REPORT

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Standards Committee
November 2007

CONTENTS

1. OPENING OF THE MEETING

1. The meeting was opened by Mr Kenmore, Secretary of the IPPC. He welcomed the participants, in particular the new SC member Mr Putra Setiawan (Indonesia) and the observers, Mr de Araújo Nojosa (Brazil) and Ms Theyse (South Africa). Two members were unable to attend and one seat on the SC for the Near East region remains unfilled.

2. He suggested that all SC members should inform their governments of the SC procedures, and in particular to clarify that there is a formal process for nominations of members and potential replacements, and remind their governments that an outgoing member may only be replaced by the CPM-confirmed potential replacement.

3. The Secretary noted that a lot of work had been done during the year on standard setting procedures; a focus group met in July to discuss some standard setting procedures, and the SPTA which had reviewed the outcome of the focus group. The outcome of these meetings would be reviewed by the SC. The Secretariat had started to implement some of the proposals made in these meetings regarding transparency such as posting member comments on the IPP once compiled and have compiled summaries of responses to comments for SC review. The Secretary reminded SC members that it was up to them to ensure that both these summaries of responses to comments and the SC report itself was detailed enough to meet the needs of contracting parties.

4. The Secretary reminded the SC of the constraints that the IPPC faced in funding the work programme and noted that the Secretariat had started to implement a new funding policy, including sharing of travel costs, which aims to be more fair. He thanked the SC members for their cooperation in this process. He also thanked the stewards for their significant contribution to the work programme, which is essential to the progress of the IPPC activities.

5. He also thanked two members who would be retiring from the SC, Mr Arnitis and Mr Vereecke, for their contributions. In particular Mr Vereecke was thanked for his many years of work dedicated to the phytosanitary community in guiding the SC as their chair and in furthering the work of the IPPC by facilitating the development and adoption of most of the ISPMs, and helping to bring the standards to a wider audience.

2. ADOPTION OF THE AGENDA

6. The SC adopted the agenda (see Appendix 1). The documents list is given in Appendix 2.

3. ELECTION OF THE RAPPORTEUR

7. Mr Sakamura from Japan was elected as rapporteur.

4. UPDATE ON THE STANDARD SETTING WORK PROGRAMME

8. The Secretariat introduced the work programme. The SC suggested that an extra column with the date of adoption on to the work programme should be added in order to show clearly the length of time taken to develop the ISPMs on the work programme.

9. Regarding the pending draft ISPM on *Systems approach for pest risk management for citrus canker (Xanthomonas axonopodis* pv. *citri* (Xac)), it was noted that a request had been made to move it off the pending list. However, an e-mail consultation conducted prior to the SC meeting had shown that major issues remain unresolved. The SC suggested that informal discussions could be envisaged between the regions concerned (South America, USA and Europe) on management options to minimize potential phytosanitary risks of Xac asymptomatic citrus fruit in international trade, in particular the issue regarding latency of the pest on fruit. The SC agreed that such consultation will remain informal and the steward would report back once the consultation had taken place.

10. Regarding the draft ISPM on *Systems approach for pest risk management of fruit flies (Tephritidae),* the status of the draft was adjusted in the table. The steward (Mr Holtzhausen) had received SC comments and would begin revising the draft. The dates for sending the draft to the SC prior to consultation were corrected to 2008, with a projected adoption date of 2009. A procedure for SC members to send comments to the steward was agreed as described in section 5.3.

11. In relation to treatments under the TPPT work programme, the following remarks were made:
- the TP might consider combining the various cold treatments proposed against medfly (*Ceratitis capitata*) for various citrus species; it was suggested that comments be sent to the steward of the TPPT by the SC member concerned.
- Latin names should be used for pests and plants mentioned (e.g. bitter momordica, netted melon) in the titles of fruit fly treatments.

12. Under the TPG, the supplement on CBD terminology in relation to ISPM No. 5 (*Glossary of phytosanitary terms*) would be ready to be presented to the May 2008 meeting. This was a document which had started as an explanatory document, and for which the SC had asked to be transformed into a supplement.

13. The Secretariat noted that work was continuing on a few explanatory documents. In particular, an explanatory document on PRA had been added to the programme. Following the PRA workshop in Niagara Falls, Canada, the Secretariat was approached by the STDF (Standards and Trade Development Facility) to assist in the development of training material in response to a training request from India. Training material was developed by the steering committee for the Niagara Falls workshop (IPPC Steering Committee on PRA), with support from CFIA and STDF. This material has been refined and is now proposed as an explanatory document for the ISPMs on PRA.

5. EXECUTIVE SUMMARIES OF TECHNICAL PANELS

14. The Secretariat noted that executive summaries and full reports are normally presented to the SC at its May meeting. Since only the SC-7 will now meet in May 2008, decisions related to TPs need to be taken at the present SC meeting.

15. Affecting all TPs, the SC agreed to follow the following points regarding membership of the technical panels:
- there should be overlap of at least one meeting between a new member and a member leaving the TP (when it is known in advance that a member will be leaving)
- the Secretariat should make the calls for nominations for the TP so that this overlap can occur. (In some cases, this will involve not waiting for the next SC meeting to agree to the call since this might prevent overlap. The SC could be informed by e-mail of the call to be made)
- the TP should be involved in the selection of members, before names are proposed to the SC.

5.1 TP on diagnostic protocols (TPDP)

16. The steward (Mr Unger) reported on the last TPDP meeting and noted that lot of experience had been gained in a few years, and the panel is functioning well. The TP had discussed specific diagnostic protocols, and had determined a number of points for future drafting of diagnostic protocols, in particular, that they should not duplicate information available in pest data sheets around the world and trade and brand names would only be used if they were essential and there were no other options, or else they might be given as examples. Regarding the use of photographs in diagnostic protocols, the panel believed that only those that were essential should be used. Supplementary pictures could be provided on the IPP for reference, but not as an official part of the diagnostic protocol. As a result of a problem with the *Thrips palmi* diagnostic protocol, the TP believed that the SC should be very careful before considering changes in draft diagnostic protocols, because some editorial changes could change the meaning of the text.

17. In relation to the criteria for prioritization of diagnostic protocols, the SC decided on one change regarding importance in trade and relevance for countries.

18. The TPDP reviewed their membership after the retirement of the discipline lead in virology and decided that the current virologist would be able to take on the discipline lead role.

19. The SC:
1. *Noted* the progress with development of diagnostic protocols.
2. *Approved* the criteria for prioritization of diagnostic protocols (see report of the 2007 meeting of the TPDP).

3. *Recommended* a new protocol (*Striga* spp.) to the CPM for adoption on the IPPC standard setting work programme.

5.2 TP on forest quarantine (TPFQ)

20. The steward (Mr Wolff) summarised the activities of the TPFQ since the last meeting.

21. The steward noted that the panel had worked on the criteria for evaluation of treatments for ISPM No. 15 (*Guidelines for regulating wood packaging material in international trade*), so that these could be used in the evaluation of treatments by the TPPT. Although there had been a good exchange of ideas via e-mail on this issue after the meeting, the criteria had not yet been fully agreed to by the TP. The criteria will be discussed again at the 2008 TPFQ meeting. The draft criteria developed to date were presented to the SC for their consideration and the SC was invited to provide comments to the TP via the steward. In the meantime, the TPFQ had proposed that treatments be evaluated against the criteria used for the adoption of the existing treatments in ISPM No. 15.

22. The SC felt that it was important that alternative treatments for ISPM No. 15 should be evaluated by the TPPT in December and the existing criteria should be used.

23. One of the main issues regarding the revision to ISPM No. 15 was bark associated with wood packaging material. The TPFQ discussed the issue taking into account the findings of the IPPC bark survey and the recommendations of the International Forest Quarantine Research Group (IFQRG). The TPFQ agreed a tolerance for bark adhering to wood packaging material for inclusion in the revised ISPM. One SC member suggested that the scientific data gathered on bark risks should accompany the draft when it went for member consultation. The Secretariat agreed that such a document could be useful and would consider this at the time the draft was reviewed for member consultation. It was also noted that the Secretariat will be presenting a paper to CPM-3 on the results of the bark survey and the chair of IFQRG would also be making a presentation on the results of the bark survey.

24. The steward reminded the SC that the next meeting will focus on the draft ISPM on *International movement of wood* and it is essential that the specification is agreed for member consultation. Two other draft specifications were also presented for SC consideration and it was hoped that the SC will agree that all three can go for member consultation.

25. The SC agreed that the consideration of alternative treatments for ISPM No. 15 should be the highest priority of the TPPT at their next meeting with treatments for fruit flies as the second highest priority.

26. The SC:

1. *Noted* the progress made in the revision to ISPM No. 15.
2. *Noted* that the results of the IPPC bark survey will be summarised for CPM-3.
3. *Noted* the "Arrangements for treatment submissions for inclusion of new treatments in ISPM No. 15 made during 2006 and 2007" section of document 2007-SC-Nov-15, *invited* SC members to provide comments and/or feedback to the TPFQ as appropriate, and *decided* that the treatments submitted in 2006 and 2007 should be evaluated as proposed in this section for equivalence to the existing ISPM No. 15 treatments.
4. *Noted* that the TPFQ is expected to finalise the criteria for evaluation of future submissions of treatments for wood packaging material in 2008.
5. *Agreed* that the SC-7 should review the comments on specifications in response to the member consultation and *agreed* that the SC will approve them by e-mail.

5.3 TP on fruit flies (TPFF)

27. The steward (Mr Ribeiro e Silva) summarised the activities of the TPFF since the last meeting and informed the SC that the next meeting of the TPFF will focus on developing trapping procedures for fruit flies. The SC noted the items in the executive summary. In relation to the draft on *Systems approach for pest risk management for fruit flies (Tephritidae),* the steward received comments from SC members after the last meeting. The SC is invited to provide any further comments on the draft until 30 November and the draft will be forwarded to the Secretariat by 15 December. It will be presented to the meeting in May 2008 for consideration for member consultation in 2008.

28. The SC:
1. *Noted* the topic for the next TPFF meeting.
2. *Noted* the TPFF have invited two experts, one with quality assurance and one with expertise in trapping fruit flies in Asia.
3. *Noted* the new member of the TPFF representing the IAEA/FAO joint division.
4. *Noted* the possibility of the IAEA funding future meetings of the TPFF.
5. *Noted* the progress on the draft ISPM on *Systems approach for pest risk management for fruit flies (Tephritidae)*.

5.4 TP on the glossary (TPG)

29. The steward (Mr Hedley) presented the work plan of the TPG summarising the activities of the TPG since the last meeting.

30. The SC:
1. *Agreed* that the TPG should start developing a supplement on Montreal Protocol terminology, in a similar format as the supplement on CBD terminology.
2. *Noted* the current TPG work plan for October 2007 to 2008.
3. *Noted* the recommendation that the following terms should not be defined: *initiation*, *hazard*, *uncertainty*, *risk communication*, *natural range*, *regulatory control.*
4. *Noted* that the following TPG outcome will be presented to the SC in May 2008 for review prior to member consultation:
   - Draft amendments to ISPM No. 5
   - Draft supplement to ISPM No. 5 on terminology of the Convention on Biological Diversity in relation to the Glossary of Phytosanitary Terms

5.5 TP on phytosanitary treatments (TPPT)

31. In the absence of the steward, the Secretariat introduced the executive summary. It was noted that, as discussed under the TPFQ executive summary, the SC had already decided that the highest priority for the work of the TPPT in December 2007 would be treatments for inclusion in ISPM No. 15 as alternatives to methyl bromide, and a second highest priority would be fruit fly treatments.

32. A call for a new member for the TP was made in 2007. The Secretariat introduced a summary of the CVs of experts nominated for the TPPT. It was noted that it was difficult to decide from the CVs of some experts whether they met the criteria for the panel as the CVs were not always very detailed. The SC approved Mr Mizobuchi (Japan) as the new member of the TPPT.

33. The Secretariat noted that a new responsibility was proposed by the focus group for SC members to notify nominees from their regions that they were unsuccessful.

34. The SC-7, when reviewing the draft ISPM on classification of commodities, proposed, among other things, that the TPPT review annex 1 of the draft.

35. It was noted that Japan had approached the Secretariat regarding the possibility of funding the TPPT for the next 5 years and was considering to also hold a capacity building workshop on phytosanitary treatments. The idea of having the TPPT provide some guidance on this capacity building workshop was discussed. The SC noted that if the TPPT was to be involved in this workshop that criteria should be clearly laid out on how participants would be selected to attend the workshop. In addition, the SC noted that there should be a balance of topics discussed at the workshop. The SC agreed that the Secretariat could invite a representative from Japan to attend the portion of the TPPT meeting that discussed this workshop in order develop this proposal further.

36. The SC thanked Japan for their interest in hosting the TPPT.

37. The SC:
1. *Noted* the progress with the irradiation treatments.

2. *Noted* the number of treatment submissions received in 2006 and 2007 and the procedures to be used by the TPPT during their meeting in December 2007.
3. *Noted* the possibility of funding of TPPT meetings by Japan.
4. *Agreed* to an additional task for the TPPT to provide guidance on the capacity-building workshop on phytosanitary treatments, provided that the workshop is open to all contracting parties.
5. *Agreed* that the highest priority would be work on treatments for inclusion in ISPM No. 15 that are alternatives to methyl bromide, and the second highest priority would be work on fruit fly treatments.
6. *Approved* Mr Mizobuchi as a new member of the TPPT.
7. *Agreed* to have the TPPT review and, if appropriate, revise the annex to the draft ISPM on classification of commodities.
8. *Agreed* that the Secretariat could invite a representative from Japan to attend the portion of the TPPT meeting that discussed the capacity-building workshops for phytosanitary treatments.

6. ADJUSTMENTS TO THE STANDARD SETTING WORK PROGRAMME

6.1 Review of submissions of new topics for the standard setting work programme

38. The Secretariat introduced a paper presenting the topics submitted in the biennial call for topics, and the SPTA conclusions on strategic priorities for new topics for the standard setting work programme. The SPTA outlined the following strategic priorities for the SC to consider when selecting new topics for the standard setting work programme:

1. pathways for spread of pests (conveyances, plants for planting, grain, cut flowers, international garbage)
2. certification systems (including accreditation/authorization) with a view of filling some of the gaps in the framework for standards.

39. The SPTA recommended that the existing "*Procedures for identifying topics and priorities for standards*" be used when evaluating the submissions, since the new procedure and criteria had not yet been adopted by the CPM. The SC noted this and the strategic priorities.

40. The SC agreed to recommend to the CPM the addition of a diagnostic protocol for *Striga* spp. to the work programme based on the recommendation of the TPDP and the request of several countries.

41. The Secretariat indicated that, while the work programme currently included a long list of topics, continuing to add to the work programme ensured that work could begin and proceed in a steady manner and that, when resources become available, the Secretariat was ready to utilize them. The Secretariat suggested that the SC consider gaps in the existing framework of standards to identify how to best utilise resources. It also suggested that the SC consider prioritizing topics that would also involve other organizations, such as the proposed topics related to accreditation, maritime containers and vessels, air cargo and aircrafts. The Secretariat also noted that, to avoid duplication of work, the SC may consider modifying existing specifications to include additional points rather than adding new topics to the work programme.

42. Reorganizations of several or all ISPMs by subjects had been proposed in several submissions. Like the SPTA, the SC found the idea of reorganizing ISPMs appealing, especially because it would also allow to identify the gaps in the series of ISPMs. It recognized the SPTA argument that it would be a huge undertaking, and that resources at this stage were limited. However, the SC strongly believed that such reorganization should be considered when resources become available.

43. One member brought up the proposal for a standard on pathway-based pest risk analysis (PRA), a broad concept standard that could address gaps in the current suite of PRA standards, indicating that ISPM No. 2 (*Framework for pest risk analysis*, 2007) refers to pathway-based PRA but does not provide concept-level guidance on how to implement it, and that this proposal appeared to be closely related to the SPTA's strategic priority on pathways for the spread of pests. It was thought that this topic was a difficult one that would take a long time to develop and that other, more specific topics were more feasible. Others noted that contaminating pests impacted a large volume of trade and should be prioritized.

44. The SC noted that this agenda item would require a long discussion, and agreed to invite those interested to review the submission in an evening session. The Chair of the SC also chaired that session, and

reported back to the SC. The working group had reviewed the 36 submissions keeping in mind the procedures and the SPTA strategic directions, and a general comment on why a topic was not considered for the work programme is included in Appendix 3. There was considerable discussion on these topics, in particular on the following points:

- it was felt that work on accreditation would help to allow others to implement phytosanitary procedures with the proper NPPO oversight.
- the possible overlap between the current topic on *regulating stored products in international trade* and the proposed topics on *international movement of grain* was discussed. It was concluded that the former would deal with stored product pests and the latter would address all pest concerns related to international movement of grain.
- there were several submissions related to conveyances, both for air and sea, maritime containers, air cargo, and international garbage. It was agreed that all these topics were very relevant for ISPMs. In order to target the ISPMs and limit the scope to a workable level, which might also be of interest to other international organizations, it was decided to propose three topics for the work programme: *minimizing pest movement by sea containers and conveyances*, *minimizing pest movement by air containers and aircrafts* and *handling and disposal of international garbage*.
- the SC agreed to recommend that *Striga* spp. be placed on the work programme under the TPDP (see also section 5.1) as there was a need for some work to begin on plants that are pests. It was also recommended that the TPDP should also consider the possible inclusion of the other pests proposed in the submissions of topics: *Anguina* spp., *Conotrachelus nenuphar* and *Phoma exigua* var. *foveata*.
- the SC agreed to recommend that the topic *Wood products and handicrafts made from raw wood* be placed on the work programme under the TPFQ as this was removed from the specification for *International movement of wood* (see also section 8.1). The SC also noted that many handicrafts are produced in Africa and if the TPFQ does not have members with this expertise, they should consider inviting an expert to their meeting when they discuss this topic.

45. In addition, the SC requested the TPG to consider terms related to certification, such as certification schemes and certification programmes, and propose some wording which would provide a common understanding of these terms internationally.

46. The following 9 submissions were selected and will be recommended to the CPM for inclusion in the standard setting work programme:

Ref. No.	Priority	Topics identified for further consideration	Process
1.	Normal	Guidelines on the use of permits as import authorization (as an Annex to ISPM No. 20: *Guidelines for a phytosanitary import regulatory system*)	Regular
2.	High	Accreditation systems for phytosanitary programmes	Regular
3.	Normal	International movement of cut flowers and foliage	Regular
4.	Normal	International movement of grain	Regular
5.	High	Minimizing pest movement by sea containers and conveyances	Regular
6.	High	Minimizing pest movement by air containers and aircrafts	Regular
7.	Normal	Handling and disposal of international garbage	Regular
8.	High	*Striga* spp. (to be added to TPDP work programme)	Fast-track
9.	Normal	Wood products and handicrafts made from raw wood (to be added to TPFQ work programme)	Regular

6.2 Adjustments to stewards

47. The SC noted that Mr Adejare would be retiring prior to the November 2008 meeting. The SC adjusted the stewards assigned to draft ISPMs (Appendix 4).

48. The SC listed alternative potential replacement stewards for the three topics for forestry ISPMs which will be worked on by the TPFQ. These alternative stewards are members of the TPFQ and would be called upon if the TPFQ steward has to review member comments on more than one ISPM at the same time. This is further discussed in section 8 of this report.

49. The SC noted that stewards for new topics adopted on to the IPPC work programme would normally be allocated in the May meeting of the SC, after the CPM. However, because the SC would not be meeting in May 2008, it was necessary to make some preparations so that, if required, work on drafting specifications could progress prior to the November SC meeting. The SC discussed possible stewards for the proposed new topics but decided to assign stewards after the work programme is adopted by the CPM.

7. REVIEW OF THE STANDARD SETTING PROCESS

50. The SC was reminded that previous versions of the three procedures under consideration had been reviewed in November 2006, and submitted to CPM-2.

7.1 Background on the focus group and the SPTA

51. The Secretariat introduced the topic, outlining that CPM-2 had tasked a focus group to review four documents: procedures and criteria for identifying topics for inclusion in the IPPC standard setting work programme; the IPPC standard setting procedure (Annex 1 of the Rules of Procedure of the CPM); terms of reference and rules of procedure for technical panels; and transparency in the standard setting process. During the review, the focus group had revised the three procedures, made sure that transparency issues were considered throughout, and also made additional recommendations on transparency and other standard setting process issues. Further details are contained in the focus group report, which is available on the IPP. The SPTA reviewed the outcome of the focus group and further revised the three procedures. The SPTA also discussed some points addressed to it by the focus group and made recommendations. Both meetings raised some questions that require further discussion in the SC.

7.2 Draft procedure and criteria for identifying topics for inclusion in the IPPC standard setting work programme

52. The Secretariat outlined the main changes made by the focus group and the SPTA to the procedure since CPM-2. The main changes related to the criteria for identifying topics for inclusion in the IPPC standard setting work programme. In addition, the focus group had suggested a hierarchy of terms (paragraph 67 of the focus group report) for items worked on in the standard setting programme. It had differentiated between technical area, topic and subject. This terminology had been used throughout the redrafted procedures. The steward of the TPFF commented on this hierarchy of terms, which states that approval by the CPM is not required for “subjects” under the TPDP, TPPT and TPG. However, this could also apply in the future to the work of the TPFF. He gave examples such as a specific annex to ISPM No. 26 (*Establishment of pest free areas for fruit flies (Tephritidae)*) for a specific fruit fly species.

53. A member of the focus group indicated that the three TPs have a mandate to develop annexes for adopted ISPMs or work on specific terms, and that their ongoing work in this regard had been anticipated, but that the TPFQ and TPFF were considered to work in a different manner. Several members of the SC agreed with this differentiation and the SC decided to leave the text as approved by the SPTA, however noting that in the future it could be envisioned that “subjects” for the two other technical panels could also be recommended to the SC by the panels themselves. The SC indicated that they should suggest this to the CPM. The TPFF steward also indicated that he would like to discuss this at the next meeting of the TPFF.

54. The SC recommended that the procedure be presented for adoption at CPM-3 (Appendix 5). It also suggested that CPM should be asked to adopt the hierarchy of terms. It would be noted in the CPM paper that this did not exclude that the TPFF and TPFQ might work on some "subjects" in the future.

7.3 Draft terms of reference and rules of procedure for technical panels

55. The Secretariat outlined the changes made to the document since CPM-2 (2007). One SC member was concerned that the scope of TPs was not clearly linked to technical standards processed under the fast-track process, and that the distinction between TPs and expert working groups was not so clear, in that both could work on technical standards. It was indicated that this subject had been discussed extensively by the focus group, which had tried to clarify, in the functions of TPs (point 4), that TPs worked on technical standards (see also paragraphs 61-65 and 69 of the focus group report). The focus group had also felt that one advantage of TPs over expert working groups was their long-standing nature.

56. Another SC member was confused over rules 5 and 6 on TP stewards and other stewards. Although it recommended that TP stewards should be members of the SC, the rule did not specify anything for other

stewards. The Secretariat indicated that the rules for other stewards were set in another procedure, and that these stewards were not necessarily SC members.

57. The Secretariat noted that a term for TP membership had been fixed at 5 years, and guidance would be needed on whether this rule would apply from the moment when the revised Terms of reference and rules of procedure (TOR and ROP) were adopted by CPM. The SC recommended that all TP terms should begin at the time of adoption of these TOR and ROP.

58. The SC recommended that the document be presented for adoption at CPM (Appendix 6).

7.4 Draft standard setting procedure (Annex 1 of the Rules of procedure of the CPM)

59. The Secretariat outlined the changes made to the document since CPM-2 (2007). It was noted in particular that the fast-track process had been renamed the "special process", and the process modified taking into account the very technical nature of the standards and recent experience with the first diagnostic protocol. Member consultation would be inviting comments, which could be considered by the technical panel and the SC. The procedure also aimed that technical standards would not be discussed at CPM, and formal objections prior to CPM would lead to the draft being returned to the SC.

60. One member noted that, with the procedure, one country presenting a formal objection could hold back the standard. This was understood as such but it was pointed out that the SC could then decide to send the draft ISPM back to the CPM through the “regular process”.

61. The procedure did not specify who would be allowed to present formal objections prior to CPM, leaving the procedure open for both contracting parties and RPPOs to present formal objections prior to CPM. Several members believed that only contracting parties should be able to present formal objections, since RPPOs are only observers at CPM. The SC suggested however not to change the text, noting that RPPOs were also part of member consultation and were providing comments at earlier stages in the process.

62. The SC suggested adding a note on when documents should be posted on the IPP prior to CPM, in order for countries to have adequate time to prepare their comments prior to CPM. This would apply to both draft ISPMs under the regular and special process. It was suggested that the English version be posted as soon as possible and that the CPM follow similar guidance provided for documents going to FAO conference, i.e. that draft ISPMs in all FAO languages be posted at least 6 weeks prior to the opening of the CPM.

63. One member noted that the procedure did not mention in which languages the ISPMs were sent for consultation. Although the financial difficulties were understood, he hoped that in the future all draft ISPMs for consultation would be sent in all FAO languages.

64. The SC recommended that the procedure be presented for adoption at CPM (Appendix 7).

7.5 Other issues arising from the focus group and SPTA

65. The Secretariat introduced other issues arising from the focus group and SPTA, noting that all recommendations would be transmitted to CPM. The points for which SC input had been asked were raised and the outcome is detailed below.

66. Some members raised concerns regarding an imbalance in involvement that was arising between the SC-7 and SC-25 when budget limitations prevent the May 2008 meeting of the full SC-25.

