REPORT

Standards Committee Working Group (SC-7)

Rome, Italy
21-23 May 2018

IPPC Secretariat
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1. Opening of the meeting

1.1 Welcome by the IPPC Secretariat

[1] The International Plant Protection Convention (IPPC) Standards Officer opened the meeting and welcomed the participants.

1.2 Election of the Chairperson

[2] Mr Nico HORN (The Netherlands) was elected as Chairperson.

1.3 Election of the Rapporteur

[3] Mr Álvaro SEPÚLVEDA LUQUE (Chile) was elected as Rapporteur.

1.4 Adoption of the Agenda

[4] The Standards Committee working group (SC-7) adopted the agenda as presented in Appendix 1.

2. Administrative Matters

[5] The IPPC Secretariat (hereafter ‘Secretariat’) introduced the Documents list (Appendix 2) and Participants list (Appendix 3).

[6] The SC-7 acknowledged the absence of Mr Stephen BUTCHER (New Zealand).

3. Updates from the Standards Committee meeting

[7] The Chairperson gave a brief summary of the 2018 May meeting[1], and reminded the SC-7 members that the different ISPMs on Requirements for the use of treatments as phytosanitary measures should be aligned wherever possible.

4. Review of Draft ISPMs

[8] The SC-7 reviewed the draft ISPMs that had been submitted for first consultation in July-September 2017. The compiled consultation comments for all draft ISPMs are available on the IPP[2].

4.1 Draft 2017 amendments to ISPM 5: Glossary of Phytosanitary Terms (1994-001), Priority 1

[9] The Steward for the IPPC Technical Panel for the Glossary (TPG), Ms Laurence BOUHOT-DELDUC (France) introduced the 2017 draft amendments to ISPM 5 (Glossary of Phytosanitary Terms (1994-001)), the TPG responses to comments from the 2017 consultation, and the Steward’s additional notes[3]. The TPG had considered 135 comments received during consultation. The SC-7 thanked the TPG and the Steward for all their work on the terms.

[10] The SC-7 discussed the following substantial issues.

[11] Frequency of ISPM 5 amendments. One country commented on the frequency of the amendments to ISPM 5 and their consequences on national legislations. The TPG recalled that the proposed revisions to the Glossary are intended to improve the clarity and overcome unnecessary restrictions of the definitions, and do not change the underlying concepts.

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**Survey (2013-005) - Revision**

[12] The Steward introduced the proposed revision of the term ‘survey’, which now includes references to the three specific types of surveys defined in the Glossary, and mentions the absence of pests in addition to their presence, and places of production and production sites in addition to areas.


[14] The current translation of the term ‘survey’, ‘encuesta’, best describes a questionnaire or poll, such as the ones used by the IRSS. They recommended that ‘survey’ should be translated into Spanish as ‘prospección’, which is the correct term to describe the process of conducting a survey in the phytosanitary sense. The SC-7 noted that the French translation of the term ‘survey’, ‘prospection’, similarly addresses this issue. The SC-7 considered whether ‘prospection’ could be used instead of ‘survey’ to express this concept in English, but concluded that adding the qualifier ‘of pests’ is sufficient to clarify the meaning of the term.

[15] Proposals for alternative translation into Spanish in the definition of ‘survey’ included translating ‘over a defined period’ as ‘durante un periodo definido’ and ‘or the boundaries’ as ‘o su delimitación’. The TPG agreed with the proposals and asked the Secretariat to forward the concern to FAO translation services.

[16] **Period of time** - In their revised definition of ‘survey’, the TPG recommended to delete ‘of time’ as it is redundant in meaning with ‘period’. However, several contracting parties commented that in Russian it is necessary to use the expression ‘period of time’ for a time interval. The TPG therefore recommended keeping the reference to ‘time’ in the Russian translation and asked the Secretariat to forward this to FAO translation services.

[17] **Qualifier ‘of pests’** – One contracting party disagreed with the addition of the qualifier ‘(of pests)’ to the term ‘survey’. The TPG recalled that by adding the qualifier ‘(of pests)’, ‘survey’ could be used in a general sense (for instance for surveys in the IPPC domain done by the Implementation Review and Support System).

[18] **Determine presence or absence of a pest** - One contracting party objected to the addition of ‘determine the presence or absence of pests in an area’ as a purpose, because this would overlap with the definition of ‘surveillance’. The TPG fully agreed that a survey is not a condition to prove the absence of a pest, but on the other hand, acknowledged that a survey may be and is often in practice used to do so. The TPG also recalled that Glossary definitions do not carry any requirements for NPPOs. The TPG Steward reminded the SC-7 members that the revision of ‘survey’ was requested by the SC in order to include the concept of ‘absence’ in its definition. One member suggested that there might be a need to capture the differences between ‘surveillance’ (the overall process) and ‘survey’ (the specific action) in the definition of ‘survey’.

