into draft 2018 Amendments to ISPM 5
- Review the intermediate version of the Annotated Glossary
- Analyse the use of the term “contamination” across standards.

[193] Regarding the draft ISPM on *Requirements for the use of temperature treatments as phytosanitary measures* (2014-005), the SC referred to discussions under section 4.2 of this report where the issue of the placement of the appendixes was addressed.

[194] **Oversight of the ePhyto list of products** (in the context of “commodity” and “commodity class” (2015-003)). The SC discussed the TPG recommendation that the SC become responsible for the oversight of the product descriptions, as this work was still linked to ISPM 12 and phytosanitary certification. The SC agreed that while the harmonized product descriptions would be useful for both paper and electronic phytosanitary certificates, the immediate objective was to enable the development of the ePhyto system for which strict and thorough harmonization on one hand, and a flexible development process on the other hand, were essential.

[195] Some SC members felt it was unclear based on what the SC should make decisions regarding product descriptions, as the recommendations would come from the ePhyto Steering Group alone.

[196] The SC agreed that the SC would be the suitable oversight body to endorse changes and additions to the list of products considering the standardization needed. In this context, the SC recognized that the work on the development of product descriptions is progressing rapidly and that it would be essential that the SC oversight role would not hamper the development of ePhyto. The SC discussed that a system or process should be set up, and agreed that the ePhyto Steering Group should develop a paper with a proposed process. The SC also noted that the bulk of the product descriptions should be done in September and that these could be reviewed by the SC in November 2017. This would help the SC understand their role.

[197] The SC noted that the CPM Bureau should be asked to agree to the SC taking on the oversight role.

[198] **Commodity class (2015-013)**. The SC discussed the TPG consideration that “commodity class” may be proposed for deletion from ISPM 5 and agreed that the TPG should consider this carefully.

[199] **Terms used in the Cartagena protocol**. One SC member queried to the workload foreseen by this task. The Secretariat noted that this was yet unknown but that the terms were likely to be few. In any case, the TPG should inform the SC if the work required too much time.

[200] **Guidelines for a consistent ISPM terminology**. The discussion on this item was deferred to the SC November 2017 meeting.

[201] The SC:

(37) *deleted* the following terms from the *List of topics for IPPC standards*:

- “ecosystems” (2016-003)
- “habitat” (2016-005)
- “modern biotechnology” (2016-006).

- (38) *agreed* that the SC would be an suitable body to take on the oversight role in the process of developing and maintaining the list of product descriptions to be included in the ePhyto system, and *invited* the CPM Bureau to consider this.
- (39) pending CPM Bureau agreement, *invited* Mr Nico HORN with input from the other members of the Steering Group to prepare a discussion paper outlining a proposal for the oversight process to be reviewed by the SC in their November 2017 meeting.
- (40) *agreed* that this oversight role should not hamper the rapid progress of the product descriptions and the development of ePhyto.
- (41) *noted* that the TPG will consider further the term “commodity class” in combination with the review of the different commodity classes included in the Glossary.
- (42) *added* the following terms as subjects to the *List of topics for IPPC standards*:
- “contamination”
 - “inspection”
 - “bulbs and tubers (as a commodity class)”
 - “fruits and vegetables (as a commodity class)”
 - “grain (as a commodity class)”
 - “plants *in vitro* (as a commodity class)”
 - “seeds (as a commodity class)”
 - “wood (as a commodity class)”
 - “treatment”.
- (43) *removed* the pending status of the term “cut flowers (as a commodity class)” (2012-007).
- (44) *reviewed* and *approved* the ink amendment to the Glossary term “detention” presented in Appendix 09.
- (45) *noted* that the ink amendment will be processed for CPM noting and incorporated in ISPM 5 as resources permit this.
- (46) *noted* the modified *General recommendations on use of terms in ISPMs* as published in the IPPC Style guide (updated in April 2017).
- (47) *noted* the TPG work plan 2017 (Appendix 06 of the TPG 2016-12 report) and the work performed by the TPG over the last year.
- (48) *agreed* that the TPG review a draft CBD document comparing terms used in the Cartagena protocol with terms in the ISPM 5, explaining the linkages and differences.

6.3 Technical Panel for Diagnostic Protocols (TPDP)

[202] The Secretariat presented an overview of TPDP activities carried out since May 2016¹⁹. The TPDP Steward joined the meeting via conference call. She stressed the tremendous efforts made by all the authors, the TPDP members and the Secretariat, especially the lead. She highlighted the importance of the work, which contributes directly to support the IPPC community and the implementation of the Convention.

[203] The next TPDP face-to-face meeting was scheduled for 5-9 February 2018, and to be hosted by EPPO, Paris, France.

[204] For 2017, the TPDP planned to continue progressing 13 draft diagnostic protocols with in-depth discussions on three.

[205] The SC noted the TPDP agreed that it would be beneficial to develop DPs for the following pests:

- *Citrus leprosis virus*
- *Pyricularia oryzae* (syn. *Magnaporthe oryzae*) on *Triticum* spp.

¹⁹ 113_SC_2017_May; Link to the [TPDP meeting reports](#)

- *Microcyclus ulei*
- *Mononychellus tanajoa*
- *Puccinia graminis* f.sp. *tritici* UG 99
- *Moniliophthora roreri*.

[206] **DPs and viability of pests.** The SC considered the TPDP discussions on molecular diagnostic methods. The Secretariat explained that DNA fragments may be detectable using molecular methods (e.g. real-time PCR) even after the pests were killed. The TPDP suggested that perhaps there was a need to include a viability test section in DPs, or to indicate other types of tests when viability would be a crucial issue.

[207] An SC member further clarified that this issue had also come up during the drafting of ISPM 38 (*International movement of seeds*). He noted that seeds may be disinfected but that pest DNA fragments or proteins may still be detected afterwards, although the pest is no more viable.

[208] The SC felt that this issue was important and linked to overall interpretation of diagnostic results. However, the SC could not determine whether it was related to the capacity to interpret the results correctly or whether it demonstrated a need for international harmonization of how the diagnostic results are interpreted. The SC felt it was premature to make a decision on this. Consequently, the SC agreed that the TPDP should prepare additional input for SC discussions. Based on this, the SC would discuss and consider making a recommendation as to whether the issue warranted international harmonization or whether to invite the IC to consider it as an implementation facilitation issue.

[209] The SC:

- (49) *noted* the following TPDP meeting reports: 2016-07 face-to-face and 2016-09 virtual.
- (50) *noted* the TPDP discussions on DPs and viability of pests (section 7.6 of the TPDP July 2016 meeting report).
- (51) *requested* the TPDP to prepare a discussion paper, for SC consideration, on molecular tests and viability of pests, also considering NGS and what potential implementation issues exist in diagnosis.
- (52) *noted* the TPDP tentative work plan for May 2017 – April 2018 as outlined in the presentation.
- (53) *noted* the revised TPDP Instructions to authors of diagnostic protocols (posted on IPP²⁰ on the TPDP webpage).
- (54) *noted* the TPDP recommendations on the need to develop new diagnostic protocols.

6.3.1 Next Generation Sequencing (NGS) technologies as a diagnostic tool for phytosanitary purposes

[210] The Secretariat introduced the TPDP paper²¹ explaining that NGS technologies allow the sequencing of all DNA in a sample and can be used for all types of organisms. NGS technologies may have significant implications for plant health. For example, there is a risk that plant material may be restricted in movement due to the apparent presence of a microorganism (e.g. virus) that may not have the potential to be pathogenic. There is also the issue, as with other indirect methods, that NGS technologies will detect non-viable organisms.

[211] The SC found that the paper provided valuable input for discussions on NGS, a very important topic, stressing that the issue is broader than diagnosis and is also relevant for PRA and surveillance.

[212] The SC noted that the CPM Bureau had already decided on the CPM-13 (2018) special topics session and made suggestions for side sessions, including one on NGS. The SC supported this side session as an opportunity to identify some of the major issues related to NGS.

²⁰ Link to [TPDP Instructions to Authors](#)

²¹ 08_SC_2017_May

[213] The SC noted the Workshop on the use of Next Generation Sequencing technologies for plant pest diagnostics, which is planned for November 2017, will be organized jointly by the European Cooperation in Science and Technology (COST) action DIVAS, European Phytosanitary Research Coordination Network (Euphresco) and EPPO. The SC felt it was important that TPDP members attended this workshop to gather as much information as possible on the subject.

[214] The SC:

- (55) *invited* the CPM to *note* the challenges associated with the use of the NGS technologies and that further work is needed on NGS technologies before they can be considered as the sole method for pest detection.
- (56) *supported* the CPM Bureau to hold a side session during CPM-13 (2018) on NGS technologies for phytosanitary purposes and viability of pests.
- (57) *agreed* that the TPDP members should provide input to the preparation of this side session as needed, acknowledging that the topic is broader than diagnostics.
- (58) *encouraged* TPDP members to attend the Workshop on the use of Next Generation Sequencing technologies for plant pest diagnostics, 22-23 November 2017, in Bari, Italy.

6.3.2 Proposal for changing the dates of the December DP notification period

[215] The Secretariat presented a proposal to change the dates of the December DP notification period, allowing it to end in the same year as it would commence²². This would facilitate reporting on results concerning the adoption of DPs.

[216] The SC noted that there would not be any adverse effects from this change.

[217] The SC:

- (59) *agreed* that the two 45-day notification periods for diagnostic protocols (DPs) for contracting parties to review the SC-approved DPs and possibly submit objections start on 1 July (ending 15 August) and on 5 January (ending 20 February), respectively.

6.4 Technical Panel on Pest Free Areas and Systems Approaches for Fruit Flies (TPFF)

[218] The Secretariat presented an overview of TPFF activities carried out since May 2016²³.

[219] The TPFF Steward thanked the TPFF members and the Secretariat, especially the lead, for their work.

[220] For 2017, the TPFF did not plan to work on any specific tasks as the reorganization of the suite of fruit fly standards was being reconsidered by the SC November 2017 (see also discussions under 3.1). Any involvement of the TPFF where a meeting would be needed, would be subject to extra-budgetary funds.

[221] The SC:

- (60) *noted* the TPFF update.

6.5 Technical Panel on Forest Quarantine (TPFQ)

[222] The Secretariat presented an overview of TPFQ activities carried out since May 2016²⁴.

[223] The TPFQ Steward thanked the TPFQ members and the Secretariat, especially the lead, for their work.

[224] One SC member recalled that the TPFQ had also provided recommendations on implementation issues on the international movement of wood.

²² 05_SC_2017_May

²³ 14_SC_2017_May

²⁴ 17_SC_2017_May; Link to the [TPFQ meeting reports](#)

[225] There was no face-to-face meeting scheduled for 2017.

[226] For 2017, the TPFQ planned to complete the drafting of the annex to ISPM 15 (*Regulation of wood packaging material in international trade*) on Criteria for treatments for wood packaging material in international trade (2006-010) and proposed a change to the title. The SC decided it was more appropriate to agree to a title change when the draft was presented to the SC.

[227] The SC:

- (61) *noted* the following TPFQ meeting reports: 2016-06 face-to-face and 2016-09 virtual.
- (62) *noted* the work performed by the TPFQ over the last year.
- (63) *noted* the tentative TPFQ work plan for the period May 2017-April 2018.

7. Adjustments to the List of Topics for IPPC Standards and the Stewards

[228] The Secretariat updated the SC on the changes to the *List of topics for IPPC standards* made by CPM-12 (2017)²⁵. It was noted that any changes agreed during this SC meeting would be incorporated.

[229] As to the new topic added by CPM-12 on the *Use of systems approaches in managing risks associated with the movement of wood commodities* (2015-004), the SC agreed that the Secretariat work with a small SC group (steward, assistant steward, Mr Nico HORN and Mr Rajesh RAMARATHNAM) to revise the draft specification taking into account the comments made during CPM-12. The SC agreed to this approach and also that the Online Comment System (OCS) be used to collect comments from SC members before submitting the draft specification for approval via SC e-decision. The Secretariat would open the OCS discussion on 1 June.

[230] The SC discussed which draft standards should be developed in 2018. It was noted that the topic on the *International movement of wood products and handicrafts made from wood* (2008-008) had been drafted and would therefore, in principle, have higher priority than the other topics of the same assigned priority. The SC noted that CPM-12 requested that the concept of the certificate of compliance not be included in draft standards, and agreed this draft standard should be redrafted.

[231] The SC discussed whether calling a new EWG or reconvening the same EWG, and agreed a new EWG should be called. The new EWG should redraft the standard taking into consideration the CPM decision on the certificate of compliance.

[232] One SC member queried if this decision would restrict the expert nominations to only members who did not participate in the previous EWG, and if the specification should be adjusted. The SC agreed that the call for experts should not be restricted and that the specification did not need to be modified.

[233] It was recalled that the *List of topics for IPPC standards* is posted on the IPP in languages before the CPM sessions and after the SC-7 meeting²⁶.

[234] The SC:

- (64) *agreed* that the Secretariat work with a small SC group (steward, assistant steward, Mr Nico HORN and Mr Rajesh RAMARATHNAM) to revise the draft specification *Use of systems approaches in managing risks associated with the movement of wood commodities* (2015-004) and that the OCS be used to collect comments from SC members before submitting the draft specification for approval via SC e-decision.
- (65) *agreed* to call a new EWG for the drafting of the ISPM on the *International movement of wood products and handicrafts made from wood* (2008-008).
- (66) *approved* changes to the *List of topics for IPPC standards* as discussed in this meeting under various agenda items.

²⁵ 20_SC_2017_May

²⁶ Link to the [List of topics for IPPC standards](#)

7.1 Adjustments to stewards

- [235] The SC reviewed and made modifications to stewards and assistant stewards for some topics:
- [236] **Use of systems approaches in managing risks associated with the movement of wood commodities** (2015-004). Mr Jesulindo Nery DE SOUZA JUNIOR (Brazil) was assigned steward and Mr HERMAWAN (Indonesia) was assigned assistant steward.
- [237] **Technical Panel for Diagnostic Protocols** (2004-002). No assistant steward was assigned.
- [238] **Technical Panel for Phytosanitary Treatments** (2004-005). Mr David OPATOWSKI (Israel) was assigned steward.
- [239] **Safe handling and disposal of waste with potential pest risk generated during international voyages** (2008-004). Mr Lupeomanu Pelenato FONOTI (Samoa) was assigned assistant steward.
- [240] **International movement of wood products and handicrafts made from wood**. Mr Rajesh RAMARATHNAM (Canada) was assigned steward.
- [241] **Minimizing pest movement by air containers and aircrafts** (2008-002). No assistant steward was assigned because this topic is pending.

7.2 Proposal for the revision of Glossary definitions

- [242] Ms Marina ZLOTINA (USA) introduced a paper suggesting that “pest free area” and “pathway” be added to the *List of topics for IPPC standards*²⁷.
- [243] The SC Chairperson informed the SC that the TPG, in their 2015-12 and 2016-12 meetings, had briefly discussed whether to propose the revision of the definitions of these terms.
- [244] **For pest free area**, the SC member suggested that the term be revised to consider the situation where a pest is present but not injurious to the plant. Several SC members shared the concern with the interpretation and implementation of pest free areas by some importing countries, but did not believe that a revision of the term would solve this. They found it more a question of implementing ISPM 11 correctly and effectively. One SC member also pointed out that the proposed revision could allow countries to neglect pest risks. For instance, according to the new proposal, an area can be considered pest free when a pest is present but not injurious to the plant because appropriate measures are taken to prevent infestation. Another SC member highlighted that the proposed revision would make the exporting country responsible for assessing the pest risk for the importing country.
- [245] Several SC members felt that the proposal went beyond modifying a definition, and would result in a change to the concept of “pest free area”.
- [246] The Secretariat recalled that the revision of ISPM 4 (*Requirements for pest free areas*) is on the *List of topics for IPPC standards* (with priority 4) and that this conceptual issue could be considered when this standard was revised.
- [247] The SC agreed to discuss the concept further in their November 2017 meeting.
- [248] **For pathway**, the SC member suggested the need for a revision because the term does not reflect current practices and creates confusion.
- [249] The SC felt that the concerns were similar to those for the term “pest free area” (relating to the concept more than the term) and that countries need to assess both whether the pest may enter and whether it may establish.
- [250] The SC agreed to discuss the concept further in their November 2017 meeting.

²⁷ 07_SC_2017_May

[251] The SC:

- (67) *agreed* that a small SC group (Ms Marina ZLOTINA and Mr Stephen BUTCHER) should redraft the document presented to this SC meeting to take account of the various points of view presented, for discussion in the SC November 2017.

8. Adjustments to the Framework for Standards and Implementation

[252] The Secretariat noted that the Framework for Standards and Implementation had been adopted by CPM-12 (2017)²⁸. The SC asked Mr Rajesh RAMARATHNAM (SC champion of the Framework) to adjust the Framework in accordance with decisions taken under section 7 of this report.

[253] The Secretariat noted that while CPM and SC identifying a need for further treatments and commodity standards, no gaps have been identified and that the SC should consider this. In addition, the Secretariat recalled that the TPDP had identified some high priority pests that should also be included.

[254] The SC discussed where the new topic on *Use of systems approaches in managing risks associated with the movement of wood commodities* (2015-004) should be included, whether it should be in row 54, row 26 or a third place. The SC felt that the champion should be able to decide that.

[255] One SC member suggested that under row 28 a potential gap could be “non-host” standards. The SC agreed to discuss this further and suggested the SC members provide additional justification for this, for further discussions in the SC November 2017.

[256] The SC:

- (68) *agreed* that Mr Rajesh RAMARATHNAM would decide on the appropriate place where to include the topic *Use of systems approaches in managing risks associated with the movement of wood commodities* (2015-004) in the Framework for Standards and Implementation.
- (69) *asked* the Secretariat to forward the Framework for Standards and Implementation to the SPG for their consideration.
- (70) *asked* Mr Bruce HANCOCKS to prepare a paper on potential gaps for non-host standards for the SC November 2017 meeting.

9. Concepts and implementation issues related to draft or adopted standards

[257] The Secretariat noted that some possible implementation issues had been identified for newly adopted ISPMs during CPM-12 (2017) and during this SC meeting for the following standards:

- ISPM 41 (*International movement of used vehicles, machinery and equipment*). One SC member presented views on the possible implementation issues²⁹. The SC noted that the text of the appendix was not fully aligned with the standard, but that the appendix is not a prescriptive part of the standard.
- ISPM 40 (*International movement of growing media*). Some CPs expressed concerns on the international movement of growing media in association with plants for planting (2005-004) as growing media in association with plants for planting and growing media in international trade were not clearly differentiated and could cause problems for implementation.