7.5.1 Observers to the SC-7

67. The SPTA had asked the SC to consider the issue of observers at SC-7. Although this could wait until the procedures were adopted, the SC-7 would meet in May 2008, and guidance was needed. Up till now, the Secretariat has applied the rules for expert working groups, i.e. in which observers are not allowed, but noted that there had never been a request for an observer at an SC-7 until last week.

68. General issues to be considered are:

- observers from the SC and other observers (e.g. from RPPOs, international organizations, etc.) might need to be treated differently;
- the SC rules might also apply to the SC-7, in which case observers would be allowed and members would also have the right to request interpretation;
- there is a difference between the November meeting of the SC-7 which reviews comments (and for which observers might clearly hinder the process), and of the SC-7 in May which studies drafts prior to member consultation (and other tasks as decided by SC). The rules regarding observers might be different for the November and May SC-7 meetings.

69. The following arguments were expressed against the participation of observers:
- the SC-7 is a small meeting, and allowing observers might upset its functioning or create an unbalanced situation due to geographical or financial advantages or disadvantages for some observers;
- when it meets on its own, the SC-7 will produce a full report and this should ensure sufficient transparency for the whole SC;
- allowing observers at the SC-7 would not be needed if improvements to reports of the SC as suggested by the SPTA and focus group are implemented.

70. The following arguments were expressed in favour of participation of observers in the SC-7:
- if the SC rules also apply to SC-7, then observers are allowed;
- being able to attend SC-7 meeting would benefit SC members by building their knowledge of standards and ensure better interaction in the following SC-25 meeting;
- the SC-7 is convened in May 2008 only because of resources issues. However, the major concern should be the final quality of ISPMs, and having more SC members at the May 2008 meeting might ensure a better representation and improved quality of the draft ISPMs.

71. The SC could not reach an agreement and suggested that:
- no observers be allowed for the May 2008 meeting if only the SC-7 meets;
- the SC should re-discuss this issue after adoption of the procedures, when it reviews its TOR and ROP, and possibly consider setting up specific rules to guide the SC-7;
- in the meantime, the Secretariat should seek legal advice on whether the SC-7 is subject to the same rules as the SC.

7.5.2 Predictability of the consultation period for the special process

72. The SC envisaged that some predictability in the consultation period for the special process was needed. It was recognized that some predictability or rhythm would facilitate consultations, and it was considered that having two main periods would be helpful. However, the Secretariat was not in a position to propose dates/periods, but suggested that the SC should discuss this issue at its next meeting, after adoption of the procedures.

73. The SC agreed that the Secretariat develop proposals on two consultation periods per year for the special process, taking account as much as possible the constraints of experts involved in the process (e.g. demanding periods of the year, such as CPM) and those of the Secretariat (e.g. preparation of CPM and SC, translation, compiling comments, etc.). In the meantime, the current provisions regarding the fast track process would apply, i.e. drafts would be sent for consultation as they are cleared by the SC and are translated.

74. The SC agreed to re-discuss the issue at its next meeting, and that the CPM paper (in the paper on standard setting procedure) would mention that the SC would attempt to agree on some predictable periods for the “special process” member consultation at its next meeting.

7.5.3 Extended time schedule

75. The Secretariat reported that the SPTA was favourable to extending the time schedule for the standard setting process, and that the SC could apply an extended schedule, and asked the SC chair to inform the CPM that they would be applying this time period to most of the next draft ISPMs that go out for member consultation. One main objective would be to allow more time to consider member comments, by allowing more time for the Secretariat to compile comments, for the stewards to consider them and for the

SC to study them prior to their meeting. The SC noted that this would be a case-by-case approach and that it would still leave the possibility to proceed faster for some draft ISPMs if needed.

7.5.4 Transparency and posting of documents

76. The focus group and SPTA had both taken some decisions on what would be available to contracting parties (or publicly) on the IPP.

77. It had decided that stewards' reactions to member comments and working documents for EWGs and TPs would not be posted.

78. The following would be available to contracting parties only:
- revised draft ISPMs and specifications presented to the SC
- compilation of member comments at the same time as sending to the SC.

79. The following would be available publicly:
- SC agenda, list of documents and list of participants;
- reports of TP and EWG meetings;
- all documents approved by the SC during its meetings as appended to the SC report;
- a summary of major issues discussed and of SC reactions to substantive comments made that were not incorporated into the standard, both for draft ISPMs and draft specifications, as part of the SC report.

80. The focus group had also recommended that any other document or type of document could be made available on request of an SC member or a contracting party's contact point, with the prior agreement of the SC and, if applicable, of the author of the document.

81. The list of SC documents will always be posted on the IPP, but other documents could also be posted on a case-by-case basis.

82. The SC agreed to consider at its next meeting how the decision on case-by case basis would be taken by the SC (e.g. by the chairperson etc.). It noted that the IPP system would need to be changed so that some SC documents are available to the public, other available to contact points of contracting parties and others only to SC members.

8. DRAFT SPECIFICATIONS FOR APPROVAL FOR MEMBER CONSULTATION

83. The SC noted that specifications proposed by the TPFQ had identified an alternative steward who is also a member of the TPFQ. This would mean that if the steward of the TPFQ was involved with more than one draft ISPM, a member of the TPFQ with knowledge of the development of the draft would be available to act as steward. The steward of the TPFQ would aim to assist this steward if the case arose.

8.1 International movement of wood

84. The steward introduced the draft specification and indicated the importance of the specification for the work of the TPFQ. The SC provided feedback on the draft, and considered that the draft appeared to be too broad covering a large subject area and might be best covered by a number of ISPMs, rather than a single ISPM.

85. The SC noted that although options for treatments for wood and diagnostic methods for detection of wood pests should be referred to in the ISPM, these should not be considered in detail or included as annexes. Diagnostic protocols and phytosanitary treatments are already covered by ISPMs No. 27 and No. 28 respectively. The SC also proposed that the most important elements to be covered in the ISPM should be on pest risk management measures for the international movement of wood. Consideration of inspection and testing methodology for identifying compliance with import requirements and phytosanitary certification of wood should not be considered as a priority for this standard, but should not be lost and may be considered appropriate at a later date. The SC also recommended that the scope of the ISPM should be restricted to unmanufactured wood, excluding handicrafts. The SC agreed that the wooden handicrafts was an important topic and added it to the list of topics recommended for the IPPC standard setting work programme (see section 6.1).

86. The steward presented a revised draft and the SC approved the specification for member consultation (Appendix 8).

8.2 International movement of forest tree seeds

87. The steward introduced the draft specification, which was welcomed by the SC. One SC member noted that the volume of trade of forest tree seeds was not large and drafting an ISPM would involve a large amount of resources for such as small volume of trade. Other members pointed out that forest tree seeds had the potential to introduce pests to a very large area of natural forests and therefore the risks were very high. The SC noted that until now seeds had not been a subject addressed by the IPPC and this would be a focused standard which could act as a model for other standards on seeds. The SC also proposed that the standard should not apply to monocotyledonous species.

88. The steward presented a revised draft and the SC made further minor adjustments. The SC approved the specification for member consultation (Appendix 9).

8.3 Forest pest surveys

89. The steward introduced the draft specification and pointed out that ISPM No. 6 (*Guidelines for surveillance*) already covered surveillance and it might be appropriate to add an annex or annexes to this standard on surveys for forest pests. Alternatively a stand-alone standard might be suitable and the consideration of how the text should be presented was reflected in the tasks.

90. The SC considered the topic was important and felt this topic would supplement the proposed standard on the international movement of wood (see section 8.1). It was important for the designation of pest free areas and to provide guidance in outbreak situations on delimiting surveys and for pest eradication. The SC noted that due to the high biodiversity in tropical forests, the scope of the specification should be limited primarily to temperate and commercial forests.

91. The SC approved the draft specification for member consultation (Appendix 10)

8.4 Movement of used machinery and equipment

92. The steward introduced the draft specification, which had not been considered at the last SC meeting due to lack of time. Some SC members had submitted comments to the Secretariat after the May SC meeting and the draft had been modified accordingly.

93. The SC made some additional changes to the draft and approved it for member consultation (Appendix 11).

8.5 Inspection manual

94. The steward reminded the SC that there had been confusion regarding the content of the submissions and informed the SC that the Secretariat had written to the NPPOs who had originally submitted these proposals to seek clarification on what had been the intention of their submissions. Only one response had been received by the Secretariat and this response did not clarify the intent. The steward was requested to consider this topic and to develop a specification that she believed was needed. The draft specification would be submitted to the SC by the end of November 2007 and SC members would be invited to send in comments to the Secretariat (with a copy to the steward) by 1 February 2008. The draft would then be re-considered at the November 2008 SC meeting.

9. DRAFT SPECIFICATIONS FOR REVIEW OF MEMBER COMMENTS AND APPROVAL

9.1 Import of plant breeding material for scientific research and development purposes

95. The steward introduced the specification, which had been revised after member consultation. The SC made some additional changes to the draft including:

- to reflect the types of plant material that may be subject to special provision as covered by Article VII.5 of the IPPC (1997);
- to identify that the material may be potentially high risk (instead of normally prohibited);
- for the EWG to consider any specific measures that might be required if this high risk material is planted in the natural environment on selected sites; and

- an additional task was added to the list to “consider the wording of the title, if appropriate”.

96. The SC approved the specification (Appendix 12).

9.2 Regulating stored products in international trade

97. The steward explained that it had not been possible to make amendments to the specification and agreed to produce a revised draft for the SC to consider by the end of November 2007. SC members were invited to send comments to the steward by 1 February 2008 and the final draft would be submitted for approval at the November 2008 SC meeting.

10. PRACTICAL GUIDELINES FOR THE USE OF “SHOULD, “SHALL”, “MUST” AND “MAY”

98. The Secretariat introduced a paper on practical guidelines on the use of “must”, “shall”, “should” and “may” in ISPMs, which was prepared as per CPM-1 decision in collaboration with a member of the focus group on standard setting procedures The draft document had also been considered by the TPG at its meeting in October 2007 and consequently modified. The SC was invited to note the Secretariat document which would provide guidance to those involved in the standard setting process. The guidance would also be used for the consultant who would carry out the review of adopted ISPMs for consistency (topic on the work programme), since one task was to review the use of these terms.

99. The document explained the terms, and provided in particular that "shall" and "must" could be used in relation with IPPC obligations, and in the case of some actions of a technical nature essential to the implementation of a standard.

100. Three members from the Latin America and Caribbean region presented substantial concerns on the paper and thought in particular that:

- it gave opinions and interpretations of the CPM-1 decision, in particular in relation to the meaning of "should", giving it a higher level of obligation than CPM-1 had intended
- the use of "shall" and "must" in the guidance was too restricted. CPM-1 decision meant that use of these terms is not restricted as long as it is justified and within the framework of the Convention and the legal status of the standards. "Shall" or "must" could be used for any action essential for the successful implementation of an ISPM
- the paper gave examples of uses of terms in ISPMs, that were not consistent with their use in the Convention, but a more comprehensive review should be performed as part of the review of adopted ISPMs for consistency
- Annex 2 (giving guidance of which terms to use) should be modified.

101. The SC had an extensive discussion on the paper, and could not see how to resolve the issue during its meeting. It considered various options to take the issue forward within the SC, including convening an evening working group to further discuss the topic; forwarding the issue to the TPG; holding an e-mail discussion after the meeting; convening a small working group or focus group; preparing an alternative paper for consideration by the SC-7 in May 2008; and investigating the use of the terms by other international organizations. One suggestion was made to add these words to the glossary, but it was noted that these are not phytosanitary terms and this would not be appropriate.

102. Finally, the SC concluded that none of the solutions above would allow resolution of the underlying issue, which was not so much technical but rather political and relating to differences in understanding of the two CPM decisions on "should" and on the use of "shall" and "must". The SC finally recommended to forward the paper to CPM for a decision, explaining the issue. The CPM may then decide how to proceed. It was hoped that position papers would also be sent by parties concerned, in particular by those SC members who had raised substantial concerns.

103. In relation to the review of adopted ISPMs by a consultant, the SC decided that the task involving checking the use of the terms “should, “shall”, “must” and “may” would be removed from the terms of reference.

11. REPORT OF THE SC-7

104. The chair of the SC-7 (Mr Holtzhausen) gave a short overview of the work of the SC-7. He noted that Mr Ribeiro e Silva had been replaced by Ms Gonzalez for this meeting. He reported that the meeting took place in a frank and transparent atmosphere. All the draft ISPMs had been discussed and in two cases when stewards could not participate in the meeting, telephone conferences had been held with them. The SC-7 had produced documents summarising the main responses to member comments for each of the draft ISPMs for consideration by the SC. The SC appreciated the efforts made by the members of the SC-7 and thanked them for their work.

105. The SC-7 had considered the member comments and had amended the terms for the Glossary and draft ISPMs on FF-ALPP and Sampling. The SC-7 had been unable to reach a consensus on how to proceed with the draft ISPM on methyl bromide, so they had reviewed and adjusted the text and passed it to the SC for resolution on whether this text should go forward as a CPM policy or a standard. For the draft supplement to ISPM No. 5 on debarked and bark-free wood, widely differing comments had been received and, in discussion with the steward, the SC-7 recommended that the definitions should be passed to the CPM for adoption and that the remaining text and an earlier draft be sent as discussion documents to the TPFQ for the development of the ISPM on international movement of wood.

106. For the draft ISPM on classification of commodities, significant comments had been received and, in consultation with the steward, the SC-7 recommended the Secretariat to forward Annex 1 of the draft ISPM to the TPPT to consider which industrial food processes would be globally accepted as reducing pest risks to a very low level and, if appropriate, to recommend additional text on these processes to provide an explanation on why the risks had been reduced. The revised Annex should be sent to the steward who would revise the draft ISPM based on further study of member comments and re-submit it for consideration by the SC-7 in May 2008.

107. For the *Thrips palmi* diagnostic protocol, formal objections had been received: from Argentina, Bolivia, Brazil, Chile, Paraguay, Uruguay, COSAVE; from Australia; and from Japan. The SC-7 congratulated the discipline lead from the TPDP, the main author of the diagnostic protocol and the steward of the TPDP on their work to address the comments that had been received. The SC-7 believed that they had addressed the concerns and the Secretariat had sent the revised draft to check whether the formal objections would be withdrawn. The SC hoped further work on this draft ISPM could be done in conjunction with experts from the member countries who had made formal objections and if these objections are withdrawn this draft ISPM could be moved forward under the fast track process.

108. It was noted that at the time of SC, COSAVE on behalf of member countries had agreed to withdraw their formal objections, but Japan and Australia had indicated that further work was required before they would withdraw their formal objection.

12. DRAFT ISPMs FOR REVIEW OF MEMBER COMMENTS AND REDRAFTING - REGULAR PROCESS

109. The Chair reminded the SC that in the last CPM and in the focus group, requests for increased transparency from the SC regarding responses to comments submitted in the consultation period were expressed. In an attempt to address this, the stewards, SC-7 and Secretariat had drafted a summary of reactions to comments on each draft standard to help indicate to members the result of their input into the redrafting of the standards, especially for substantive comments which had not been incorporated. The SC did not have time to review or discuss the summaries in detail, but agreed that the stewards would again modify these summaries. It was agreed that this was a good first attempt to try to address members' concerns. The SC further agreed that these summaries should be annexed to the report of the meeting. One member proposed that the SC consider reviewing the summaries right after the revision of the draft ISPMs.

110. It was noted that this was the first time that stewards were requested to draft responses to comments on their draft ISPMs, especially for those comments which were not incorporated. This added to the stewards' workload and it was thought that additional guidance would be helpful. SC members were invited to submit suggestions to the Secretariat for amending the *Guidelines on the role of a steward of an ISPM* by 1 March 2008 in order to facilitate their draft responses to comments in future years.

12.1 Amendments to the Glossary (Steward: John Hedley)

111. The steward of the TPG introduced the amendments to the Glossary and thanked the Secretariat for their work in preparing the paper. Noting that two terms had been withdrawn from the proposal sent for consultation, he emphasized that Glossary terms could not be rushed and must be thought over very carefully. He also indicated that explanations about terms would be given in the CPM paper. It was hoped that this would facilitate understanding of the definitions by the CPM. The SC agreed with the amendments to the Glossary as proposed by the TPG and reviewed by the SC-7.

112. A summary of SC reactions to some comments is given in Appendix 13.

113. The CPM will be invited to adopt the amendments to the Glossary as presented in Appendix 13.

12.2 Establishment and maintenance of areas of low pest prevalence for fruit flies (Steward: Magda Gonzalez)

114. The steward of the draft standard gave an introduction to the draft ISPM, indicating that 530 comments on this draft had been submitted by members. Many of the comments addressed translation problems, with countries indicating that these had caused the text to lose its meaning. The TPG had addressed some of the comments regarding the terms *primary host* and *secondary host*, and recommended that these terms, rather than others suggested by members, should continue to be used in the standard, and the steward had applied this to the draft. Most of the comments were included, and some issues that needed discussion by the SC were presented.

115. In the background section, several members wanted to indicate that the document could also be relevant to domestic situations. A sentence was added to the end of the background outlining that this standard can also be applied for movement of fruit in domestic or national trade.

116. In section 1.2, the addition of non-commercial hosts was added, with some members indicating that in some cases these are important to consider.

117. In section 2.2.2, a discussion over the applicability of the term endemic took place, with a suggestion to replace it with established as it was thought that endemic excluded established, but not vice versa. It was decided that the terms were both relevant for different situations so both terms were left in the draft.

118. In section 2.5.1, some members did not feel that the text was clear regarding situations where the suspension of the FF-ALPP status could be applied only to part of the area, if that part could be delimited. Several attempts were made to modify the wording but the SC decided to retain the original wording, indicating that the paragraph was clear, provided it was read in its entirety.

119. The SC made some further minor modifications to the draft.

120. A summary of SC reactions to some comments is given in Appendix 14.

121. The CPM will be invited to adopt the draft ISPM *Establishment of areas of low pest prevalence for fruit flies (Tephritidae)* as modified and presented in Appendix 14.

12.3 Methodologies for sampling of consignments (Steward: David Porritt)

122. The SC discussed the revised draft. The SC noted that the scope of the draft ISPM did not cover field sampling, for example for surveys conducted in fields. The SC also noted that the draft was not intended to provide instructions to NPPOs on phytosanitary actions and part of the text was modified accordingly.

123. The SC discussed at length the term “tolerance level” and noted that some NPPOs implement tolerances for quarantine pests, for example, if after PRA they consider that the establishment potential of the pest is low or the intended use of the consignment limits the pest’s potential of entry into endangered areas. The SC also noted that ISPM No. 11 (*Pest risk analysis for quarantine pests including analysis of environmental risks and living modified organisms*, 2004) provides for the use of tolerances for quarantine pests. The SC therefore re-organised the text and added a reference to section 3.4.1 of ISPM No. 11 to improve the clarity of the text.

124. The SC discussed arrangement of the types of sampling and re-organised the text into statistically based and non-statistically based sampling sections. In the draft presented to the SC, the different types of non-statistically based sampling had been organised under a sub heading of targeted sampling methods, but this was not an appropriate title because some of the methods were not targeted methods and this section was re-organized. The sentence introducing the types of method was added to the introductory paragraph.

125. The SC discussed the issue of re-sampling and the fact that it should not be done unless necessary and to provide examples of when this might be appropriate. The SC noted that re-sampling altered the statistical basis of sampling.

126. There was some confusion on what repeated sampling meant and it was clarified that when it was proven that the initial sample was taken incorrectly or that there was a technical error, the lot could be sampled again using the correct method and this would not affect the statistical basis of the sampling.

127. One member pointed out that a comment regarding deletion of section 5.2 (Pest(s) distribution aggregated in the lot) had been missed from the compiled comments. However, he noted that the wording had been modified from the original draft and agreed that it would be more appropriate to consider the text further and, if necessary discuss the issue further at the CPM.

128. One member of the SC proposed that fixed proportion sampling (section 5.3) was also a type of sampling and should be included in the types of non-statistical sampling (section 3.2). The SC considered that this was not a type of sampling method, but was a way of taking a sample (proportion of the units in the lot) and was related to the size of the sample. The SC was reluctant to move the text because the EWG had placed the text in this section.

129. A summary of SC reactions to some comments is given in Appendix 15.

130. The CPM will be invited to adopt the draft ISPM *Methodologies for sampling of consignments* as modified and presented in Appendix 15.

12.4 Replacement or reduction of methyl bromide as a phytosanitary measure (Steward: Mohammad Katbeh Bader)

131. The steward introduced the draft ISPM. He noted that there had been 476 comments including proposals to present the drafts in different formats, including as an ISPM or as a CPM policy document. He informed the SC that there had been no consensus in the SC-7 on what type of document this should be and asked the SC to decide on how this text should be presented to the CPM.

132. The SC agreed that the information in this draft text was extremely important and should be given a high profile so that the IPPC could be seen to be addressing this important issue of reduction and replacement of methyl bromide for phytosanitary uses. The SC discussed the various options of taking forward the document. A number of members considered that it should go forward as an IPPC policy document. Others considered that the document provided guidance for NPPOs on the subject and was suitable for adoption as an ISPM. Still other members supported either option. The Secretariat noted that the topic had been adopted on to the IPPC work programme for development of an ISPM and it had been through the standard setting process, including improvement of the text as a result of the member consultation.

133. The Secretariat informed the SC that there currently was not a category for policy documents other than as appendices to the CPM report and that the only type of document that the IPPC currently had with a sufficiently high profile for this subject was an ISPM. They noted that the ICPM had adopted *Recommendation on the future of methyl bromide for phytosanitary purposes* (Appendix VIII of the report of ICPM-5), but it is not well known and this document updates this recommendation. The Secretariat informed the SC that the SPTA had discussed the possibility of having IPPC policy documents, for example as a set of documents similar to the set of ISPMs. The SPTA had not agreed to recommend this approach, but had asked one Vice-Chairperson of the IPPC (from Canada) to produce a discussion paper for CPM-3 on a strategy for the CPM to publish such policy documents.

134. The SC came to a compromise solution. Because the issue was so important for the IPPC, the document should go forward as an ISPM for consideration for possible adoption at CPM-3. If the CPM agrees to publish policy documents in the future, then it can consider changing the ISPM to the policy document format.

135. The SC made some adjustments to the text to improve the draft. In considering examples of phytosanitary measures for replacement of methyl bromide use (section 1), the SC removed reference to biological methods because these are usually not effective alternatives to methyl bromide unless used as part of a systems approach or in combination with other measures. The SC also introduced a separate paragraph to cover actions to be taken in cases of non-compliance. This was to avoid possible interpretation that these actions were equivalent to the other measures in normal trading situations and to prevent creation of barriers to trade.

136. The SC agreed to change the word "items" to "articles" to be more consistent with IPPC language. The SC noted that the EWG had recommended the consistent approach to reporting of methyl bromide use and had recommended that the list of articles in the appendix could be used to consistently record quarantine and pre-shipment (QPS) use. A sentence was therefore added to the appendix to reflect this.

137. The Secretariat informed the SC that the IPPC Secretariat is developing a website to post phytosanitary information, which would also contain the IPPC approved diagnostic protocols and phytosanitary treatments (annexes to ISPMs No. 27 and No. 28, respectively), and NPPOs and RPPOs could also post treatments that they have approved. There would be a clear distinction between the IPPC adopted ISPMs and treatments approved by NPPOs or RPPOs.

138. A summary of SC reactions to some comments is given in Appendix 16.

139. The CPM will be invited to consider for possible adoption the draft ISPM *Replacement or reduction of methyl bromide as a phytosanitary measure* as modified and presented in Appendix 16.

12.5 Supplement to ISPM No. 5 on debarked and bark-free wood (Steward: Ringolds Arnitis)

140. The steward indicated that many controversial comments were received on the draft supplement to ISPM No. 5 on debarked and bark-free wood. Some comments indicated that the supplement should be adopted as such, others indicated that it should be put on hold until the revision of ISPM No. 15 is completed, and still others indicated that only the definitions contained in the supplement should be adopted. Due to these conflicting comments, the steward was unable to redraft the text. The steward indicated that the only part of the text that countries agreed to was the three definitions for *bark*, *bark-free wood* and *debarked wood*, and he put forward the proposal that only the definitions should be submitted to the CPM for adoption.

141. The SC agreed that the remaining text of the supplement should not be lost, and decided to submit it to the TPFQ for their use in the drafting of the ISPM on international movement of wood.

142. A summary of SC reactions to some comments is given in Appendix 17.

143. The CPM will be invited to adopt the definitions for *bark*, *bark-free wood* and *debarked wood* as part of the amendments to the Glossary as presented in Appendix 13.

12.6 Classification of commodities into phytosanitary risk categories

144. The steward explained the member comments on the draft ISPM. He noted that there had been concerns regarding the commodities listed in the annex and whether they all reduced the pest risks to a very low level.

145. The SC agreed that this was an important ISPM and would prevent unnecessary requirements for phytosanitary certificates for processed commodities. They noted that these were industrial processes and in many cases there might be industry quality requirements for food safety purposes. They agreed that further consideration of the parameters involved in the processes was required in order to be able to agree on globally acceptable processes that reduce pest risks to a very low level. They agreed that it was important to

have a common understanding of the meaning of certain processes, for example there may be different interpretations of the term sterilization.

146. The SC agreed that annex should be considered by an FAO expert on industrial food processing, who would provide information on the parameters involved in the different industrial processes. The annex would then be passed to the TPPT to identify which processes reduced the pest risks to a very low level and would be acceptable globally (see also section 5.5). The Secretariat would then forward the draft annex to the SC and steward, inviting the SC to submit comments to the steward. The steward would revise the ISPM as appropriate and present a revised draft to the SC in May 2008.