[19] One SC-7 member suggested to add a bracket around ‘or absence’ in order to align the definition with ISPM 6 (Surveillance), but the Steward explained that in ISPM 6 the brackets were included as a compromise because determination of absence of a pest is not part of the definition of ‘detection survey’. She also recommended not adding words in brackets to definitions as this would make them less clear. The SC-7 asked the TPG to consider whether the definition of ‘detection survey’ should be amended, to include ‘or absence’. If so, the modification should be an ink amendment.

[20] **Distribution of pests** - One SC-7 member suggested adding a reference to the determination of distribution to the definition of ‘survey’. However, the Steward explained that one would first determine the presence or absence of a pest in an area before determining its distribution. Another SC member noted that the determination of pest distribution might also be covered in the definition by the determination of the boundaries of pest populations. Since there were no consultation comments addressing this issue, it was not discussed further.
Including specific survey definitions – The revised definition of ‘survey’ contains references to the purposes of the three specific types of ‘surveys’ defined in ISPM 5, i.e. determining the presence or absence of pests (referring to ‘detection survey’), determining the boundaries of a pest population (referring to ‘delimiting survey’) and determining the characteristics of a pest population (referring to ‘monitoring survey’). As it was recommended not to include cross-references to other definitions in the Glossary, the TPG considered that these inclusions would be sufficient to provide extra clarity and are consistent with the wording in the revised ISPM 6 (Surveillance).

Place of production or production site - One contracting party suggested to refer not only to ‘area’ in the definition, but also to ‘place of production or production site’. Although place of production and production site are smaller entities within an ‘area’, the TPG agreed that ‘place of production or production site’ should appear explicitly in the definition of ‘survey’. This would be consistent with the revised ISPM 6 (Surveillance) and would also clarify that surveys can be conducted at smaller, specific levels, for example to establish pest free places of production or pest free production sites as per ISPM 10 (Requirements for the establishment of pest free places of production and pest free production sites). The TPG added a comma after ‘pest population’ to clarify that ‘in an area, place of production or production site’ refers not only to the boundaries or characteristics of a pest population, but also to the presence or absence of pests. The SC-7 discussed the wording of the revised definition to reflect that ‘place of production’ and ‘production site’ are included in, or specific cases within, an ‘area’, but decided not to change the wording as proposed by the TPG.

One SC-7 member suggested adding ‘place of production and production site’ to the definitions of delimiting survey and detection survey, and ‘area, place of production or production site’ to the definition of monitoring survey. The SC-7 discussed this proposal and agreed that since monitoring survey refers to a pest population, the reference to an area is not necessary. They also considered whether instead of referring these terms to the TPG for revision, these amendments could be captured as consequential changes or ink amendments. In any case, the SC would have to forward this request to the TPG. The TPG Steward explained that the TPG had discussed the three terms during the revision of ‘survey’ and did not consider additional revisions necessary, as the revised definition of ‘survey’ provides an umbrella for the others.

Growing period (2016-004) - Revision

The TPG considered that the term ‘growing period’ is essential for inspection and treatment purposes to ensure that those are carried out when relevant (i.e. when the plant actively grows). They recommended revising the Glossary definition of ‘growing period’ and deleting the Glossary definition ‘growing season’ which does not have any specific IPPC meaning. Thus, they included the reference to ‘an area, place of production or production site’ in the definition of ‘growing period’, to underline the link between the growing period and the area and, especially under artificial conditions, the place of production or production site. Furthermore, they deleted the cross reference to ‘growing season’, which was confusing as there may not be defined growing seasons in tropical countries or for plants grown under artificial conditions in greenhouses.

Period of time – As for the proposed revised definition of ‘survey’, one contracting party did not agree with the deletion of the term ‘time’ and would have preferred to keep the wording ‘time period’. The Technical Panel on the Glossary (TPG) noted that this issue was related to a translation issue into Russian. If in Russian it is considered essential to keep the reference to ‘time’, the TPG recommended it to be translated into Russian this way.

Growth and development – Some comments suggested that the definition refers not only to the active growth of a plant species, but also to its development. For example, fruit ripening could be an important period for certain pests like fruit flies. The TPG agreed that ‘growth’ does not merely mean increasing in size, but includes the notion of development. Therefore, the TPG did not add a reference to the development of the plant in the definition of ‘growing period’.

Addition of ‘in an area, place of production or production site’ - Some contracting parties objected to the proposed revision of the definition of ‘growing period’ as they felt that the addition of ‘in an area,
place of production or production site’ would confuse the definition. They considered that there is a risk of understanding that if a plant is grown in two places of production (e.g. in the field or a container), the plant is considered to be grown in two growing periods. The TPG Steward recalled that ‘in an area, place of production or production site’ had been added in the proposed definition for ‘growing period’ due to the proposed deletion of ‘growing season’ where this was included in the definition. She also reminded the SC-7 that the addition of ‘in an area, place of production or production site’ in the definition of ‘growing period’ is necessary to convey the idea that the growing period depends on the location, and this is important for countries when setting their phytosanitary import requirements.

The SC-7 further discussed this issue. One SC member was concerned that e.g. a plant could be grown in one place of production, then transported to another where it continues to grow; thus being considered to have two growing periods and requiring multiple inspections or allowing the required inspections to all be done within the same year. However, the SC-7 agreed with the TPG that the proposed revised definition did not imply that several inspections would be required during the growing period, unless countries would deem it necessary and justified due to a change in the growing conditions related to the place of production.