[258] The SC noted that there was no agreement on the most important issues to be presented to CPM for discussion, and agreed to discuss the matter further in the SC November 2017.

[259] The SC:

- (71) *agreed* to discuss possible implementation issues identified for newly adopted ISPMs in their November 2017 meeting and asked Mr Masahiro SAI (lead) and Mr Lupeomanu Pelenato

²⁸ Link to [Framework for Standards and Implementation](#)

²⁹ 24_SC_2017_May

FONOTI to draft a paper including the various issues identified during CPM-12 and in this SC meeting.

Proposals for special topics session and side events

[260] SC discussions on this matter are captured under section 6.3.1 of this report.

10. SC recommendations for CPM-13 (2018)

11. Agenda items deferred to future SC Meetings

[261] The following items were deferred:

[262] Under section 4.2 of this report, the implementation issues in relation to the draft ISPM on the *Requirements for the use of fumigation as a phytosanitary measure* (2014-004).

[263] Under section 6.2 of this report, the guidelines for a consistent ISPM terminology.

11.1 Future SC e-decisions

[264] The Secretariat stressed the need for all SC members to actively participate in SC e-decisions.

[265] The following SC e-forums are e-decisions are tentatively planned between SC May 2017 – SC November 2017:

[266] DPs for approval for consultation period (tentatively 29 May – 12 June)

- Revision of DP 2: *Plum pox virus* (2016-007)
- *Bactrocera dorsalis* complex (2006-026)
- *Conotrachelus nenuphar* (2013-002)
- *Ips* spp. (2006-020)

[267] DPs for approval for DP notification period (no dates planned):

- Revision of DP 2: *Plum pox virus* (2016-007)
- *Bactrocera dorsalis* complex (2006-026)
- *Conotrachelus nenuphar* (2013-002)
- *Ips* spp. (2006-020)
- *Puccinia psidii* (2006-018)

[268] PTs for approval for submission for adoption at CPM-13 (2018):

- Heat treatment of wood using dielectric heating (2007-114)
- Vapour heat treatment for *Bactrocera dorsalis* on *Carica papaya* (2009-109).

[269] Draft specifications and draft ISPMs

- Approve the draft specification on *Use of systems approaches in managing risks associated with the movement of wood commodities* (2015-004) for first consultation.

[270] Selection of members of expert drafting groups as needed.

[271] Other issues: Gather comments on the draft ISPM on the *International movement of grain* (2008-007).

[272] The SC:

- (72) *noted* the standard setting calendar for 2017 and the tentative SC e-decisions from May 2017 to November 2017.

12. Review of the standard setting calendar

[273] The Secretariat explained that the standard setting calendar is available on the IPP³⁰. SC members were reminded to check the calendar regularly for updates on standard setting meetings.

[274] Stewards for draft ISPMs approved for the first consultation were reminded to provide presentations for the IPPC regional workshops by 15 June 2017 (a template will be e-mailed to the stewards).

[275] The Secretariat informed the SC that the following meetings may tentatively be held in 2018:

- EWG on *Guidance on pest risk management* (2014-001)
- Face-to-face meetings of TPPT, TPDP and TPG.

13. Other business

[276] There was no other business.

14. Date and venue of the next SC Meeting

[277] The next SC meeting is scheduled from 13 to 17 November 2017 in Rome, Italy.

15. Evaluation of the meeting process

[278] The SC Chairperson encouraged the SC to fill out the electronic evaluation form that had been created and invited all SC members to submit their evaluation via the following link by 9 June 2017: https://www.surveymonkey.com/r/SC_May_2017.

16. Adoption of the report

[279] The SC adopted the report.

[280] For ease of reference, a list of action points arising from the meeting is attached as Appendix 10.

17. Close of the meeting

[281] The SC Chairperson thanked the SC for giving him the opportunity to serve the committee in this capacity, highlighting that he had always considered the role as Chairperson a great honour. He also recognized the Secretariat staff for their hard work during this week to ensure everything works smoothly and impeccably, which he had had the opportunity to experience first-hand. He thanked the rapporteur for taking copious notes and for capturing all the SC decisions, and the Vice-chairperson for her help during the meeting. Lastly, he thanked the interpreters and support staff.

[282] The Standards Officer also took the opportunity to thank the SC and his team.

[283] The SC in return thanked the SC Chairperson for his excellent work throughout this week.

[284] The SC Chairperson closed the meeting.

³⁰ Link to the [IPP calendar](#)

APPENDIX 1: Agenda

| AGENDA ITEM | DOCUMENT NO. | PRESENTER |
|---|--|--|
| 1. Opening of the meeting | | |
| 1.1. Welcome by the IPPC Secretariat | | Jingyuan XIA |
| ❖ Welcome to new SC members | | Brent LARSON |
| 1.2. Election of the Chairperson | | Brent LARSON |
| 1.3. Election of the Rapporteur | | Chairperson |
| 1.4. Adoption of the Agenda | 01_SC_2017_May | Chairperson |
| 2. Administrative Matters | | |
| ❖ Documents List | 02_SC_2017_May | Piotr WLODARCZYK |
| ❖ Participants List | 03_SC_2017_May | Piotr WLODARCZYK |
| ❖ Local Information | Link to local information | Piotr WLODARCZYK |
| ❖ Standard Setting Unit staff | Link to standard setting staff | Brent LARSON |
| 3. Updates | | |
| 3.1 Items arising from governance bodies | | |
| ❖ CPM-12 (2017) | 19_SC_2017_May | Brent LARSON |
| ❖ CPM Bureau (April 2017) | Link to the report | Brent LARSON |
| 3.2 Briefings from IPPC Secretariat | | |
| ❖ Standard Setting Unit | | Brent LARSON |
| ❖ General update from the IPPC Secretariat | | Craig FEDCHOCK |
| ❖ Tentative dates and venues of the 2017 IPPC Regional Workshops | 12_SC_2017_May | Adriana MOREIRA |
| 4. Draft ISPMs from expert drafting groups (EWG/TP) for the first consultation | | |
| 4.1. International movement of cut flowers and foliage (2008-005), Priority 4 | | |
| - Steward: Ana Lilia MONTEALEGRE | 2008-005 | Ana Lilia MONTEALEGRE (Adriana MOREIRA) |
| ❖ Specification 56 (for information) | Link to Specification | |
| ❖ Steward's notes and potential implementation issues | 11_SC_2017_May | |
| 4.2. Requirements for the use of fumigation treatments as a phytosanitary measure (2014-004), Priority 1 | | |
| - Steward: David OPATOWSKI | 2014-004 | David OPATOWSKI (Adriana MOREIRA) |
| ❖ Specification 62 (for information) | Link to Specification | |

| AGENDA ITEM | DOCUMENT NO. | PRESENTER |
|---|---|--|
| <ul style="list-style-type: none"> ❖ Update from the Technical Panel on Phytosanitary Treatments (TPPT) <ul style="list-style-type: none"> ○ October 2016 virtual meeting report ○ December 2016 virtual meeting report ○ January 2017 virtual meeting report ❖ Steward's notes and potential implementation issues | Link to the TPPT meeting reports 06_SC_2017_May | |
| 4.3. International movement of grain (2008-007), Priority 2 <ul style="list-style-type: none"> - Steward: Stephen BUTCHER ❖ Specification 60 (for information) ❖ Expert working group (EWG) September 2016 meeting report ❖ Steward's notes and potential implementation issues | 2008-007 Link to Specification Link to the report 04_SC_2017_May | Stephen BUTCHER (Brent LARSON) |
| 4.4. Amendments to ISPM 5 (1994-001) <ul style="list-style-type: none"> - Steward: Laurence BOUHOT-DELDUC ❖ TPG December 2016 meeting report | 1994-001 Link to the report | Laurence BOUHOT-DELDUC (Eva MOLLER) |
| 5. Standards Committee | | |
| 5.1. Report of the SC November 2016 <ul style="list-style-type: none"> ❖ Promotional paper on the positive impact of phytosanitary standards on international trade, poverty reduction and the phytosanitary situation globally | Link to the report 18_SC_2017_May | Chairperson Shaza OMAR / Jesulindo JUNIOR |
| 5.2. Summary on polls and forums discussed on the e-decision site from December 2016 to April 2017 | 09_SC_2017_May | Janka KISS |
| 5.2.1 Regional representation in the Expert Working Groups | 23_SC_2017_May | David OPATOWSKI |
| 5.2.2 Selection of experts for TPG (Ar, En, Zh) and for the EWG for the revision of ISPM 8 | 21_SC_2017_May 22_SC_2017_May Link to the nominations | Chairperson |
| 6. Review of technical panels (from May 2016 to April 2017) | | |
| 6.1. Technical Panel on Phytosanitary Treatments (TPPT) <ul style="list-style-type: none"> ❖ TPPT meeting reports: <ul style="list-style-type: none"> ○ 2016 July virtual meeting ○ 2016 September meeting (face-to-face) ○ 2016 October virtual meeting ○ 2016 December virtual meeting | Link to the TPPT meeting reports | Adriana MOREIRA / Ezequiel FERRO |

| AGENDA ITEM | DOCUMENT NO. | PRESENTER |
|--|--|--|
| <ul style="list-style-type: none"> ○ 2017 January virtual meeting ❖ Update on activities of the TPPT | 10_SC_2017_May | |
| 6.2. Technical Panel for the Glossary (TPG) <ul style="list-style-type: none"> ❖ TPG meeting report (2016 December, face-to-face) ❖ Update on activities of the TPG ❖ Guidelines for a consistent ISPM terminology | Link to the report 15_SC_2017_May 16_SC_2017_May | Eva MOLLER / Laurence BOUHOT-DELDUC |
| 6.3. Technical Panel for Diagnostic Protocols (TPDP) <ul style="list-style-type: none"> ❖ TPDP meeting reports: <ul style="list-style-type: none"> ○ 2016 July meeting (face-to-face) ○ 2016 September virtual meeting ○ 2017 February meeting (face-to-face) ❖ Update on activities of the TPDP ❖ Discussion paper: TPDP recommendations on Next Generation Sequencing (NGS) technologies as a diagnostic tool for phytosanitary purposes ❖ Proposal for changing the dates of the December DP Notification Period | Link to the TPDP meeting reports 13_SC_2017_May 08_SC_2017_May 05_SC_2017_May | Adriana MOREIRA / Jane CHARD |
| 6.4. Technical Panel on Pest Free Areas and Systems Approaches for Fruit Flies (TPFF) <ul style="list-style-type: none"> ❖ Update on the activities of the TPFF | 14_SC_2017_May | Eva MOLLER / Ana Lilia MONTEALEGRE |
| 6.5. Technical Panel on Forest Quarantine (TPFQ) <ul style="list-style-type: none"> ❖ TPFQ meeting reports <ul style="list-style-type: none"> ○ 2016 June meeting (face-to-face) ○ 2016 September virtual meeting ❖ Update on activities of the TPFQ | Link to the TPFQ meeting reports 17_SC_2017_May | Brent LARSON / Marina ZLOTINA |
| 7. Adjustments to the List of Topics and the stewards | 20_SC_2017_May | Brent LARSON |
| 7.1 Adjustment to stewards | | |
| 7.2 Proposal for the revision of Glossary definitions | 07_SC_2017_May | Marina ZLOTINA |
| 8. Adjustments to the Framework for Standards and Implementation | Link to the Framework | Brent LARSON |
| 9. Concepts and implementation issues related to draft or adopted standards | 24_SC_2017_May | Brent LARSON |
| 10. SC recommendations for CPM-13 (2018) | | Chairperson |
| 11. Agenda items deferred to future SC Meetings | | Chairperson |
| 11.1 Future SC e-decision | | |

| AGENDA ITEM | DOCUMENT NO. | PRESENTER |
|---|--|------------------|
| 12. Review of the standard setting calendar | Link to the IPP calendar | Piotr WLODARCZYK |
| 13. Other business | | Chairperson |
| 14. Date and venue of the next SC Meeting | | Brent LARSON |
| 15. Evaluation of the meeting process | Link to survey monkey ³¹ | Chairperson |
| 16. Adoption of the report | | Chairperson |
| 17. Close of the meeting | | Chairperson |

³¹ The link will be sent to the SC members after the meeting

APPENDIX 2: Documents List

| DOCUMENT NO. | AGENDA ITEM | DOCUMENT TITLE | LEVEL OF ACCESS | DATE POSTED / DISTRIBUTED |
|--------------------|-------------|--|---------------------|---------------------------|
| Draft ISPMs | | | | |
| 2008-005 | 4.1 | Draft ISPM on the <i>International movement of cut flowers and foliage</i> | SC, NPPOs and RPPOs | 2017-03-01 |
| 2014-005 | 4.2 | Draft ISPM on the <i>Requirements for the use of fumigation treatments as a phytosanitary measure</i> | SC, NPPOs and RPPOs | 2017-03-01 |
| 2008-007 | 4.3 | Draft ISPM on the <i>International movement of grain</i> | SC, NPPOs and RPPOs | 2017-03-10 |
| 1994-001 | 4.4 | Draft 2017 Amendments to ISPM 5: <i>Glossary of phytosanitary terms</i> | SC, NPPOs and RPPOs | 2017-03-07 |
| Documents | | | | |
| 01_SC_2017_May | 1.4 | Agenda (2017-05-05) | SC, NPPOs and RPPOs | 2017-05-05 |
| 02_SC_2017_May | 2 | Documents list | SC, NPPOs and RPPOs | 2017-05-05 |
| 03_SC_2017_May | 2 | Participants list | SC, NPPOs and RPPOs | 2017-05-05 |
| 04_SC_2017_May | 4.3 | Steward's notes and potential implementation issues (draft ISPM on International movement of grain) | SC, NPPOs and RPPOs | 2017-04-21 |
| 05_SC_2017_May | 6.3 | Proposal for changing the dates of the December DP notification period | SC, NPPOs and RPPOs | 2017-04-21 |
| 06_SC_2017_May | 4.2 | Steward's notes and potential implementation issues (draft ISPM on Requirements for the use of fumigation as a phytosanitary measure (2014-004)) | SC, NPPOs and RPPOs | 2017-04-21 |
| 07_SC_2017_May | 7 | Proposal for the revision of Glossary definitions | SC, NPPOs and RPPOs | 2017-04-21 |
| 08_SC_2017_May | 6.3 | Potential implications of the use of next generation sequencing as a diagnostic technique | SC, NPPOs and RPPOs | 2017-04-21 |
| 09_SC_2017_May | 5.2 | Summary on polls and forums discussed on the e-decision site from December 2016 to April 2017 | SC, NPPOs and RPPOs | 2017-05-05 |
| 10_SC_2017_May | 6.1 | Update on the activities of the TPPT | SC, NPPOs and RPPOs | 2017-04-26 |
| 11_SC_2017_May | 4.1 | Steward's notes and potential implementation issues (draft ISPM on International Movement of Cut Flowers and Foliage (2008-005)) | SC, NPPOs and RPPOs | 2017-04-21 |
| 12_SC_2017_May | 3.2 | Tentative dates and venues of the 2017 IPPC Regional Workshops | SC, NPPOs and RPPOs | 2017-04-21 |
| 13_SC_2017_May | 6.3 | Update on the activities of the TPDP | SC, NPPOs and RPPOs | 2017-04-24 |

| DOCUMENT NO. | AGENDA ITEM | DOCUMENT TITLE | LEVEL OF ACCESS | DATE POSTED / DISTRIBUTED |
|----------------|-------------|--|---------------------|---------------------------|
| 14_SC_2017_May | 6.4 | Update on the activities of the TPF | SC, NPPOs and RPPOs | 2017-04-26 |
| 15_SC_2017_May | 6.2 | Update on the activities of the TPG | SC, NPPOs and RPPOs | 2017-04-25 |
| 16_SC_2017_May | 6.2 | Guidelines for a consistent ISPM terminology | SC, NPPOs and RPPOs | 2017-04-25 |
| 17_SC_2017_May | 6.5 | Update on the activities of the TPFQ | SC, NPPOs and RPPOs | 2017-04-25 |
| 18_SC_2017_May | 5.1 | Promotional paper on the positive impact of phytosanitary standards on international trade, poverty reduction and the phytosanitary situation globally | SC, NPPOs and RPPOs | 2017-04-25 |
| 19_SC_2017_May | 3.1 | CPM-12 (2017) update | SC, NPPOs and RPPOs | 2017-04-26 |
| 20_SC_2017_May | 7 | Adjustments to the List of Topics and the stewards | SC, NPPOs and RPPOs | 2017-04-26 |
| 21_SC_2017_May | 5.2 | Selection of experts for the EWG for the revision of ISPM 8 | SC, NPPOs and RPPOs | 2017-05-05 |
| 22_SC_2017_May | 5.2 | Selection of experts for the TPG | SC, NPPOs and RPPOs | 2017-05-05 |
| 23_SC_2017_May | 5.2 | Regional representation in the Expert Working Groups | SC, NPPOs and RPPOs | 2017-05-05 |
| 24_SC_2017_May | 9 | Concepts and implementation issues related to draft or adopted standards | SC, NPPOs and RPPOs | 2017-05-05 |

| IPP LINKS: | Agenda item |
|---|-------------|
| Link to Local Information | 2 |
| Link to Standards Setting Staff | 2 |
| Link to the 2017 April CPM Bureau report | 3 |
| Link to Specification 56 (Cut Flowers) | 4.1 |
| Link to Specification 62 (Fumigation) | 4.2 |
| Link to the TPPT meeting reports | 4.2, 6.1 |
| Link to Specification 60 (Grain) | 4.3 |
| Link to the EWG report (Grain) | 4.3 |
| Link to the TPG Dec 2016 meeting report | 4.4, 6.2 |
| Link to the nominations (TPG, EWG for the revision of ISPM 8) | 5.2 |
| Link to the TPDP meeting reports | 6.3 |
| Link to the TPFQ meeting reports | 6.5 |