147. A summary of SC reactions to some comments is given in Appendix 18.

13. DRAFT ISPMs FOR REVIEW - FAST-TRACK PROCESS

13.1 Annex to ISPM No. 27 (*Diagnostic protocols for regulated pests*): *Thrips palmi*

148. The steward of the TPDP informed the SC that the TPDP discipline lead for entomology and the editorial team for this diagnostic protocol had made every effort to resolve the formal objections received from several members as had been indicated by the SC-7 chair in his report (section 11). The steward regretted that there still remained two formal objections.

149. The Secretariat will now continue to attempt to resolve these formal objections and has requested assistance from the TPDP steward, discipline lead and editorial team.

150. One member raised a concern that one of the formal objections was not based on a technical issue but rather a more philosophical issue of who was expected to use the diagnostic protocol. The SC was reminded that they had previously agreed with the TPDP decision that the diagnostic protocols were to provide guidance to an experienced diagnostician on how to carry out the diagnoses and should not be a standard operating procedure.

151. The SC thanked the various experts for their efforts to move this diagnostic protocol forward and agreed that if the formal objections are not withdrawn by the end of December 2007 that the SC would recommend to the CPM that the standard setting work programme be adjusted to move this diagnostic protocol from the fast track process to the regular process. The Secretariat indicated that if the revised fast-track process (special process) is adopted by the CPM, the SC will be able to transfer a draft ISPM into the regular standard setting process.

14. OTHER BUSINESS

152. If only the SC-7 would meet in May 2008, it was agreed that they would be able to recommend draft ISPMs for member consultation, but the SC did not delegate any other authorities to the SC-7. As per usual, working papers for the meeting would be posted on the SC restricted work area and SC members are invited to submit comments to their regional representative. The SC member of each region could enter in contact with other members of the region for the process of member consultation.

153. The SC selected Ms Gonzalez to replace Mr Ribeiro e Silva on the SC-7.

15. DATE AND VENUE OF THE NEXT MEETING

154. The SC was informed of the tentative dates of the meetings of the SC-7 and SC in 2008:

- SC-7: 5-9 May 2008 and 10-14 November 2008
- SC: 17-21 November 2008.

16. ELECTION OF THE CHAIR

155. The SC elected Mr Ribeiro e Silva as their chair.

17. ADOPTION OF THE REPORT

156. The SC adopted the report of the meeting.

18. CLOSE

157. The outgoing chair (Mr Veerecke) thanked the SC for a productive meeting. In turn the SC thanked the chair for his long service to the SC and for his valuable contribution to the phytosanitary world and wished him well in his retirement.

AGENDA

Standards Committee
5 - 9 November 2007
FAO Headquarters, Rome, Italy

AGENDA ITEM	DOCUMENT
1. Opening of the meeting	
2. Adoption of the agenda • Documents list • List of participants • Report of SC May 2007	2007-SC-Nov-01 2007-SC-Nov-02 2007-SC-Nov-03 2007-SC-Nov-04
3. Election of the rapporteur	
4. Update on the standard setting work programme	2007-SC-Nov-05-Rev2
5. Executive summaries of technical panels	
5.1 TP Diagnostic protocols	2007-SC-Nov-11-Rev1
5.2 TP Forest quarantine	2007-SC-Nov-14 2007-SC-Nov-15
5.3 TP Fruit flies	2007-SC-Nov-12
5.4 TP Glossary	2007-SC-Nov-17-Rev1
5.5 TP Phytosanitary treatments	2007-SC-Nov-13
6. Adjustments to the standard setting work programme	
6.1 Review of submissions of new topics for the standard setting work programme	2007-SC-Nov-06 2007-SC-Nov-06-ADD 2007-SC-Nov-22 (section 6.4) 2007-SC-Nov-29 2007-SC-Nov-30
6.2 Adjustments to stewards	
7. Review of the standard setting process	
7.1 Report of the Focus Group on the review of standard setting procedures	2007-SC-Nov-07
7.2 Extracts from the SPTA discussions on the standard setting process	2007-SC-Nov-22
7.3 Review of updated documents for submission to CPM	2007-SC-Nov-16
8. Draft specifications for approval for member consultation	
8.1 International movement of wood (Steward: Greg Wolff)	2007-SC-Nov-08
8.2 International movement of forest tree seed (Steward: Greg Wolff)	2007-SC-Nov-09
8.3 Forestry surveillance (Greg Wolff)	2007-SC-Nov-10
8.4 Movement of used equipment and machinery (Steward: Gabriel Adejare)	2007-SC-Nov-28
8.5 Inspection manual (Steward: Julie Aliaga)	--
9. Draft specifications for review of member comments and approval	
9.1 Importation of plant breeding material for scientific research and development purposes (Steward: Mike Holtzhausen)	2007-SC-Nov-19
9.2 Regulating stored products in international trade (Steward: Robert Karyeija)	--
10. Practical guidelines for the use of "should," "shall," "must" and "may"	2007-SC-Nov-18
11. Report of the SC-7	
12. Draft ISPMs for review of member comments and redrafting (regular process)	
12.1 Amendments to the Glossary (Steward: John Hedley)	2007-SC-Nov-20 2007-SC-Nov-20-ADD
12.2 Establishment and maintenance of areas of low pest prevalence for fruit flies (Steward: Magda Gonzalez)	2007-SC-Nov-21 2007-SC-Nov-21-ADD

AGENDA ITEM	DOCUMENT
12.3 Sampling of consignments (Steward: David Porritt)	2007-SC-Nov-26 2007-SC-Nov-26-ADD
12.4 Developing a strategy to reduce or replace the use of methyl bromide for phytosanitary purposes (Steward: Mohammad Katbeh-Bader)	2007-SC-Nov-23 2007-SC-Nov-23-ADD
12.5 Debarked and bark-free wood (Steward: Ringolds Arnitis)	2007-SC-Nov-25
12.6 Classification of commodities into phytosanitary risk categories (Steward: Diego Quiroga)	2007-SC-Nov-27
13. Draft ISPMs for review - fast-track process	
13.1 *Thrips palmi* diagnostic protocol	2007-SC-Nov-24 2007-SC-Nov-24-ADD
14. Other business	
14.1 Discussion on SC decisions by e-mail and/or delegation to SC-7 in May 2008	
15. Date and venue of the next meeting	
15.1 SC-7	
15.2 Standards Committee	
16. Adoption of the report	
17. Close	

DOCUMENTS LIST

Standards Committee
5 - 9 November 2007
FAO Headquarters, Rome, Italy

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2007-SC-Nov-18	10	Practical guidelines on the use of “must”, “shall”, “should” and “may” in ISPMs	23-Oct-2007
2007-SC-Nov-19	9.1	Draft specification: Importation of plant breeding material	26-Oct-2007
2007-SC-Nov-20	12.1	Draft ISPM: amendments to the glossary	29-Oct-2007
2007-SC-Nov-20-ADD	12.1	Response to comments: amendments to the glossary	30-Oct-2007
2007-SC-Nov-21	12.2	Draft ISPM: establishment of areas of low pest prevalence for fruit flies (Tephritidae)	29-Oct-2007
2007-SC-Nov-21-ADD	12.2	Response to comments: FF-ALPPs	30-Oct-2007
2007-SC-Nov-22	7.2	Extracts from the report of SPTA	31-Oct-2007
2007-SC-Nov-23	12.4	Draft ISPM: replacement or reduction of methyl bromide as a phytosanitary measure	01-Nov-2007
2007-SC-Nov-23-ADD	12.4	Response to comments: Methyl bromide	01-Nov-2007
2007-SC-Nov-24	13.1	*Thrips palmi* diagnostic protocol	01-Nov-2007
2007-SC-Nov-24-ADD	13.1	*Thrips palmi* diagnostic protocol - issues and proposal	02-Nov-2007

DOCUMENT NUMBER	AGENDA ITEM	DOCUMENT TITLE	DATE POSTED / DISTRIBUTED
2007-SC-Nov-25	12.5	Debarked and bark-free wood - issues and text proposal	01-Nov-2007
2007-SC-Nov-26	12.3	Draft ISPM: sampling of consignments	01-Nov-2007
2007-SC-Nov-26-ADD	12.3	Response to comments: sampling of consignments	02-Nov-2007
2007-SC-Nov-27	12.6	Classification of commodities - issues and proposals	02-Nov-2007
2007-SC-Nov-28	8.4	Draft specification for approval for country consultation: Movement of used machinery and equipment	06-Nov-2007
2007-SC-Nov-29	6.1	Topics identified for further consideration	07-Nov-2007
2007-SC-Nov-30	6.1	Pest movement by sea containers and conveyances and by aircraft	07-Nov-2007

Summary of SC reactions to submissions for topics for the IPPC standard setting work programme

	Topic proposed	Submitted by	Summary response
1.	Review of adopted ISPMs for consistency	Argentina, Brazil, Chile, Paraguay, Uruguay, COSAVE	Already on the work programme
2.	Systems approach for management of *Xanthomonas axonopodis* pv. *citri* (citrus canker)	Argentina, Brazil, Chile, Paraguay, Uruguay, COSAVE	Already on the work programme
3.	Areas of low pest prevalence for fruit flies	United States	Already on the work programme
4.	Reorganization of ISPMs	Japan	The SC recognized the SPTA argument that it would be a huge undertaking, and that resources at this stage were limited. However, the SC strongly believed that this should be considered when resources become available
5.	ISPM No. 26 Establishment of pest free areas for fruit flies (Tephritidae) and ISPM No. 10 Requirements for the establishment of pest free places of production and pest free production sites	United States	The SC recognized the SPTA argument that it would be a huge undertaking, and that resources at this stage were limited. However, the SC strongly believed that this should be considered when resources become available
6.	Pest risk management	Canada	Wait until major reorganization of PRA standards
7.	Pathway / commodity PRA	Canada	Interacts with the topic of "classification of commodities". Wait until developed, and see if needs to be resubmitted
8.	Establishment and management of regulated areas for outbreaks of quarantine pests in free areas	Argentina, Brazil, Chile, Paraguay, Uruguay, COSAVE	General points covered under ISPMs No. 4 and 10. Wait for revision of these standards
9.	Post-entry quarantine system	Republic of Korea	Interacts with the topic on "post-entry quarantine facilities". Wait until developed, and see if needs to be resubmitted
10.	Guideline on use of permits as import authorization (Annex of ISPM No. 20)	Japan	**Propose to CPM as possible new topic**
11.	Guidelines for establishing a quarantine treatment efficacy assurance system	Australia	Interacts with the topic on "inspection manual". Wait until developed, and see if needs to be resubmitted
12.	Accreditation systems for phytosanitary programs	United States	**Propose to CPM as possible new topic**
13.	Use of certification schemes for the production of healthy plants for planting	EC and its member states, Slovenia	Interacts with the topic on "pest risk management for plants for planting". Wait until developed, and see if needs to be resubmitted
14.	Age and size restriction of plants for planting	United States	Interacts with the topic on "pest risk management for plants for planting". Wait until developed, and see if needs to be resubmitted
15.	Certification programmes and systems approaches for movement of cut flowers and foliage	Canada	**Propose to CPM as possible new topic: international movement of cut flowers and foliage**
16.	Phytosanitary procedures for the international movement of cut flowers and foliage	United States	

	Topic proposed	Submitted by	Summary response
17.	Phytosanitary procedures for the international movement of grains	Mexico	**Propose to CPM as possible new topic: international movement of grain**
18.	Grain for human and animal consumption	EC and its member states, Slovenia	
19.	Guidelines for regulating wood decorative products or handicrafts moving in international trade	New Zealand	**Propose to CPM as possible new topic: wood products and handicrafts made from raw wood**
20.	Guidelines for the movement of medicinal plant materials with barks	Nigeria	Does not meet the current criteria for screening topics as the volume of trade is not high and only affecting one region
21.	Guidelines for the international movement of Christmas trees	Saint Kitts and Nevis	Does not meet the current criteria for screening topics as the volume of trade is not high and only affecting one region
22.	ISPM No 15 Annex II "Re-use wood packing material"	Republic of Korea	Interacts with the topic on "revision of ISPM No. 15" (under TPFQ). Wait until developed, and see if needs to be resubmitted
23.	Sea container cleanliness	New Zealand	**Propose to CPM as possible new topic: Minimizing pest movement by sea containers and conveyances**
24.	Maritime vessels phytosanitary inspection	United States	
25.	The phytosanitary regulation of maritime vessels	Canada	
26.	The phytosanitary regulation and treatment of international air cargo and conveyances	Canada	**Propose to CPM as possible new topic: Minimizing pest movement by air containers and aircrafts**
27.	Cargo aircraft inspection	United States	
28.	Phytosanitary procedures for the international movement of ceramic tiles and quarry products	United States	Too specific
29.	Handling and disposal of international garbage	Saint Lucia, Dominica	**Propose to CPM as possible new topic**
30.	Guidelines for importation and confined release of transgenic arthropods	United States	Too specific
31.	Guidelines for the introduction of natural enemies for pink hibiscus mealybug (PHMB) (*Maconellicoccus hirsutus*)	Jamaica, Dominica	Too specific
32.	Guidelines for regulating armoured scales on commodities for consumption	United States	Too specific
33.	Guidelines for control measures for *Bemisia* spp on plant materials in international trade	Nigeria	Too specific
34.	Guidelines for determining host status for fruit flies	United States	Interacts with the topic on "*determination of host susceptibility for fruit flies*" (under TPFF). Wait until developed, and see if needs to be resubmitted
35.	*Anguina* spp., *Conotrachelus nenuphar*, *Striga* spp., *Phoma exigua* var. *foveata*	Argentina, Brazil, Chile, Paraguay, Uruguay, COSAVE	***Striga* spp. proposed to be added to TPDP work programme** Others to be considered as possible subjects at the next TPDP meeting
36.	Should, shall, must and may	United States	Guidance being developed

LIST OF STEWARDS OF ISPMs AND TECHNICAL PANELS

STEWARDS OF DRAFT ISPMs		
Steward	**Spec No.**	**Title of Specification**
Aliaga, Julie (USA)	*(draft)*	Inspection manual
Aliaga, Julie (USA)	33	Supplement to ISPM No. 5: Guidelines for the interpretation and application of the phrase not widely distributed in relation to quarantine pests
Arnitis, Ringolds (Latvia)	17 Rev1	Debarking of wood
Bast-Tjeerde, Reinouw (Canada)	37	Use of the term country of origin in existing ISPMs
Enkerlin, Walther (NAPPO)	35	Trapping procedures for fruit flies (Tephritidae)
Gonzalez, Magda (Costa Rica)	28	Areas of low pest prevalence for fruit flies
Gonzalez, Magda (Costa Rica)	41	Establishment of pest free places of production and pest free production sites for fruit flies (Tephritidae)
Hedley, John (New Zealand)	08 Rev1	Efficacy of measures: concept and application
Hedley, John (New Zealand)	32	Review of ISPMs
Holtzhausen, Mike (South Africa)	23	Guidelines for surveillance for specific pests: *Xanthomonas axonopodis* pv. *citri* (citrus canker)
Holtzhausen, Mike (South Africa)	29	The use of integrated measures in a systems approach for pest risk management of fruit flies
Holtzhausen, Mike (South Africa)	42	Pre-clearance for regulated articles
Holtzhausen, Mike (South Africa)	45	Import of plant breeding material
Karyeija, Robert (Uganda)	*(draft)*	Movement of used machinery and equipment
Karyeija, Robert (Uganda)	*(draft)*	Regulating stored products in international trade
Katbeh Bader, Mohammad (Jordan)	43	Movement of soil and growing media in association with plants in international trade
Katbeh Bader, Mohammad (Jordan); Assistant: Côté, Steve (Canada)	16	Alternatives to methyl bromide
Melcho, Beatriz (Uruguay)	24	Post-entry quarantine facilities
Opatowski, David (Israel)	34	Pest risk management for plants for planting in international trade
Porritt, David (Australia)	20	Sampling of consignments
Porritt, David (Australia)	40	Development of Annex 1 (Specific Approved Treatments) of ISPM No. 18
Porritt, David (Australia)	44	Pest risk analysis for plants as quarantine pests
Quiroga, Diego (Argentina)	18	Classification of commodities into phytosanitary risk categories
Ribeiro e Silva, Odilson (Brazil)	*(draft)*	Determination of host susceptibility for fruit flies (Tephritidae)
Ribeiro e Silva, Odilson (Brazil)	15 Rev1	The use of integrated measures in a systems approach for pest risk management of citrus fruit for citrus canker (*Xanthomonas axonopodis* pv. *citri*)
Ribeiro e Silva, Odilson (Brazil)	39	Suppression and eradication procedures for fruit flies (Tephritidae)
Sakamura, Motoi (Japan)	38	Revision of ISPMs No. 7 and 12

STEWARDS OF DRAFT ISPMs		
Steward	**Spec No.**	**Title of Specification**
Wang, Fuxiang (China)	36	Appropriate level of protection
Wolff, Greg (Canada)	21	Guidelines for regulating potato micropropagation material and minitubers in international trade
Wolff, Greg (Canada)	31	Revision of ISPM No. 15 (Guidelines for regulating wood packaging material in international trade)
Wolff, Greg (Canada) (Back-up: Christer Magnusson (Norway))	*(draft)*	International movement of wood
Wolff, Greg (Canada) (Back-up: Shane Sela (Canada))	*(draft)*	Forest surveillance
Wolff, Greg (Canada) (Back-up: Thomas Schroeder (Germany))	*(draft)*	International movement of forest tree seeds

STEWARDS OF TECHNICAL PANELS		
Steward	**Spec No.**	**Title of Specification**
Hedley, John (New Zealand)	TP5	Technical panel on the *Glossary of phytosanitary terms*
Porritt, David (Australia)	TP3 Rev1	Technical panel on phytosanitary treatments
Ribeiro e Silva, Odilson (Brazil)	TP2 Rev2	Technical panel on pest free areas and systems approaches for fruit flies
Unger, Jens (Germany)	TP1 Rev2	Technical panel to develop diagnostic protocols for specific pests
Wolff, Greg (Canada)	TP4 Rev1	Technical panel on forest quarantine

Draft

PROCEDURE AND CRITERIA FOR IDENTIFYING TOPICS FOR INCLUSION IN THE IPPC STANDARD SETTING WORK PROGRAMME

In establishing topics for standards to be included in the IPPC standard setting work programme, the following procedure should be used[1]:

1. The IPPC Secretariat calls for submissions for topics to be included in the standard setting work programme. A call is made every two years. It is sent to contracting parties, NPPOs, RPPOs and the WTO-SPS Secretary, and is also posted on the International Phytosanitary Portal (IPP, www.ippc.int). Other organizations (such as the Convention on Biological Diversity) and CPM technical panels can also respond to the call.

2. Detailed proposals for new topics or for the revision of existing ISPMs are submitted to the Secretariat (IPPC@fao.org) no later than the 31 July of the year the call for topics is made, using the submission form for CPM standard setting work programme topics available on the IPP. Submissions should address the applicable criteria for justification of the proposed topic (as listed below). Where possible, information in support of the justification and that may assist in the prioritization should be indicated. Submissions should preferably be made in an electronic format.

3. A list of topics is compiled by the IPPC Secretariat from the submissions received. Submissions from previous years which were not added to the standard setting work programme are not included in this compilation. They may be re-submitted, as appropriate.

4. The compiled list of detailed proposals is presented to the Informal Working Group on Strategic Planning and Technical Assistance (SPTA) and posted on the IPP. The SPTA reviews these submissions and identifies strategic priorities taking into account the criteria for justification of proposed topics (as listed below).

5. The Standards Committee, taking into account the SPTA strategic priorities and using the criteria listed below, reviews the existing work programme and the compiled list of detailed proposals. It proposes a revised work programme, adding, deleting or modifying topics as appropriate, giving each topic a recommended priority (high or normal), and identifying those topics that may be processed under the special standard setting process.

6. The CPM reviews the work programme proposed by the Standards Committee. The CPM adjusts and adopts the standard setting work programme, including for each topic its priority and whether the topic may be processed under the special standard setting process. A revised standard setting work programme is attached as an appendix to the CPM meeting report.

7. In any year, when a situation arises in which a standard is required urgently, the CPM may insert such a topic into the standard setting work programme.

[1] Other than proposals for subjects related to topics previously adopted by the CPM related to annexes and appendices to be worked on by technical panels.

Criteria for justification and prioritization of proposed topics

Core criteria

1. Contribution to the purpose of the IPPC as described in article I.1.
2. Feasibility of implementation at the global level (includes ease of implementation, technical complexity, capacity of NPPOs to implement, relevance for more than one region).
3. Clear identification of the problems that need to be resolved through the development of the standard.

Supporting criteria

Technical

1. Availability of, or possibility to collect, information in support of the proposed standard (scientific, historical, technical information, experience).

Practical

2. Feasibility of adopting the proposed standard within a reasonable time frame.
3. Stage of development of the proposed standard (is a standard on the same topic already widely used by NPPOs, RPPOs or a relevant international organization).
4. Availability of expertise needed to develop the proposed standard.

Economic

5. Estimated value of the plants protected.
6. Estimated value of trade affected by the proposed standard (e.g. volume of trade, value of trade, the percentage of Gross Domestic Product of this trade) if appropriate.
7. Estimated value of new trade opportunities provided by the approval of the proposed standard.
8. Potential benefits in terms of pest control or quarantine activities.

Environmental

9. Utility to reduce the potential negative environmental consequences of certain phytosanitary measures, for example reduction in global emissions for the protection of the ozone layer.
10. Utility in the management of non indigenous species which are pests of plants (such as some invasive alien species).
11. Contribution to the protection of the environment, through the protection of wild flora, and their habitats and ecosystems, and of agricultural biodiversity.

Strategic

12. Extent of support for the proposed standard (e.g. one or more NPPOs or RPPOs have requested it, or one or more RPPOs have adopted a standard on the same topic).
13. Frequency with which the issue addressed by the proposed standard emerges as a source of trade disruption (e.g. disputes or need for repeated bilateral discussions, number of times per year trade is disrupted).
14. Relevance and utility to developing countries.
15. Coverage (application to a wide range of countries/pests/commodities).
16. Complements other standards (e.g. potential for the standard to be used as part of a systems approach for one pest, complement treatments for other pests).
17. Foundation standards to address fundamental concepts (e.g. treatment efficacy, inspection methodology).
18. Expected standard longevity (e.g. future trade needs, suggested use of easily outdated technology or products).
19. Urgent need for the standard.

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TERMS OF REFERENCE AND RULES OF PROCEDURE FOR TECHNICAL PANELS

Terms of reference

1. Scope of Technical Panels

Technical Panels (TPs) assist the SC in the development of International Standards for Phytosanitary Measures (ISPMs) in their specified technical areas on topics which have been determined by the Commission on Phytosanitary Measures (CPM).

2. Objective

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

3. Structure of Technical Panels

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

4. Functions of Technical Panels

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

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

5. IPPC Secretariat

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

6. Establishment of Technical Panels

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

Rules of procedure

Rule 1. Membership

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

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

Rule 2. Procedure for Nomination and Selection of Technical Panel Members

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

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

Rule 3. Period of Membership

Members of TPs may serve for a 5 year period, after which, with the member's agreement, the SC may extend membership for additional terms. The SC may, in accordance with Rule 1 of these Rules of Procedure, change or amend the membership of TPs at any time. Membership should be reviewed regularly by the SC, and membership may be confirmed. Extension of membership does not require the application of the nomination procedure according to Rule 2. Members may at any time withdraw from the TP.

Rule 4. Chair
The Chairpersons of TPs are elected at each meeting by their members.

Rule 5. TP Steward
Each TP should have a TP steward, selected by the SC. Where possible, that TP steward should be a member of the SC. The TP steward is responsible for liaison between the SC and the TP, ensuring the TP follows the guidance given by the SC.

Rule 6. Other stewards
Stewards assigned by the SC to work on a specific standard, annex or supplement referred to the TP may also participate in that TP meeting.

Rule 7. Observers and participation of non-members of the Technical Panel
TPs should not allow observers.

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

A representative of the host country and/or organization may participate in the meeting of a TP, and assist the IPPC Secretariat in the organization and efficient running of the meeting.
Decisions of TPs are taken by their members only.

Rule 8. Sessions
TPs should meet as necessary, generally once a year. E-mail, teleconferencing and other modern communication methods should be used where possible to prepare and supplement face to face meetings of TPs.

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

Rule 9. Approval
Approvals relating to draft documents and agreement on advice provided to the SC should be by consensus and communicated to the SC by the relevant steward. If consensus is not reached, contentious issues should be noted in the report and brought to the attention of the SC.

Rule 10. Reports
The report of each TP meeting should be published on the IPP. Major discussion issues should be noted in the report and the rationale for conclusions should be recorded.

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

Rule 11. Working Language
English should be the working language of TP meetings.

Rule 12. Amendments
Amendments to the Terms of reference and Rules of procedures, if required, should be adopted by the CPM.

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IPPC STANDARD SETTING PROCEDURE
(ANNEX 1 of the RULES OF PROCEDURE OF THE CPM)

The process for the development of international standards for phytosanitary measures (ISPMs) is divided into four stages:

- Stage 1 - developing the IPPC standard setting work programme,
- Stage 2 - drafting,
- Stage 3 - member consultation,
- Stage 4 - adoption and publication.

Relevant ICPM/CPM decisions on many aspects of the standard setting process have been compiled in the IPPC Procedural Manual which is updated annually.

STAGES

Stage 1: Developing the IPPC standard setting work programme

Step 1: Call for topics

A call for topics is made by the IPPC Secretariat every two years. Detailed proposals for new topics or for the revision of existing ISPMs are submitted to the IPPC Secretariat.