APPENDIX 3. Participants list

| Region / Role | Name, mailing address, telephone | Email address | Membership Confirmed | Term expires |
|---------------------|--|--|--|--------------|
| Africa Member | Ms Alphonsine LOUHOARI TOKOZABA Ministère de l'Agriculture et de l'Elevage, 24, rue Kiélé Tenard, Mfilou, Brazzaville, REPUBLIC OF CONGO Tel: +242 01 046 53 61 Tel: +242 04 005 57 05 | louhouari@yahoo.fr ; | Replacement member for Ms Nadia HADJERES CPM-10 (2015) 1st term / 3 years | 2019 |
| Africa Member | Mr David KAMANGIRA Department of Agricultural Research Services Headquarters, P.O. Box 30779, Lilongwe 3. MALAWI Tel: : +265 888 342 712 Tel: +265 999 122 199 | davidkamangira1@gmail.com ; | CPM-11 (2016) 1st term / 3 years | 2019 |
| Asia Member | Mr HERMAWAN Centre for Plant Quarantine and Bio-Safety Indonesian Agricultural Quarantine Agency Ministry of Agriculture Jl. Harsono RM. 3 Pasar Minggu, Jakarta Selatan 12550 INDONESIA Tel: + 62 21 7816482 Fax: + 62 12 7816482 | Hermawan1961@gmail.com ; | CPM-11 (2016) 2nd term / 3 years | 2019 |
| Asia Member | Mr Masahiro SAI Senior Researcher (Section Chief) Risk Analysis Division Yokohama Plant Protection Station Ministry of Agriculture, Forestry and Fisheries (MAFF) JAPAN Tel: +81-45-211-0375 | saim@pps.maff.go.jp ; | Replacement member for Mr Lifeng WU CPM-10 (2015) 1st term / 3 years | 2018 |
| Asia Member SC-7 | Ms Thanh Huong HA Deputy Director of Plant Quarantine Division, Plant Protection Department 149 Ho Dac Di Street Dong Da district Hanoi City VIET NAM Tel: (+844) 35331033 Fax: (+844) 35330043 | ppdhuong@yahoo.com ; huonght.bvtv@mard.gov.vn ; | CPM-7(2012) CPM-10 (2015) 2nd term / 3 years | 2018 |

| Region / Role | Name, mailing address, telephone | Email address | Membership Confirmed | Term expires |
|------------------------------------|--|--|---|--------------|
| Europe Member | Ms Laurence BOUHOT-DELDUC Plant health section Sub-directorate for plant quality, health and protection Service for prevention of the sanitary risks of the primary production General directorate for food Ministry of agriculture, agro-food and forestry 251 rue de Vaugirard 75732 PARIS CEDEX 15 FRANCE Tel: +33 149558437 Fax: +33 149555949 | laurence.bouhot-delduc@agriculture.gouv.fr | CPM-10 (2015) 1st term / 3 years | 2018 |
| Europe Member SC-7 | Mr Nicolaas Maria HORN Senior Officer Plant Health, Netherlands Food and Consumer Product Safety Authority (NVWA) Division Plant and Nature National Plant Protection Organization (NPPO) P.O. Box 9102 6700 HC Wageningen THE NETHERLANDS Phone: (+31) 651998151 | n.m.horn@nvwa.nl ; | CPM-9 (2014) CPM-12 (2017) 2nd term / 3 years | 2020 |
| Europe Member | Mr Samuel BISHOP Plant Health Policy team Room IIG35 Department for Environment, Food and Rural Affairs National Agri-Food Innovation Campus Sand Hutton York North Yorkshire UNITED KINGDOM YO41 4LZ Tel: + 44 (0) 2080262506 Mob.: +44 (0) 7827976902 | sam.bishop@defra.gsi.gov.uk ; | Replacement member for Ms Hilde Kristin PAULSEN CPM-11 (2016) 1st term / 3 years | 2018 |
| Europe Member | Mr David OPATOWSKI 1-3 avenue de la Paix 1202 Geneva, Switzerland ISRAEL Tel: (+41) 79945 7344 | dopatowski@yahoo.com ; | CPM-1 (2006) CPM-4 (2009) CPM-12 (2017) 3rd term / 3 years | 2020 |
| Latin America and Caribbean Member | Mr Jesulindo Nery DE SOUZA JUNIOR Esplanada dos Ministérios, Bloco D, Anexo B, Sala 303 70043-900 - Brasília, DF BRAZIL Tel: +55 (61) 3218-2843 (Office) Private tel: (61) 98131-8007 | jesulindo.junior@agricultura.gov.br ; jesulindo@gmail.com ; | CPM-11 (2016) 1st term / 3 years | 2019 |

| Region / Role | Name, mailing address, telephone | Email address | Membership Confirmed | Term expires |
|--|---|--|--|--------------|
| Latin America and Caribbean Member | Ms Ana Lilia MONTEALEGRE LARA Harmonization and International Evaluation Deputy Director Dirección General de Sanidad Vegetal SENASICA/SAGARPA Boulevard Adolfo Ruiz Cortines No. 5010, Piso 4 Colonia Insurgentes Cuicuilco, Delegación Coyoacán, México D.F., C.P. 04530 MEXICO Tel: (+11) 52-55 59 05 10 00 ext 51341 | ana.montealegre@senasica.gob.mx ; | CPM-7(2012) CPM-10 (2015) 2nd term / 3 years | 2018 |
| Latin America and Caribbean Member SC Chairperson SC-7 | Mr Ezequiel FERRO Dirección Nacional de Protección Vegetal - SENASA Av, Paeso Colón 315 C.A. de Buenos Aires ARGENTINA Tel/Fax : (+5411) 4121-5091 | eferro@senasa.gov.ar ; | CPM-11 (2016) 2nd term / 3 years | 2019 |
| Latin America and Caribbean Member | Mr Álvaro SEPÚLVEDA LUQUE Servicio Agrícola y Ganadero División de Protección Agrícola y Forestal Av. Presidente Bulnes 140, Santiago, CHILE Tel + 56-2 2699 6452 | alvaro.sepulveda@sag.gob.cl ; | CPM-10 (2015) 1st term / 3 years | 2018 |
| Near East Member SC Vice-Chairperson SC-7 | Ms Shaza OMAR Phytosanitary Specialist Central Administration for Plant Quarantine Ministry of Agriculture 1 Nadi al Said Street Dokki, Giza, EGYPT Mobile: +20 1014000813 Fax: (+20) 237608574 | shaza.roshdy@gmail.com ; | CPM-11 (2016) 1st term / 3 years | 2019 |
| Near East Member | Mr Youssef Al MASRI Rwayseh Salima Maten alala Babda Mount Lebanon - 7103 LEBANON Phone: +961-3-957482 | Yalmasri755@yahoo.com | CPM-11 (2016) 1st term / 3 years | 2019 |

| Region / Role | Name, mailing address, telephone | Email address | Membership Confirmed | Term expires |
|----------------------------------|--|--|---|--------------|
| North America Member SC-7 | Ms Marina ZLOTINA IPPC Technical Director USDA-APHIS, Plant Protection and Quarantine (PPQ) 4700 River Rd, 5c-03.37 Riverdale, MD 20737 USA Phone: 1-301-851-2200 Cell: 1-301-832-0611 | Marina.A.Zlotina@aphis.usda.gov ; | CPM-10 (2015) 1st term / 3 years | 2018 |
| North America Member | Mr Rajesh RAMARATHNAM Senior Specialist (International Phytosanitary Standards): International Phytosanitary Standards Section, Plant Protection Division, CFIA-ACIA 59 Camelot Drive, Ottawa ON K1A 0Y9 CANADA Tel: (+1) 613-773-7235 Fax: (+1) 613-773-7204 | rajesh.ramarathnam@inspection.gc.ca ; | CPM-11 (2016) 1st term / 3 years | 2019 |
| Pacific Member | Mr Stephen BUTCHER Manager Import & Export Plants Standards Branch Plant, Food and Environment Directorate Ministry for Primary Industries Pastoral House 25 The Terrace PO Box 2526 Wellington 6140 NEW ZEALAND Tel: (+64) 4 894 0478 Fax: (+ 64) 4 894 0662 Mob: (+ 64) 29 894 0478 | stephen.butcher@mpi.govt.nz ; | Replacement member for Mr John HEDLEY CPM-4 (2009) CPM-7 (2012) CPM-11 (2016) 3rd term / 3 years | 2019 |
| Pacific Member | Mr Bruce HANCOCKS Assistant Director Plant Health Policy Biosecurity Plant Division Department of Agriculture GPO Box 858, Canberra ACT 2601 AUSTRALIA Tel: +61 2 62723826 | Bruce.Hancocks@agriculture.gov.au ; | Replacement member for Mr Jan Bart ROSSEL CPM-6 (2011) CPM-9 (2014) 2nd term / 3 years | 2017 |
| Pacific Member | Mr Lupeomanu Pelenato FONOTI Assistant Chief Executive Officer Quarantine Division Ministry of Agriculture and Fisheries, P.O. Box 1874, Apia, SAMOA Tel.: H: (685)27054 W: (685) 20924 M: 7767305 | aceo@samoaaquarantine.gov.ws | CPM-12 (2017) 1st term / 3 years | 2020 |

Others

| Region / Role | Name, mailing address, telephone | Email address | Membership Confirmed | Term expires |
|--|--|--|-----------------------------|---------------------|
| Observer / The Near East Plant Protection Organization (NEPPO) | Mr Mekki CHOUIBANI Executive Director The Near East Plant Protection Organization (NEPPO) Batiment C de l'INRA Angle des Avenues Ibn Al Ouazzane et Hassan II Rabat MOROCCO Office: +212 537 704810 Cell: +212 673997808 Fax: +212 537 708763 | m.chouibani@neppo.org | N/A | N/A |
| Observer / Australia | Ms Sophie Alexia PETERSON Department of Agriculture and Water and Resources GPO Box 858 Canberra ACT 2601 AUSTRALIA Phone: +61 2 6272 37 69 Mobile: 0402 313 170 | sophie.peterson@agriculture.gov.au | N/A | N/A |
| IPPC Secretariat | Mr Brent LARSON Standards Officer | Brent.Larson@fao.org | N/A | N/A |
| IPPC Secretariat | Ms Adriana MOREIRA Support | Adriana.Moreira@fao.org | N/A | N/A |
| IPPC Secretariat | Ms Eva MOLLER Support | Eva.Moller@fao.org | N/A | N/A |
| IPPC Secretariat | Ms Celine GERMAIN Support | Celine.Germain@fao.org | N/A | N/A |
| IPPC Secretariat | Mr Piotr WLODARCZYK Support | Piotr.Wlodarczyk@fao.org | N/A | N/A |
| IPPC Secretariat | Ms Janka KISS Support | Janka.Kiss@fao.org | N/A | N/A |
| IPPC Secretariat | Ms Stephanie DUBON Support | Stephanie.Dubon@fao.org | N/A | N/A |
| IPPC Secretariat | Ms Karen ROUEN Editor | Karen.Rouen@fao.org | N/A | N/A |

Members who did not attend

| Region / Role | Name, mailing address, telephone | Email address | Membership Confirmed | Term expires |
|---------------------------|---|--|---|--------------|
| Africa Member SC 7 | Ms Esther KIMANI Ag. Managing Director Kenya Plant Health Inspectorate Service- KEPHIS P.O. BOX 49592-00100, Nairobi KENYA Tel: (+254) 356171, Mobile: (+254) 0722 226 239 | ekimani@kephis.org ; | CPM-9 (2014) CPM-12 (2017) 2nd term / 3 years | 2020 |
| Africa Member | Mr Moses Adegboyega ADEWUMI Nigeria Agricultural Quarantine Service Plant Unit P. O .Box 10434 5 th floor Federal Secretariat, Port Harcourt Rivers State, NIGERIA Tel: +234-8033913847 / 8059607047 | adegboyegamoses37@yahoo.com ; | Replacement member for Alice Ntoboh Sibon NDIKONTAR CPM-10 (2015) 1st term / 3 years | 2018 |
| Asia Member | Ms Walaikorn RATTANADECHAKUL Senior Agricultural Research Scientist Plant Quarantine Research Group Plant Protection Research and Development Office Department of Agriculture 50 Phaholyothin Rd., Ladyao Chatuchak Bangkok 10900 KINGDOM OF THAILAND Tel: +662 940 6670 ext 115, 116 Fax : +662 579 2145 | walai4733@gmail.com ; | CPM-10 (2015) 1st term / 3 years | 2018 |
| Near East Member | Mr Nazir AI-BDOUR Assistant Director of Plant Protection & Phytosanitary Directorate Ministry of Agriculture P.O. Box 961043 Amman 11196, Amman JORDAN Tel: (+0962) 799668375 Fax: (+0962) 65625714 | natheeralbdour@yahoo.com ; | CPM-11 (2016) 1st term / 3 years | 2019 |
| Near East Member | Mr Ali Amin KAFU Expert in the Field of Quarantine IPPC Official Contact Point National Center for Plant Protection and Plant Quarantine P.O. Box.2933, Tripoli LIBYA Phone: (+21) 8925022980 | benkafu@yahoo.com ; | Replacement member for Ms Maryam JALILI MOGHADAM CPM-11 (2016) 1st term / 3 years | 2019 |

APPENDIX 4: List of draft ISPMs approved for consultation (1 July – 30 September 2017)

The SC at the 2017 May meeting agreed to submit the following draft ISPMs for the consultation (1 July – 30 September 2017):

- *International movement of cut flowers and foliage* (2008-005)
- *Requirements for the use of fumigation treatments as a phytosanitary measure* (2014-004)
- 2017 Amendments to ISPM 5 (*Glossary of phytosanitary terms*) (1994-001)

APPENDIX 5: Draft ISPM on the International movement of cut flowers (2008-005)

| | |
|--|---|
| Status box | |
| This is not an official part of the ISPM and it will be modified by the IPPC Secretariat after adoption. | |
| Date of this document | 2017-05-15 |
| Document category | Draft ISPM |
| Current document stage | To first consultation |
| Major stages | <p>2004-11 SC recommended topic <i>International movement of cut flowers and foliage</i> (2005-004) be added to the work programme</p> <p>2008 CPM-3 added topic <i>International movement of cut flowers and branches</i> (2008-005)</p> <p>2012-04 SC approved change to the title to <i>International movement of cut flowers and branches</i> (2008-005)</p> <p>2012-11 SC approved Specification 56</p> <p>2014-06 EWG drafted ISPM <i>International movement of cut flowers</i> (2008-005)</p> <p>2014-07 Draft ISPM edited and revised by Steward</p> <p>2015-05 SC returned draft to steward for review in consultation with a small group of SC members</p> <p>2015-11 SC approved change to the title to <i>International movement of cut flowers and foliage</i> (2008-005)</p> <p>2015-11 SC returned draft to steward for review with SC members' comments</p> <p>2016-05 SC discussed (small group formed)</p> <p>2016-11 SC revised</p> <p>2016-11 SC discussed (small group formed)</p> <p>2017-05 SC revised</p> |
| Steward history | <p>2008-11 SC Ms Magda GONZALES (CR, Lead Steward)</p> <p>2012-04 SC Ms Ana Lilia MONTEALEGRE LARA (MX, Lead Steward)</p> <p>2013-05 SC Ms Julie ALIAGA (US, Assistant Steward)</p> <p>2014-11 SC Ms Esther KIMANI (KE, Assistant Steward)</p> |
| Notes | <p>2014-07 Edited</p> <p>2017-02 Edited</p> <p>2017-05 TC by SMD</p> <p>2017-05 Edited</p> <p>This is a draft document</p> |

CONTENTS [to be inserted later]**Adoption**

- [1] This standard was adopted by the XX Session of the Commission on Phytosanitary Measures in XXXX.

INTRODUCTION**Scope**

- [2] This standard provides guidance on identification of the pest risk associated with cut flowers and non-woody foliage, for decoration or ornamentation (hereafter referred to as cut flowers), and on phytosanitary measures to reduce the likelihood of pests being moved with this commodity in international trade. The standard covers flowers with their stems or foliage.
- [3] The standard does not cover dried or otherwise preserved plant parts, plants for planting, or processed plant material and articles manufactured from plants or plant products.

References

- [4] 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>.

Definitions

- [5] Definitions of phytosanitary terms used in the present standard can be found in ISPM 5 (*Glossary of phytosanitary terms*).

Outline of Requirements

- [6] This standard identifies specific factors relating to the international movement of cut flowers (e.g. high perishability, cold storage) that should be taken into account when conducting pest risk analysis.
- [7] The standard provides examples of pest groups that may be associated with the international movement of cut flowers.
- [8] It also provides guidance on options to be considered as part of the pest risk management for cut flowers, taking into account that several ISPMs provide general guidance on pest risk management (e.g. ISPM 2 (*Framework for pest risk analysis*), ISPM 11 (*Pest risk analysis for quarantine pests*)).

BACKGROUND

- [9] Cut flowers are a short-lived commodity that may be a pathway for pest entry, although this may not always lead to establishment. Phytosanitary measures such as inspection, certification and treatments often involve a variety of phytosanitary actions to reduce the associated pest risk. Guidelines on how to minimize the pest risk from quarantine pests present in cut flowers prior to import may facilitate international trade in this commodity class.
- [10] International movement of cut flowers may involve pest risk that is associated with particular pest groups and certain genera. Accurate pest diagnosis is crucial for the appropriate application of phytosanitary measures. Import of cut flowers, which are perishable, may be delayed if pests are detected and a treatment is required at the point of entry. Guidelines on how to minimize the pest risk from quarantine pests present in cut flowers prior to import could also help to reduce delays at points of entry.

IMPACT ON BIODIVERSITY AND THE ENVIRONMENT

- [11] The implementation of this ISPM could reduce the likelihood of introduction of quarantine pests, thereby contributing to the protection of biodiversity and the environment. Certain treatments may have negative impacts on the environment and national plant protection organizations (NPPOs) are encouraged to promote the use of phytosanitary measures that are environmentally acceptable.

REQUIREMENTS

1. Pest Risk Analysis

- [12] Pest risk analysis (PRA) should be conducted in accordance with ISPM 2 and ISPM 11. When performing a PRA, the short-lived characteristics and the intended use (for decoration or ornamentation) of cut flowers should be considered, because they may affect the likelihood of pest establishment.

1.1 Specific factors to consider when conducting a PRA for cut flowers

- [13] In addition to the general considerations given in ISPM 11, the following specific factors associated with cut flowers should be considered when conducting the PRA:
- the ease of pest detection, which may differ depending on the genus and species of cut flower (e.g. the number of petals, whether it has closed flowers or not)

- if more than one plant genus or species is present in the commodity (e.g. bouquets), they should all be considered separately
- the production system (e.g. greenhouse, field or wild)
- the biology of the associated pest, specifically the ability of the pest to complete its life cycle on the cut flowers
- the perishability, shelf-life, transport, cold storage and intended use of the cut flowers in relation to survival and establishment of the pest
- harvest and post-harvest practices (e.g. quality checks, cleaning, handling, processing and treatments), which may remove or exclude certain pests
- the presence of fruit or other propagules.

1.2 Risk ranking of major pest groups for cut flowers

- [14] The relative risk ranking of pest groups associated with cut flowers may assist NPPOs in focusing on pests that can enter and establish.

Pest risk varies within the broad category of cut flowers, depending on the plant taxon and the species of pest. Furthermore, within any given cut flower species there is a range of pest risk associated with the type of material being moved (e.g. bare stemmed, stems with foliage, fruit). Some examples of higher- and lower-risk pest groups are indicated below. This relative ranking may be useful as guidance in the PRA. The ranking may vary depending on the specific circumstances. In general, for insects, adults on cut flowers pose a higher risk than other life stages. Due to the cold storage and transport and the short shelf-life of cut flowers, juvenile life stages are less likely to develop to adults and therefore pose a lower risk.

- [15] Examples of pest groups that may be associated with different genera of cut flowers are listed in Table 1.

1.2.1 Examples of higher-risk pest groups (in alphabetical order)

- [16] **Aphids (*Aphididae*)**. Aphids can be polyphagous, and females can reproduce parthenogenetically. Many aphid species can produce winged forms that can migrate long distances to new host plants. Because many aphids often need not mate or find places to oviposit during the growing season, they probably can establish more easily than many other insects. Some aphids are vectors for plant viruses.
- [17] **Leafminers (e.g. *Agromyzidae*)**. Compared to many other pest groups, a greater proportion of leafminers on cut flowers in trade tend to be adults. Consequently, they often may not need to complete development on this short-lived commodity, and as adults may have greater mobility and ability to transfer from the commodity to a host. The most significant leafminers tend to be polyphagous and therefore have a greater likelihood of finding a suitable host.
- [18] **Thrips (*Thripidae*)**. Thrips oviposit in leaf tissue, and adults and nymphs feed on the flowers and leaves of many plants. Thrips can fly, may exhibit host shifts in new areas and can reproduce parthenogenetically. Many thrips are also vectors of other pests.

1.2.2 Examples of lower- or negligible-risk pest groups (in alphabetical order)

- [19] **Moths (e.g. *Noctuidae*, *Geometridae*, *Tortricidae*)**. Mobile adults rarely occur in the cut flower pathway. Immature stages of these pests may be much more common, but these are relatively immobile and unlikely to complete their development within the short vase-life of cut flowers. Many species require pupation in soil. For these reasons, moths seem highly unlikely to escape the pathway in large enough numbers to emerge as adults, successfully find mates and establish.
- [20] **Nematodes (*Nematoda*)**. Most nematodes are associated with below-ground parts of plants, and therefore only rarely would be present on cut flowers. Only nematodes feeding on the leaves (e.g. *Aphelenchoides* spp.) are expected to be associated with cut flowers.

[21] **Pathogens.** In the case of most pathogens, infected cut flowers are likely to be asymptomatic. However, because few of the genera associated with cut flowers can propagate easily, systemic plant pests (for example, viruses) may only rarely escape the pathway.

[22] **Whiteflies (*Hemiptera*).** These are sap sucking insects found in groups on the underside of leaves. Nymphs normally occur in clusters and suck from the leaves. Whiteflies are vectors for viral diseases.

1.3 Pest groups

[23] Examples of pest groups that may be associated with the cut flowers and other fresh parts of various plant genera are listed in Table 1. The list presented is neither exhaustive nor comprehensive. Other pest groups may need to be considered in some circumstances.

1.4 Other factors that increase pest risk for cut flowers

[24] Is important to mention that there are some other factors that should be considered when conducting a PRA for the international movement of cut flowers. The presence or absence of propagules should, therefore, be considered when conducting a PRA for the establishment of phytosanitary import requirements of cut flowers as these has also fruits associated with cut flowers that may pose a higher pest risk.

[25] The production system for the cut flowers (e.g. wild, field or greenhouse grown) may also affect the pest risk that they pose. Different pests and higher incidences of pests can be expected on plants collected in the wild than on cut flowers cultivated under controlled conditions. Moreover, not all available management measures can be applied to naturally occurring plants. When conducting a PRA, special attention therefore needs to be paid to identifying the pest risk that is particularly associated with cut flowers obtained from plants grown in the wild.

[26] Cut flowers are a perishable commodity and temperature is the most important factor that influences their shelf-life. Therefore, if possible, most cut flowers are transported and stored in a cold condition from the time the cut flowers are collected to the time they are sold at the consumer level. This will also affect the further development, the survival and the mobility of pests present on these commodities.

2. Phytosanitary Measures

[27] A number of different phytosanitary measures may be applied based on the outcome of the PRA. Appropriate measures should be chosen based on their effectiveness in reducing the probability of introduction of the pest. Selected phytosanitary measures should be appropriate to the pest risk and technically justified. For existing trade, new measures should only be applied after the PRA has been completed (or revised). Required measures may include:

- surveillance for pest freedom
- the application of a pre-dispatch treatment
- inspection of the consignment
- treatment on arrival at the point of entry.

2.1 Options to be considered as part of pest risk management

[28] Pest risk management options may include regulations on production, harvest, transport, storage, locations of import and use, sale, waste disposal, time of year import takes place, and requirements regarding processing or treatments (e.g. devitalization). In identifying options to be considered as part of pest risk management, the feasibility of control measures, applicability depending on the production system (e.g. wild, field or greenhouse grown) the cut flowers, ease of detection, identification of the pests, time needed for effective control, and difficulty of eradication or containment should be considered. In identifying pre-harvest, harvest and post-harvest options for pest risk management, reference is made to ISPM 14 (*The use of integrated measures in a systems approach for pest risk management*).

[29] Pest free areas (ISPM 4 (*Requirements for the establishment of pest free areas*); ISPM 8 (*Determination of pest status in an area*); ISPM 29 (*Recognition of pest free areas and areas of low pest prevalence*)) and pest free places of production (ISPM 10 (*Requirements for the establishment of pest free places of production and pest free production sites*)) may be established to manage the pest risk associated with cut flowers. The following summarizes many of the options commonly used and that are based on a PRA.

2.1.1 Production and pre-harvest options

- treatment of growing media (e.g. sterilization, chemical treatment, fumigation)
- field pest monitoring and detection
- field treatments including biocontrol activities
- chemical control (e.g. fumigants, aerosols, mists, fogs, dusts, dips, granules, sprays)
- physical control (e.g. bagging).

2.1.2 Harvest and post-harvest options

- grading or sorting (to separate clean from infested material both at harvesting and at packing house)
- inspection for presence of quarantine pests or symptoms (e.g. at timed intervals)
- chemical control (e.g. spraying, dipping, fogging, fumigation)
- physical control (e.g. shaking, cleaning, washing, brushing, waxing)
- packaging (e.g. new, clean, secure)
- harvesting at certain times of the year or growing season (limiting harvest to a specific season or plant age).

2.1.3 Options for pre-dispatch treatment

- fumigation
- irradiation (can be used against particular pests of cut flowers, although some damage may occur)
- application of a controlled atmosphere
- cold, heat or vapour treatment
- devitalization.

2.1.4 Transportation options

- treatment (e.g. application of a controlled atmosphere or environmental conditions; cold treatment for arthropods)
- examination and cleaning of conveyances, as necessary, prior to loading.

2.1.5 Options on arrival

- documentation checks
- phytosanitary inspection
- testing
- treatment.

[30] Each lot in a consignment should be identified in a way that can be traced back to the place of production. In the case of treatments applied, measures should be adopted to segregate treated and non-treated lots and to protect treated lots from contamination or infestation.

[31] Further guidance on measures for consignments to be imported is provided in ISPM 20 (*Guidelines for a phytosanitary import regulatory system*).

3. Records

[32] A place of production should maintain records on its premises as specified by the NPPO of the exporting country. The documentation and records should be reviewed and updated regularly. For traceability and auditing purposes, these records should be maintained for at least 12 months and made available to the NPPO of the importing country upon request.

[33] **Table 1.** Examples of pest groups that may be associated with the international movement of cut flowers and other fresh plant parts.

| Examples of cut flowers and other fresh parts by scientific name (common name or names), family name | Organisms that affect the cut flowers and other fresh parts | | |
|--|---|---|--|
| | Phylum | Order | Common names |
| <i>Alpinia</i> spp. (ginger-lilies), Zingiberaceae | Arthropods (insects) | Hemiptera | Whiteflies, mealybugs, scales |
| <i>Asparagus</i> spp. (asparagus), Asparagaceae | Basidiomycota | Pucciniales | Rusts (e.g. rose rust, chrysanthemum white rust, carnation rust) |
| <i>Aster</i> spp. (asters, Michaelmas daisy), Asteraceae | Arthropods (insects) | Diptera, Lepidoptera, Hymenoptera | Leafminers |
| | | Hemiptera | Aphids |
| | | Hemiptera | Bugs (e.g. Miridae) |
| | | Hemiptera | Whiteflies, mealybugs, scales |
| | | Lepidoptera | Moths (e.g. Noctuidae) |
| | | Thysanoptera | Thrips |
| | Oomycota | Peronosporales Pythiales | <i>Phytophthora</i> spp., <i>Pythium</i> spp. |
| <i>Brunia</i> spp. (coffee bush, brunia), Bruniaceae | Arthropods (insects) | Diptera: Cecidomyiidae | |
| <i>Chrysanthemum</i> spp. (mum), Asteraceae | Arthropods (insects) | Coleoptera | Beetles |
| | | Diptera | Leafminers |
| | | Hemiptera | Aphids |
| | | Hemiptera | Whiteflies, mealybugs, scales |
| | | Lepidoptera | Moths (e.g. Noctuidae) |
| | | Thysanoptera | Thrips |
| | Proteobacteria | Enterobacteriales | <i>Erwinia</i> spp. |
| | Basidiomycota | Pucciniales | Rusts (e.g. rose rust, chrysanthemum white rust, carnation rust) |
| | Viruses, viroids and other bacterial diseases | | |
| <i>Codiaeum variegatum</i> (croton leaves), Euphorbiaceae | Molluscs | Pulmonata | Snails and slugs |
| <i>Cymbidium</i> spp. (boat orchid), Orchidaceae | Arthropods (insects) | Thysanoptera | Thrips |
| <i>Cyperus</i> spp. (papyrus), Cyperaceae | Molluscs | Pulmonata | Snails and slugs |
| <i>Dendrobium</i> spp. (epiphytic orchids), Orchidaceae | Ascomycota | Helotiales (<i>Botrytis</i>) | Botrytis (grey mould) |
| | Arthropods (insects) | Diptera | Gall midges |
| | | Thysanoptera | Thrips |
| | Arthropods (mites) | (e.g. spider mites from family Tetranychidae) | |
| | Arthropods (insects) | Coleoptera | Beetles |

| | | | |
|--|---|---|---|
| <i>Dianthus</i> spp. (carnations), Caryophyllaceae | | Diptera | Leafminers |
| | | Hemiptera | Aphids |
| | | Hemiptera | Whiteflies, mealybugs, scales |
| | | Lepidoptera | Moths (e.g. Noctuidae) |
| | | Thysanoptera | Thrips |
| | Arthropods (mites) | (e.g. spider mites from family Tetranychidae) | |
| | Ascomycota | Pleosporales (<i>Alternaria</i>) Hypocreales (<i>Fusarium</i>) | Carnation blight <i>Fusarium</i> wilt |
| | Oomycota | Peronosporales Pythiales | <i>Phytophthora</i> spp., <i>Pythium</i> spp. |
| | Viruses, viroids and other bacterial diseases | | |
| <i>Dracaena</i> spp. (Madagascar dragon tree, dracaena), Liliaceae | Molluscs | Pulmonata | Snails and slugs |
| <i>Eryngium</i> spp. (sea holly, spiny coriander), Apiaceae | Arthropods (insects) | Diptera | Leafminers |
| | | Hemiptera | Whiteflies, mealybugs, scales |
| <i>Eustoma</i> spp. (lisianthus), Gentianaceae | Arthropods (insects) | Diptera | Leafminers |
| | | Hemiptera | Whiteflies, mealybugs, scales |
| <i>Freesia</i> spp. (freesia), Iridaceae | Arthropods (insects) | Coleoptera | Beetles |
| | | Hemiptera | Aphids |
| | | Hemiptera | Whiteflies, mealybugs, scales |
| | | Thysanoptera | Thrips |
| <i>Geranium</i> spp. (geranium), Geraniaceae | Ascomycota | Helotiales (<i>Botrytis</i>) | Botrytis (grey mould) |
| <i>Gerbera</i> spp. (gerbera), Asteraceae | Arthropods (insects) | Coleoptera | Beetles |
| | | Hemiptera | Whiteflies, mealybugs, scales |
| | | Thysanoptera | Thrips |
| | Arthropods (mites) | (e.g. spider mites from family Tetranychidae) | |
| | Oomycota | Peronosporales Pythiales | <i>Phytophthora</i> spp., <i>Pythium</i> spp. |
| <i>Gladiolus</i> spp. (gladiolus), Iridaceae | Arthropods (insects) | Coleoptera | Beetles |
| | Ascomycota | Helotiales (<i>Botrytis</i>) Hypocreales (<i>Fusarium</i>) | <i>Fusarium</i> rot and yellows Leaf spots and blights |
| | | Hemiptera | Aphids |
| | Arthropods (insects) | Hemiptera | Whiteflies, mealybugs, scales |
| | | Thysanoptera | Thrips |
| | | Thysanoptera | Thrips |
| <i>Gypsophila</i> spp. (common gypsophila, baby's breath), Caryophyllaceae | Arthropods (insects) | Diptera | Leafminers |
| | | Hemiptera | Whiteflies, mealybugs, scales |
| | | Thysanoptera | Thrips |

| | | | |
|---|----------------------|---|--|
| <i>Helianthus</i> spp. (sunflower), Asteraceae | Arthropods (insects) | Hemiptera | Aphids |
| | | Hemiptera | Bugs (e.g. Miridae) |
| | | Hemiptera | Whiteflies, mealybugs, scales |
| | | Thysanoptera | Thrips |
| <i>Hydrangea</i> spp. (hydrangea or hortencia), Hydrangeaceae | Arthropods (insects) | Hemiptera | Aphids |
| | | Hemiptera | Whiteflies, mealybugs, scales |
| | Arthropods (mites) | (e.g. spider mites from family Tetranychidae) | |
| <i>Hypericum</i> spp. (hypericum), Hypericaceae | Arthropods (insects) | Hemiptera | Whiteflies, mealybugs, scales |
| | | Thysanoptera | Thrips |
| | Ascomycota | Capnodiales (<i>Passalora hyperici</i>) Xylariales (<i>Diploceras hypericinum</i>) | Leaf spotting and leaf blight |
| | Arthropods (mites) | (e.g. spider mites from family Tetranychidae) | |
| <i>Lilium</i> spp. (Lily), Liliaceae | Arthropods (insects) | Coleoptera | Beetles |
| | | Thysanoptera | Thrips |
| | Ascomycota | Plectosphaerellaceae (<i>Verticillium</i>) Hypocreales (<i>Fusarium</i>) | Verticillium wilt Fusarium bulb rot |
| | Oomycota | Peronosporales Pythiales | <i>Phytophthora</i> spp. and <i>Pythium</i> spp. |
| <i>Limonium</i> spp. (statice), Plumbaginaceae | Arthropods (insects) | Thysanoptera | Thrips |
| <i>Molucella</i> spp. (bells of Ireland), Lamiaceae | Arthropods (insects) | Diptera | Leafminers |
| | | Hemiptera | Aphids |
| | | Hemiptera | Whiteflies, mealybugs, scales |
| <i>Phalaenopsis</i> spp. (moth orchid), Orchidaceae | Arthropods (insects) | Coleoptera | Beetles |
| <i>Polyanthes</i> spp. (polyanthes), Asparagaceae | Arthropods (insects) | Coleoptera | Beetles |
| | | Hemiptera | Aphids |
| | | Hemiptera | Whiteflies, mealybugs, scales |
| | | Thysanoptera | Thrips |
| Polypodiophyta (ferns), Ophioglossaceae | Molluscs | Pulmonata | Snails and slugs |
| <i>Protea</i> spp. (sugarbush), Proteaceae | Oomycota | Peronosporales Pythiales | <i>Phytophthora</i> spp., <i>Pythium</i> spp. |
| <i>Rosa</i> spp. (rose), Rosaceae | Arthropods (insects) | Coleoptera | Beetles |
| | | Hemiptera | Aphids |
| | | Hemiptera | Whiteflies, mealybugs, scales |
| | | Lepidoptera | Moths (e.g. Noctuidae) |
| | | Thysanoptera | Thrips |
| | Arthropods (mites) | (e.g. spider mites from family Tetranychidae) | |

| | | | |
|---|-------------------------------------|------------------------------------|--|
| | Ascomycota | Erysiphales (<i>Podosphaera</i>) | Powdery mildews |
| | Oomycota | Peronosporales Pythiales | <i>Phytophthora</i> spp., <i>Pythium</i> spp. |
| | Viruses, viroids and other diseases | | |
| <i>Solidago</i> spp. (goldenrods), Asteraceae | Arthropods (insects) | Hemiptera | Bugs (e.g. Miridae) |
| | | Hemiptera | Whiteflies, mealybugs, scales |
| | | Lepidoptera | Moths (e.g. Noctuidae) |
| | | Thysanoptera | Thrips |
| <i>Tagetes</i> spp. (marigold), Asteraceae | Arthropods (insects) | Hemiptera | Whiteflies, mealybugs, scales |
| | Molluscs | Pulmonata | Snails and slugs |
| <i>Vanda</i> spp. (orchid), Orchidaceae | Arthropods (insects) | Thysanoptera | Thrips |
| <i>Veronica</i> spp. (speedwell), Plantaginaceae | Arthropods (insects) | Coleoptera | Beetles |
| | | Thysanoptera | Thrips |
| <i>Viola</i> spp. (violet), Violaceae | Ascomycota | Helotiales (<i>Botrytis</i>) | Botrytis (grey mould) |
| <i>Zantedeschia</i> spp. (arum lily, calla lily, garden calla), Araceae | Proteobacteria | Enterobacteriales | <i>Erwinia</i> spp. |

APPENDIX 6: Draft ISPM on Requirements for the use of fumigation as a phytosanitary measure (2014-004)

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 | 2017-05-25 |
| Document category | Draft ISPM |
| Current document stage | To First consultation |
| Major stages | <p>2014-04 CPM-9 added the topic <i>Requirements for the use of fumigation as a phytosanitary measure</i> (2014-004) to the work programme with priority 1</p> <p>2014-05 SC revision of the draft specification</p> <p>2015-05 SC approved specification 62</p> <p>2016-10 TPPT virtual meeting</p> <p>2016-12 TPPT virtual meeting</p> <p>2017-01 TPPT virtual meeting</p> <p>2017-01 TPPT e-forum (2017_eTPPT_Jan_01)</p> <p>2017-05 SC revised</p> |
| Steward history | <p>2004-05 SC: Mr Yuejin WANG (CN, Steward)</p> <p>2014-05 SC: Mr Michael ORMSBY (NZ, Assistant Steward)</p> <p>2016-11 SC: Mr David OPATOWSKI (IL, Lead Steward)</p> <p>2016-11 SC: Mr Yuejin WANG (CN, Assistant Steward)</p> |
| Secretariat notes | <p>This is a draft document</p> <p>Edited 2017-01</p> <p>2017-05 TC by SMD</p> <p>2017-05 Edited</p> |

CONTENTS [TO BE INSERTED LATER]

Adoption

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

INTRODUCTION

Scope

- [1] This standard provides technical guidance for NPPOs on the specific procedures for the application of fumigation as a phytosanitary measure for regulated pests or articles. This includes treatments based on the application of chemicals in a gaseous form within enclosed environments. Requirements of temperature, dosage, duration, minimum concentration readings at time intervals, and other essential aspects for effective fumigation are covered in ISPM 28 (*Phytosanitary treatments for regulated pests*).
- [2] This standard does not describe use of modified atmospheres as a phytosanitary treatment.