Step 2: Adjustment and adoption of the IPPC standard setting work programme

The CPM adjusts and adopts the IPPC standard setting work programme, taking account of the strategic priorities identified by the Informal Working Group on Strategic Planning and Technical Assistance and the revised work programme proposed by the Standards Committee.

Stage 2: Drafting

Step 3: Development of a specification

For each topic or technical panel, the Standards Committee appoints a steward(s), who, in collaboration with the Secretariat, drafts a specification, taking into account the proposal(s) for the topic.

The draft specification is reviewed by the Standards Committee and, once approved for member consultation, is then made available on the International Phytosanitary Portal (IPP) for a 60 day consultation period. Comments received by the IPPC Secretariat are compiled, posted on the IPP and submitted to the steward(s) and Standards Committee for consideration. The specification is amended as necessary, finalized and approved by the Standards Committee, and published on the IPP.

Step 4: Preparation of a draft ISPM[1]

The standard is drafted or revised by an expert drafting group (expert working group or technical panel) in accordance with the relevant specification.

Regular process:	Special process:
The resulting draft standard is submitted to the Standards Committee.	The resulting draft standard is submitted to the Standards Committee at any time by e-mail.
The Standards Committee or SC-7 reviews the draft at a meeting and decides whether to send it for member consultation, or to return it to the steward(s) or to an expert drafting group, or to put it on hold. In the case where only the SC-7 meets, comments from any SC members will also be taken into account.	As far as possible the Standards Committee decides by e-mail whether to send it for member consultation, or to return it to the steward(s) or to an expert drafting group, or to place it on the Standards Committee agenda for a decision on how to proceed.

Stage 3: Member consultation

Step 5: Member consultation

Following clearance by the SC, the draft standard is sent for member consultation by the IPPC Secretariat to contracting parties, National Plant Protection Organizations (NPPOs), Regional Plant Protection Organizations (RPPOs) and relevant international organizations for consultation. The draft standard is also posted on the IPP. The length of the

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

consultation period is 100 days. Comments are submitted through the IPPC contact point. Comments are by written submission to the Secretariat following guidelines.

Regular process:	Special process:
Comments are compiled by the Secretariat and submitted to the steward and the Standards Committee for consideration.	Comments are compiled by the Secretariat and submitted to the technical panel and the Standards Committee for consideration (possibly by e-mail).

Compiled comments are posted on the IPP at the time of submission to the SC.

Step 6: Review of the draft ISPM prior to CPM

Regular process:	Special process:
The draft standard is revised by the SC-7 and Standards Committee taking comments into account. The Standards Committee decides whether to forward the modified draft to the CPM for adoption, or to put it on hold, return it to the steward or to an expert drafting group, or submit it for another round of member consultation. A summary of major issues discussed and of SC reactions to substantive comments that were not incorporated into the standard is produced as part of the SC report and posted on the IPP.	If no changes are made to the draft text, the draft standard is submitted to the CPM for adoption. If the draft standard is changed as a result of comments, the draft is submitted to the Standards Committee. In consultation with the relevant technical panel, the Standards Committee examines the draft standard and if appropriate modifies it. The SC decides (possibly via e-mail) whether to forward the modified draft standard to the CPM for adoption.

Draft ISPMs should be posted on the IPP in English as soon as possible and in other languages at least 6 weeks prior to the opening of the CPM.

Stage 4: Adoption and publication

Step 7: Adoption

Regular process:	Special process:
Following approval by the Standards Committee, the draft standard is included on the agenda of the CPM for adoption. Comments on standards are sent to the IPPC Secretariat at least 14 days before the CPM meeting following guidelines.	The draft standard is included on the agenda of the CPM for adoption. - if no formal objection[2] is received up to 14 days prior to the CPM, the draft standard will be adopted without discussion - if a formal objection is received at least 14 days prior to the CPM, the draft standard is returned to the SC. The SC decides, possibly via electronic means, how to proceed, including the possibility of submitting it to the CPM for adoption through the regular process.

The ISPM is formally adopted by the CPM according to Rule X of the Rules of Procedure of the CPM.

Step 8: Publication

The ISPM is appended to the report of the CPM and published by the IPPC Secretariat, including posting on the IPP.

[2] A formal objection should be a technically supported objection to the adoption of the draft standard in its current form, sent through the official IPPC contact point. The Secretariat would not make any judgement about the validity of the objection – an objection with some technical discussion of the issue would be accepted as a formal objection.

DRAFT SPECIFICATION FOR MEMBER CONSULTATION

Title: International movement of wood

Reason for the standard: Wood poses a significant risk for the transmission of pests. Based on technical justification, NPPOs may establish specific requirements for treatment and/or certification of wood. Numerous countries stipulate specific import requirements for wood, including: heat treatment, chemical treatment, and/or bark removal. To assist NPPOs in determining what types of treatments may be appropriate, if treatments have been applied correctly, and if overall phytosanitary certification is sufficient, a standard is required to outline key phytosanitary certification criteria and the processes available for verifying that import requirements are met. The establishment of harmonized standards and methods for the verification of such requirements would reduce disruptions to trade (and irritants). At present, no specific standard exists, nor do existing concept standards provide sufficient specific advice regarding the guidelines for relevant phytosanitary certification approaches.

Scope and purpose: A variety of raw ("green") and treated wood and wood products move in international trade, presenting phytosanitary risks. The standard would provide guidelines for risk management through the application of phytosanitary measures. The standard should include information on: appropriate types of treatments to reduce risks associated with movement of wood; phytosanitary certification criteria and guidelines for import inspection of treated and raw wood; indications of types of detection techniques for specific pest groups associated with wood including bark beetles, wood borers, fungi, nematodes, etc.; and, if appropriate, tools available for determining whether treatments have been applied appropriately. This standard would not apply to wood packaging material, which would remain wholly within the scope of ISPM No. 15

Tasks: The expert drafting group should:

1. Consider risks related to specific pest groups associated with wood;
2. Consider specific procedures for determining pest status that may be used to assess and reduce risks associated with wood from varying origins;
3. Consider and indicate types of methods that should be used for the detection of pests that may be present within imported wood, including fungi and nematodes (individual diagnostic protocols are developed by the Technical Panel on Diagnostic Protocols);
4. Identify and describe suitable phytosanitary measures (e.g., bark removal, kiln drying, etc.) and indicate categories of treatments for wood that reduce the risk presented by quarantine pests (specific treatments are evaluated and presented for adoption as part of ISPM No, 28 by the Technical Panel on Phytosanitary Treatments);
5. Consider and describe the role of bark in relation to the risks presented by the movement of wood, and appropriate measures related to this;
6. If feasible, consider and indicate appropriate inspection and/or types of testing methodology for identifying compliance with import requirements relating to specific treatments (e.g., heat treatment, fumigation and others);
7. Identify and describe key criteria that should form the basis for phytosanitary certification of wood;
8. Make recommendations, as appropriate, for further work and/or specific standards required in relation to this standard.

Provision of resources: Funding for the meeting is provided by the IPPC Secretariat (FAO). As recommended by ICPM-2 (1999), whenever possible, those participating in standard setting activities voluntarily fund their travel and subsistence to attend meetings. Participants may request financial assistance, with the understanding that resources are limited and the priority for financial assistance is given to developing country participants.

Steward: Greg Wolff, Steward for the Technical Panel on Forest Quarantine.

Collaborator: To be determined.

Expertise: Expertise on forest crop protection as contained in the Technical Panel on Forest Quarantine.

Participants: Technical Panel on Forest Quarantine.

Approval: Added to the work programme of the TPFQ by the Standards Committee in November 2006. Specification approved for member consultation by the Standards Committee in November 2007.

References: The IPPC (1997), ISPM No. 15, *Guidelines for regulating wood packaging material in international trade*, text of proposed supplement to ISPM No. 5 on debarked and bark-free wood (in draft form at time of preparing these specifications), other standards and international agreements as may be applicable to the tasks, discussion papers submitted in relation to this work. Text of draft supplement to the glossary on debarked and bark-free wood circulated for comment in 2007.

Discussion papers: Participants and interested parties are encouraged to submit discussion papers to the IPPC Secretariat (ippc@fao.org) for consideration by the expert drafting group.

DRAFT SPECIFICATION FOR MEMBER CONSULTATION

Title: International movement of seeds of forest tree species

Reason for the standard: Tree seed is traded internationally both for forestry or ornamental uses. Although the economic value, as well as the total weight of exported seed, is comparatively low the potential for widespread geographic distribution of plants grown from tree seed is high. For example, hundreds of thousands trees can be produced from a very few kilograms seed of spruce or pine species. Several quarantine pests can be transmitted by tree seed, e.g., *Fusarium circinatum*, *Sphaeropsis sapinea*, *Sirococcus conigenus*, *Cryphonectria parasitica*, *Sirococcus clavigignenti-juglandacearum*. In contrast to the situation regarding agricultural seed, where in several cases a test for contamination with pathogens is widely recommended, tree seed is usually only tested for quality-based parameters, e.g., for purity, germination capacity, etc., according to the International Seed testing Association (ISTA) rules. Phytosanitary-based testing of seed is not required under existing international standards, therefore there is a lack in the appropriate international guidance on managing phytosanitary risks related to the movement of seed of forest tree species.

Since several important forest tree diseases are seed-borne, the movement of infested seed of forest tree species poses a great risk for the long distance spread of pathogens. Some NPPOs have already established specific requirements for treatment, origin-based restrictions, and associated certification of seed related to the species, to prevent introduction of such pests and diseases. The proposed standard is intended to harmonize phytosanitary requirements and describe approved measures that will significantly reduce the risk of the spread of the regulated pests.

Scope and purpose: This standard would apply to seed of forestry species with an intended end use of propagation either for commercial forestry or for ornamental purposes. This standard should provide guidelines and technical advice for reducing phytosanitary risks via application of phytosanitary measures that may be applied at seed harvest, seed extraction, and incorporating provisions for seed testing and seed storage, including specific requirements concerning seed health. The provisions of the standard should be aimed at reducing the risk of spread of seed borne or seed-transmissible pests.

Tasks: The expert drafting group should consider and describe:

1. recommendations concerning seed harvest in specific areas, e.g., possible requirements to carry out the harvest only in pest free areas, if applicable, for certain seed/disease combinations;
2. methods for seed harvesting (e.g., to avoid contamination with soil-borne organisms);
3. methods of seed extraction and purification to prevent building up of organisms during processing;
4. categories of laboratory methods of seed testing to detect various seed-borne or seed transmittable diseases and pests (individual diagnostic protocols are developed by the Technical Panel on Diagnostic Protocols);
5. methods for tree seed storage to prevent infection or infestation;
6. categories of phytosanitary seed treatments (specific treatments are evaluated and presented for adoption as part of ISPM No, 28 by the Technical Panel on Phytosanitary Treatments);
7. recommendations, as appropriate, for basic phytosanitary certification criteria and related description of the seed lot regarding, e.g., origin, year of harvest, climate zone, treatment, storage, etc.;
8. suitable methods of packaging, if appropriate.

Provision of resources: Funding for the meeting is provided by the IPPC Secretariat (FAO). As recommended by ICPM-2 (1999), whenever possible, those participating in standard setting activities voluntarily fund their travel and subsistence to attend meetings. Participants may request financial assistance, with the understanding that resources are limited and the priority for financial assistance is given to developing country participants.

Steward: Greg Wolff, Steward for the Technical Panel on Forest Quarantine.

Collaborator: To be determined.

Expertise: Expertise on forest crop protection as contained in the Technical Panel on Forest Quarantine.

Participants: Technical Panel on Forest Quarantine.

Approval: Added to the work programme of the TPFQ by the Standards Committee in November 2006. Specification approved for member consultation by the Standards Committee in November 2007.

References: The IPPC (1997), various standards and international agreements as may be applicable to the tasks, discussion papers submitted in relation to this work.

Discussion papers: Participants and interested parties are encouraged to submit discussion papers to the IPPC Secretariat (ippc@fao.org) for consideration by the expert drafting group.

DRAFT SPECIFICATION FOR MEMBER CONSULTATION

Title: Forest pest surveys

Reason for the standard: Standardised methods for surveys for forest pests are of importance for exporting and importing countries and their respective NPPOs. Survey activities undertaken in accordance with internationally-agreed practices would be conducive to official inspection activities and the international recognition of pest-free areas and, hence, contribute to reducing risk and facilitating trade. This work could take the form of a new independent standard, or as an annex providing standardised methods for forest pest-specific surveys will be an important and valuable complement to ISPM No. 6, *Guidelines for Surveillance*.

Scope and purpose: Either an independent standard, or as an annex or a series of annexes (to ISPM No. 6, *Guidelines for Surveillance*) will be developed specifically to provide guidelines for surveys for forest pests suitable for application primarily in relation to temperate and cultivated forests, to address broad categories of organisms, e.g., fungal pathogens, nematodes, Lepidoptera, bark beetles, and Cerambycids. This standard/these annexes should assist contracting parties and NPPOs in meeting their obligations for surveillance.

Tasks: The expert drafting group should:

1. Consider and recommend whether this work should be in the format of an independent standard, or as an annex (or series of annexes) to ISPM No. 6;
2. Identify appropriate broad categories of forest pests for which specific guidance on surveys is appropriate and will be provided (e.g., fungal pathogens, nematodes, Lepidoptera, bark beetles, and Cerambycids in temperate and cultivated forests);
3. Consider and decide whether, due to specific applicability of certain methods to specific organisms from within a category, and key differences in their biology, some organisms within broad groups (like fungal pathogens) may need to be treated separately with, in the case of an independent standard, devoted/dedicated chapter or sections, or, in the case of including this work as a part of ISPM No. 6, either in separate annexes to be included in ISPM No. 6 or under separate heading in a single annex on forest pests;
4. Consider and describe situations in which conducting surveys is feasible (i.e. indicate difficult or problematic survey scenarios such as tropical forests with very high biodiversity);
5. Describe appropriate specific survey methodology for these groups of pests, considering where applicable:
   - Seasonal timing considerations
   - Specific sampling patterns and plans.
   - Statistical considerations with regard to sample size and the number of samples for a region
   - Types of traps, lures, pheromones, etc., and recommended spacing (if appropriate)
   - Host plant, symptoms for detection
   - Use of non-quarantine indicator species to determine pest prevalence
   - Wood type and material for inspection (including symptoms of vector activity), sampling procedures and testing
   - Soil sampling criteria (if appropriate, depending on lifecycles of the pests concerned)
   - Listings of recommended types of diagnostic procedures (individual diagnostic protocols are developed by the Technical Panel on Diagnostic Protocols)
   - Pest-specific concerns to be considered prior to and during survey
   - Uniform reporting and recording templates
   - Other methodology as appropriate.

Provision of resources: Funding for the meeting is provided by the IPPC Secretariat (FAO). As recommended by ICPM-2 (1999), whenever possible, those participating in standard setting activities voluntarily fund their travel and subsistence to attend meetings. Participants may request financial assistance, with the understanding that resources are limited and the priority for financial assistance is given to developing country participants.

Steward: Greg Wolff, Steward for the Technical Panel on Forest Quarantine.

Collaborator: To be determined.

Expertise: Expertise on forest crop protection as contained in the Technical Panel on Forest Quarantine.

Participants: Technical Panel on Forest Quarantine.

Approval: Added to the work programme of the TPFQ by the Standards Committee in November 2006. Specification approved for member consultation by the Standards Committee in November 2007.

References: The IPPC (1997), ISPM No. 6, *Guidelines for surveillance*, other standards and international agreements as may be applicable to the tasks, discussion papers submitted in relation to this work.

Discussion papers: Participants and interested parties are encouraged to submit discussion papers to the IPPC Secretariat (ippc@fao.org) for consideration by the expert drafting group.

DRAFT SPECIFICATION FOR MEMBER CONSULTATION

Title: International movement of used machinery and equipment.

Reason for the ISPM: Used machinery and equipment are commodities frequently moved or traded between countries. Organisations operating in different countries often need and move used equipment between sites whilst others trade in such commodities. They may have been used for many purposes such as for construction, industrial uses, and mining, as well as for agricultural or forestry purposes and may include used military vehicles, machinery and equipment. Depending on the use to which these commodities are put prior to export, they may have become contaminated with a range of materials of phytosanitary concern. When moved internationally, they can harbour and spread plants or parts of plants, soil, and pests that may present a phytosanitary risk to the importing country. Depending on their use in the country of import, they may introduce quarantine pests to agricultural, forested, wilderness or other areas. Guidance is needed for NPPOs to assess the risks associated with the movement of these commodities and to determine phytosanitary measures that may be required to mitigate assessed risks in order to facilitate the safe movement of such commodities.

Scope and purpose: The standard should provide guidance to NPPOs on the identification and assessment of risks associated with the international movement of used machinery and equipment, and on the development of phytosanitary measures to mitigate the risks of introduction of quarantine pests and soil associated with them.

Tasks: The expert drafting group should:

1. Identify other ISPMs of relevance to this standard.
2. Identify the categories of used machinery and equipment to be addressed by the standard (such as construction, industrial, military and agricultural or forestry uses, and used parts of such equipment and machinery) and consider the need to include such categories in the standard.
3. Identify the phytosanitary risks associated with the movement of used machinery and equipment.
4. Identify phytosanitary measures, e.g. inspection before movement and on arrival to mitigate pest risks associated with the international movement of used machinery and equipment.
5. Provide guidance which may be used in the establishment of phytosanitary inspection and certification procedures.
6. Identify and assign the roles and responsibilities of NPPOs and different stakeholders, e.g. importers, exporters, etc. to implement mitigation measures for the risks.
7. Determine the phytosanitary measures to monitor the movement of used machinery and equipment.
8. Determine the processes of corrective actions in case of non-compliance.

Provision of resources: Funding for the meeting is provided by the regular programme of the IPPC Secretariat (FAO) except where expert participation is voluntarily funded by the expert's government. As recommended by ICPM-2 (1999), whenever possible, those participating in standard setting activities voluntarily fund their travel and subsistence to attend meetings. Participants may request financial assistance, with the understanding that resources are limited and the priority for financial assistance is given to developing country participants.

Steward: Robert Karyeija (Uganda).

Expertise: Five to seven experts with a wide general phytosanitary knowledge and practical expertise in inspection and risk mitigation.

Approval: Introduced into the work programme by CPM-1 (2006). Specification approved for member consultation by the Standards Committee in November 2007.

References:

ISPM No. 3 (2005): Guidelines for the export, shipment, import and release of biological control agents and other beneficial organisms (originally adopted in 1996, revised in 2005)
ISPM No. 7 (1997): Export certification system
ISPM No. 11 (2004): Pest risk analysis for quarantine pests, including analysis of environmental risks and living modified organisms (originally adopted in 2001, revised in 2003 and 2004)
ISPM No. 12 (2001): Guidelines for phytosanitary certificates
ISPM No. 15 (2002): Guidelines for regulating wood packaging material in international trade
ISPM No. 17 (2002): Pest reporting
ISPM No. 18 (2003): Guidelines for the use of irradiation as a phytosanitary measure
ISPM No. 20 (2004): Guidelines for a phytosanitary import regulatory system
ISPM No. 23 (2005): Guidelines for inspection
ISPM No. 25 (2006): Consignments in transit

Discussion documents: Participants and interested parties are encouraged to submit discussion papers to the IPPC Secretariat (ippc@fao.org) for consideration by the expert drafting group.

SPECIFICATION NO. 45

Title: Import of plant breeding material for scientific research, education or other specific use.

Reason for the standard: The import of potential high risk plant breeding material such as seed and planting material for scientific research and development purposes constitutes potential pathway for introduction and/or spread of plant pests and therefore their import is regulated by appropriate phytosanitary regulations by various countries. The IPPC states in Article VII.5 that importing contracting parties may make special provision, subject to adequate safeguards, for the importation of plants or pests for the purpose of scientific research, education or other specific use. Different countries may have different phytosanitary measures for the same plant breeding material. Since there is a need to work with this type of high risk material, there has been a proposal to develop an international standard for providing appropriate harmonized guidance for safe import of such material without undue risk of introduction and/or spread of plant pests.

Scope and purpose: This standard provides specific guidance for import of plant breeding material such as seed and planting material for both scientific research and development purposes. This standard will also cover the import of germplasm collected from wild and/or from centers of origin. This standard does not cover any import of transgenic plant material and/or commercial import of seed and planting material.

Tasks: The expert working group (EWG) should:

1. Consider the wording of the title if relevant.
2. Consider the difference between risk assessment and management for plants imported for scientific research and development purposes as opposed to plants imported for commercial purposes, based on the purpose/end use of their import, and describe key considerations as appropriate.
3. Identify basic phytosanitary and other requirements for import of plant breeding material both for scientific research and development purposes.
4. Determine the requirements of pre-import risk analysis and whether guidance in addition to that provided by the existing pest risk analysis standards is required.
5. Identify characteristics for particular breeding materials to be taken into account for PRA
6. Provide recommendations and identify criteria for secure quarantine facilities for conducting research, for raising international plant breeding and for post entry quarantine requirements.
7. Identify criteria for selection of sites situated in the natural environment, if they are necessary for conducting evaluation trials, and conducting breeding.
8. Provide guidance for import conditions as appropriate
9. Identify the requirements and provide guidelines for pest monitoring after import, after planting and/or during planting or during the growing period in secure facilities.

Provision of resources: Funding for the meeting is provided by the IPPC Secretariat (FAO). As recommended by ICPM-2 (1999), whenever possible, those participating in standard setting activities voluntarily fund their travel and subsistence to attend meetings. Participants may request financial assistance, with the understanding that resources are limited and the priority for financial assistance is given to developing country participants.

Steward: Mike Holtzhausen (South Africa).

Collaborator: To be determined.

Expertise: 5-7 international phytosanitary experts, who have specific experience in handling import and quarantine clearance of plant breeding material such as seed and planting material including germplasm both for research and development purposes, and an international expert on plant breeding.

Participants: To be determined.

Approval: Introduced into the work programme by ICPM-6 (2004). Specification approved by the Standards Committee in November 2007.

References:

Guidelines for inspection, 2005. ISPM No. 23, FAO, Rome.
Guidelines for a phytosanitary import regulatory system, 2004. ISPM No. 20, FAO, Rome.
International Plant Protection Convection, New Revised Text, 1999, FAO, Rome.
International Treaty on Plant Genetic Resources for Food and Agriculture, 2001.
Pest risk analysis for quarantine pests including analysis of environmental risks and living modified organisms, 2004. ISPM No. 11, FAO, Rome.
Review of Plant Research Biosecurity Protocols. J. Radcliffe, M. Catley, T. Fischer, K. Perrett and K. Sheridan, Australian Government Department of Agriculture, Fisheries and Forestry, 2003 (available at: *http://www.daff.gov.au/__data/assets/pdf_file/0006/146913/review.pdf*).

Discussion papers: Participants and interested parties are encouraged to submit discussion papers to the IPPC Secretariat (ippc@fao.org) for consideration by the expert drafting group.

Summary of SC reactions to some comments
Draft amendments to ISPM No. 5 (*Glossary of phytosanitary terms*)
(Comment numbers refer to the tables of compiled member comments posted on the IPP)

All comments on prevalence, e.g. comments 1-6 and 9-14, 16-18, 21-24, 27-28, 33
The SC agreed to the TPG recommendations, i.e.:
1- to withdraw the definition of prevalence from the proposals for CPM adoption
2- to define an alternative term, incidence, and not prevalence (a proposal in this sense with detailed explanations will be presented to the SC in May 2008)
3- with the proposal to be made, there might not be a need for the explanation note/explanatory document requested by some countries in their comments. This could be reconsidered in view of the incidence definition proposed next year
4- many comments link the definition of tolerance level to that of prevalence/incidence; the TPG also recommends that the definition for tolerance level be withdrawn (see row 29)

All comments on tolerance level, e.g. comments 30-36, 39-41
Recommended that the definition of tolerance level be withdrawn. A redrafted definition will be presented to the SC in May 2008, prior to member consultation.

All comments on beneficial organisms, e.g. comments 45, 46, 48
Propose to process the definition for adoption without change. Some comments suggested to delete reference to biological control agents, to sterile insects or to both. If the term "biological control agent" is deleted, the definition is not needed. If reference to "sterile insects" is deleted, it is back to the previous version, and this fails to take account of the intent for ISPM No. 3 to cover sterile insects. If both references are deleted, there would be no point in maintaining the definition.

(Translation recommendation: in French, term is organisme utile (and not organisme bénéfique)

Comments 51-55
Reviewed comments below, and suggests to process all terms for deletion.

Comment 52
There is no IPPC usage of biopesticide, which is a requirement for a term to be defined in ISPM No. 5.

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

1. NEW TERMS AND DEFINITIONS

1.1 Prevalence (of a pest)

Background: a definition of *prevalence (of a pest)* was sent for consultation. However, after discussion of comments received, this term and definition have been withdrawn. A definition of an alternative term, *incidence*, will be presented to the SC in May 2008, prior to member consultation.

1.2 Tolerance level

Background: a definition of *tolerance level* was sent for member consultation. However, after discussion of comments received, this term and definition have been withdrawn. A redrafted definition will be presented to the SC in May 2008, prior to member consultation.

2. REVISED TERM AND DEFINITION

2.1 Beneficial organism

Background

Discussions of the revision of the definition of *biological control* (after CPM-1) led to the proposal that this term should be deleted from the Glossary (adopted at CPM-2) and that the definition of *beneficial organism* should be revised to cover sterile insects. Some comments suggested deleting reference to "biological control agents", to "sterile insects" or to both. If the reference to "biological control agents" is deleted, the definition is not needed. If reference to "sterile insects" is deleted, there will be no change to the existing definition, and this fails to take account of the intent for ISPM No. 3 to cover sterile insects.

Definition proposed for CPM adoption

beneficial organism	Any **organism** directly or indirectly advantageous to **plants** or **plant products**, including **biological control agents** and **sterile insects**

3. TERMS ARISING FROM THE DRAFT SUPPLEMENT ON DEBARKED AND BARK-FREE WOOD

Background

Three definitions were part of the draft Supplement on debarked and bark-free wood sent for member consultation in 2007. After consideration of comments received, the SC felt that it was appropriate to proceed only with the definitions at this time. The rest of the supplement was referred back to the Technical Panel on Forest Quarantine (TPFQ) to have specific provisions related to bark presented within the appropriate standards (revised ISPM No. 15 and a future ISPM on international movement of wood).

New definition proposed for CPM adoption

bark	The layer of a woody trunk, branch or root outside the cambium

Revised definitions proposed for CPM adoption

bark-free wood	**Wood** from which all **bark**, except ingrown bark around knots and bark pockets between rings of annual growth, has been removed
debarked wood*	**Wood** that has been subjected to any process designed to remove **bark**. (Debarked wood is not necessarily **bark-free wood**.)

* Note: this will replace the current term *debarking*.

4. PROPOSED DELETIONS

ICPM-7 adopted the revised ISPM No. 3 (2005). A number of terms in the Glossary were defined when ISPM No. 3 (1996) was originally developed. It is proposed that the following terms and their definitions should be deleted. Reasons for the deletion are given for each term.

Term	Reason for deletion
authority	ISPM No. 3 (2005) uses the words "NPPO or responsible authority". The existing definition of authority does not apply to that use, and also mentions the "Code", which was in ISPM No. 3 (1996). The term does not have a meaning that is specific to the work of the IPPC and a definition is not needed.
biological pesticide (biopesticide)	The current definition is out of date. The term is used in ISPM No. 3 (2005) and in ISPM No. 9 but does not have a meaning that is specific to the work of the IPPC, and a definition is not needed. There is no IPPC usage of *biopesticide*, which is a requirement for a term to be defined in ISPM No. 5.
- classical biological control, **- introduction (of a biological control agent),** **- establishment (of a biological control agent)**	The three definitions were linked to ISPM No. 3 (1996). These are not used in a meaning specific to the IPPC. There is no need for specific definitions in relation to any ISPM.
exotic	The term and definition were linked to ISPM No. 3 (1996) and the term is not used in the 2005 revision. It is proposed to: - delete the term and definition because: • the term is used only in ISPM No. 9; • the term causes confusion in Spanish and French because "alien" and "exotic" are translated by the same word ("exotico" in Spanish and "exotique" in French); • the definition uses the term "ecoarea", which has been deleted from the Glossary. - use the term *non-indigenous*. Suitable wording has been proposed in the draft supplement to ISPM No. 5 on CBD terminology (for SC in May 2008) to specify that "exotic" and "non-indigenous" could be considered as synonyms.
Import Permit (of a biological control agent)	*Import Permit* (without a parenthetical addition) is defined in the Glossary and its definition covers the case of import permits for biological control agents.
micro-organism	This is a common term that does not have a meaning specific to the work of the IPPC.
specificity	The definition was linked to ISPM No. 3 (1996). This term is self-explanatory and the current definition might cause confusion.

Summary of SC reactions to some comments
Draft ISPM: Establishment of areas of low pest prevalence for fruit flies (Tephritidae)
(Comment numbers refer to the tables of compiled member comments posted on the IPP)

All comments related to host terminology
The SC agrees to the TPG recommendations, i.e.:
- recognizes that many different terms are used for fruit fly hosts, and it cannot advise on which terms are better nor propose a definition for primary hosts and secondary hosts.
- suggest to leave the text as it is since the terms *primary hosts* and *secondary hosts* are commonly used by fruit fly experts (although with a different meaning than for other pests), and should therefore be understood by fruit fly experts using the standard. In addition they are "defined" in the text as "biologically preferred" "biologically non-preferred".
- notes that TPFF has started to examine the terminology associated with hosts. Suggest that it should also consider defining *non-host* (and refer to the APPPC standard which has defined non-host and host).

Comment 2
Partly covered by some modifications made for comment 245.

The FTD values are defined taking into account the specific situation of the area to be established as low pest prevalence, a very important factor is the host status of commodity, every area is unique and therefore should be considered as such.

There is a specification approved by SC to develop a draft standard on trapping that will take care of this concern, since it is supposed to include FTD values for fruit flies, depending on the purpose of the area established (pest free areas, pest free sites, areas of low pest prevalence, etc) and the type of target fruit fly, among other issues.

Information on FTD values, and criteria to be used, could also be made available in an explanatory document. To be considered by TPFF.

Comment 4
Even though this ISPM is very similar to ISPM No. 22, there was an agreement that TPFF should work on standards related to the principle of regionalization, in this case it was proposed and approved by SC, two specifications addressing this issue, FF- PFA & FF-ALPP. Since this is a very specific topic, it is recommended that this draft remains as a stand-alone standard.

Good idea but not urgent activity.

Comment 13
In the text, there is some reference to the possibility of accessing other specialized sources for identification, in case the NPPO does not have the capability. This also could be addressed with the relevant organizations for technical assistance in SPS issues.

Can be addressed by aid agencies and bilaterally between trading partners.

Comment 52
Since this comment applies to the whole standard, a paragraph has been added to cover this issue at the end of the “background” section.

Comment 126
SC-7 has used should. See CPM-1 decision.

Comment 165
Comment regarding term FTD has not been incorporated since the SC has refrained from mentioning FTD in the main text. The paragraph now refers to Annex 2.

Comment 245
During last year's comments, it was suggested that this section should be short and details related to measurement of specified level of low pest prevalence be moved to an annex.

Some examples of factors to determine the appropriate level were added to 2.1.1.

Comment 247
One member suggested that levels deleted last year (FTD's for different host commodities of fruit flies) should be useful for people to look at (levels which have been used) as examples. Maybe explanatory document after adoption of standard.

FTD values are included in IAEA trapping guidelines, and it is suggested that would be part of the standard on trapping.

Comment 280
"commercial" is different concept that is more widely used in the specific area of fruit flies. Also consistent with ISPM No. 26. Technically more appropriate to separate commercial from others.

Comment 316
Both examples (shade trees and untreated commercial hosts) are deleted. These are only examples, and the one on *replacement or elimination of hosts* covers such cases.

Comment 351
New wording "might be suspended" is not strong enough. In most cases will be suspended. Leave *is normally*, which leaves the meaning as "in most cases".

Also applies in section 3 of Annex 2. The FF-ALPP status "should" be suspended.

Comment 375
With revisions which have been made are covered in 2.3.2, 2.5.1 and 2.5.2.

Use of threshold (comments 398 and others)
New wording FTD threshold level used in 2.5.2 and in Annex 1. *FTD value* was unclear and following comments *FTD threshold level* was used. Wording is unclear and not used in ISPM No. 22. ISPM No. 22 used *specified level* after long debate on wording to be used. Should be consistent and use *FTD specified level* where appropriate.

Comment 441
Second paragraph addresses the issue of the area with mixed fruit fly hosts. Each specific situation cannot be considered in standards, they should be just guidelines to be followed by the NPPO. The FTD values are established taking into account many factors related to the target fruit fly, host, purpose of the ALPP, etc.

Comment 464
References were not added as we do not normally add references to ISPMs unless they are widely used, such as IAEA trapping procedures for fruit flies.

Several comments related to sections on suspension, reinstatement and loss
Order of subsection changed to the logical sequence of suspension, reinstatement and loss. This is also consistent with ISPM No. 26. Text within the sections was also reordered.

INTERNATIONAL STANDARDS FOR PHYTOSANITARY MEASURES

ISPM No. --

ESTABLISHMENT OF AREAS OF LOW PEST PREVALENCE FOR FRUIT FLIES (TEPHRITIDAE)

(200-)

CONTENTS

INTRODUCTION

SCOPE

This standard provides guidelines for the establishment and maintenance of areas of low pest prevalence for fruit flies (FF-ALPPs) by a National Plant Protection Organization (NPPO). Such areas may be utilised as official pest risk management measures alone, or as part of a systems approach, to facilitate trade of fruit fly host products, or to minimize the spread of regulated fruit flies within an area. This standard applies to fruit flies (Tephritidae) of economic importance.

REFERENCES

Agreement on the Application of Sanitary and Phytosanitary Measures, 1994. World Trade Organization, Geneva.
Determination of pest status in an area, 1998. ISPM No. 8, FAO, Rome.
Establishment of pest free areas for fruit flies (Tephritidae), 2006. ISPM No. 26, FAO, Rome.
Glossary of phytosanitary terms, 2007. ISPM No. 5, FAO, Rome.
Guidelines for surveillance, 1997. ISPM No. 6, FAO, Rome.
International Plant Protection Convention, 1997. FAO, Rome.
Pest reporting, 2002. ISPM No. 17, FAO, Rome.
Requirements for the establishment of areas of low pest prevalence, 2005. ISPM No. 22, FAO, Rome.
The use of integrated measures in a systems approach for pest risk management, 2002. ISPM No. 14, FAO, Rome.

DEFINITIONS

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

OUTLINE OF REQUIREMENTS

The general requirements for establishment and maintenance of an area of low pest prevalence for fruit flies (FF-ALPP) include:

- confirming the operational and economic feasibility of the FF-ALPP
- describing the purpose of the area
- listing the target fruit fly species(s) for the FF-ALPP
- operational plans
- determination of the FF-ALPP
- documentation and record keeping
- supervision activities.

For the establishment of the FF-ALPP, parameters used to estimate the level of fruit fly prevalence and the efficacy of trapping devices for surveillance should be determined as stated in Annex 1. Surveillance, control measures and corrective action planning are required for both establishment and maintenance. Corrective action planning is described in Annex 2.

Other specific requirements include phytosanitary procedures, as well as suspension, loss and reinstatement of the status of the FF-ALPP.

BACKGROUND

The International Plant Protection Convention (IPPC, 1997) contains provisions for areas of low pest prevalence (ALPPs), as does the World Trade Organization Agreement on the Application of Sanitary and Phytosanitary Measures (Article VI of the WTO-SPS Agreement). ISPM No. 22 (*Requirements for the establishment of areas of low pest prevalence*) describes different types of ALPPs and provides general guidance on the establishment of ALPPs. ALPPs may also be used as part of a systems approach (ISPM No. 14: *The use of integrated measures in a systems approach for pest risk management*).

Fruit flies are a very important group of pests for many countries because of their potential to cause damage to fruits and restrict national and international trade for plant products that are hosts of fruit flies. The high probability of introduction of fruit flies associated with a wide range of hosts results in restrictions imposed by many importing countries and the need for phytosanitary measures to be applied in exporting countries related to movement of host material or regulated articles to ensure that the risk of introduction is appropriately mitigated.

This standard provides guidance for the establishment and maintenance by the NPPO of FF-ALPPs with the aim to facilitate trade by minimizing the risk of introduction or spread of regulated fruit flies.

FF-ALPPs are generally used as a buffer zone for fruit fly-pest free areas (FF-PFAs), fruit fly free places of production or fruit fly free production sites (either as a permanent buffer zone or as part of an eradication process), or for export

purposes, usually in conjunction with other risk mitigation measures as a component of a systems approach (this may include all or part of an FF-ALPP that acts as a buffer zone).

They may occur naturally (and subsequently be verified, declared and monitored or otherwise managed); they may occur as a result of pest management practices during crop production that suppress the population of fruit flies in an area to limit their impact on the crop; or they may be established as a result of management practices that reduce the number of fruit flies in the area to a specified low level.

The decision to establish an FF-ALPP may be closely linked to market access as well as to economic and operational feasibility.

If an FF-ALPP is established for export of fruit fly host commodities, the parameters for establishment and maintenance of the FF-ALPP should be determined and agreed in conjunction with the importing country and in consideration of the guidelines presented in this standard.

The requirements for the establishment of FF-ALPPs laid down in this standard can also be applied in domestic trade for movement of fruit in ALPPs within a country.

REQUIREMENTS

1. General Requirements

The concepts and provisions of ISPM No. 22 (*Requirements for the establishment of areas of low pest prevalence*) apply to the establishment and maintenance of ALPPs for a specified pest, or a group of pests including fruit flies, and therefore ISPM No. 22 should be referred to in conjunction with this standard.

An FF-ALPP may be established in accordance with this standard under a variety of situations. Some of them may require the application of the full range of elements provided by this standard, whereas others may require the application of only some of those elements.

Phytosanitary measures and specific procedures as further described in this standard may be required for the establishment and maintenance of an FF-ALPP by the NPPO. The decision to establish an official FF-ALPP may be based on all or some of the technical factors provided in this standard, as appropriate. They include necessary components such as pest biology and control methods, which will vary according to the species of fruit fly for which the FF-ALPP is being established.

The establishment of an official FF-ALPP should be considered against the overall operational and economic feasibility of establishing a programme to meet and maintain the low pest level and the objectives of the FF-ALPP.

An FF-ALPP may be applied to facilitate the movement of fruit fly hosts from one FF-ALPP to another of the same fruit fly pest status to protect areas endangered by a regulated fruit fly pest.

The essential prerequisite for establishment of an FF-ALPP is an area that exists naturally, or that can be established, and that can be delimited, monitored and verified by the NPPO to be of a specified fruit fly prevalence level. The area may be in place to protect an FF-PFA or support sustainable crop production, or may have developed in response to suppression or eradication actions. It may occur naturally as a result of climatic, biological or geographical factors that reduce or limit the fruit fly population through all or part of the year.

An area can be defined as an FF-ALPP for one or more target fruit fly species. However, for an FF-ALPP covering multiple target fruit fly species, trapping devices and their deployment densities and locations should be specified, and low pest prevalence levels determined for each target fruit fly species.

FF-ALPPs should include public awareness programmes of a similar nature as outlined in section 1.1 of ISPM No. 26 (*Establishment of pest free areas for fruit flies (Tephritidae)*).

1.1 Operational plans

An official operational plan is needed to specify the required phytosanitary procedures to establish and maintain an FF-ALPP.

The operational plan should describe the main procedures to be carried out such as surveillance activities, procedures to maintain the specified level of low pest prevalence, the corrective action plan and any other procedures that are required to achieve the objective of the FF-ALPP.

1.2 Determination of an FF-ALPP

Elements to be considered in the determination of an FF-ALPP are as follows:

- delimitation of the area (size of location, detailed maps including an accurate description of the boundaries or Global Positioning System (GPS) coordinates showing the boundaries, natural barriers, entry points, location of commercial and, as appropriate, non-commercial hosts of the target fruit fly and urban areas)
- target fruit fly species and its/their seasonal and spatial distribution within the area
- location, abundance and seasonality of hosts, including wherever possible specifying primary (biologically preferred) hosts
- climatic characteristics, including rainfall, relative humidity, temperature, and prevailing wind speed and direction.

In areas where prevalence of fruit flies is naturally at a low level because of climatic, geographical or other reasons (e.g. natural enemies, availability of suitable hosts, host seasonality), the target fruit fly population may already be below the specified level of low pest prevalence without applying any control measures. In such cases, surveillance should be undertaken to validate the low prevalence status and this status may be recognized in accordance with the examples listed in section 3.1.1 of ISPM No. 8 (*Determination of pest status in an area*). If, however, the fruit flies are detected above the specified level of low pest prevalence (for example, because of extraordinary climatic conditions or other reasons) corrective actions should be applied. Guidelines for corrective action plans are provided in Annex 2.

1.3 Documentation and record keeping

The phytosanitary procedures used for the determination, establishment, verification and maintenance of an FF-ALPP should be adequately documented. These procedures should be reviewed and updated regularly, including the corrective actions if required (as described in ISPM No. 22: *Requirements for the establishment of areas of low pest prevalence)*. It is recommended that a manual of procedures relating to the operational plan be prepared for the FF-ALPP.

Documentation for determination and establishment may include:

- list of fruit fly hosts known to occur in the area, including seasonality and commercial fruit production in the area
- delimitation records: detailed maps showing the boundaries, natural barriers and points where fruits may enter the area; description of agro-ecological features such as soil type, the location of main host areas of target fruit fly, and marginal and urban host areas; and meteorological conditions, for example rainfall, relative humidity, temperature, and prevailing wind speed and direction
- surveillance records:
  - trapping: types of surveys, number and type of traps and lures, frequency of trap inspection, trap density, trap array, number of target fruit flies captured by species for each trap
  - fruit sampling: type, quantity, date, frequency and result
- record of control measures used for fruit flies and other pests that may have an effect on fruit fly populations: type(s) and locations.

For verification and maintenance, documentation should include the data recorded to demonstrate the population levels of the target fruit fly species are below the specified level of low pest prevalence. The records of surveys and results of other operational procedures should be retained for at least 24 months. If the FF-ALPP is being used for export purposes, records should be made available to the NPPO of the relevant importing country on request.

Corrective action plans should also be developed and maintained (see section 2.4).

1.4 Supervision activities

The FF-ALPP programme, including applicable domestic regulations, surveillance procedures (e.g. trapping, fruit sampling) and corrective action plans, should comply with officially approved procedures. These procedures may include official delegation of responsibility assigned to key personnel, for example:

- a person with defined authority and responsibility to ensure that the systems/procedures are implemented and maintained appropriately
- entomologist(s) with responsibility for the identification of fruit flies to species level.

The NPPO should evaluate and/or audit the operation of the procedures for establishment and maintenance of the FF-ALPP to ensure that effective management is maintained even where the responsibility to carry out specific activities has been delegated to outside the NPPO. Supervision of operational procedures include:

- operation of surveillance procedures
- surveillance capability
- trapping materials (traps, attractants) and procedures
- identification capability
- application of control measures
- documentation and record keeping
- implementation of corrective actions.

2. Specific Requirements

2.1 Establishment of the FF-ALPP

Elements for consideration when establishing an FF-PFA are described in sections 2.1 and 2.2 of ISPM No. 26 (*Establishment of pest free areas for fruit flies (Tephritidae)*) and may also be applied to an FF-ALPP as defined in following subsections.

2.1.1 Determination of the specified level of low pest prevalence

Specified levels of low pest prevalence will depend on the level of risk associated with the target fruit fly species–host–area interaction. These levels should be established by the NPPO of the country where the FF-ALPP is located and with sufficient precision to allow assessment of whether surveillance data and protocols are adequate to determine that pest prevalence is below these levels.

Individual NPPOs may draw on a variety of different factors when determining exactly what an appropriate level of pest prevalence should be for a given FF-ALPP. Some commonly considered factors include the following:

- levels stipulated by trading partners in order for trade to proceed
- levels in use by other NPPOs for the same or similar fruit fly species, hosts and agro-ecological conditions (including experience and/or historical data gained from the operation of other FF-ALPPs as to what levels are required to be maintained to achieve pest free fruits).

Establishment of the parameters used to estimate the level of fruit fly prevalence is described in Annex 1.

2.1.2 Geographical description

The NPPO defines the limits of a proposed FF-ALPP. Isolation of the area (physical or geographical) is not necessarily required for establishment of FF-ALPP.

Boundaries used to describe the delimitation of the FF-ALPP should be established and closely related to the relative presence of primary hosts of the target fruit fly species or adjusted to readily recognizable boundaries.

2.1.3 Surveillance activities prior to establishment

Prior to the establishment of an FF-ALPP, surveillance to assess the presence and level of prevalence of the target fruit fly species should be undertaken for a period determined by its biology, behaviour, climatic characteristics of the area, host availability and appropriate technical considerations for at least 12 consecutive months.

2.2 Phytosanitary procedures

2.2.1 Surveillance activities

Surveillance systems based on trapping are similar in any type of ALPP. The surveillance used in an FF-ALPP may include those processes described in ISPM No. 6 (*Guidelines for surveillance*), section 2.2.2.1 on trapping procedures of ISPM No. 26 (*Establishment of pest free areas for fruit flies (Tephritidae)*) and any other relevant scientific information.

Fruit sampling as a routine surveillance method is not widely used for monitoring fruit flies in low prevalence areas except in areas where sterile insect technique (SIT) is applied, where it may be a major tool.

The NPPO may complement trapping with fruit sampling for fruit fly surveillance and/or monitoring. However, fruit sampling alone will not provide sufficient accuracy for describing the size of the population and should not be solely relied on to validate or verify the FF-ALPP status. Surveillance procedures may include those described in section 2.2.2.2 on fruit sampling procedures of ISPM No. 26 (*Establishment of pest free areas for fruit flies (Tephritidae)*).

The presence and distribution of fruit fly hosts should be recorded separately identifying commercial and primary non-commercial hosts. This information will help in planning the trapping and host sampling activities and may help in anticipating the potential ease or difficulty of establishing and maintaining the phytosanitary status of the area.

The NPPO should have, or have access to, appropriate identification capabilities for identification of the target fruit fly species detected during the surveys (whether adult or larvae). This capability should also exist for the ongoing verification of FF-ALPP status for the target fruit fly species.

2.2.2 Reduction and maintenance of target fruit fly species population level

Specific control measures may be applied to reduce fruit fly populations to or below the specified level of low pest prevalence. Suppression of fruit fly populations may involve the use of more than one control option; some of these are described in section 3.1.4.2 of ISPM No. 22 (*Requirements for the establishment of areas of low pest prevalence*).

Since the target fruit fly species are endemic or established in the area, preventive and/or sustainable control measures to maintain fruit fly populations at or below the specified level of low pest prevalence are nearly always necessary

(some FF-ALPPs may occur naturally). Efforts should be made by NPPOs to select those measures with least environmental impact.

Available methods may include:
- chemical control (e.g. selective insecticide bait, aerial and ground spraying, bait stations and male annihilation technique)
- physical control (e.g. fruit bagging)
- use of beneficial organisms (e.g. natural enemies, SIT)
- cultural control (e.g. stripping and destruction of mature and fallen fruit, elimination or replacement of other host plants by non-host plants where appropriate, early harvesting, discouraging intercropping with fruit fly host plants, pruning before the fruiting period, use of perimeter trap hosts).

2.2.3 Phytosanitary measures related to movement of host material or regulated articles

Phytosanitary measures may be required to reduce the risk of entry of the specified pests into the FF-ALPP. These are outlined in section 3.1.4.3 of ISPM No. 22 (*Requirements for the establishment of areas of low pest prevalence*).

2.2.4 Domestic declaration of an FF-ALPP

The NPPO should verify the status of the FF-ALPP (in accordance with ISPM No. 8: *Determination of pest status in an area*) specifically by confirming compliance with the procedures established in accordance with this standard (surveillance and controls). The NPPO should declare and notify the establishment of the FF-ALPP, as appropriate.

To verify the status of the FF-ALPP and for purposes of internal management, the continuing FF-ALPP status should be verified after it has been established and any phytosanitary measures for the maintenance of the FF-ALPP have been put in place.

2.3 Maintenance of the FF-ALPP

Once the FF-ALPP is established, the NPPO should maintain the relevant documentation and verification procedures (auditable), and continue the application of phytosanitary procedures.

2.3.1 Surveillance

In order to maintain the FF-ALPP status, the NPPO should continue surveillance, as described in section 2.2.1 of this standard.

2.3.2 Measures to maintain low prevalence levels of target fruit fly species

In most cases the control measures as identified in section 2.2.2 may be applied to maintain the FF-ALPP, since the target fruit flies are still present in the established area.

If the monitored fruit fly prevalence level is observed to be increasing (but remains below the specified level for the area), a threshold established by the NPPO for the application of measures may be reached. At this point the NPPO may require implementation of additional control measures (e.g. as described in section 3.1.4.2 of ISPM No. 22: *Requirements for the establishment of areas of low pest prevalence*). This threshold should be set to provide adequate warning of potentially exceeding the specified level of low pest prevalence and avert suspension.

2.4 Corrective action plans

A corrective action plan for the FF-ALPP should be applied by the NPPO when the population level of the target fruit fly exceeds the specified level of low pest prevalence. Annex 2 provides guidelines on corrective action plans for FF-ALPPs.

2.5 Suspension, reinstatement and loss of FF-ALPP status

2.5.1 Suspension of FF-ALPP status

If the specified level of low pest prevalence of the target fruit fly species is exceeded either throughout the whole FF-ALPP area or within a part of the FF-ALPP, the entire FF-ALPP is normally suspended. However, where the affected area within the FF-ALPP can be identified and clearly delimited, then the FF-ALPP may be redefined to suspend only that area.

Relevant importing NPPOs should be notified without undue delay of these actions (further information on pest reporting requirements is provided in ISPM No. 17: *Pest reporting*).

Suspension may also apply if faults in the procedures or their application are found (for example, inadequate trapping or pest control measures or inadequate documentation).

If an FF-ALPP is suspended, an investigation by the NPPO should be initiated to determine the cause of the failure and introduce measures to prevent such failures from reoccurring.

When an FF-ALPP is suspended, the criteria for reinstatement should be made clear.

2.5.2 Reinstatement of FF-ALPP status

Reinstatement of FF-ALPP status applies only to suspended areas and may take place when:

- The population level no longer exceeds the specified level of low pest prevalence and this is maintained for a period determined by the biology of the target fruit fly species and the prevailing environmental conditions.
- Faulty procedures have been corrected and verified.

Once the specified level of low prevalence has been achieved and maintained as required above or procedural faults have been rectified through the application of corrective actions contained in the plan, the FF-ALPP status can be reinstated. If the FF-ALPP is established for export of host fruits, the reinstatement may be subject to recognition by the relevant importing country(ies). This recognition of reinstatement should be carried out without undue delay by the NPPO of the importing country.