References

- [3] 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>.
- [4] **CPM R-03**. 2017. Replacement or reduction of the use of methyl bromide as a phytosanitary measure. CPM Recommendation. Rome, IPPC, FAO. Available at <https://www.ippc.int/en/publications/84230/> (last accessed 15 May 2017).

Definitions

- [5] Definitions of phytosanitary terms used in the present standard can be found in ISPM 5 (*Glossary of phytosanitary terms*).

Outline of Requirements

- [6] This standard provides a description of the main types of fumigation and provides guidance on the main operational requirements needed in order to ensure that the treatments are applied effectively, consistently and in a manner that minimizes economic and environmental impacts.
- [7] The standard describes how fumigation should be carried out to achieve the stated efficacy as given in ISPM 28 for the regulated pests of concern. This standard also provides guidance for NPPOs on the procedural requirements for fumigation entities authorized to perform fumigation as a phytosanitary measure.

BACKGROUND

- [8] Fumigation is a form of treatment in which a toxic gas is applied to a commodity to kill a sufficient proportion of the target pests and may be used in pest management.
- [9] The purpose of the IPPC is “to prevent the spread and introduction of pests of plants and plant products, and to promote appropriate measures for their control” (Article I.1 of the IPPC). The requirement for, or application of, phytosanitary treatments to regulated articles is a phytosanitary measure used by contracting parties to prevent the introduction and spread of regulated pests.
- [10] The change in concentration of carbon dioxide and oxygen in air as used in modified atmosphere treatments is not considered to be a fumigation treatment.

IMPACTS ON BIODIVERSITY AND THE ENVIRONMENT

- [11] Historically, fumigation has been widely applied to prevent the introduction and spread of target pests into a regulated area and has, therefore, been beneficial to biodiversity and the environment. However, fumigant gases, such as methyl bromide, sulphuryl fluoride, phosphine and ethyl formate, may be toxic to people and have negative impacts on the environment. For example, the emission of methyl bromide into the atmosphere is known to deplete the ozone layer and sulphuryl fluoride is a recognized greenhouse gas. The IPPC Recommendation on the replacement or reduction of the use of methyl bromide as a phytosanitary measure (CPM R-03, 2017) has been adopted in relation to this issue. Environmental impacts of fumigants can be proportionally mitigated through the use of recapture technology to reduce emissions.

REQUIREMENTS

- [12] The purpose of this ISPM is to provide requirements for the application of phytosanitary fumigation, specifically those treatments adopted under ISPM 28.

1. Treatment Objective

- [13] The objective of using fumigation as a phytosanitary measure, alone or in combination with another phytosanitary measure is to manage pest risk by achieving a specified level of pest mortality (either immediately or eventually).

2. Fumigation entities

- [14] Fumigation is undertaken by entities (e.g. fumigation companies or individuals) either in a fumigation facility or at other locations (e.g. cargo ship hold) (hereafter, fumigation facilities and fumigation operators are referred to as fumigation entities).

3. Treatment Application

- [15] Fumigation may be applied at any point along the supply chain, for example:
- as an integral part of packing operations
 - just before dispatch (e.g. at centralized locations at the port)
 - after packaging (e.g. once the commodity is packaged for dispatch)
 - during storage
 - during transport
 - after unloading.
- [16] The minimum requirement of fumigation is to ensure that the scheduled parameters (e.g. concentration–time product (CT)) are attained at the required level throughout the commodity for the scheduled treatment minimum temperature and duration, allowing the required efficacy to be achieved. Appendix 1 provides guidance for fumigation efficacy studies.
- [17] Parameters to consider when applying fumigation are the minimum dose, temperature and duration of the treatment, and where applicable the humidity of the treatment environment or moisture content of the commodity, all of which should be compatible with officially approved schedules or ISPM 28. Modified atmospheres created by packaging or by the commodity itself may alter treatment efficacy.
- [18] The treatment protocol should describe the process of pre- and post-conditioning to reach the required dose, where these processes are critical to the treatment achieving the required efficacy. The protocol should also include contingency procedures and guidance on corrective actions for treatment failures.

4. Treatment Types

- [19] The following are the main groups of fumigant treatment types used.

4.1 Single fumigant treatments

- [20] The most common forms of fumigation are those that apply a single fumigant. General use fumigants such as methyl bromide, phosphine or sulphuryl fluoride rely on a mode of action that is effective against all pest groups or against one particular group (e.g. arthropods, fungi, nematodes) and all or most life stages. Treatment schedules for single fumigants are generally simple, requiring a single application to achieve a required minimum dose over a specified duration. A list of commonly used fumigants and their chemical properties is provided in Appendix 2.

4.2 Combinations with other fumigants or treatments

- [21] Where a single fumigant may not achieve the required efficacy without rendering the commodity unmarketable, or for reasons of economy or logistics, another fumigant or treatment may be included in the treatment schedule.

4.2.1 Sequential combination treatments

- [22] Another treatment may be applied immediately before or after fumigation to increase the effectiveness of the entire treatment. For example, temperature and fumigant treatments applied sequentially may be necessary where the host commodity is vulnerable to damage from the increased severity required of either treatment alone, or where the most tolerant life stage of the target pest is different for the different treatments. An example of a temperature and fumigant combination treatment is fumigation with methyl bromide followed by a cold treatment.

4.2.2 Concurrent combination treatments

- [23] Concurrent combinations of a fumigant with other fumigants or treatments may be superior in efficacy, commodity tolerance, economics or logistics to treatment with a single fumigant alone.

4.2.2.1 Fumigant and modified atmosphere combination treatments

- [24] Increasing atmospheric carbon dioxide in the fumigation enclosure, either alone or in combination with increasing nitrogen and decreasing oxygen levels, may be used to increase fumigation treatment efficacy. Changing the atmosphere in this way may directly enhance target pest mortality or may increase target pest respiration thereby increasing the efficacy of fumigants such as phosphine. Reducing levels of oxygen in the atmosphere may also be necessary where the fumigant is flammable, such as is the case with ethyl formate.

4.2.2.2 Fumigation under vacuum

- [25] Applying a fumigant under a partial atmospheric vacuum can significantly increase the rate of fumigant penetration into a commodity, resulting in increased efficacy or the ability to reduce fumigant quantity or duration of treatment. Such treatments should be carried out in purpose-built vacuum chambers that allow minimal vacuum loss during the fumigation, and using a vacuum pump capable of attaining the atmospheric pressure required within the time frame required.

5. Fumigation Enclosures and Equipment

- [26] There are many potential forms and designs for equipment and enclosures used in fumigation. These will vary depending on the type of fumigant used, the nature of the commodity, and the conditions of the surrounding environment. The following enclosures and equipment may be necessary to ensure that a fumigation achieves the required efficacy.

5.1 Fumigation enclosure

- [27] A fumigation enclosure should be a space that can be enclosed in a manner that ensures that appropriate fumigation conditions are maintained throughout the duration of the fumigation. Examples of enclosures include purpose-built fumigation chambers, silos, freight containers, warehouses or tarpaulin “tents”. The enclosure should be constructed from materials that maintain adequate fumigant concentrations over the fumigation period (e.g. materials that are not porous or absorbent to the fumigant). Surfaces such as soil, sand, base rock and paving (stones or blocks) are unlikely to provide a suitable floor for a tent fumigation enclosure.

- [28] All enclosures should be designed to allow adequate access for the equipment that is required to verify that the fumigation has been applied appropriately.

5.1.1 Pressure testing the enclosure

- [29] Where the gas tightness of an enclosure may not be sufficient to ensure adequate gas concentrations are maintained throughout the fumigation period, the gas tightness should be determined by measuring the half pressure decay time. The required gas tightness of an enclosure will depend on the fumigant being used and the environment surrounding the fumigation enclosure (e.g. proximity of sensitive equipment, commodities or people). For example, an enclosure having a half pressure decay time of ten seconds or

more (air pressure decaying from 200 Pa to 100 Pa) should be considered suitably gas tight for methyl bromide fumigations.

5.2 Fumigation equipment

- [30] All equipment used for measuring fumigation parameters (e.g. measuring devices) should be calibrated according to the manufacturer's instructions.

5.2.1 Dosing devices

- [31] Dosing equipment should enable the quantitative introduction of fumigant gas into an enclosure. Dosing equipment includes an appropriately safe and secure storage vessel for the fumigant, and lines that allow the fumigant to be delivered to the enclosure, and should include a device that can either measure the rate or volume of gas flow into an enclosure (e.g. a gas mass flow-meter) or measure the volume or weight loss from the gas storage supplying the enclosure (e.g. a scale or balance). In some cases, gas cylinders may be opened within the enclosure applying a known volume or weight of gas into the enclosure to achieve the required fumigant dose.

5.2.2 Gas vaporizer

- [32] Some fumigants are stored as a compressed liquid in a metal cylinder. Release and vaporization of a significant quantity of the liquid as required for fumigation will absorb a significant amount of energy. A vaporizer should be used to provide energy (as heat) during the vaporization of the liquid to a gas to ensure that the required amount of gas is provided to the enclosure.

5.2.3 Heating equipment

- [33] When it is necessary to raise the temperature of the commodity and the air within the enclosure, exposed heating sources should not be used with flammable fumigants or fumigants that decompose at high temperatures (see Appendix 2 for fumigant chemical properties).

5.2.4 Gas circulation equipment

- [34] Even and quick distribution of fumigant gas introduced into the enclosure may be important for successful fumigation of a large quantity of commodity, especially with gases that diffuse relatively slowly. Rapid circulation of gas is required for the fumigation of perishable commodities or commodities that sustain damage on extended exposure to the fumigant. One or more electrical fans capable of moving a volume of three to ten times that of the enclosure per hour should be used to ensure gas circulation.

5.2.5 Instruments to measure moisture content

- [35] A moisture meter gives a reading of the approximate moisture content of the commodity (e.g. wood). Moisture content can be measured as a dry or wet weight, where the wet weight is the weight of the original "wet" sample and the dry weight is the weight of the sample after drying in an oven. As moisture content will usually vary within and between the commodities within the same lot, moisture meters need only measure within 5% of the actual moisture content. Available moisture meters include those that measure electrical resistance (pin meters) or use electrometric wave technology (pinless meters).

5.2.6 Instruments to measure vacuum

- [36] A suitable vacuum gauge, of appropriate accuracy and sensitivity, should be used to measure and record the air pressure or vacuum drawn and maintained during the exposure or testing period. Suitable vacuum gauges may include a simple U-tube manometer or a Bourdon gauge, although specialized electronic measuring devices are also available, and should measure within 10 Pa of the actual pressure.

5.2.7 Instruments to measure temperatures

- [37] Sufficiently reliable thermometers should be used to measure either continuously or at suitable intervals the temperature in the enclosure space and, as appropriate, the external surfaces and inside the

commodity before and during fumigation. The number of temperature sensors required will depend on the size of the treatment enclosure (see section 6.4). The accuracy of the temperature measurement should be within 0.5 °C of the actual temperature.

5.2.8 Instruments to monitor gas concentration

- [38] The equipment required to measure the fumigant concentration within the enclosure will depend on the type of gas used. The equipment used should have an accuracy of $\pm 5\%$ of the fumigant concentration to be achieved throughout the fumigation. The monitoring equipment (e.g. lines) exposed to the fumigant should be constructed from materials that do not absorb the fumigant. Fumigant monitoring lines should be placed as far as possible from fumigant supply lines or dispensers, and in the area or areas of the enclosure likely to have the lowest concentration of fumigant.

5.2.9 Safety equipment

- [39] Equipment suitable for ensuring the safety of those potentially exposed to the fumigant should be available at all times and in appropriate working order. Depending on the fumigant being used, protective clothing, respirators and suitably sensitive monitoring equipment may need to be made available to those handling the fumigant or undertaking or monitoring the fumigation.

5.2.10 Equipment to capture or recycle fumigant emissions

- [40] The use of equipment that can capture the fumigant gas for recycling, reuse or safe disposal is encouraged for safety and environmental reasons. Release of fumigant gas (e.g. methyl bromide) to the atmosphere should be minimised where it is possible to do so.

6. Fumigation Procedures

- [41] Many factors may affect fumigation efficacy. Fumigant concentration, exposure time, commodity temperature and atmospheric temperature are crucial factors. Gas tightness of the enclosure, commodity load pattern and load factor directly influence gas distribution and gas concentration during fumigation. The fumigant supply and circulation equipment should be arranged within the fumigation enclosure in a way that ensures that the fumigant concentrations required by the treatment schedule are achieved and maintained within the enclosure during fumigation. Some commodities, such as oil, fats or porous or finely ground materials, may absorb a large quantity of fumigant and lead to a reduction in gas concentration. Packaging materials should be of a composition and construction that does not preclude fumigant gas penetration to the commodity and prevent fumigant concentrations achieving required levels. In summary, it is essential that the fumigation enclosure and equipment are well prepared prior to fumigation in order to achieve the required efficacy.

6.1 Commodity loading

- [42] Before fumigation, the commodity should be loaded into the fumigation enclosure in a manner that ensures sufficient space for adequate circulation of the fumigant. To ensure fumigant penetration into the commodity, separators such as pieces of wood should be used. As a guide, and depending on the fumigant used, for container fumigations there should be 200 mm free air space above the commodity, 50 mm below, and 100 mm at the sides and between the commodities.

6.2 Fumigant impenetrable packaging

- [43] Fumigant-impenetrable packing material or coatings should be removed or punctured to ensure adequate access for the fumigant. As a guide for most fumigants, otherwise impenetrable packaging can be rendered suitable for fumigation if it contains not less than four perforations of 6 mm diameter per 100 cm² (10 cm × 10 cm square) or not less than five perforations of 5 mm diameter per 100 cm². Plastic wraps containing numerous pinholes (at least six holes per cm²) may also be considered acceptable. Perforated packaging materials should not be overlapped, as holes may become blocked.

6.3 Sorption

- [44] Sorption is the process of chemically or physically binding free fumigant on or within the fumigated commodity, packaging or enclosure. Sorption makes the fumigant unavailable to kill the plant pest. The sorption rate is high at the start of the fumigation, then gradually reduces to a slow rate. Sorption increases the time required for aeration. Commodities or packaging known or believed to be highly sorptive should not be fumigated unless concentration readings can be taken to ensure that the required minimum concentration is achieved.

6.4 Determination of fumigation temperature

- [45] Temperature is a factor in achieving the efficacy of fumigation. In addition to other factors, the effectiveness of a fumigant depends on the respiration rate of the target organism. In general, the lower the temperature, the lower the respiration rate of the organism and the greater the dose of fumigant needed to achieve the required efficacy.
- [46] The temperatures of the commodity and the atmosphere within the fumigation enclosure should be measured and recorded. The lowest temperature recorded in the enclosure or the commodity is deemed to be the temperature at which the fumigation is undertaken. Fumigation should not proceed if, before or during fumigation, the temperature within the enclosure or the commodity falls to within 3–5 °C of the fumigant boiling point at the atmospheric pressure used. Under such conditions, heating equipment should be used to ensure adequate fumigant activity. Appendix 2 provides boiling point temperatures for some common fumigants.
- [47] The number of temperature sensors required to adequately measure the temperature throughout the enclosure will depend on the size and nature of the enclosure. The following table can be used as a guide for determining the number of sensors required under tent enclosures. Purpose-built and insulated fumigation chambers may require fewer sensors.

| Size of enclosure (m ³) | Number of sensors |
|-------------------------------------|-------------------|
| Up to 300 | 3 |
| 301 to 700 | 6 |
| 701 to 1 500 | 9 |
| Larger than 1 500 | 12 |

6.5 Gas tightness test

- [48] Prior to the fumigation (preferably immediately before), a gas tightness test should be performed. However, if the fumigation enclosure is of sufficiently resistant construction and in regular use, the testing may only be necessary at intervals of, for example, 6 or 12 months.

6.6 Introduction of the fumigant gas

- [49] The minimum ambient temperature that the fumigation enclosure or commodity (whichever is less) is expected to experience over the duration of the treatment should be used when determining the dosage.
- [50] The total weight of fumigant to be applied is a product of the required dosage (dose rate) and the volume of the enclosure. Excess sorption or leakage from the fumigation enclosure should be taken into consideration. Correct measurement of the enclosure volume is therefore important.
- [51] Once the enclosure volume has been determined, the weight of fumigant required should be calculated as follows:

$$[52] \text{ Amount of fumigant (g)} = \frac{\text{Volume of enclosure (m}^3\text{)} \times \text{Target dosage (g/m}^3\text{)} \times 100}{\% \text{ Fumigant purity}}$$

- [53] where the dosage should take into account fumigant loss over the duration of the treatment and the percentage fumigant release (or purity) is equal to the amount of fumigant generated from the chemical applied (e.g. aluminium phosphide generates around 33.3% of phosphine gas).
- [54] The volume of the enclosure is the internal volume and should be calculated separately for each differently shaped compartment (see Appendix 3 for examples of shapes and formulae for calculations). The volume of containers (e.g. drums or boxes) within the enclosure that are airtight and non-absorbent to the fumigant can be subtracted from the enclosure volume.
- [55] As the fumigant should be applied in a gaseous form, for some fumigants under cool conditions this can be achieved by applying the liquid fumigant through a vaporizer in order to fully volatilize the fumigant prior to its entry into the fumigation enclosure.
- [56] For methyl bromide, the water in the vaporizer unit should be raised to 65 °C before any liquid methyl bromide is released into it. To ensure complete vaporization, the water should be maintained at this temperature for as long as possible throughout the gas introduction process and should not be allowed to fall below 65 °C.