2.5.3 Loss of FF-ALPP status

Loss of FF-ALPP status should occur after suspension if reinstatement has failed to take place within an acceptable time frame. Relevant importing NPPOs should be notified without undue delay of the change in status of the FF-ALPP (further information on pest reporting requirements is provided in ISPM No. 17: *Pest reporting*).

In the event that FF-ALPP status is lost, the procedures for establishment and maintenance outlined in this standard should be followed to achieve the FF-ALPP status again, and should take into account all background information related to the area.

ANNEX 1

PARAMETERS USED TO ESTIMATE THE LEVEL OF FRUIT FLY PREVALENCE[1]

Parameters used to determine the level of fruit fly prevalence in the FF-ALPP are defined by the NPPO. The most widely used parameter is flies per trap per day (FTD). More precise spatial data may be presented on the basis of trap density (i.e. FTD per unit area) or temporally for each trap present in an area over time.

The FTD is an index used to estimate the population by averaging the number of flies captured by one trap in one day. This parameter estimates the relative number of fruit fly adults in a given time and space. It provides baseline information to compare fruit fly populations among different places and/or time.

The FTD is the result of dividing the total number of captured flies by the product obtained from multiplying the total number of inspected traps by the average number of days the traps were exposed. The formula is as follows:

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

Where
F = total number of flies captured
T = number of inspected traps
D = number of days traps were exposed in the field.

In cases where traps are regularly inspected on a weekly basis, or longer in the case of winter surveillance operations, the parameter may be "flies per trap per week" (FTW). It estimates the number of flies captured by one trap in one week. Thus, FTD can be obtained from FTW by dividing by 7.

Specified levels of low pest prevalence, as expressed in FTD values, should be established in relation to the risk of infestation of the fruits that are intended to be protected by the FF-ALPP, and in relation to any specific related objectives of the FF-ALPP (e.g. fruit-fly free commodities for export). In situations where a single FF-ALPP contains more than one host species (i.e. the ALPP is intended to protect more than one target fruit fly host), the specified level of low pest prevalence should be based on scientific information relating to the primary host of the fruit fly species, the risks of infestation and comparative preferences of the target fruit fly species for the different hosts. However, in situations where the FF-ALPP is established to protect only one type of host, consideration should be given as to whether that host is a primary host or a secondary host. In such situations, lower specified levels of low pest prevalence are usually established for the primary host(s) of the target fruit fly species and comparatively higher levels for secondary hosts.

The biology of the target fruit flies (including number of generations per year, host range, host species present in the area, temperature thresholds, behaviour, reproduction and dispersion capacity) plays a major role in establishing appropriate specified levels of low pest prevalence. For an FF-ALPP with several hosts present, the established specified levels of low pest prevalence should reflect host diversity and abundance, host preference and host sequence for each target fruit fly species present. Although an FF-ALPP may have different specified levels of low pest prevalence for each relevant fruit fly target species, those levels should remain fixed for the whole area and duration of the FF-ALPP operation.

Efficiency of the types of traps and attractants used to estimate the levels of the pest population and the procedures applied for servicing the traps should be taken into consideration. The rationale is that different trap efficiencies could lead to different FTD results at the same location for a given population, so they have a significant effect in measuring the prevalence level of the target fruit fly species. Thus, when specifying the level of low pest prevalence accepted in terms of an FTD value, the efficacy of the trapping system should be stated as well.

Once a specified level of low pest prevalence has been established for a given situation using a specific lure/attractant, the lure/attractant used in the FF-ALPP must not be changed or modified until an appropriate specified level of low pest prevalence is established for the new formulation. For FF-ALPPs with multiple target fruit fly species present that are attracted to different lures/attractants, trap placement should take into consideration possible interactive effects between lures/attractants.

Fruit sampling can be used as a complementary surveillance method to trapping to assess the profile of the fruit fly population levels. However, fruit sampling will not provide sufficient accuracy for describing the size of the population and should not be solely relied on to validate or verify the FF-ALPP status.

[1] This annex is an official part of the standard.

ANNEX 2

GUIDELINES ON CORRECTIVE ACTION PLANS FOR FRUIT FLIES IN AN FF-ALPP[2]

The detection of a population level exceeding the specified level of low pest prevalence for the target fruit fly species in the FF-ALPP should trigger the application of a corrective action plan. The objective of the corrective action plan is to ensure suppression of the fruit fly population to below the specified level for low pest prevalence as soon as possible. It is the responsibility of the NPPO to ensure that appropriate corrective action plans are developed. Corrective action plans should not be repeatedly implemented because this may lead to a loss of FF-ALPP status and the need to re-establish the area in accordance with the guidelines of this standard.

The corrective action plan should be prepared taking into account the biology of the target fruit fly species, the geography of the FF-ALPP, climatic conditions, phenology, and host abundance and distribution within the area.

The elements required for implementation of a corrective action plan include:
- declaration of suspension of FF-ALPP of status, where appropriate
- legal framework under which the corrective action plan can be applied
- time scales for the initial response and follow-up activities
- delimiting survey (trapping and fruit sampling) and application of the suppression actions
- identification capability
- availability of sufficient operational resources
- effective communication within the NPPO and with the NPPO(s) of the relevant importing country(ies), including provision of contact details of all parties involved
- a detailed map and definition of the suspension area.

Application of the corrective action plan

1. Notice to implement corrective actions

The NPPO notifies interested stakeholders and parties, including relevant importing countries, when initiating the application of a corrective action plan. The NPPO, or an NPPO-nominated agency, is responsible for supervising the implementation of corrective measures.

2. Determination of the phytosanitary status

Immediately after detecting a population level higher than the specified level of low pest prevalence, a delimiting survey (which may include the deployment of additional traps, fruit sampling of primary host fruits and increased trap inspection frequency) should be implemented to determine the size of the affected area and more precisely gauge the level of the fruit fly prevalence.

3. Suspension of FF-ALPP status

If the specified level of low pest prevalence of the target fruit fly species is exceeded, the FF-ALPP status should be suspended as stated in section 2.5.1.

4. Implementation of control measures in the affected area

Specific suppression actions should immediately be implemented in the affected area(s). Available methods include:
- selective insecticide-bait treatments (aerial and/or ground spraying and bait stations)
- sterile insect technique
- male annihilation technique
- collection and destruction of affected fruit
- stripping and destruction of primary host fruits, if possible
- insecticide treatments (ground, cover).

5. Notification of relevant agencies

Relevant NPPOs and other agencies should be kept informed of corrective actions. Information on pest reporting requirements under the IPPC is provided in ISPM No. 17 (*Pest reporting*).

[2] This annex is an official part of the standard.

APPENDIX 1

GUIDELINES ON TRAPPING PROCEDURES[3]

Information about trapping is available in the following publication of the International Atomic Energy Agency (IAEA): *Trapping Guidelines for area-wide fruit fly programmes*, IAEA/FAO-TG/FFP, 2003. IAEA, Vienna.

This publication is widely available, easily accessible and generally recognized as authoritative.

[3] This appendix is not an official part of the standard. It is provided for information only.

APPENDIX 2

TYPICAL APPLICATIONS OF FF-ALPPS[4]

1. An FF-ALPP as a buffer zone

In cases where the biology of the target fruit fly species is such that it is likely to disperse from an infested area into a protected area, it may be necessary to define a buffer zone with a low fruit fly prevalence (as described in ISPM No. 26: *Establishment of pest free areas for fruit flies (Tephritidae)*). These FF-ALPPs are usually established at the same time as establishing the FF-PFA and may subsequently be redefined to improve protection of the FF-PFA.

1.1 Determination of an FF-ALPP as a buffer zone

Determination procedures may include those listed in section 1.2 of this ISPM. In addition, in delimiting the buffer zone, detailed maps may be included showing the boundaries of the area to be protected, distribution of hosts, host location, urban areas, entry points and control checkpoints. It is also relevant to include data related to natural biogeographical features such as prevalence of other hosts, climate, and location of valleys, plains, deserts, rivers, lakes and sea, as well as those areas that function as natural barriers. The size of the buffer zone in relation to the size of the area being protected will depend on the biology of the target fruit fly species (including behaviour, reproduction and dispersal capacity), the intrinsic characteristics of the protected area, and the economic and operational feasibility of establishing the FF-ALPP.

1.2 Establishment of an FF-ALPP as a buffer zone

The establishment procedures are described in section 2.1. The movement of relevant fruit fly host commodities into the area may need to be regulated. Additional information can be found in section 2.2.3 of ISPM No. 26 (*Establishment of pest free areas for fruit flies (Tephritidae)*).

1.3 Maintenance of an FF-ALPP as a buffer zone

Procedures include those listed in section 2.3. Since the buffer zone has features similar to the area or place of production it protects, procedures for maintenance may include those listed for the FF-PFA as described in section 2.3 of ISPM No. 26 (*Establishment of pest free areas for fruit flies (Tephritidae)*) and sections 3.1.4.2, 3.1.4.3 and 3.1.4.4 of ISPM No. 22 (*Requirements for the establishment of areas of low pest prevalence*). The importance of information dissemination may also be considered in the maintenance of an FF-ALPP as a buffer zone.

2 FF-ALPPs for export purposes

FF-ALPPs may be used to facilitate fruit exports from the area. In most cases the FF-ALPP is the main component of a systems approach as a pest risk mitigation measure. Examples of measures and/or factors used in conjunction with FF-ALPPs include:

- pre- and post-harvest treatments
- production of secondary hosts or non-hosts in preference to primary hosts
- export of host material to areas not at risk during particular seasons
- physical barriers (e.g. pre-harvest bagging, insect-proof structures).

2.1 Determination of an FF-ALPP for export purposes

Determining procedures may include those listed in section 1.2. In addition, the following elements should be considered for the determination of an FF-ALPP:

- a list of products (hosts) of interest
- a list of other commercial and non-commercial hosts of the target fruit fly species present but not intended for export and their level of occurrence, as appropriate
- additional information such as any historical records in connection with biology, occurrence and control of the target fruit fly species or any other fruit fly species that may be present in the FF-ALPP.

2.2 Maintenance of an FF-ALPP for export purposes

Maintenance procedures may include those described in section 2.3.2 and should be applied if hosts are available. If appropriate, surveillance may continue at a lower frequency during the off-season period. This will depend on the biology of the target fruit fly species and its relationship with hosts present during the off-season period.

[4] This appendix is not an official part of the standard. It is provided for information only.

Summary of SC reactions to some comments
Draft ISPM: Methodologies for sampling of consignments
(Comment numbers refer to the tables of compiled member comments posted on the IPP)

Summary of the major issues identified as a result of comments provided on the draft ISPM for sampling of consignments resulting from the member consultation process.

1. The title of the ISPM was changed to better reflect that the ISPM is to provide guidance to NPPOs in developing sampling methodologies.
2. Restructuring of the text of the draft ISPM and adding of additional text to ensure that the ISPM still made sense. Appropriate text was inserted to link the restructured text.
3. A number of translation issues identified in the member comments in both the Spanish and French versions of the draft ISPM circulated for consultation. In addition it was noted that the terms "must", "should", "shall" and "may" should be consistently translated into Spanish following guidance given by the CPM.
4. A new "outline of requirements" was developed and inserted into the ISPM to better reflect the guidelines for ISPMs (that is, a summary of the substance of the standard).
5. There was comment that any reference to "tolerance level" should be removed from the draft ISPM. However, there was also comment that the concept of a tolerance level should be included as one of the key concepts. The SC attempted to improve the text and hopefully the understanding of the concept of tolerance level (and that it is an exception rather than a requirement that a tolerance level greater than zero be set) and noted that while most countries will only have tolerance of zero (that is, a zero tolerance level) for regulated pests some countries do in fact have a tolerance level greater than zero for regulated pests. In addition, knowledge of a tolerance level for the entire lot and/or consignment can potentially affect a range of the other parameters. There are a number of references to tolerances and tolerance levels in existing ISPMs including: ISPM No. 2 (Section 2.2), ISPM No. 5 (Supplement on “official control”), ISPM No. 11 (section 3.4.1), ISPM No. 16 (section 6.3 – and throughout text), ISPM No. 20 (sections 4.2.3 and 5.1.6.1), ISPM No. 21 (section 4).
6. A specific comment, to bring the text in line with the heading (consignments), suggested that specific text be included noting that the ISPM is not for collection of samples in relation to field survey activities.
7. It was suggested that all the formulae included in the appendices to the draft ISPM be numbered. This was done and an additional appendix (a new appendix 5) was added to the draft ISPM as an index for the formulae.
8. The term "batch" was changed to “lot”, which was already defined in the glossary.
9. The SC recommends as a high priority, an explanatory document be developed that includes further examples to complement the text of the ISPM. While the draft ISPM is consistent with the requirements for an ISPM the explanatory document would be very useful for developing countries. The explanatory document could be based on the supporting documents circulated with the draft ISPM during the member consultation process and the chair of the EWG could be approached to author the document.
10. For comment 8, the SC suggested the idea of placing a sampling calculator on the IPP. This could help translate the methodologies described in the standard into practical sampling rates. The Secretariat is requested to comment on the feasibility of this to the SC.
11. Regarding comment 14 requesting the addition of ISTA in the reference section, the SC noted that references are only included if they are referred to in the ISPM and ISTA is not referred to in the draft.
12. Regarding comments 211, 212 and 217 which suggested that the text describe that samples should be taken randomly. This was not incorporated as random sampling is one of the valid methods used by NPPOs however, as reflected in the draft ISPM, there are others that are valid.
13. Regarding comment 256, operational considerations are, as noted in the ISPM, one of the major limitations on NPPOs applying statistically based methods. If there is a phytosanitary risk you will sample to see if it meets your requirements. If you can’t, for operational reasons, perform a statistically based sampling method, you are aiming to solely detect the pest and therefore employ a method that would do that.

Draft ISPM

INTERNATIONAL STANDARDS FOR PHYTOSANITARY MEASURES

METHODOLOGIES FOR SAMPLING OF CONSIGNMENTS

(200-)

CONTENTS

INTRODUCTION

SCOPE

This standard provides guidance to National Plant Protection Organizations (NPPOs) in selecting appropriate sampling methodologies for inspection or testing of consignments to verify compliance with phytosanitary requirements.

This standard does not give guidance on field sampling (for example, as required for surveys).

REFERENCES

Cochran, W.G. 1977. *Sampling techniques*. 3rd edn. New York, John Wiley & Sons. 428 pp.
Glossary of phytosanitary terms, 2007. ISPM No. 5, FAO, Rome.
Guidelines for inspection, 2005. ISPM No. 23, FAO, Rome.
Guidelines for phytosanitary import regulatory systems, 2004, ISPM No. 20, FAO Rome.
Pest risk analysis for quarantine pests including analysis of environmental risks and living modified organisms, ISPM No. 11, 2004, FAO, Rome.
Pest risk analysis for regulated non-quarantine pests, 2004. ISPM No. 21, FAO, Rome.
Phytosanitary principles for the protection of plants and the application of phytosanitary measures in international trade, 2006. ISPM No. 1, FAO, Rome.

DEFINITIONS

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

OUTLINE OF REQUIREMENTS

The sampling methodologies used by NPPOs in selecting samples for the inspection of consignments of commodities moving in international trade are based on a number of sampling concepts. These include parameters such as acceptance level, level of detection, confidence level, efficacy of detection, sample size and tolerance level.

The application of statistically based methods, such as simple random sampling, systematic sampling, stratified sampling, sequential sampling or clustered sampling, provides results with a statistical confidence level. Other sampling methods that are not statistically based, such as convenience sampling, haphazard sampling or selective sampling, may provide valid results in determining the presence or absence of a regulated pest(s) but no statistical inference can be made on their basis. Operational limitations will have an effect on the practicality of sampling under one or another method.

In using sampling methodologies, NPPOs accept some degree of risk that non-conforming lots may not be detected. Inspection using statistically based methods can provide results with a certain level of confidence only and cannot prove the absence of a pest from a consignment. Sampling may result in an NPPO undertaking phytosanitary action on the consignment.

BACKGROUND

This standard provides the statistical basis for, and complements, ISPMs No. 20 (*Guidelines for phytosanitary import regulatory systems*) and No. 23 (*Guidelines for inspection*). Inspection of consignments of regulated articles moving in trade is an essential tool for the management of pest risks and is the most frequently used phytosanitary procedure worldwide to determine if pests are present and/or the compliance with phytosanitary import requirements.

It is usually not feasible to inspect entire consignments, so phytosanitary inspection is performed mainly on samples obtained from a consignment. It is noted that the sampling concepts presented in this standard may also apply to phytosanitary procedures, notably selection of units for testing.

Sampling of plants, plant products and other regulated articles may occur prior to export, at the point of import, or other points as determined by NPPOs.

It is important that sampling procedures established and used by NPPOs are documented and transparent, and take into account the principle of minimum impact (ISPM No. 1: *Phytosanitary principles for the protection of plants and the application of phytosanitary measures in international trade*), particularly because inspection based on sampling may lead to refusal to issue a phytosanitary certificate, refusal of entry, or treatment or destruction of a consignment or part of a consignment.

Sampling methodologies used by NPPOs will depend on the sampling objectives (for example, sampling for testing) and may be solely statistically based or developed noting particular operational constraints. Methodologies developed to achieve the sampling objectives, within operational constraints, may not yield the same statistical confidence levels in the results as fully statistically based methods, but such methods may still give valid results depending on the desired

sampling objective. If the sole purpose of sampling is to increase the chance of finding a pest, selective or targeted sampling is also valid.

OBJECTIVES OF SAMPLING OF CONSIGNMENTS

Sampling of consignments is done for inspection and testing in order to:

- detect regulated pests
- provide assurance that the number of regulated pests or infested units in a consignment does not exceed the specified level for the pest
- provide assurance of the general phytosanitary condition of a consignment
- detect organisms for which a phytosanitary risk has not yet been determined
- optimize the probability of detecting specific regulated pests
- maximize the use of available sampling resources
- gather other information such as for monitoring of a pathway
- verify compliance with phytosanitary requirements
- determine the proportion of the consignment infested.

It should be noted that inspection and/or testing based on sampling always involves a degree of error. The acceptance of some probability that the pests are present is inherent in the use of sampling procedures for inspection and/or testing. Inspection and/or testing using statistically based sampling methods can provide confidence that the incidence of a pest is below a certain level, but it can never prove that a pest is truly absent from a consignment.

REQUIREMENTS

1. Lot Identification

A consignment may consist of one or more lots. Where a consignment comprises more than one lot, the inspection to determine compliance may have to consist of several separate visual examinations, and therefore the lots will have to be sampled separately. In such cases, the samples relating to each lot should be segregated and identified in order that the appropriate lot can be clearly identified if subsequent inspection or testing reveals non-compliance with phytosanitary requirements. Whether or not a lot will be inspected should be determined using factors stated in ISPM No. 23 (*Guidelines for inspection*, section 1.5).

A lot to be sampled should be a number of units of a single commodity identifiable by its homogeneity in factors such as:

- origin
- grower
- packing facility
- species, variety, or degree of maturity
- exporter
- area of production
- regulated pests and their characteristics
- treatment at origin
- type of processing.

The criteria used by the NPPO to distinguish lots should be consistently applied for similar consignments.

Treating multiple commodities as a single lot for convenience may mean that statistical inferences can not be drawn from the results of the sampling.

2. Sample Unit

Sampling first involves the identification of the appropriate unit for sampling (for example, a fruit, stem, bouquet, unit of weight, bag or carton). The determination of the sample unit is affected by issues related to homogeneity in the distribution of pests through the commodity, whether the pests are sedentary or mobile, how the consignment is packaged, intended use, and operational considerations. For example, if determined solely on pest biology, the appropriate sample unit might be an individual plant or plant product in the case of a low-mobility pest, whereas in the case of mobile pests, a carton or other commodity container may be the preferred sample unit. However, when inspection is to detect more than one type of pest, other considerations (for example, practicality of using different sample units) may apply.

3. Statistical and Non-Statistical Sampling

The sampling method is the process approved by the NPPO to select units for inspection and/or testing. Sampling for

phytosanitary inspection of consignments or lots is done by taking units from the consignment or lot without replacement of the units selected[1]. NPPOs may choose either a statistically based or targeted sampling methodology.

Sampling based on statistical or targeted methods is designed to facilitate the detection of a regulated pest(s) in a consignment and/or lot.

3.1 Statistically based sampling

Statistically based sampling methods involve the determination of a number of interrelated parameters and the selection of the most appropriate statistically based sampling method.

3.1.1 Parameters

Statistically based sampling is designed to detect a certain percentage or proportion of infestation with a specific confidence level, and thus requires the NPPO to determine the following interrelated parameters: acceptance number, level of detection, confidence level, efficacy of detection and sample size. The NPPO may also establish a tolerance level for certain pests (e.g. regulated non-quarantine pests).

3.1.1.1 Acceptance number

The acceptance number is the number of infested units or the number of individual pests that are permissible in a sample of a given size before phytosanitary action is taken. Many NPPOs determine this number to be zero for quarantine pests. For example, if the acceptance number is zero and an infested unit is detected in the sample then phytosanitary action will be taken. It is important to appreciate that a zero acceptance number within a sample does not mean a zero tolerance level in the consignment as a whole. Even if no pests are detected in the sample there remains a probability that the pest may be present in the rest of the consignment, albeit at a very low level.

The acceptance number is linked to the sample. The acceptance number is the number of infested units or the number of individual pests that are permissible in the sample whereas the tolerance level (see section 3.1.1.6) refers to the status of the entire consignment.

3.1.1.2 Level of detection

The level of detection is the minimum percentage or proportion of infestation that the sampling methodology will detect at the specified efficacy of detection and level of confidence, which the NPPO intends to detect in a consignment.

The level of detection may be specified for a pest, a group or category of pests, or for unspecified pests. The level of detection may be derived from:

- a decision based on pest risk analysis to detect a specified level of infestation (the infestation determined to present an unacceptable risk)
- an evaluation of the effectiveness of phytosanitary measures applied before inspection
- an operationally based decision that inspection above a certain level is not practical.

3.1.1.3 Confidence level

The confidence level indicates the probability that a consignment with a degree of infestation exceeding the level of detection will be detected. A confidence level of 95% is commonly used. The NPPO may choose to require different confidence levels depending on the intended use of the commodity. For example, a higher confidence level for detection may be required for commodities for planting than for commodities for consumption, and the confidence level may also vary with the strength of the phytosanitary measures applied and historical evidence of non-compliance. Very high confidence level values quickly become difficult to achieve, and lower values become less meaningful for decision-making. A 95% confidence level means that the conclusions drawn from the results of sampling will detect a non-compliant consignment, on average, 95 times out of 100, and therefore, it may be assumed that, on average, 5% of non-compliant consignments will not be detected.

3.1.1.4 Efficacy of detection

The efficacy of detection is the probability that an inspection or test of an infested unit(s) will detect a pest. In general the efficacy should not be assumed to be 100%. For example, pests may be difficult to detect visually; plants may not express symptoms of disease (latent infection); or efficacy may be reduced as a result of human error. It is possible to include lower efficacy values (for instance, an 80% chance of detecting the pest when an infested unit is inspected) in the determination of sample size.

3.1.1.5 Sample size

[1] Sampling without replacement is selecting a unit from the consignment or lot without replacing the unit before the next units are selected. Sampling without replacement does not mean that a selected item cannot be returned to a consignment (except for destructive sampling); it means only that the inspector should not return it before selecting the remainder of the sample.

The sample size is the number of units selected from the lot or consignment that will be inspected or tested.

3.1.1.6 Tolerance level

Tolerance level refers to the percentage of infestation in the entire consignment or lot that is the threshold for phytosanitary action. The level of detection should be less than, or equal to, the tolerance level.

Tolerance levels may be established for regulated non-quarantine pests (as described in ISPM No. 21: *Pest risk analysis for regulated non-quarantine pests*, section 4.4) and may also be established for conditions related to other phytosanitary import requirements (for example, bark on wood or soil on plant roots).

Most NPPOs have a zero tolerance level for all quarantine pests, taking into account probabilities of pest presence in the non-sampled components as described in section 3.1.1.1. However, an NPPO may determine to establish a tolerance level for a quarantine pest based on pest risk analysis (as described in ISPM No. 11: *Pest risk analysis for quarantine pests including analysis of environmental risks and living modified organisms*, section 3.4.1) and then determine sampling rates from this. For example, NPPOs may determine a tolerance level that is greater than zero because small numbers of the quarantine pest may be acceptable if the establishment potential of the pest is considered low or if the intended end use of the product (for example, fresh fruit and vegetables imported for processing) limits the potential of entry of the pest into endangered areas.

3.1.2 Links between the parameters

The six parameters (acceptance number, level of detection, confidence level, efficacy of detection, sample size and tolerance level) are statistically related. The NPPO should determine the efficacy of the detection method used and decide upon the acceptance number in the sample; any two of the remaining four parameters can also be chosen, and the remainder will be determined from the values chosen for the rest.

If a tolerance level based on risk analysis is used, the level of detection chosen should be equal to (or less than, if the acceptance number is greater than zero) the tolerance level to ensure that consignments having an infestation level greater than the tolerance level will be detected with the specified confidence level.

If no pests are detected in the sample unit, then the percentage of infestation in the consignment can not be stated beyond the fact that it falls below the level of detection at the stated confidence level. If the pest is not detected with the appropriate sample size, the confidence level gives a probability that the tolerance level is not exceeded.

3.1.3 Statistically based sampling methods

3.1.3.1 Simple random sampling

Simple random sampling involves drawing the sample units in accordance with a tool such as a random numbers table. The use of a predetermined randomization process is what distinguishes this method from haphazard sampling (described in section 3.2.2).

This method is often used when little is known about the pest distribution or rate of infestation. To use this method, each unit should have an equal probability of selection. In cases where a pest is not distributed randomly through the lot, this method may not be optimal. Random sampling may require greater resources depending on the type and/or configuration of the consignment.

3.1.3.2 Systematic sampling

Systematic sampling involves drawing a sample from units in the lot at fixed, predetermined intervals. However, the first selection must be made at random, and the assumption is made that the pest is randomly distributed through the lot. Biased results are possible if pests are not randomly distributed. Such biases may be reduced when consignments have been subjected to grading, sorting and mixing during the packing process.

Two advantages of this method are that the sampling process may be automated through machinery and that it requires the use of a random process only to select the first unit.

3.1.3.3 Stratified sampling

Stratified sampling involves separating the lot into separate subdivisions (that is, strata) and then drawing some of the samples from each subdivision. Within each subdivision, samples are taken using a particular method (systematic or random). Under some circumstances, different numbers of samples may be taken from each subdivision – for instance, the number of samples may be proportional to the size of the subdivision, or based on prior knowledge concerning the infestation of the subdivisions.

If at all feasible, stratified sampling will almost always improve detection accuracy. The smaller variation associated with stratified sampling yields more accurate results. This is especially true when infestation levels may vary across a

lot depending on packing procedures or storage conditions. Stratified sampling is the preferred choice when knowledge about the pest distribution is presumed and operational considerations will allow it.

3.1.3.4 Sequential sampling

Sequential sampling involves drawing a series of samples using one of the above methods. After each sample (or group) is drawn, the data are accumulated and compared with predetermined ranges to decide whether to accept the consignment, reject the consignment or continue sampling.

This method can be used when a tolerance level greater than zero is determined and the first set of samples does not provide sufficient information to allow a decision to be made on whether or not the tolerance level is exceeded. This method would not be used if the acceptance number in a sample of any size is zero. Sequential sampling may reduce the number of samples required for a decision to be made or reduce the possibility of rejecting a conforming consignment.

3.1.3.5 Clustered sampling

Clustered sampling involves selecting groups of units (for example, boxes of fruit, bunches of flowers) to make up the total number of sample units required from the lot. It is useful if resources available for sampling are limited and works well when the distribution of pests is expected to be random.

Clustered sampling can be stratified, and can use either systematic or random methods for selecting the groups. Of the statistically based methods, this method is often the most practical to implement.

3.2 Non-statistically based sampling

Other sampling methods that are not statistically based, such as convenience sampling, haphazard sampling or selective or targeted sampling, may provide valid results in determining the presence or absence of a regulated pest(s). The following methods may be used based on specific operational considerations or when the goal is purely detection of pests.

3.2.1 Convenience sampling

Convenience sampling involves selecting the most convenient (for example, accessible, cheapest, fastest) units from the lot, without selecting units in a random or systematic manner.

3.2.2 Haphazard sampling

Haphazard sampling involves selecting arbitrary units without using a true randomization process. This may often appear to be random because the inspector is not conscious of having any selection bias. However, unconscious bias may occur, so that the degree to which the sample is representative of the lot is unknown.

3.2.3 Selective or targeted sampling

Selective sampling involves deliberately selecting samples from parts of the lot most likely to be infested, or units that are obviously infested, in order to increase the chance of detecting a specific regulated pest. This method may rely on inspectors who are experienced with the commodity and familiar with the pest's biology. Use of this method may also be triggered through a pathway analysis identifying a specific section of the lot with a higher probability of being infested (for example, a wet section of timber may be more likely to harbour nematodes). Because the sample is targeted, and hence statistically biased, a probabilistic statement about the infestation level in the lot can not be made. However, if the sole purpose of sampling is to increase the chance of finding a regulated pest(s), this method is valid. Separate samples of the commodity may be required to meet general confidence in detection of other regulated pests.

4. Selecting a Sampling Method

In most cases the selection of an appropriate sampling method is necessarily dependent on information available about the pest’s incidence and distribution in the consignment or lot as well as the operational parameters associated with the inspection situation in question. In most phytosanitary applications, operational limitations will dictate the practicality of sampling under one or another method. Subsequently, determining the statistical validity of practical methods will narrow the field of alternatives.

The sampling method that is ultimately selected by the NPPO should be operationally feasible and be the most appropriate to achieve the objective and be well documented for transparency. Operational feasibility is clearly linked to judgements concerning situation-specific factors, but should be consistently applied.

If sampling is undertaken to increase the chance of detecting a specific pest, one of the targeted sampling methods (described in section 3.2) may be the preferred option, as long as the inspectors can identify the section(s) of the lot with a higher probability of being infested. Without this knowledge, one of the statistically based methods will be more appropriate. Targeted methods also do not result in each unit having an equal probability of being included in the sample, so the true confidence level and level of detection may not be equal to the values chosen by the NPPO.

If sampling is undertaken to provide knowledge about the general phytosanitary condition of a consignment, to detect multiple quarantine pests, to verify compliance with phytosanitary requirements, or for information gathering, one of the statistically based methods will be appropriate.

In selecting a statistically based method, consideration may be given to how the consignment has been treated in harvesting, sorting and packing, and the likely distribution of the pest(s) in the lot. Sampling methods may be combined: for instance, a stratified sample may have either random or systematic selection of sample units (or clusters) within strata.

If sampling is undertaken to determine whether a specific non-zero tolerance level has been exceeded, a sequential sampling method may be appropriate.

Once a sampling method has been selected and correctly applied, repeating the sampling with the aim of achieving a different result is unacceptable. Sampling should not be repeated unless considered necessary for specific technical reasons (for example, suspected incorrect application of sampling methodology or suspected infestation due to the inspection or test results).

5. Sample Size Determination

To determine the number of samples to be taken, the NPPO should select a confidence level (for example, 95%), a level of detection (for example, 5%) and an acceptance number (for example, zero), and determine the efficacy of inspection or testing (for example, 80%). From these values and the lot size, a sample size can be calculated. Appendices 1-5 set out the mathematical basis of sample size determination.

5.1 Pests distributed randomly in the lot

Because sampling is done without replacement and the population size is finite, the hypergeometric distribution should be used to determine the sample size. This distribution gives a probability of detecting a certain number of infested units in a sample of a given size drawn from a lot of a given size, when a specific number of infested units exist in the lot (see Appendix 1). The number of infested units in the lot is estimated as the level of detection multiplied by the total number of units in the lot.

As lot size increases, the sample size required for a specific level of detection and confidence level approaches an upper limit. When the sample size is less than 5% of the lot size, the sample size can be calculated using either the binomial or Poisson distribution (see Appendix 2). All three distributions (hypergeometric, binomial and Poisson) give almost identical sample sizes for specific confidence and detection levels at large lot sizes, but binomial and Poisson distributions are easier to calculate.

5.2 Pest distribution aggregated in the lot

Most pest populations are aggregated to some degree in the field. Because commodities may be harvested and packed in the field without being graded or sorted, the distribution of infested units in the lot may be clustered or aggregated. Aggregation of infested units of a commodity will always lower the likelihood of finding an infestation. However, phytosanitary inspections are aimed at detection of infested units and/or pest(s) at a low level. The effect of aggregation of the infested units on the detection efficacy of a sample and on the required sample size is small in most cases. When NPPOs identify that there is a high likelihood that there will be aggregation of infested units in the lot a stratified sampling method may help increase the chance of detecting an aggregated infestation.

When pests are aggregated, the calculation of sample size should ideally be performed using a beta-binomial distribution (see Appendix 3). However, this calculation requires knowledge of the degree of aggregation, which is generally not known and therefore this distribution is not practical for general use. One of the other distributions (hypergeometric, binomial or Poisson) can be used; however, the confidence level of the sampling will decline as the degree of aggregation increases.

5.3 Fixed proportion sampling

Sampling a fixed proportion of the units in the lot (for example, 2%) results in inconsistent levels of detection or confidence levels when lot size varies. As shown in Appendix 4, fixed proportion sampling results in changing confidence levels for a given level of detection, or in changing levels of detection for a given confidence level.

6. Varying Level of Detection

The choice of a constant level of detection may result in a varying number of infested units entering with imported consignments because lot size varies (for example, a 1% infestation level of 1000 units corresponds to 10 infested units, while a 1% infestation level of 10,000 units corresponds to 100 infested units). Ideally the selection of a level of detection will reflect in part the number of infested units entering on all consignments within a particular period of time. If NPPOs want to manage the number of infested units entering with each consignment as well, a varying detection

level may be used. A tolerance level would be specified in terms of a number of infested items per consignment, and the sample size would be set in order to give the desired confidence and detection levels (further described in Appendix 4).

7. Outcome of Sampling

The outcome of activities and techniques related to sampling may result in phytosanitary action being taken (further details can be found in ISPM No. 23: *Guidelines for inspection*, section 2.5).

APPENDIX 1

CALCULATING SAMPLE SIZES FOR SMALL LOTS: HYPERGEOMETRIC-BASED SAMPLING (RANDOM SAMPLING)[2]

The hypergeometric distribution is appropriate to describe the probability of finding a pest in a relatively small lot. A lot is considered as small when the sample size is more than 5% of the lot size. In this case, sampling of one unit from the lot affects the probability of finding an infested unit in the next unit selected.

It is also assumed that the distribution of the pest in the lot is not aggregated and that random sampling is used. This methodology can be extended for other schemes such as stratified sampling (further details can be found in Cochran, 1977).

The probability of detecting *i* infested units in a sample is given by

$$P(X = i) = \frac{\binom{A}{i}\binom{N-A}{n-i}}{\binom{N}{n}} \qquad \text{Formula 1}$$

Where:

$$\binom{a}{b} = \frac{a!}{b!(a-b)!} \quad \text{where a!= a(a-1)(a-2)….. 1 and 0!=1}$$

P(X = i) is the probability of observing i infested units in the sample, where i = 0, …, *n*.

The confidence level corresponds to: 1- P(X = i)
A = number of infested units in the lot that could be detected if every unit in the lot was inspected or tested, given the efficacy of the inspection method or test (level of detection × N × efficacy, truncated to an integer)
i = number of infested units in the sample
N = number of units in the lot (size of the lot)
n = number of units in the sample (sample size)

In particular the approximation that can be used for the probability of finding no infested units is

$$P(X=0) = \left(\frac{N-A-u}{N-u}\right)^{n} \qquad \text{Formula 2}$$

where u = (n-1)/2 (from Cochran, 1977).

Solving the equation to determine *n* is difficult arithmetically but can be done with approximation or through maximum likelihood estimation.

Tables 1 and 2 show sample sizes calculated for different lot sizes, levels of detection and confidence levels, when the acceptance number is 0.

[2] This appendix is not an official part of the standard. It is provided for information only.

Table 1. Table of minimum sample sizes for 95% and 99% confidence levels at varying detection levels according to lot size, hypergeometric distribution

Number of units in lot	P = 95% (confidence level) % level of detection × efficacy of inspection or test					P = 99% (confidence level) % level of detection × efficacy of inspection or test				
	5	2	1	0.5	0.1	5	2	1	0.5	0.1
25	24*	-	-	-	-	25*	-	-	-	-
50	39*	48	-	-	-	45*	50	-	-	-
100	45	78	95	-	-	59	90	99	-	-
200	51	105	155	190	-	73	136	180	198	-
300	54	117	189	285*	-	78	160	235	297*	-
400	55	124	211	311	-	81	174	273	360	-
500	56	129	225	388*	-	83	183	300	450*	-
600	56	132	235	379	-	84	190	321	470	-
700	57	134	243	442*	-	85	195	336	549*	-
800	57	136	249	421	-	85	199	349	546	-
900	57	137	254	474*	-	86	202	359	615*	-
1 000	57	138	258	450	950	86	204	368	601	990
2 000	58	143	277	517	1553	88	216	410	737	1800
3 000	58	145	284	542	1895	89	220	425	792	2353
4 000	58	146	288	556	2108	89	222	433	821	2735
5 000	59	147	290	564	2253	89	223	438	840	3009
6 000	59	147	291	569	2358	90	224	442	852	3214
7 000	59	147	292	573	2437	90	225	444	861	3373
8 000	59	147	293	576	2498	90	225	446	868	3500
9 000	59	148	294	579	2548	90	226	447	874	3604
10 000	59	148	294	581	2588	90	226	448	878	3689
20 000	59	148	296	589	2781	90	227	453	898	4112
30 000	59	148	297	592	2850	90	228	455	905	4268
40 000	59	149	297	594	2885	90	228	456	909	4348
50 000	59	149	298	595	2907	90	228	457	911	4398
60 000	59	149	298	595	2921	90	228	457	912	4431
70 000	59	149	298	596	2932	90	228	457	913	4455
80 000	59	149	298	596	2939	90	228	457	914	4473
90 000	59	149	298	596	2945	90	228	458	915	4488
100 000	59	149	298	596	2950	90	228	458	915	4499
200 000+	59	149	298	597	2972	90	228	458	917	4551

Those values in the table marked with an asterisk (*) are because some scenarios presented in the tables result in a fraction of a unit being infested (for example, 300 units with 0.5% infestation corresponds to 1.5 infested units in the shipment). This is not possible for an individual shipment (whole numbers of units are infested). Therefore, values are given for the calculated number of infested units rounded down to a whole number. This means that the sampling intensity increases slightly, and may be greater for a shipment size where the number of infested units is rounded down than for a larger shipment where a larger number of infested units are calculated (for example, compare results for 700 and 800 units in the lot). It also means that a slightly lower proportion of infested units might be detected than the proportion indicated by the table, or that such infestation is more likely to be detected than the confidence level shown.

Those values in the table marked with a dash (-) are because some of the scenarios that are presented are not possible (less than one unit infested).

Table 2: Table of sample sizes for 80% and 90% confidence levels at varying detection levels according to lot size, hypergeometric distribution

Number of units in lot	P = 80% (confidence level) % level of detection × efficacy of inspection or test					P = 90% (confidence level) % level of detection × efficacy of inspection or test				
	5	2	1	0.5	0.1	5	2	1	0.5	0.1
100	27	56	80	-	-	37	69	90	-	-
200	30	66	111	160	-	41	87	137	180	-
300	30	70	125	240*	-	42	95	161	270*	-
400	31	73	133	221	-	43	100	175	274	-
500	31	74	138	277*	-	43	102	184	342*	-
600	31	75	141	249	-	44	104	191	321	-
700	31	76	144	291*	-	44	106	196	375*	-
800	31	76	146	265	-	44	107	200	350	-
900	31	77	147	298*	-	44	108	203	394*	-
1 000	31	77	148	275	800	44	108	205	369	900
2 000	32	79	154	297	1106	45	111	217	411	1368
3 000	32	79	156	305	1246	45	112	221	426	1607
4 000	32	79	157	309	1325	45	113	223	434	1750
5 000	32	80	158	311	1376	45	113	224	439	1845
6 000	32	80	159	313	1412	45	113	225	443	1912
7 000	32	80	159	314	1438	45	114	226	445	1962
8 000	32	80	159	315	1458	45	114	226	447	2000
9 000	32	80	159	316	1474	45	114	227	448	2031
10 000	32	80	159	316	1486	45	114	227	449	2056
20 000	32	80	160	319	1546	45	114	228	455	2114
30 000	32	80	160	320	1567	45	114	229	456	2216
40 000	32	80	160	320	1577	45	114	229	457	2237
50 000	32	80	160	321	1584	45	114	229	458	2250
60 000	32	80	160	321	1588	45	114	229	458	2258
70 000	32	80	160	321	1591	45	114	229	458	2265
80 000	32	80	160	321	1593	45	114	229	459	2269
90 000	32	80	160	321	1595	45	114	229	459	2273
100 000	32	80	160	321	1596	45	114	229	459	2276
200 000	32	80	160	321	1603	45	114	229	459	2289

APPENDIX 2

SAMPLING OF LARGE LOTS: BINOMIAL OR POISSON BASED SAMPLING[3]

For large lots sufficiently mixed, the likelihood of finding an infested unit is approximated by simple binomial statistics. The sample size is less than 5% of the lot size. The probability of observing i infested units in a sample of *n* units is given by:

$$P(X=i) = \binom{n}{i} p^{i} (1-\phi p)^{n-i} \qquad \text{Formula 3}$$

p is the average proportion of infested units (infestation level) in the lot and ϕ represents the percentage inspection efficacy divided by 100.
P(X = *i*) is the probability of observing i infested units in the sample. The confidence level corresponds to: 1- P(X = *i*), i = 0, 1, 2, …, n.

For phytosanitary purposes, the probability of not observing a pest specimen or symptom in the sample is determined. The probability of not observing an infested unit in a sample of *n* units is given by

$$P(X=0) = (1-\phi p)^{n} \qquad \text{Formula 4}$$

The probability of observing at least one infested unit is then:

$$P(X>0) = 1 - (1-\phi p)^{n} \qquad \text{Formula 5}$$

This equation can be rearranged to determine n

$$n = \frac{\ln[1 - P(X > 0)]}{\ln(1 - \phi p)} \qquad \text{Formula 6}$$

The sample size n can be determined with this equation when the infestation level (p), efficacy (ϕ) and the confidence level (1- P (X > 0)) are determined by the NPPO.

The binomial distribution can be approximated with the Poisson distribution. As *n* increases and p decreases, the binomial distribution equation given above tends to the Poisson distribution equation given below,

$$P(X=i) = \frac{(n\phi p)^{i} e^{-n\phi p}}{i!} \qquad \text{Formula 7}$$

where *e* is the base-value of the natural logarithm.

The probability of finding no infested units simplifies to

$$P(X=0) = e^{-n\phi p} \qquad \text{Formula 8}$$

The probability of finding at least one infested unit (the confidence level) is calculated as

$$P(X>0) = 1-e^{-n\phi p} \qquad \text{Formula 9}$$

Solving for n gives the following, which can be used to determine the sample size:

$$n = -\ln[1-P(X>0)]/\phi p \qquad \text{Formula 10}$$

Tables 3 and 4 show sample sizes when the acceptance number is 0, calculated for different levels of detection, efficacy and confidence levels with the binomial and Poisson distributions, respectively. A comparison of the case for 100% efficacy with the sample sizes in Table 1 (see Appendix 1) shows that the binomial and Poisson give very similar results to the hypergeometric distribution when n is large and p is small.

[3] This appendix is not an official part of the standard. It is provided for information only.

Table 3: Table of sample sizes for 95% and 99% confidence levels at varying detection levels, according to efficacy values where lot size is large and sufficiently mixed, binomial distribution

% efficacy	P = 95% (confidence level) % detection level					P = 99% (confidence level) % detection level				
	5	2	1	0.5	0.1	5	2	1	0.5	0.1
100	59	149	299	598	2995	90	228	459	919	4603
99	60	150	302	604	3025	91	231	463	929	4650
95	62	157	314	630	3152	95	241	483	968	4846
90	66	165	332	665	3328	101	254	510	1022	5115
85	69	175	351	704	3523	107	269	540	1082	5416
80	74	186	373	748	3744	113	286	574	1149	5755
75	79	199	398	798	3993	121	305	612	1226	6138
50	119	299	598	1197	5990	182	459	919	1840	9209
25	239	598	1197	2396	11982	367	919	1840	3682	18419
10	598	1497	2995	5990	29956	919	2301	4603	9209	46050

Table 4: Table of sample sizes for 95% and 99% confidence levels at varying detection levels, according to efficacy values where lot size is large and sufficiently mixed, Poisson distribution

% efficacy	P = 95% (confidence level) % detection level					P = 99% (confidence level) % detection level				
	5	2	1	0.5	0.1	5	2	1	0.5	0.1
100	60	150	300	600	2996	93	231	461	922	4606
99	61	152	303	606	3026	94	233	466	931	4652
95	64	158	316	631	3154	97	243	485	970	4848
90	67	167	333	666	3329	103	256	512	1024	5117
85	71	177	353	705	3525	109	271	542	1084	5418
80	75	188	375	749	3745	116	288	576	1152	5757
75	80	200	400	799	3995	123	308	615	1229	6141
50	120	300	600	1199	5992	185	461	922	1843	9211
25	240	600	1199	2397	11983	369	922	1843	3685	18421
10	600	1498	2996	5992	29958	922	2303	4606	9211	46052

APPENDIX 3

SAMPLING FOR PESTS WITH AN AGGREGATED DISTRIBUTION: BETA-BINOMIAL BASED SAMPLING[4]

In the case of aggregated spatial distribution, sampling can be adjusted to compensate for aggregation. For this adjustment to apply, it should be assumed that the commodity is sampled in clusters (for example, boxes) and that each unit in a chosen cluster is examined (cluster sampling). In such cases, the proportion of infested units, *f*, is no longer constant across all clusters but will follow a beta density function.

$$P(X=i) = \binom{n}{i} \frac{\prod_{j=0}^{i-1}(f+j\theta)\prod_{j=0}^{n-i-1}(1-f+j\theta)}{\prod_{j=0}^{n-1}(1+j\theta)} \qquad \text{Formula 11}$$

f is the average proportion of infested units (infestation level) in the lot.
P(X = i) is the probability of observing i infested units in a lot.
n = number of units in a lot.
$\prod$ is the product function
θ provides a measure of aggregation for the *j*th lot θ is $0<\theta<1$.

Phytosanitary sampling is often more concerned with the probability of not observing an infested unit after inspecting several batches. For a single batch, the probability that X=0 is

$$P(X=0) = 1 - \prod_{j=0}^{n-1}(1-f+j\theta)/(1+j\theta) \qquad \text{Formula 12}$$

and the probability that each of several lots has no infested unit, Pr(X=0), equals $P(X=0)^m$, where *m* is the number of lots. When *f* is low, equation 1 can be estimated by

$$P(X=0) \approx (1-n\theta)^{-(f/\theta)}$$
$$Pr(X=0) \approx (1+n\theta)^{-(mf/\theta)}$$

The probability of observing one or more infested units is given by $1 - Pr(X=0)$. Formula 13

This equation can be rearranged to determine *m*

$$m = \frac{-\theta}{f}\left[\frac{\ln(1-P(x>0)}{\ln(1+n\theta)}\right] \qquad \text{Formula 14}$$

Stratified sampling offers a way of reducing the impact of aggregation. Strata should be chosen so that the degree of aggregation within the strata is minimized.

When the degree of aggregation and the confidence level are fixed, the size of the sample can be determined. Without the degree of aggregation, the sample size can not be determined.

Efficacy (ϕ) values of less than 100% can be included by substituting ϕf for *f* in the equations.

[4] This appendix is not an official part of the standard. It is provided for information only.

APPENDIX 4

COMPARISON OF HYPERGEOMETRIC AND FIXED PROPORTION SAMPLING RESULTS[5]

Table 5: Confidence in the results of different sampling schemes for a 10% detection level

	Hypergeometric-based sampling (random sampling)		Fixed proportion sampling (2%)	
Lot size	sample size	confidence in detection	sample size	confidence in detection
10	10	1	1	0.100
50	22	0.954	1	0.100
100	25	0.952	2	0.191
200	27	0.953	4	0.346
300	28	0.955	6	0.472
400	28	0.953	8	0.573
500	28	0.952	10	0.655
1 000	28	0.950	20	0.881
1 500	29	0.954	30	0.959
3 000	29	0.954	60	0.998

Table 6: Minimum levels that can be detected with 95% confidence using different sampling schemes

	Hypergeometric-based sampling (random sampling)		Fixed proportion sampling (2%)	
Lot size	sample size	minimum detection level	sample size	minimum level of detection
10	10	0.10	1	1.00
50	22	0.10	1	0.96
100	25	0.10	2	0.78
200	27	0.10	4	0.53
300	28	0.10	6	0.39
400	28	0.10	8	0.31
500	28	0.10	10	0.26
1 000	28	0.10	20	0.14
1 500	29	0.10	30	0.09
3 000	29	0.10	60	0.05

[5] This appendix is not an official part of the standard. It is provided for information only.

APPENDIX 5

FORMULAE USED IN APPENDICES 1–4[6]

Formula No.	Purpose	Appendix No.
1	Probability of detecting *i* infested units in a sample.	1
2	Approximation for calculating the probability of finding no infested units.	1
3	Probability of detecting *i* infested units in a sample of n units (sample size is less than 5% of the lot size).	2
4	Binomial distribution probability of not observing an infested unit in a sample of n units.	2
5	Binomial distribution probability of observing at least one infested unit.	2
6	Binomial distribution formulae 5 and 6 rearranged to determine *n*.	2
7	Poisson distribution version of binomial formula 6	2
8	Poisson distribution probability of finding no infested units (simplified).	2
9	Poisson distribution probability of finding at least one infested unit (the confidence level).	2
10	Poisson distribution to determine the sample size for *n*.	2
11	Beta-binomial based sampling for aggregated spatial distribution	3
12	Beta-binomial – probability of not observing an infested unit after inspecting several lots (for a single lot)	3
13	Beta-binomial – probability of observing one or more infested units	3
14	Beta-binomial formulae 12 and 13 rearranged to determine m.	3

[6] This appendix is not an official part of the standard. It is provided for information only.

Summary of SC reactions to some comments
Draft ISPM: Replacement or reduction of methyl bromide as a phytosanitary measure
(Comment numbers refer to the tables of compiled member comments posted on the IPP)

Throughout the text
All references to phytosanitary procedures have been changed to the more appropriate phrase, phytosanitary measures.

Comment 1
Mention of one national database such as the one suggested might preclude the use of other databases available in other countries. At adoption during CPM, it could be mentioned that such databases exist, CPM members could then be asked to consider using existing databases, and contracting parties could be encouraged to post relevant information from their databases on the IPP.