6.7 Monitoring and recording of the fumigation

- [57] Fumigant concentration readings or recordings should be used to indicate if the amount of fumigant applied is correct and if any excessive leakage or sorption of the fumigant exists. The fumigation time begins once all the gas has been introduced and has distributed throughout the enclosure. Concentration readings should be taken a number of times during the treatment and in a number of locations in the fumigation enclosure to ensure that the fumigant is evenly distributed in the enclosure over the duration of the treatment. Fumigant concentration should be monitored and recorded either continuously or in sufficient frequency to provide confidence that the required dose has been achieved and maintained or to allow adequate calculations of CT to be made (if required).

6.7.1 Measuring fumigant concentration

- [58] The number of sampling lines required to adequately measure the fumigant concentration throughout the enclosure will depend on the size and nature of the enclosure. The following table can be used as a guide for determining the number of sampling lines required under tent enclosures. Purpose-built fumigation chambers may require fewer sampling lines.

| Size of enclosure (m ³) | Number of sampling lines |
|-------------------------------------|--|
| Up to 15 000 | 6 sampling lines for the first 3 000 m ³ , plus one line for each additional 1 500 m ³ |
| Larger than 15 000 | 14 sampling lines for the first 15 000 m ³ , plus one line for each additional 5 500 m ³ |

- [59] Depending on the commodity and the fumigation schedule, further sampling lines may be required to be placed within the commodities within the enclosure. As a guide, a minimum of three sampling lines should be used for the first 300 m³ of commodity, with additional lines for commodities that are tightly packed or difficult to penetrate.

6.7.2 CT calculation

- [60] The CT is best calculated by multiplying together two observed gas concentrations at each location, taken one after the other, then multiplying the square root of this number by the time interval (in hours) between the two readings. The CT values obtained from a contiguous series of readings may then be added together to calculate the cumulative CT for the whole exposure period for that location. The dose achieved at the location providing the lowest cumulative CT should be used as the achieved treatment dose.

- [61] CT can be estimated using the following calculation:

$$[62] \quad CT_{n,n+1} = (T_{n+1} - T_n) \times \sqrt{C_n \times C_{n+1}}$$

[63] where

T_n is the time the first reading was taken, in hours

T_{n+1} is the time the second reading was taken, in hours

C_n is the concentration reading at T_n , in g/m^3

C_{n+1} is the concentration reading at T_{n+1} , in g/m^3

$CT_{n,n+1}$ is the calculated CT between T_n and T_{n+1} , in $\text{g}\cdot\text{h}/\text{m}^3$

6.8 Completion of the fumigation

[64] Once the treatment time has been completed and the concentration and temperature readings indicate that the required minimum readings have been achieved, the application of the fumigation should be considered as being in accordance with this standard and the treatment schedule.

[65] Indications of fumigation success can be obtained by inspection to verify target pest mortality. For many fumigations an extended post-fumigation period may be required before full pest mortality is achieved. Required treatment effects should not necessarily be expected on non-target pests on the fumigated commodity.

7. Phytosanitary System Security

[66] Well-designed and closely monitored systems for treatment delivery, and for safeguarding of treated commodities, provide an assurance that treatments are properly conducted.

[67] The NPPO of the country in which the treatment facility is located or where treatments are initiated should ensure that treatments are properly applied to meet the phytosanitary import requirements of the importing country and that commodities are protected from infestation and reinfestation.

7.1 Authorization of fumigation entities

[68] Fumigation entities should be authorized by the NPPO in the country in which the phytosanitary treatments are conducted (see 7.6). NPPOs should maintain a list of authorized fumigation entities capable of undertaking fumigation treatments. The NPPO of the exporting country is responsible for authorizing the entity applying the treatment during transport.

7.2 Prevention of infestation after treatment

[69] The fumigation entity should implement the necessary measures to prevent possible infestation or contamination of the commodity after fumigation. The following measures may be required:

- keeping the commodity in a pest free enclosure
- packing the commodity immediately after fumigation
- segregating and identifying treated commodities
- dispatching the commodity immediately after fumigation.

[70] Specific procedures appropriate for each fumigation entity and commodity treatment should be approved by the NPPO in the country in which the fumigation is conducted.

7.3 Environment, health and safety

[71] Prior to any application of a fumigant, a review of the health and safety risks should be completed to ensure that all the requirements of domestic regulations are met and the safety of applicators and those living or working in proximity to the fumigation site are ensured. The fumigant used should be appropriate to the commodity being fumigated, and the equipment and enclosure appropriate to the circumstances.

- [72] An assessment of health and safety risks associated with handling of fumigated consignments should be completed prior to unloading or inspecting fumigated commodities.

7.4 Labelling

- [73] Commodities may be labelled with treatment lot numbers or other features of identification (e.g. locations of packing and the fumigation site, dates of packing and treatment, identity of operator) allowing trace-back.

7.5 Monitoring and auditing

- [74] The NPPO of the country in which the fumigation is conducted is responsible for the monitoring and auditing of fumigation entities. Continuous supervision of fumigations should not be necessary, provided treatment programmes are properly designed and can be verified to ensure a high degree of system integrity for the fumigation entity, process and commodity in question. Oversight should be appropriate to detect and correct deficiencies promptly.

7.6 Compliance agreement

- [75] A compliance agreement should be in place between the fumigation entity and the NPPO of the country in which the fumigation is conducted. Such an agreement may include the following elements:
- authorization of the fumigation entity by the NPPO of the country in which the fumigation is conducted
 - the monitoring programme to be administered by the NPPO of the country in which the fumigation is conducted
 - audit provisions
 - access for the NPPO of the country in which the fumigation is conducted to documentation and records of the fumigation entity
 - corrective action to be taken in cases of non-compliance.

8. Documentation

- [76] The NPPO of the country in which the fumigation is conducted is responsible for monitoring the record keeping and the documentation by the fumigation entities, and for ensuring that records are available to concerned parties.

8.1 Documentation of procedures

- [77] Procedures should be documented to ensure that commodities are fumigated in accordance with the fumigation schedule and this standard, as required. Process controls and operational parameters should be established, documenting the details necessary for a specific authorization of a fumigation entity. Calibration and quality control procedures should be documented by the entity. As a minimum, a written procedure should include the following:
- commodity handling procedures before, during and after fumigation
 - orientation and configuration of the commodity during fumigation
 - critical process parameters and the means for their monitoring
 - records of temperature sensor calibrations and, where appropriate, calibration records for humidity sensors or moisture meters
 - contingency plans and corrective actions to be taken in the event of fumigation failure or problems with critical treatment processes
 - procedures for handling rejected lots
 - staff training
 - record keeping and documentation requirements.

8.2 Record keeping

[78] Fumigation entities should keep records. These records should be available to the NPPO of the country in which the fumigation is conducted or initiated for auditing and verification purposes or trace-back.

[79] Appropriate records for fumigation as a phytosanitary measure should be kept by the fumigation entity for at least one year to enable the trace-back of treated lots. The fumigation entity should keep all records for every treatment. Information that should be recorded includes:

- identification of enclosure and fumigation entity
- enclosure leakage testing records (as appropriate)
- equipment calibration records
- commodity fumigated
- target regulated pest
- packer, grower and place of production of the commodity
- fumigation lot number
- lot size and volume, including number of articles or packages
- identifying markings or characteristics
- date of fumigation
- any observed deviation from the treatment schedule
- air and commodity temperature records
- fumigant dose and concentration records
- fumigant volumes (dose rate) calculated and added throughout fumigation.

8.3 Documentation by the NPPO

[80] All NPPO procedures should be appropriately documented and records, including those of monitoring inspections made and phytosanitary certificates issued, should be maintained for at least one year. In cases of non-compliance or new or unexpected phytosanitary situations, documentation should be made available as described in ISPM 13 (*Guidelines for the notification of non-compliance and emergency action*).

9. Inspection

[81] Inspection is carried out to determine compliance with phytosanitary import requirements. Where live non-target pests are found, the NPPO should consider if their survival would indicate a treatment failure.

10. Authority

[82] The NPPO of the country in which the fumigation is conducted or initiated is responsible for the evaluation, approval and monitoring of the application of fumigation as phytosanitary measures, including those performed by authorized fumigation entities. However, when treatments are conducted or completed during transport, the NPPO of the importing country is responsible for verifying if the treatment requirement has been met.

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

APPENDIX 1: Guidance for fumigation efficacy studies³²

1. Research Materials

- [83] It is recommended that samples of the different life stages of the pests studied are archived in order to, among other reasons, resolve possible future disputes on identification (voucher specimens). The commodity to be used for confirmation tests should be of normal commercial condition.
- [84] To perform research into the control of regulated pests by fumigation, it is necessary to know the basic biology of the pests as well as to define how the pests used in the research will be obtained. Fumigation experiments should be carried out on the commodity infested naturally in the field or with laboratory-reared pests that are used to infest the commodity preferably in a natural manner. The method of rearing, feeding and refreshing of the pest colony should be carefully detailed.
- [85] Note: Studies carried out with pests *in vitro* are not recommended unless preliminary testing indicates that results from *in vitro* treatments are no different than *in situ*.

2. Instrument Recording

- [86] Instrument recording systems used to record fumigation parameters, such as gas concentration and enclosure and commodity temperature, should be calibrated, certified and used according to the manufacturer's instructions. Routine calibration of all measuring instruments should be conducted periodically.

3. Estimation and Confirmation of Optimal Gas Concentration and its Duration for Treatment

3.1 Preliminary tests

- [87] The following steps should be carried out to estimate the dose required to achieve an adequate efficacy:
- (1) The treatment tolerance of the different life stages of the pest in question that may be present in the commodity should be established with the purpose of determining the most resistant stage. The most resistant stage, even if it is not the most common one occurring in the commodity, is the stage for which the treatment dose is established.
 - (2) The treatment tolerance of different shapes, size and varieties of the commodities should be addressed to determine if they may influence the treatment outcome.
 - (3) The optimal fumigant concentration and treatment duration at each temperature should be determined experimentally. If pertinent data do not already exist, it is recommended that at least five dose levels and a control are used for each pest life stage, temperature, and shape or size of commodity, with a minimum of 120 individuals where possible for each of the doses and a minimum of three replicates. The relationship between optimal fumigant concentration and its duration and response for each life stage and temperature should be determined to identify the most resistant stage. The optimum dose to kill the pest at the most resistant stage in the variety or commodity type where the target pest shows the highest resistance needs to be determined. The remainder of the research should be conducted on the most fumigant-resistant life stage in the variety or commodity type where the target pest shows the highest resistance at each temperature.
 - (4) During the period of post-treatment observation of the commodities and associated pests, both treated and control commodities must remain under favourable conditions for survival of the pests. The untreated controls must respond normally for the experiment to be valid. Any study where the control or check mortalities are high indicates that the organisms were held and handled under suboptimal conditions. These organisms may give misleading results if their treatment mortality is used to predict an optimum treatment dose. In general, mortality in the control or check should not exceed 10%.

³² Based primarily on insect pest treatment research.

3.2 Large-scale or extrapolation (confirmatory) tests

[88] To confirm whether the estimated optimal fumigant concentration and its duration at each temperature provides the adequate efficacy, two methods are recommended: (1) treat a large number of individuals of the most resistant life stage of the pest while achieving complete mortality; or (2) treat the most resistant stage over a range of levels of efficacy that may be less than adequate and estimate the adequate efficacy using a regression analysis. The number treated will depend on the required level of confidence.

- Treating a large number of individuals (usually many thousands or tens of thousands), using one set of treatment parameters (commodity, concentration, duration, temperature) and with no (or nearly no) survivors is a direct method of severely testing the efficacy of the treatment, and calculations of efficacy are straightforward.
- Establishing a treatment schedule via estimation using regression analysis should be accepted only if the data closely fit the model and the upper 95% confidence interval is used to establish the treatment parameters. This method is especially useful when it is too difficult or costly to test very large numbers of individuals and the treatment for achieving the required efficacy can be more severe than may be absolutely necessary.

[89] Because the most severe fumigant concentration and duration at each temperature measured during the confirmatory part of the research will be the fumigant concentration, temperature and duration required for the approved treatment, it is recommended that fluctuations in fumigant concentration and temperature during the large scale or extrapolation tests are kept as low as possible.

4. Record Keeping

[90] Test records and data need to be kept to validate the data requirements and should upon request be presented to interested parties, for example the NPPO of the importing country, for consideration in establishing an agreed commodity treatment.

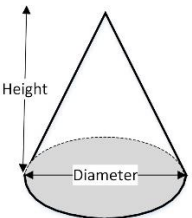
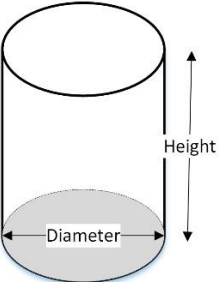
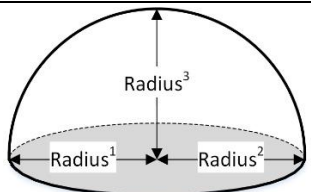
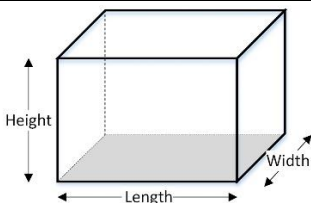
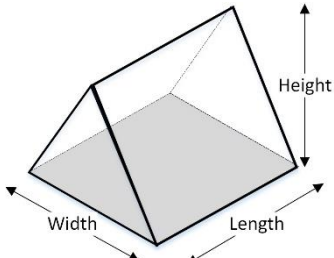
This appendix is for reference purposes only and is not a prescriptive part of the standard.

APPENDIX 2: Chemical properties of some common fumigants

| Fumigant name | Formula | Molecular weight (g/mol) | Boiling point (°C) (@ 1atm) | Specific gravity (gas) (air = 1.0) | Flammability limits in air (v/v %) | Solubility in water | Conversion factor (mg/litre to ppm, v/v @ 1 atm) |
|------------------------|--|--------------------------|-----------------------------|------------------------------------|------------------------------------|---------------------|--|
| Carbonyl sulphide | COS | 60 | -50.2 | 2.07 | 12–29 | 0.125 g/100 ml | 247 |
| Ethane dinitrile (EDN) | C ₂ N ₂ | 52 | -21.2 | 1.82 | 6-32 | Highly soluble | 480 |
| Ethyl formate | CH ₃ .CH ₂ .COOH | 74.08 | 54.5 | 2.55 | 2.7–13.5 | 11.8 g/100 ml | 330 |
| Hydrogen cyanide | HCN | 27 | 26 | 0.9 | 5.6-40 | Miscible | 659 |
| Methyl bromide | CH ₃ Br | 95 | 3.6 | 3.3 | 10–15 | 3.4 v/v % | 260 |
| Methyl iodide | CH ₃ I | 141.94 | 42.6 | 4.89 | non | 1.4 g/100 ml | 580 |
| Methyl isothiocyanate | C ₂ H ₃ NS | 73.12 | 119 | 2.53 | non | 0.82 g/100 ml | 300 |
| Phosphine | PH ₃ | 34 | -87.7 | 1.2 | >1.7 | 0.26 v/v % | 730 |
| Sulphur dioxide | SO ₂ | 64.066 | -10 | 2.26 | non | 9.4 g/100 ml | 266 |
| Sulphuryl fluoride | SO ₂ F ₂ | 102 | -55.2 | 3.72 | non | Slight | 245 |

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

APPENDIX 3: Formulae for calculating volume of geometrical shapes

| Type of geometrical shape | Geometrical structure | Formula for calculating volume |
|---------------------------|---|---|
| Cone |  | $Volume = \frac{\pi \times Radius^2 \times Height}{3}$ |
| Cylinder |  | $Volume = \pi \times Radius^2 \times Height$ |
| Dome† |  | $Volume = \frac{2 \times \pi \times Radius^1 \times Radius^2 \times Radius^3}{3}$ |
| Rectangular prism |  | $Volume = Length \times Width \times Height$ |
| Triangular prism |  | $Volume = \frac{Length \times Width \times Height}{2}$ |

† The formula used provides an approximate volume only.

APPENDIX 7: Draft 2017 Amendments to ISPM 5 (Glossary of phytosanitary terms) (1994-001)

Publication history

(This is not an official part of the standard)

| | |
|-------------------------------|--|
| Date of this document | 2017-05-11 |
| Document category | Draft 2017 Amendments to ISPM 5 (<i>Glossary of phytosanitary terms</i>) (1994-001) |
| Current document stage | To first consultation (2017-07) |
| Major stages | CEPM (1994) added topic: 1994-001, Amendments to ISPM 5: Glossary of phytosanitary terms 2006-05 Standards Committee (SC) approved specification TP5 2012-10 Technical Panel for the Glossary (TPG) revised specification 2012-11 SC revised and approved revised specification, revoking Specification 1 2016-12 TPG drafted text 2017-05 SC approved for first consultation |
| Notes | Note to Secretariat formatting this paper: formatting in definitions and explanations (strikethrough, bold, italics) needs to remain. |

IPPC Official contact points are asked to consider the following proposals for addition, revision and deletion of terms and definitions to ISPM 5 (*Glossary of Phytosanitary Terms*). A brief explanation is given for each proposal. For revision of terms and definitions, only the proposed changes are open for comments. For full details on the discussions related to the specific terms, please refer to the meeting reports on the [IPP](#).

1. REVISIONS

1.1 “growing period” (2016-004)

- [1] The Standards Committee (SC) added the term to the *List of topics for IPPC standards* in May 2016 based on a proposal from the Technical Panel for the Glossary (TPG) to review its definition because “growing season” linked to “area, place of production or production site” to but “growing period” did not. This link seemed odd because a “growing period” would supposedly be more specific than a “growing season”. It was recalled that the mention of “plants” and the wording “in an area” were deleted from the definition of “growing period (of a plant species)” by the SC in November 2002 when a reference to “growing season” was introduced in the definition of “growing period”, and the wording “place of production or production site” was added to the definition of “growing season”.
- [2] The TPG discussed the terms in their December 2016 meeting and proposed a revision of the term “growing period” and the deletion of the term “growing season” (see section 2.2).
- [3] The following explanatory points may be considered when reviewing the proposal for the revision of “growing period”:
- The term “growing period” is essential for inspection purposes to ensure that inspection is carried out when the plant actively grows, and may be important also for treatments, surveys and other phytosanitary procedures.
 - “Time” and “period” ultimately mean the same thing, thus “time” can be considered redundant and should be deleted.

- “Actively grows” correctly reflects that some plants have active growth periods alternating with periods of dormancy.
- The cross reference to “growing season” is unnecessary and confusing as not all countries have growing seasons and as plants grown under artificial conditions may actively grow beyond the growing season of an area.
- The addition of “when a plant species” ensures that the definition restricts the growing period to one specific plant species, which facilitates the implementation of inspection and phytosanitary procedures. Consequently, the qualifier “(of a plant species)” can be deleted.
- “in an area, place of production or production site” should be added to the definition to ensure that the growing period is particular to an area or a specific place of production or production site (especially under artificial conditions).

[4] **Current definition**

| | |
|---|--|
| growing period (of a plant species) | Time period of active growth during a growing season [ICPM, 2003] |
|---|--|

[5] **Proposed revision**

| | |
|--|---|
| growing period (of a plant species) | Time p Period of active growth during a growing season <u>when a plant species actively grows in an area, place of production or production site</u> [ICPM, 2003] |
|--|---|

1.2 “survey” (2013-015)

- [6] The term “survey” was added to the *List of Topics for IPPC Standards* by the SC in May 2013, because the SC agreed that this definition needed further consideration as to whether it should read “whether a pest is present or absent”. While the term is currently pending on the TPG work programme, due to the ongoing revision of ISPM 6 (*Guidelines for surveillance*), the TPG discussed the term in combination with their review of terms and consistency for the draft revision of ISPM 6.

- [7] The following explanatory points may be considered when reviewing the proposal for the revision of “survey”:

- By adding the qualifier “(of pests)”, “survey” could be used in a general sense (for instance for surveys in the IPPC domain done for the Implementation Review and Support System).
- “Time” and “period” ultimately mean the same thing, thus “time” can be considered redundant and should be deleted.
- The purposes of carrying out a “survey” are clearer because the definition now mentions determining “the presence or absence of pests” and “the boundaries (of a pest population)”, together with the “characteristics of a pest population”.
- Cross-reference to specific surveys in the definition is not useful. Instead, the definition now covers the different types of surveys that can be carried out by representing their purposes in the definition.
- The revised definition is consistent with the draft revision of ISPM 6 (*Surveillance*).

[8] **Current definition**

| | |
|---------------|--|
| survey | An official procedure conducted over a defined period of time to determine the characteristics of a pest population or to determine which species are present in an area [FAO, 1990; revised CEPV, 1996; CPM, 2015] |
|---------------|--|

[9] **Proposed revision**

| | |
|--------------------------|--|
| survey (of pests) | An official procedure conducted over a defined period of time to determine the presence or absence of pests in an area , or the boundaries or characteristics of a pest population or to determine which species are present in an area [FAO, 1990; revised CEPF, 1996; CPM, 2015] |
|--------------------------|--|

2. DELETIONS

2.1 “confinement (of a regulated article)” (2016-002)

[10] The term “confinement (of a regulated article)” was included in the Glossary in 2012 following a TPG proposal to develop a definition in relation to ISPM 3 (*Guidelines for the export, shipment, import and release of biological control agents and other beneficial organisms*) and ISPM 34 (*Design and operation of post-entry quarantine stations for plants*). This Glossary term was added to the *List of topics for IPPC standards* by the SC in May 2016 based on a TPG proposal of December 2015, where the TPG discussed the terms “confinement facility” (2015-001) and “quarantine” (2015-002) and felt that “confinement” should be revised, or possibly deleted from the Glossary. This because of the proposed revision of “quarantine” as this term is a subset of “confinement” and because the definition of “quarantine” (whether in the current or revised form) conflicts with that of “confinement”. The TPG in its December 2016 meeting discussed the term and agreed to propose its deletion from the Glossary.

[11] The following explanatory points may be considered when reviewing the proposal for the deletion of “confinement (of a regulated article)”:

- There are currently three defined terms (“quarantine”, “confinement” and “detention”) covering almost the same concept; the difference between the three definitions is very subtle, the definitions are somewhat circular in that they refer to each other, and the terms are often used interchangeably in ISPMs. This situation creates unfortunate and unnecessary confusion.
- The original aim of defining “confinement (of a regulated article)” was to avoid that the Glossary term “containment” would be used beyond its defined scope (pertaining to an “area”). However, defining “confinement (of a regulated article)” is not needed to avoid the misuse of the well-defined “containment”.
- The description of “confinement (of a regulated article)” as being the “application of phytosanitary measures...” misses the notion of holding something in some sort of enclosure. Example: while “treatment” is a “phytosanitary measure”, the mere applying of a treatment would not count as “confinement”. Therefore, normal English dictionary definitions of “confinement” are more adequate than the current definition.
- “Confinement” in the broad, common sense is used in the definition of “quarantine” and here clearly functions to provide the notion of holding in enclosure, and suggesting that “quarantine” is a subset of “confinement”. On the other hand, the purpose of “confinement (of a regulated article)” is defined as “to prevent the escape of pests”. This is only one out of several purposes for “quarantine”, so “confinement (of a regulated article)” is defined more restrictively than for “quarantine”, suggesting that “confinement (of a regulated article)” becomes a subset of “quarantine”. Thus the relation between the two terms is illogic.
- “Confinement” in the broad, common sense is also used in the definition of “detention”. For the IPPC community to deal with the terms: the undefined “confinement” used to define two very closely related terms (“quarantine” and “detention”) and then the defined term “confinement (of a regulated article)” is confusing and unproductive.
- Retaining the definitions of “quarantine” and “detention” is sufficient for all ISPM purposes, in particular if the less restrictive revised definition of “quarantine” shall be agreed, leaving the definition for “confinement (of a regulated article)” unnecessary and confusing.
- Although, as stated in its definition, “detention” is a subset of “quarantine”, it is not particularly clear whether such distinction has been used deliberately in ISPMs so far. On the other hand, the uses seem unproblematic.

- “Confinement” is difficult to translate into other FAO languages, e.g. Arabic uses the same term as the translation of “detention”.
- The use in ISPMs of “confinement” in the broad, common sense is appropriate and well understood in all current ISPM contexts. “Confinement” as used would not merit any ink amendments in ISPMs if the term is left without a definition in the Glossary. In future, the Glossary terms “quarantine” or “detention” should be used where appropriate, and “confinement” could be used in its common English meaning.

[12] **Proposed deletion**

| | |
|---|--|
| confinement (of a regulated article) | Application of phytosanitary measures to a regulated article to prevent the escape of pests [CPM, 2012] |
|---|--|

2.2 “growing season” (2016-004)

- [13] For the background information, refer to section 1.1 of this paper.
- [14] The TPG discussed the term in their December 2016 meeting and proposed the deletion of “growing season” from the Glossary.
- [15] The following explanatory points may be considered when reviewing the proposal:
- While “growing season” is used in ISPMs, the term does not have any specific IPPC meaning and may be used in its common dictionary meaning. In comparison, “growing period” is essential for inspection purposes to ensure that inspection is carried out when the plant actively grows, and is also important when applying other phytosanitary procedures.
 - Several tropical countries do not have “growing seasons” and the term is therefore not relevant for them.
 - Plants grown under artificial conditions may actively grow beyond the outdoor growing season.
 - Originally, the term “growing period” was defined in the Glossary to replace the term “growing season” which was intended to be deleted.
 - Deleting the term “growing season” would not cause difficulties of understanding the uses of the term in ISPMs and would not require ink amendments.

[16] **Proposed deletion**

| | |
|-----------------------|---|
| growing season | Period or periods of the year when plants actively grow in an area, place of production or production site [FAO, 1990; revised ICPM, 2003] |
|-----------------------|---|

2.3 “mark” (2013-007)

- [17] The Glossary term “mark” was added to the *List of topics for IPPC standards* by the SC in May 2013, based on a TPG proposal for revising the definition to become explicit and precise, and avoid using the phrase “phytosanitary status” within the definition.
- [18] During first consultation in 2014, several consultation comments recommended that the term and definition be deleted altogether. They suggested that the definition would not be needed as the meaning of “mark” could instead be specified case-by-case with any future use of the term in new ISPMs, as is done already in ISPM 15 (*Regulation of wood packaging material in international trade*).

[19] The TPG in its December 2016 meeting discussed the term and agreed to propose its deletion from the Glossary.

[20] The following explanatory points may be considered when reviewing the proposal:

- “mark” as a term and definition was originally included in ISPM 15 and then moved to ISPM 5 (*Glossary of phytosanitary terms*) based on comments from the 2001 consultation. No justification was provided for this inclusion. The Interim Standards Committee, November 2001, agreed with the inclusion recognizing that “the term ‘mark’ may be applicable to phytosanitary issues beyond the scope of this standard”. However, so far the term is only used in its Glossary meaning in ISPM 15.
- “mark” in its Glossary sense is comprehensively and consistently described in ISPM 15, “Outline” and Section 3.1, and defining “mark” in the Glossary is therefore not necessary.
- “mark” is used inconsistently in several other ISPMs, i.e. with different meanings than that of the current or proposed revised definition. Retaining the definition (whether in the original or revised form) would necessitate the revision of those uses to substitute the term “mark” with different wording. Finding appropriate alternative terms for ink amendments could prove very difficult.

[21] **Proposed deletion**

| | |
|-------------|---|
| mark | An official stamp or brand, internationally recognized, applied to a regulated article to attest its phytosanitary status [ISPM 15, 2002] |
|-------------|---|

APPENDIX 8: Summary of polls and forums (from December 2016 to April 2017)

| E-decision number and date | SC decision | SC members commenting in the forum | Polls (yes/no) |
|--|--|------------------------------------|----------------|
| 2017_eSC_May_01 28 November to 12 December 2016. | SC approval of diagnostic protocol <i>Tomato spotted wilt virus</i> , <i>Impatiens necrotic spot virus</i> and <i>Watermelon silver mottle virus</i> (2004-019) to be submitted to the DP notification period for adoption | 14 | No poll |
| <p>SC e-decision</p> <p>The SC approved the draft diagnostic protocol <i>Tomato spotted wilt virus</i>, <i>Impatiens necrotic spot virus</i> and <i>Watermelon silver mottle virus</i> (2004-019) to be submitted to the 45-day DP notification period starting on the 15 December 2016 for adoption.</p> | | | |

| E-decision number and date | SC decision | SC members commenting in the forum | Polls (yes/no) |
|---|---|------------------------------------|----------------|
| 2017_eSC_May_02 28 November to 12 December 2016. | SC approval of diagnostic protocol on <i>Candidatus Liberibacter solanacearum</i> (2013-001) to be submitted to the DP notification period for adoption | 15 | No poll |
| <p>SC e-decision</p> <p>The SC approved the draft diagnostic protocol for <i>Candidatus Liberibacter solanacearum</i> (2013-001) to be submitted to the 45-day DP Notification Period starting on the 15 December 2016 for adoption.</p> | | | |

| E-decision number and date | SC decision | SC members commenting in the forum | Polls (yes/no) |
|--|--|------------------------------------|----------------|
| 2017_eSC_May_03 28 November to 12 December 2016. | SC approval of diagnostic protocol on <i>Fusarium circinatum</i> (2006-021) to be submitted to the DP notification period for adoption | 14 | No poll |
| <p>SC e-decision</p> <p>The SC approved the draft diagnostic protocol for <i>Fusarium circinatum</i> (2006-021) to be submitted to the 45-day DP Notification Period starting on the 15 December 2016 for adoption.</p> | | | |

| E-decision number and date | SC decision | SC members commenting in the forum | Polls (yes/no) |
|--|--|------------------------------------|----------------|
| 2017_eSC_May_04 28 November to 12 December 2016 | SC approval of the diagnostic protocol on <i>Dendroctonus ponderosae</i> syn. <i>Scolytus scolytus</i> (2006-019) to be submitted to the DP notification period for adoption | 16 | No poll |
| <p>SC e-decision</p> <p>The SC approved the draft diagnostic protocol for <i>Dendroctonus ponderosae</i> (2006-019) to be submitted to the 45-day DP Notification Period starting on the 15 December 2016 for adoption.</p> | | | |

| E-decision number and date | SC decision | SC members commenting in the forum | Polls (yes/no) |
|---|---|------------------------------------|----------------|
| 2017_eSC_May_05 10 to 31 January 2017 | SC approval of the draft specification on <i>Audit in the phytosanitary context</i> (2015-014) for first consultation | 15 | No poll |
| <p>Some SC members were concerned that the draft specification did not distinguish between audits of an NPPO in their own country and audits of the NPPO in the exporting country by the country of export. Another member of the SC also would have preferred clearer distinction between 1) internal audits, 2) audits of entities authorized by the NPPOs to perform specific tasks, and 3) audits carried out by the NPPOs of the importing countries in the exporting countries.</p> <p>Another member disagreed saying that the specification appropriately discusses the particular types of audit for phytosanitary purposes, but suggested that the matter may be better managed through a manual.</p> <p>Nevertheless no text changes were proposed and all members approved the draft specification for consultation, concluding that countries will have the opportunity to raise any issues they may have during the consultation period.</p> <p>SC e-decision</p> <p>The SC approved the draft specification for Audit in the phytosanitary context (2015-014) for consultation.</p> | | | |

| E-decision number and date | SC decision | SC members commenting in the forum | Polls (yes/no) |
|---|---|------------------------------------|----------------|
| 2017_eSC_May_06 10 to 31 January 2017 | SC approval of the draft specification on the revision of ISPM 12 (<i>Phytosanitary certificates</i>) (2015-011) for first consultation | 15 | 8/0 |
| <p>Some SC member were concerned that the specification would not focus the work of the drafting group enough, and they should be focusing on the issue related to re-export issue and to the changes in terminology.</p> <p>The secretariat explained that the SC agreed that the TPG work would focus on the three terms “identity (of a consignment)”, “integrity (of a consignment)” and “phytosanitary security (of a consignment)” and the consequential changes to ISPM 12. The sections that are affected by this focused revision are mainly Section 4 and 6, but other consequential changes may also be necessary following the careful and detailed review by the expert drafting group. It was also highlighted that the SC will have opportunity later to review consequential changes to ensure that no additional revisions that are not strictly needed to enhance clarity and understanding will be included.</p> | | | |

The steward presented a new version of draft clarifying further the scope by adding “The revision of ISPM 12 will be focused on sections affected by the terms “identity (of a consignment)”, “integrity (of a consignment)” and “phytosanitary security (of a consignment)” mirroring the exact wording of the report of the SC May 2015 meeting (paragraph 164, decision (66)).

The forum stayed open for an additional week, and no other suggestions arrived in modifying the text.

SC e-decision

The Secretariat opened a poll to obtain final agreement by the SC.

According to the poll results, the SC approved the revised draft specification on the revision of ISPM 12 (*Phytosanitary certificates*) (2015-011).

As there was consensus to approve the draft specification, there is no need for further discussion during the 2017 May SC meeting.

| E-decision number and date | SC decision | SC members commenting in the forum | Polls (yes/no) |
|---|---|------------------------------------|----------------|
| 2017_eSC_May_07 10 to 31 January 2017 | SC approval of the draft specification on Supplement on <i>Guidance on the concept of the likelihood of establishment component of a pest risk analysis for quarantine pests</i> (2015-010) to ISPM 11 for first consultation | 16 | 9/0 |
| <p>One member suggested including the component for analyzing spread potential to the specification, but it was suggested that it is covered in the main part of the ISPM 11 (<i>Pest risk analysis for quarantine pests</i>) in section 2.2 Assessment of the probability of introduction and spread.</p> <p>Some SC members suggested editorial changes and to clarify the scope, but otherwise agreed to the draft. The editorial changes were incorporated.</p> <p>Scope: Several members noticed a typo related to the commodities, that the standard will be applicable for (indicating they can be "medium" risk pathways).</p> <p>The steward of the draft explained that scope was modified based on SC comments in the OCS discussion where some members suggested that this guidance should be applicable to all categories of commodities, where pest risk can exist. The resulting sentence was intended to read "The supplement to the standard will be most applicable for commodities as identified in ISPM 32 (<i>Categorization of commodities according to their pest risk</i>)", thus avoiding to pre-rank them as "low" or "medium" risk before the assessment actually takes place. Some members suggested that the mention on levels of risks was needed to enhance clarity in the scope. One SC member suggested to add the concept to the Purpose section as well for consistency.</p> <p>The steward proposed the following change to the scope deleting the reference to the commodities: “The supplement to the standard will provide guidance on how to consider those organisms for which a certain set of conditions is required for the establishment to occur. The role of evidence to support the probability of establishment will be emphasized over the possibility of rare events.”</p> <p>Purpose: An SC member suggested to delete part of the text for it referred to standard implementation thus was not appropriate in the Purpose section. The explanation was accepted along with the deletion.</p> <p>The steward and the secretariat worked together to incorporate the suggestions and presented a new version of draft on the forum incorporating the editorial changes and modifying both the Scope section and the Purpose. The forum stayed open for an additional week, and no other suggestions arrived in modifying the text.</p> <p>SC e-decision</p> <p>The Secretariat opened a poll to obtain the final agreement by the SC.</p> | | | |

According to the poll results, the SC approved draft specification for the Supplement on Guidance on the concept of the likelihood of establishment component of a pest risk analysis for quarantine pests (2015-010) to ISPM 11 for first consultation.