Comment 3
Appendix 1 of this draft ISPM and ISPM No. 28 are not felt to be overlapping. The list in appendix 1 does not give approved treatments, but an indicative list of alternatives which could be used. The list could be provided to the TPPT for its consideration when developing future treatments.

Comments relating to links between the standard and the Montreal Protocol
Links to the Montreal Protocol are important. A footnote was introduced to recognize that contracting parties might already have obligations under the Montreal Protocol. A sentence was added about the Beijing Amendment to the Montreal Protocol (on the provision of statistical data on amounts of methyl bromide used annually for quarantine and pre-shipment (QPS) purposes).

Comment 225
A sentence, which encouraged the use of phytosanitary treatment options which posed lower environmental impact was suggested to be included in the text of the relevant standards as they are developed or revised. The SC felt that this should be part of the SC report and not part of the standard.

Comment 322
The text change was not incorporated, but could be suggested by individual NPPOs as a recommendation from CPM that in situations where alternative treatments are more difficult to apply or more expensive than methyl bromide, consider supporting, as appropriate, industry or pest control applicators in order to encourage their uptake.

Comments 341, 343-346, 348-350
Point 2 was reworded to: "Ensure that methyl bromide fumigation is used only for quarantine pests and that it is authorized or performed by the NPPO, including fumigation as emergency action for pests not previously assessed". Targeting quarantine pests is clearer for those not familiar with phytosanitary issues, and the SC could not think of examples where it would apply to regulated non-quarantine pests. Since this point also refers to emergency measures, a mention of pests not previously assessed was made.

Comment 352, 353, 354
It is necessary to provide guidance, at least on the importance of alternatives. Point was reworded to read: Provide guidance to those responsible for methyl bromide fumigations for quarantine purposes on the importance of pursuing feasible alternative phytosanitary measures.

Comments 384, 386, 387
Comments asked for deletion of point 8 about prioritization, suggesting that it is implied in point 9 about liaison with research. The two points were felt to be slightly different. Point 8 relates to giving highest priority to development of alternatives treatments for those commodities for which methyl bromide usage is high. It was reworded and maintained.

Comments 398-400

Deletion of point 11 was requested. It was agreed that posting or linking to approved alternatives for methyl bromide treatment on the IPP is not an existing procedure, but nevertheless such communication could be done through the IPP.

Comments 411-413
Suggestion for deletion of point on exchange of information between the NPPO and the National Ozone unit. Points 12 and 13 are not exactly the same. One is about coordination for implementation of strategy, and the other about information exchange between NPPO and the national ozone unit.

Comment 423 and others about usefulness of appendix
Suggested deletion of the appendix. The appendix is felt to be useful and indicates what is being used by others as alternatives. Once individual alternatives to methyl bromide are developed by the TPPT and adopted by CPM, they can be added to ISPM No. 28.

An indent was added to mention that some other treatments may be agreed based on bilateral agreements.

Comment 464, 468
One main issue in comments about the table (the fact that treatments other than those in ISPM No. 15 were indicated for wood packaging material) was solved by giving only heat treatment as an alternative, and mentioning that other alternatives may be added in the future.

Draft ISPM

INTERNATIONAL STANDARDS FOR PHYTOSANITARY MEASURES

ISPM No. --

REPLACEMENT OR REDUCTION OF METHYL BROMIDE AS A PHYTOSANITARY MEASURE

(200-)

CONTENTS

INTRODUCTION

SCOPE

This standard[1] provides guidance to National Plant Protection Organizations (NPPOs) on the replacement of or reduction in the use of methyl bromide as a phytosanitary measure in order to reduce emissions of methyl bromide.

REFERENCES

Copenhagen Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer [from the Fourth Meeting of the Parties to the Montreal Protocol, Copenhagen, 1992].
Glossary of phytosanitary terms, 2007. ISPM No. 5, FAO, Rome.
Guidelines for a phytosanitary import regulatory system, 2004. ISPM No. 20, FAO, Rome.
Guidelines for inspection, 2005. ISPM No. 23, FAO, Rome.
Guidelines for regulating wood packaging material in international trade, 2002. ISPM No. 15, FAO, Rome.

Guidelines for the determination and recognition of equivalence of phytosanitary measures, 2005. ISPM No. 24, FAO, Rome.
International Plant Protection Convention, 1997. FAO, Rome.
Montreal Protocol on Substances that Deplete the Ozone Layer, 2000. UNEP Ozone Secretariat, United Nations Environment Programme. ISBN: 92-807-1888-6. http://www.unep.org/ozone/pdfs/Montreal-Protocol2000.pdf
Pest risk analysis for quarantine pests including analysis of environmental risks and living modified organisms, 2004. ISPM No. 11, FAO, Rome.
Pest risk analysis for regulated non-quarantine pests, 2004. ISPM No. 21, FAO, Rome.

Phytosanitary principles for the protection of plants and the application of phytosanitary measures in international trade, 2006. ISPM No. 1, FAO, Rome.
Phytosanitary treatments for regulated pests, 2007. ISPM No. 28, FAO, Rome.
Report of the Second Session of the Commission on Phytosanitary Measures, 2007. FAO, Rome.
Requirements for the establishment of areas of low pest prevalence, 2005. ISPM No. 22, FAO, Rome.

Requirements for the establishment of pest free areas, 1995. ISPM No. 4, FAO, Rome.

Requirements for the establishment of pest free places of production and pest free production sites, 1999. ISPM No. 10, FAO, Rome.
The use of integrated measures in a systems approach for pest risk management, 2002. ISPM No. 14, FAO, Rome.

DEFINITIONS

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

OUTLINE OF REQUIREMENTS

This standard outlines areas for action and guidelines to replace or reduce the use of methyl bromide as a phytosanitary measure. With the overall aim of reducing release of methyl bromide into the atmosphere, NPPOs may consider methods of reducing the quantities of methyl bromide used, reducing methyl bromide emissions by physical means, and promoting and implementing phytosanitary measures that are economically and technically feasible as viable alternatives to the use of methyl bromide. The standard also provides guidance on monitoring the use of methyl bromide.

BACKGROUND

The main purpose of the International Plant Protection Convention (IPPC) and the responsibility of its contracting parties is to prevent the spread and introduction of pests of plants and plant products and to promote appropriate measures for their control. In doing so, contracting parties also undertake the promotion of appropriate measures for the control of regulated pests. In its preamble, the IPPC states that contracting parties take into account internationally approved principles governing the protection of plant, human health and the environment. The second meeting of the Commission on Phytosanitary Measures (CPM) "Encouraged contracting parties to promote best fumigation practices, recapture technology and development and use of alternatives to methyl bromide in phytosanitary measures where this was technically and economically feasible". Thus, while pursuing the IPPC's purpose, contracting parties are also encouraged to take into account environmental concerns, among which is protection of the ozone layer by reducing methyl bromide emissions.

IPPC contracting parties may also be party to the Montreal Protocol on Substances that Deplete the Ozone Layer. This obliges them to protect the ozone layer by reducing, and ultimately eliminating, emissions of ozone-depleting substances through a phase-out of production and import of such substances.

[1] Nothing in this standard shall affect the rights or obligations of contracting parties under other international agreements. Provisions of other international agreements may be applicable, for example the Montreal Protocol.

In the 1992 Copenhagen Amendment to the Montreal Protocol, methyl bromide was listed as an ozone-depleting substance subject to phase-out provisions of the Montreal Protocol. However, the use of methyl bromide for quarantine and pre-shipment (QPS)[2] purposes is currently exempt from the protocol's phase-out provisions because of difficulties in identifying technically and economically feasible alternatives. There is currently no limit on the amount of methyl bromide that can be used for these QPS purposes. In 1999, in the Beijing Amendment to the Montreal Protocol, mandatory requirements for the provision of statistical data on amounts of methyl bromide used annually for QPS purposes were agreed to. This amendment entered into force in January 2001. Therefore, parties to the Montreal Protocol already have obligations to monitor and report their use of methyl bromide for QPS applications.

Methyl bromide has been widely used as a pest control treatment for many decades. It offers a broad spectrum of control for insects, nematodes, weeds, pathogens and rodents. Methyl bromide has been employed primarily as a soil fumigant before planting crops, and is also used for commodity treatment and structural fumigation. Most uses of methyl bromide as a phytosanitary measure are for the treatment of durable commodities, such as grains, cereals and dried foodstuffs, wood packaging materials, wood and logs, as well as perishable commodities, such as fruit.

It is recognized that alternatives to methyl bromide for use as phytosanitary measures are needed, particularly because there may be future restrictions on the use of methyl bromide. It is also recognized that there is a need for contracting parties to continue to use methyl bromide until equivalent and feasible alternative phytosanitary measures are available.

Some countries have already successfully reduced or eliminated the use of methyl bromide.

To be considered viable under the IPPC, phytosanitary measures that are alternatives to methyl bromide and that are equivalent to methyl bromide fumigation as per ISPM No. 24 (*Guidelines for the determination and recognition of equivalence of phytosanitary measures*) should also be economically and technically feasible. In comparison, the United Nations Environment Programme's Methyl Bromide Technical Options Committee defined alternatives as those non-chemical or chemical treatments and/or procedures that are technically feasible for controlling pests, thus avoiding or replacing the use of methyl bromide.

REQUIREMENTS

To reduce the risk of introduction of some quarantine pests, the need for methyl bromide as a phytosanitary measure remains until a range of equivalent alternatives has been developed. Contracting parties are encouraged to put in place a strategy that will help them to reduce the use of methyl bromide for phytosanitary measures and/or reduce emissions of methyl bromide. This may include the following areas for action:

- replacing methyl bromide use
- reducing methyl bromide use
- physically reducing methyl bromide emissions
- accurately recording methyl bromide use for phytosanitary measures.

In developing and implementing strategies to replace and/or reduce methyl bromide use and reduce emissions, contracting parties should also take into account any international obligations to which they may be subject and relevant IPPC principles. These principles are described in ISPM No. 1 (*Phytosanitary principles for the protection of plants and the application of phytosanitary measures in international trade*).

1. Replacement of Methyl Bromide Use as a Phytosanitary Measure

In recognition of the desire to minimize the use of methyl bromide, contracting parties should, where possible, take actions to replace methyl bromide usage by increasing the application of alternative phytosanitary measures. Where methyl bromide fumigation is currently used as a phytosanitary treatment for regulated pests it may be replaced by an alternative phytosanitary measure in which no methyl bromide is used. This may involve the implementation of systems approaches, pest free areas (PFAs), areas of low pest prevalence (ALPPs), pest free places of production, pest free production sites and equivalence.

The following are examples of phytosanitary measures that may be implemented independently or in conjunction with other phytosanitary measures to replace methyl bromide as a phytosanitary treatment when equivalent:

- use of other chemicals such as treatments mentioned in Appendix 1 (e.g. sulfuryl fluoride)
- application of physical treatments (e.g. heating, cooling, irradiation)
- immediate commodity processing (e.g. grain being milled into flour on arrival)
- methods of production (e.g. soil-free growing media, tissue culture, sterile culture).

[2] This document refers to some terms used by the Montreal Protocol as follows: QPS (quarantine and pre-shipment) purposes, National Ozone Units. These are not IPPC terms and should not be interpreted as such.

In situations where consignments are identified as non-compliant at the point of import, the use of methyl bromide should be avoided where possible (appropriate actions to be taken in the case of non-compliance are described in section 5.1.6.1 of ISPM No. 20: *Guidelines for a phytosanitary import regulatory system*).

The CPM, largely through the provisions of ISPM No. 28 (*Phytosanitary treatments for regulated pests*), is actively pursuing recognition of treatments that are viable alternatives to methyl bromide. As these alternatives become recognized, contracting parties are encouraged to use them in place of methyl bromide, where appropriate.

Where a standard contains options for various treatments for a commodity, and one of the options is methyl bromide (currently the only standard for which this is the case is ISPM No. 15: *Guidelines for regulating wood packaging material in international trade*) and others are considered to present less of an adverse environmental impact, parties are encouraged to use the lower-impact option(s).

Appendix 1 contains a list of articles that have historically been treated with methyl bromide and presents possible alternative phytosanitary measures that could be used to replace or reduce the use of methyl bromide.

2. Reducing Volumes of Methyl Bromide Use as a Phytosanitary Measure

The reduction of methyl bromide emissions can be achieved through the use of reduced dosages of methyl bromide as a phytosanitary measure or decreased treatment frequency. In addition, existing methyl bromide use should be analysed carefully to determine if the treatment is appropriate and necessary.

The following approaches may, where appropriate, be pursued to reduce the use of methyl bromide as a phytosanitary measure:

- inspection-based fumigation instead of mandatory fumigation, i.e. to detect and identify the quarantine pest of concern
- avoidance of unjustified refumigation with methyl bromide (i.e. refumigation should be used only when a quarantine pest situation is evident)
- improvement of treatment facilities as appropriate in order to increase exposure time with a reduction of dosage
- compliance with phytosanitary requirements for exporting commodities
- avoidance of application in situations where efficacy is doubtful or marginal
- reassessment of doses and exposure times in order to reduce them
- use of higher temperatures when fumigating
- use of appropriately sized treatment facilities.

3. Physically Reducing Methyl Bromide Emissions

Contracting parties should aim to minimize or eliminate the release of methyl bromide to the atmosphere by physical means. This may be achieved by upgrading facilities as appropriate to increase efficiency of methyl bromide application to improve:

- methyl bromide emissions control, e.g. by recapture, and/or reusage or destruction, through the use of leak-proof chambers and containment/capture bubbles, etc.
- fumigation performance, e.g. by use of bioassay controls in lieu of concentration × time (C×T) products, use of higher temperatures during fumigation through supplemental heat when necessary combined with air circulation, pressure testing etc., reduction of leakage
- gas circulation, e.g. by use of a carrier gas such as CO_2
- gas and temperature monitoring including proper calibration of equipment.

4. Recording Methyl Bromide Use as a Phytosanitary Measure

To measure progress in reduction of methyl bromide emissions arising from use of methyl bromide as a phytosanitary measure, NPPOs are encouraged to accurately record and collate data on current usage and share this data with their country's National Ozone Unit[3] (the national body responsible for the implementation of the Montreal Protocol).

The information on methyl bromide use for phytosanitary measures should contain:

- quantities of methyl bromide used in kilograms
- description of the articles[4] fumigated
- whether the use was on import or export commodities
- target pests.

5. Guidelines for Appropriate Use of Methyl Bromide as a Phytosanitary Measure

NPPOs could be involved in the coordination of the following actions:

[3] Obligations for recording and reporting on methyl bromide usage exist under the Montreal Protocol.
[4] The first column of the table in Appendix 1 provides a list of articles commonly fumigated.

1. Review and consider how to change phytosanitary policies (e.g. phytosanitary import requirements) to reduce and/or replace methyl bromide where it is required and where an equivalent, practically viable and economically feasible alternative exists. This may also require review and revision of bilateral agreements between countries.
2. Ensure that methyl bromide fumigation is used only for quarantine pests and that it is authorized or performed by the NPPO, including fumigation as emergency action for pests not previously assessed (as described in section 5.1.6.2 of ISPM No. 20: *Guidelines for a phytosanitary import regulatory system*).
3. Provide guidance to those responsible for methyl bromide fumigations for quarantine purposes on the importance of pursuing feasible alternative phytosanitary measures.
4. Develop and utilize phytosanitary measures that are equivalent, viable and feasible alternatives to methyl bromide.
5. Communicate to other NPPOs where there are viable alternatives to methyl bromide use.
6. Submit phytosanitary treatments that are effective, efficacious, documented, feasible and applicable alternatives to the use of methyl bromide to the IPPC Secretariat using the guidelines in ISPM No. 28 (*Phytosanitary treatments for regulated pests*).
7. Give highest priority to the development of alternative treatments for those commodities for which methyl bromide usage is high.
8. Liaise with research groups and funding bodies to develop alternative treatments as appropriate.
9. Facilitate the annual collection and reporting of methyl bromide usage data.
10. Post or link details of NPPO-approved alternatives for methyl bromide treatment on the International Phytosanitary Portal (https://www.ippc.int) for exchange of information.
11. Cooperate with the National Ozone Unit to implement a strategy to replace and reduce methyl bromide usage.
12. Exchange information on alternatives to methyl bromide usage between the NPPO and the National Ozone Unit.
13. Identify current treatments where methyl bromide is the only option, and provide sufficient information to the IPPC Secretariat for consideration in the development of potential viable alternatives (e.g. identify the commodity, pests associated with it for which methyl bromide is used, required efficacy).

APPENDIX 1

EXAMPLES OF POTENTIAL PHYTOSANITARY TREATMENTS TO REPLACE OR REDUCE METHYL BROMIDE

Listed in the table below are treatments that could be considered and validated as alternatives to methyl bromide and that are currently registered, where necessary, and used in at least one country. These treatments may be employed to replace or reduce methyl bromide use in certain circumstances. The use of the names of the articles presented in this appendix may be helpful for ensuring consistency in reporting QPS use.

The following considerations affect the choice of a measure:

- combination of crop type (flowers, fruits, foliage etc.) and/or species and pest species (insects, bacteria, fungi, virus etc.)
- lack of a national registration or existing equivalency agreement between countries, which may preclude use of particular treatments in particular countries
- economic factors that may preclude use of the treatment in particular countries
- processes in the supply chain that may reduce pests to an acceptable level (e.g. washing, freezing, dicing)
- occurrence of resistance of a pest towards the envisaged alternative, which may change the necessary dosage schedule or preclude the alternative
- irradiation (often used only on specific life stages for sterility, not for eradication)
- intended use of the commodity
- undesirable effects of chemical residues for operators
- provisions in relevant ISPMs
- other treatments that may be agreed to by countries based on bilateral agreements.

List of articles fumigated	**Examples of potential phytosanitary treatments to consider to replace or reduce methyl bromide**
Commodities	
Bulbs, corms, tubers and rhizomes (intended for planting)	Hot water, pre-plant quarantine soil sterilization (steam or chemical), pesticide dip, or a combination of these treatments
Cut flowers and branches (including foliage)	Controlled atmosphere + combination treatment, hot water, irradiation, phosphine, phosphine/carbon dioxide mixture**,** pyrethroids + CO_2, ethyl formate + CO_2
Fresh fruit and vegetables	Cold treatment, high-temperature forced air, hot water, irradiation, phytosanitary systems approach (PRA, PFA, ALPP etc.), quick freeze, vapour heat treatment, chemical dip, hydrogen cyanide, phosphine, combination of treatments
Grain, cereals and oil seeds for consumption including rice (not intended for planting)	Heat treatment, irradiation, ethyl formate, carbonyl sulphide, phosphine, phosphine + CO_2, controlled atmosphere (CO_2, N_2)
Dried foodstuffs (including herbs, dried fruit, coffee, cocoa)	Heat treatment, carbon dioxide under high pressure, irradiation, ethyl formate, ethylene oxide, phosphine, phosphine + carbon dioxide, controlled atmosphere, sulfuryl fluoride, propylene oxide
Nursery stock (plants intended for planting other than seed), and associated soil and other growing media	Hot water, phytosanitary systems approach (PRA, PFA, ALPP etc.), soil sterilization (steam or chemical e.g. methyl isothiocyanate (MITC) fumigants), pesticides dip, phosphine, combination of any of these treatments
Seeds (intended for planting)	Hot water, phytosanitary systems approach (PRA, PFA, ALPP etc.), pesticide dip or dusting, phosphine, combination treatments
Wood packaging materials[5]	Heat treatment (contained in Annex 1 of ISPM No. 15). Further alternative treatments may be added in the future.
Wood (including round wood, sawn wood, wood chips)	Heat treatment, microwave, irradiation, MITC/sulfuryl fluoride mixture, methyl iodide, chemical impregnation or immersion, phosphine, sulfuryl fluoride
Whole logs (with or without bark)	Heat treatment, irradiation, removal of bark, phosphine, sulfuryl fluoride

[5] It is noted that ISPM No. 15 (*Guidelines for regulating wood packaging material in international trade*) is the only ISPM currently listing approved treatments for wood packaging material. Wood packaging material is the only commodity for which specific treatments are currently described in an ISPM.

List of articles fumigated	Examples of potential phytosanitary treatments to consider to replace or reduce methyl bromide
Hay, straw, thatch grass, dried animal fodder (other than grains and cereals listed above)	Heat treatment, irradiation, high pressure + phosphine, phosphine, sulfuryl fluoride
Cotton and other fibre crops and products	Heat treatment, compression, irradiation, phytosanitary systems approach (PRA, PFA, ALPP etc.), phosphine, sulfuryl fluoride
Tree nuts (almonds, walnuts, hazelnuts etc.)	Carbon dioxide under high pressure, controlled atmosphere, heat treatment, irradiation, phytosanitary systems approach (PRA, PFA, ALPP etc.), ethylene oxide, ethyl formate, phosphine, phosphine + carbon dioxide, propylene oxide, sulfuryl fluoride
Structures and equipment	
Buildings with quarantine pests (including elevators, dwellings, factories, storage facilities)	Controlled atmosphere, heat treatment, pesticide spray or fogging, phosphine, sulfuryl fluoride
Equipment (including used agricultural machinery and vehicles), empty shipping containers and reused packaging	Controlled atmosphere, heat treatment, steam, hot water, pesticide spray or fogging, phosphine, sulfuryl fluoride
Other items	
Personal effects, furniture, crafts, artefacts, hides, fur and skins	Controlled atmosphere, heat treatment, irradiation, ethylene oxide, pesticide spray or fogging, phosphine, sulfuryl fluoride

Summary of SC reactions to some comments
Draft supplement on debarked and bark-free wood
(Comment numbers refer to the tables of compiled member comments posted on the IPP)

Very controversial comments were received. It was not possible to go forward with the text as a supplement given the comments made.

Taking into account comments and history of the draft supplement/standard and decision made at CPM-2, the following proposal was made:

1. Propose three definitions for approval by SC and submit those to CPM-3 with one amendment from TPG (to "debarked wood");
2. Since the TPFQ is working on the relationship between pest risk and bark very actively, and that that various work and provision of information had been pursued in the context of revising ISPM No. 15 and wood generally, the present supplement text and previous versions should be submitted to the TPFQ for their work on the development of an ISPM *Movement of wood in international trade*.

The SC discussed the timing in relation to the two standards because there is an urgent need to resolve issues that will be addressed in the revised ISPM No. 15 and it is anticipated that this revision will be presented to the SC in May 2008. Therefore the SC recommended that the revision of ISPM No. 15 should proceed independently as soon as possible.

It was noted that the terms *bark-free* and *debarked wood* might not be used in the proposed revision of ISPM No. 15. However, since they are used at the moment in the current ISPM No. 15, and that the revised ISPM No. 15 might still considerably be changed, it is proposed that all three terms be processed for adoption. They can be reassessed later as needed.

Summary of SC reactions to some comments
Draft ISPM: Classification of commodities into phytosanitary risk categories
(Comment numbers refer to the tables of compiled member comments posted on the IPP)

There was agreement that elements of the document could provide useful guidance on which processes reduced phytosanitary risk to very low levels and as a consequence should not require regulations. It was felt that in some cases importing NPPOs are requiring phytosanitary certificates for commodities that pose very little phytosanitary risk and that there was no technical justification for requiring a phytosanitary certificate and that this issue could be addressed if more clarity about the processes was outlined. The SC agreed that portions of this document should move forward, however some concerns needed to be addressed.

The SC noted that some members had raised concerns that they felt that some of the processes listed in the annex did not eliminate the phytosanitary risks as described. The annexes, in their current form, should not be recommended for adoption. The current annexes do not provide sufficient information to guide NPPOs because the listed processes do not include enough details (such as appropriate times and temperatures for cooking or freezing, combinations of processing methods such as peeling/chopping/freezing, as well as the intended use of the commodity). In this regard, there was some discussion on the required level of detail and the some members of the SC felt that the appropriate information may include the efficacy of the process in killing pests, the reliability of the processes, the post-processing security procedures and the period of use of the processing procedures.

Comment 6 specifically requested that the annexes provide clearer distinctions between which commodities should be considered as very low phytosanitary risk (and therefore should not be regulated) as opposed to more complex cases that require pest risk analysis. The SC agreed that reaching consensus on a few processes or combinations of processes (such as washing, chopping and freezing) which could lower the phytosanitary risk to very low levels would be more valuable than a long list of processes.

Comment 6 also requested the standard to be reorganized; the submitter of this comment agreed to provide more detailed suggestions by mid-January 2008.

Following actions:

- SC members are invited to send additional comments to the steward.
- The SC requested the Secretariat to forward the draft ISPM to an FAO food industry expert for advice on internationally recognized standards for processing (such as temperatures for freezing), and then to the TPPT for consideration at their next meeting and asked the panel to identify which processes they felt could be globally agreed on that would reduce the phytosanitary risk of a commodity to very low levels, whether the annex should include more details for each of the industrial processes listed, and provide advice on how to move forward. If appropriate the TPPT could provide these details if they felt they had the appropriate expertise or possibly in consultation with other experts. This consultation and finalization of details could be conducted via e-mail.
- If the TPPT revises annex 1 it would then be forwarded to the SC by e-mail, requesting comments on the draft ISPM and revised annex be submitted to the steward within a 2 week time period.
- The steward would then consider the draft ISPM in light of the revised annex 1 and comments received from SC members. The steward would also consider reformatting as suggested in member comment 6 (more details related to this comment would be submitted to the steward by the originator of the comment). The modified draft ISPM would be submitted back into the standard setting process, if possible for review by the SC-7 in May 2008 for consideration for a second round of member consultation.

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