As there was consensus to approve the draft specification, there is no need for further discussion during the 2017 May SC meeting.

| E-decision number and date | SC decision | SC members commenting in the forum | Polls (yes/no) |
|--|--|------------------------------------|----------------|
| 2017_eSC_May_08 10 to 31 January 2017 | SC approval of the modified Specification TP 3: Technical Panel on Phytosanitary Treatments (2004-005) | 15 | 9/0 |
| <p>One SC member expressed concerns on the criteria to post treatments on the Phytosanitary Resources page. The Secretariat explained that the CDC has a defined criteria for reviewing materials to be posted on the Phytosanitary Resources page.</p> <p>Two SC members suggested the rewording of the proposed additional tasks. The secretariat reworded the tasks to have all the original 12 tasks already in the current TP 3 as they are, and added two new tasks:</p> <ul style="list-style-type: none"> - Task 13) In addition, the TPPT may help evaluating basic information on treatments that are submitted for inclusion on the Phytosanitary Resources page. - Task 14) Categorize and tag phytosanitary treatments (adopted or included to the Phytosanitary Resources page) for use by an online search tool including identifying target pest, commodity and treatment type. <p>This proposal also clarifies that the TPPT will review the treatments submitted for the inclusion in Phytosanitary Resources page for basic information.</p> <p>Another member was concerned about identifying "usefulness" of the treatments for the Resource Page. The new text proposed by the Secretariat does not contain the word "useful" anymore, so it avoids misinterpretation.</p> <p>SC e-decision</p> <p>Since the draft was modified to incorporate the SC members' comments and the tasks were reworded, the Secretariat opened a poll to have the SC members' approval on the final version of the draft.</p> <p>According to the poll results, the SC approved the Specification TP 3: Technical Panel on Phytosanitary Treatments (2004-005) with the two added tasks.</p> <p>As there was consensus to approve the modified specification TP 3, there is no need for further discussion during the 2017 May SC meeting.</p> | | | |

| E-decision number and date | SC decision | SC members commenting in the forum | Polls (yes/no) |
|--|--|------------------------------------|----------------|
| 2017_eSC_May_09 6 to 20 March 2017 | SC approval of the responses to comments and the draft DP for <i>Phytophthora ramorum</i> (2004-013) to be submitted to the DP notification period | 15 | No poll |
| <p>One SC member suggested that the TPDP provided some more explanations for the following comments: 375, 386, 226, 395, 396, 400, 409 and 410, so that the decisions made by the TPDP are better understood. As the response to comment 226 mentioned that it was incorporated, the Secretariat made the editorial adjustment into the draft DP to reflect this. It was noted that adjustments to the responses to member comments may require other changes in the draft DP.</p> <p>SC e-decision</p> <p>The Secretariat will seek advice from the TPDP. If the draft DP is modified, the Secretariat will open a new e-decision focusing on the changes.</p> | | | |

| E-decision number and date | SC decision | SC members commenting in the forum | Polls (yes/no) |
|--|---|------------------------------------|----------------|
| 2017_eSC_May_10 6 to 20 March 2017 | SC approval of the draft DP for <i>Puccinia psidii</i> (2006-018) to be submitted to first consultation | 12 | No poll |
| <p>SC e-decision</p> <p>The SC approved the draft diagnostic protocol for <i>Puccinia psidii</i> (2006-018) for consultation.</p> | | | |

| E-decision number and date | SC decision | SC members commenting in the forum | Polls (yes/no) |
|--|---|------------------------------------|----------------|
| 2017_eSC_May_11 18 April to 02 May 2017 | SC approval for the draft DP for <i>Xylella fastidiosa</i> (2004-024) to be submitted to first consultation | 17 | No poll |
| <p>One SC member suggested to delete the last sentence of paragraph 12 because the distribution of other subspecies is not mentioned therefore no reason to mention it in case of Taiwan and subsp. <i>fastidiosa</i>.</p> <p>The SC member also suggested to remove the link from paragraph 31, as it does not link to the sentence subject but links to a site on Alfalfa. He also suggested to remove the two links from paragraph 168 because the site is already mentioned in a previous paragraph and unlike the link for validation data, is unlikely to be looked at on its own (as a separate diagnostic method). In addition, he suggested to look for alternative wording in paragraph 14 because it appears to repeat the idea of persistency.</p> <p>Regarding paragraph 12 another SC member thought that the last sentence in paragraph 12 should be retained as it draws a distinction between the new species, and the presence also of the subspecies <i>fastidiosa</i>. It therefore clarifies the unique situation in Taiwan.</p> <p>Another SC member said it the relation between the subspecies described in paragraph 19 and the diseases described in paragraphs 23 to 31 was unclear. He suggested to have a sentence clarifying this before paragraph 23 even if there is no clear relation or the relation is unknown at the moment.</p> | | | |

The Secretariat contacted the Discipline lead and the Lead author for this draft DP for *Xylella fastidiosa* (2004-024) and in overall they agreed with propositions, and revised the draft DP. The Secretariat posted the following in the e-decision forum

- Paragraph 12: Removed the mention to “subsp. fastidiosa” in second last line where it refers to the subspecies in Taiwan. However, mention to two *Xylella* species retained as it is important to point out that Taiwan has the two *Xylella* species.
- Paragraph 14: Left as is as the term “persistence” is common terminology when discussing the vector and *Xylella* relationship.
- Paragraph 19: The text was revised under paragraph 22 to include more information on subspecies that were described as responsible of the disease.
- Paragraph 22: Text was adjusted to include more information on subspecies that were described as responsible of the disease, with information on host range.
- Paragraphs 23, 24, 26, 27, 30: Information on subspecies included.
- Paragraph 31: removed link. This link used to refer to *Xylella* on Alfalfa. Rechecked - the information on *Xylella* appears to be gone.
- Paragraph 168: Links were removed as they were duplicates.
- New paragraph 186: Reference added - Almeida, R. P., Nascimento, F. E., Chau, J., Prado, S. S., Tsai, C. W., Lopes, S. A., & Lopes, J. R. (2008). Genetic structure and biology of *Xylella fastidiosa* strains causing disease in citrus and coffee in Brazil. *Applied and Environmental Microbiology*, 74: 3690-3701.
- New paragraph 252: Reference added - Nunney, L., Yuan, X., Bromley, R., Hartung, J., Montero-Astúa, M., Moreira, L., Ortiz, B. and Stouthamer, R., (2010). Population genomic analysis of a bacterial plant pathogen: novel insight into the origin of Pierce's disease of grapevine in the US. *PLoS One*, 5(11), p.e15488.

The SC members who had raised the concerns felt that the proposed changes would address their issues, therefore no new comments were made.

SC e-decision

The SC agreed to the proposed changes and approved the draft diagnostic protocol for *Xylella fastidiosa* (2004-024) for consultation.

| E-decision number and date | SC decision | SC members commenting in the forum | Polls (yes/no) |
|--|--|---|-----------------------|
| 2017_eSC_May_12 18 April to 02 May 2017 | SC approval of the responses to comments and the draft DP for <i>Phytophthora ramorum</i> (2004-013) to be submitted to the DP notification period | 18 | No poll |
| <i>SC e-decision</i> The SC approved the responses to comments and the draft diagnostic protocol for <i>Phytophthora ramorum</i> (2004-013) as an annex to ISPM 27, to be submitted to the DP notification period. | | | |

| E-decision number and date | SC decision | SC members commenting in the forum | Polls (yes/no) |
|---|---|------------------------------------|----------------|
| 2017_eSC_May_13 18 April to 02 May 2017 | SC approval for the for the responses to objection and the draft DP for <i>Tomato spotted wilt virus</i> , <i>Impatiens necrotic spot virus</i> and <i>Watermelon silver mottle virus</i> (2004-019) for the DP notification period | 18 | No poll |
| <p>SC e-decision</p> <p>The SC approved the responses to the objection and the draft diagnostic protocol for <i>Tomato spotted wilt virus</i> (TSWV), <i>Impatiens necrotic spot virus</i> (INSV) and <i>Watermelon silver mottle virus</i> (WSMoV) (2004-019), to be submitted to the DP notification period.</p> | | | |

| E-decision number and date | SC decision | SC members commenting in the forum | Polls (yes/no) |
|---|---|------------------------------------|----------------|
| 2017_eSC_May_14 18 April to 02 May 2017 | SC approval for the selection of members for the Expert Working Group on <i>Authorization of entities to perform phytosanitary actions</i> (2014-002) | 19 | No poll |
| <p>One member expressed his concern with not all regions being represented and others are represented by two persons. He felt, that the right expertise is the most important selection criteria, however it would be good to encourage all regions to nominate experts.</p> <p>Another SC member suggested that an EWG should be comprised of the best experts rather than focusing on regional representation, the regional views are expressed when the SC reviews the draft ISPM.</p> <p>Another member responded by quoting the IPPC Procedure Manuel (p.64) that states that "An EWG should have members representing a wide geographic area (including proportional developing country participation)".</p> <p>The secretariat responded by reminding the SC that regional representation had been discussed before, and the SC has always concluded that it is not the main selection criteria. In addition some regions did not submit experts.</p> <p>The Secretariat also informed the SC that postponing the decision on the selection of the experts for the EWG may result in having to postpone to the June 2017 meeting as arrangement would need to be made as soon as possible. This may result in losing the funding as it needs to be spent in 2017.</p> <p>The SC agreed to go ahead with this configuration of the EWG, however a discussion on the concept on how to improve submissions in the future was suggested for the upcoming SC meeting.</p> <p>SC e-decision</p> <p>Based on the forum discussion, the SC approved that the listed experts be selected as members of the EWG to develop the draft ISPM on Authorization of entities to perform phytosanitary actions (2014-002).</p> <ul style="list-style-type: none"> - Mr Robert BISHOP (USA) - Ms Jenny DUNN (Australia) - Ms Nancy FURNESS (Canada) - Mr Thorwald GEUZE (Netherlands) - Mr Le Son HA (Vietnam) - Mr Peter JOHNSTON (New Zealand) - Ms Paula MENDY (Argentina) | | | |

APPENDIX 9: Proposed ink amendment to ISPM 5 (“detention”)

(Prepared by the TPG December 2016; approved by the SC May 2017)

- [1] The Technical Panel for the Glossary (TPG) reviewed the definition of “detention” in their 2016 meeting when discussing “confinement (of a regulated article)” (2016-002).
- [2] The TPG noted that the definition of “detention” was inconsistent with other Glossary definitions and the general style as it had the cross reference “see quarantine”. Glossary terms are using bolded words when using other Glossary terms in their definition to ensure easy cross reference, whereas cross reference to any other term (by “see...”) is not used. The intention and legal effect of “see...” is obscure, and therefore inappropriate, and more confusing than helpful in harmonized terminology.
- [3] The below ink amendment to delete the cross reference “see quarantine” is therefore proposed to ensure consistency among Glossary terms.
- [4] The SC in May 2017 reviewed the ink amendment and agreed to it, without proposing any additional modification.

Table 1. Proposed ink amendment to ISPM 5 (*Glossary of phytosanitary terms*) for consistency

| | |
|------------------|--|
| detention | Keeping a consignment in official custody or confinement, as a phytosanitary measure (see quarantine) [FAO, 1990; revised FAO, 1995; CEPF, 1999; ICPM, 2005] |
|------------------|--|

APPENDIX 10: Action points arising from the SC May 2017 meeting

| Action | Section / Paragraph / Decision point | Responsible | Deadline |
|---|--|--|-------------|
| 1. Inform the Bureau that Mr John HEDLEY was recommended as an invited expert for the SCTF | 3.1 [16, 34] (2) | Secretariat | 12-May-2017 |
| 2. Review of the ToR for the IC, possible revision of the ToR for the SC | 3.1 [21, 34] | Mr Alvaro SEPULVEDA LUQUE | 15-Sep-2017 |
| 3. Draft a discussion paper for SPG Oct 2017 outlining the need for a possible change to the standard setting procedure | 3.1 [23, 34] (8) | Mr Jesulindo DE SOUZA JUNIOR, Mr Alvaro SEPULVEDA LUQUE, Mr Ezequiel FERRO | 15-Sep-2017 |
| 4. Develop and submit a proposal for the reorganization of the fruit fly ISPMs | 3.1 [26] | COSAVE | 30-Sep-2017 |
| 5. Inform the IFU that Mr Rajesh RAMARATHNAM and Mr Stephen BUTCHER were selected as the SC members of the task force to develop the draft criteria for the joint SC/IC call for topics | 3.1 [29, 34] (7) | Secretariat | 12-May-2017 |
| 6. Work with the IFU on forming the task force and prepare the draft criteria for the joint call for topics | 3.1 [29, 34] (7) | Secretariat | 01-Sep-2017 |
| 7. Inform the IFU that Mr Jesulindo DE SOUZA JUNIOR will be the SC representative for the Sea Containers Task Force (SCTF) | 3.1 [34] (1) | Secretariat | 12-May-2017 |
| 8. Inform the IFU that Mr Sam BISHOP will be the SC representative in the CDC/IC and Mr Alvaro SEPULVEDA LUQUE will be the alternate | 3.1 [34] (4) | Secretariat | 12-May-2017 |
| 9. November SC seminar (Trade Facilitation) - presentations to the Secretariat | 3.1 [35, 44] (9) | Mr Nico HORN, Ms Thanh Huong HA, Mr David KAMANGIRA | 15-Sep-2017 |
| 10. Remind the stewards for ISPMs to submit presentations for the RWS by 15 June | 3.2 [44] | Secretariat | 31-May-2017 |
| 11. Inform RWS organizers about the draft ISPMs going for their first consultation in 2017 and about the attending SC representatives | 3.2 [44] (10) | Secretariat | 12-May-2017 |
| 12. Update the CDC/IC on the implementation issues for ISPMs (draft ISPM on <i>International movement of cut flowers and foliage</i> (2008-005), draft PT Heat treatment of wood using dielectric heating (2007-14), PT 26: Cold treatment for <i>Ceratitidis capitata</i> on <i>Citrus limon</i>) | 4.1 [70](13), 6.1 [184, 187, 188] (33)(34) | Secretariat | 31-May-2017 |
| 13. Open an SC forum to gather comments on the draft ISPM on International movement of grain (2008-007) | 4.3 [127] (15) | Secretariat | 01-Jun-2017 |

| Action | Section / Paragraph / Decision point | Responsible | Deadline |
|---|--------------------------------------|---|---------------------|
| 14. Revise draft ISPM on International movement of grain (2008-007) based on the SC forum comments | 4.3 [127] (16) | Mr Bruce HANCOCKS, Mr Nico HORN, Mr Rajesh RAMARATHNAM | 06-Oct-2017 |
| 15. Draft IYPH promotional paper on ISPMs - open for comments in OCS (July-August) | 5.1 [149] (19) | Secretariat | 01-Jul-2017 |
| 16. Revised draft IYPH promotional paper on ISPMs to the Secretariat | 5.1 [149] (19) | Mr Sam BISHOP | 06-Oct-2017 |
| 17. Revise the draft IYPH promotional paper on ISPMs and submit it to the Secretariat | 5.1 [149] (19) | Mr Sam BISHOP, Mr Jesulindo DESOUZA JUNIOR, Mr Nico HORN, Ms Shaza OMAR, Mr Alvaro SEPULVEDA LUQUE, Ms Thanh Huong HA, Mr David KAMANGIRA, Mr Lupeomanu Pelenato FONOTI | 30-Jun-2017 |
| 18. Give the SC members access to the EWG forums | 5.2.1 [166] (21) | Secretariat | Ongoing |
| 19. Notify the unsuccessful nominees for the TPG and the EWGs from their regions that they had not been selected by the SC | 5.2.2 [172] (25) | SC members | as soon as possible |
| 20. TPPT to consider the pros and cons of developing treatments based solely on publicly available data | 6.1 [183] | TPPT | 06-Oct-2017 |
| 21. TPPT to consider the data sent by the contracting party objecting to the PT HT of wood using dielectric heating | 6.1 [183] | TPPT | 06-Oct-2017 |
| 22. Notify the Bureau (send relevant sections of the SC report) about the plan for the TPPT to consider the use the unpublished data for the development of PTs | 6.1 [188] (32b) | Secretariat | 31-May-2017 |
| 23. Include a note on the submission form for PTs to encourage submitters to make the supporting documentation publicly available, add an option for the submitter to allow for public release of the submission and supporting documents | 6.1 [188] (32c) | Secretariat | 31-May-2017 |
| 24. Request the Bureau to agree on SC's oversight over the ePhyto list of products | 6.2 [201] (38) | Secretariat | 31-May-2017 |
| 25. Draft the process of the SC's oversight over the ePhyto list of products | 6.2 [201] (39) | Mr Nico HORN and the ePhyto Steering Group | 31-May-2017 |
| 26. Add the review of the draft CBD document comparing terms used in the Cartagena protocol with terms in the ISPM 5 to the TPG Work Programme | 6.2 [201] (48) | Secretariat | 31-May-2017 |

| Action | Section / Paragraph / Decision point | Responsible | Deadline |
|---|--------------------------------------|---|-------------|
| 27. Prepare a paper for the SC Nov on molecular tests/viability/NGS issues | 6.3 [209] (51) | TPDP | 25-May-2017 |
| 28. Notify Bureau on the support for an NGS side session at CPM-13 (2018) | 6.3.1 [214] (56) | Secretariat | 31-May-2017 |
| 29. The Dec DP notification period was changed - update the SOP and the calendar | 6.3.2 [217] (59) | Secretariat | 31-May-2017 |
| 30. Revise the draft specification for the <i>Use of systems approaches in managing risks associated with the movement of wood commodities</i> (2015-004) | 7 [234] (64) | Mr Jesulindo DE SOUZA JUNIOR, Mr Nico HORN, Mr Rajesh RAMARATHNAM | 31-May-2017 |
| 31. Open OCS for SC comments on the revised draft specification for the <i>Use of systems approaches in managing risks associated with the movement of wood commodities</i> (2015-004) | 7 [234] (64) | Secretariat | 01-Jun-2017 |
| 32. Open the call for experts for the EWG to redraft the draft ISPM on <i>International movement of wood products and handicrafts made from wood</i> (2008-008) | 7 [234] (65) | Secretariat | TBD |
| 33. Redraft the US proposal for the revision of Glossary definitions | 7.2 [251] (67) | Ms Marina ZLOTINA, Mr Stephen BUTCHER | 06-Oct-2017 |
| 34. Adjust the Framework for Standards and Implementation (add the new topic (Use of systems approaches in managing risks associated with the movement of wood commodities (2015-004)) and the possible gaps) and submit to the Secretariat | 8 [256] (68) | Mr Rajesh RAMARATHNAM | 31-May-2017 |
| 35. Forward the Framework for Standards and Implementation to the SPG | 8 [256] (69) | Secretariat | 30-Sep-2017 |
| 36. Draft a paper on gaps for non-host ISPMs for the SC Nov (for inclusion in the Framework for Standards and Implementation) | 8 [256] (70) | Mr Bruce HANCOCKS | 06-Oct-2017 |
| 37. Draft a paper on implementation issues raised at CPM-12 (2017) and at SC May 2017 | 9 [259] (71) | Mr Masahiro SAI, Mr Lupeomanu Pelenato FONOTI | 06-Oct-2017 |