One member commented that the definition should include a link with phytosanitary actions, but the SC-7 agreed that it was not necessary because this link is inherent in most of the Glossary terms.

One member made the point that the growing period of the plants is not the only factor relevant for inspection or treatment, because these would focus on when the pest could be potentially present. The SC-7 agreed that this issue should be considered during the pest risk analysis, but that it did not affect the definition of ‘growing period’.

One member proposed to include in the definition a link with climate instead of area, as e.g. the climatic conditions in greenhouses can be the same in different countries. However the SC-7 agreed to keep the link with the area, because e.g. when scheduling inspections it is necessary to know when a plant species actively grows in a specific location. One SC member proposed moving ‘in an area, place of production or production site’ to the beginning of the definition, to put the focus on the plant species rather than on the area, and thus clarify that the plant species and the area are defining the growing period in combination.

In the end, the SC-7 agreed that the wordings suggested during the meeting did not improve clarity and that the common understanding of the revised definition proposed in the draft 2017 Amendments to ISPM 5 would not lead to misunderstandings as suggested by the consultation comments. Therefore, the proposed revised definition of ‘growing period’ was retained without changes, but the SC-7 agreed to provide further explanation on this issue in the draft 2017 Amendments to ISPM 5 that will be sent for second consultation.

Growing season (2016-004) - Deletion

Some contracting parties did not support the deletion of the term ‘growing season’ in line with objecting to the proposed revised definition of the term ‘growing period’. The Steward recalled that originally the term ‘growing period’ was defined in the Glossary to replace the term ‘growing season’, which was proposed to be deleted. She explained that the term ‘growing season’ is used in ISPMs in its common English sense, thus not requiring any ink amendments if deleted.

One SC-7 member was concerned that deleting ‘growing season’ would leave the concept of period open-ended in time as not all countries experience seasons, and suggested adding references to limit the period within a yearly cycle. However, he supported sending the proposal of deletion for the second consultation.

As the SC-7 agreed with the TPG to leave the proposal for revision of ‘growing period’ unchanged, the recommendation for the deletion of ‘growing season’ was retained.
Confinement (2016-002) - Deletion

[36] The Steward explained that the TPG proposed deletion of this term from the Glossary because in the IPPC context ‘confinement’ is used in its common English meaning and its Glossary definition conflicts with the definition of ‘quarantine’. During first consultation in 2017, no comment disagreed with the proposed deletion. Therefore, the recommendation to delete the term ‘confinement (of a regulated article)’ was retained.

Mark (2013-007) - Deletion

[37] The Steward explained that the TPG recommended deleting the term ‘mark’ from the Glossary as it is used in its Glossary meaning only in ISPM 15, where it is well described. The Steward recalled that ‘mark’ is used inconsistently in several other ISPMs, i.e. with meanings different from its Glossary definition. Therefore, if the definition were retained, many ink amendments would be necessary to substitute the term ‘mark’ with different wordings.

[38] One comment suggested that a proper definition for ‘mark’ should be developed to take care of its use in all ISPMS. The TPG and SC-7 considered the comment and referred to the explanations of the draft 2017 Amendments to ISPM 5, where it is clarified that defining ‘mark’ in a manner that would cover all current uses of the term in ISPMs would not be possible and is not needed.

[39] The SC-7 retained the recommendation to delete the term ‘mark’.

[40] The SC-7:

(1) approved the 2018 Draft amendments to ISPM 5: Glossary of Phytosanitary Terms (1994-001) as modified in this meeting for submission to the second consultation.

(2) asked the TPG to consider whether ‘absence of a pest’ needs to be captured in the definition of ‘detection survey’.

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

[41] The Steward of the draft ISPM, Mr David OPATOWSKI (Israel), was unable to attend the meeting, but was contacted via teleconference and he introduced the draft ISPM and supporting documents. The draft ISPM had received a record number of 1593 comments during country consultation, all of which were considered by the Steward and in case of technical issues, the experts of the Technical Panel on Phytosanitary Treatments (TPPT).

[42] The Secretariat explained that the draft has been written by TPPT members and approved by the entire panel. The TPPT have addressed the main technical issues arising from consultation. Thus, the SC-7 was asked to mainly address the non-technical issues of alignment and clarity in wording.

[43] The TPG considered 117 comments for consistency in use of terms and definitions, specifically on the alignment between this draft and ISPM 42 (Requirements for the use of temperature treatments as a phytosanitary measure). The Steward incorporated most of the TPG recommendations.

[44] The SC-7 members acknowledged the work by the Steward, the TPPT and the TPG, in addressing the exceptional amount of comments. The SC-7 discussed the following substantial issues:

[45] Consistency with other standards on requirements for treatments – The SC-7 agreed that full alignment might not be possible between this draft and the other ISPMs dealing with treatment requirements (ISPM 42 and the draft ISPM Requirements for the use of modified atmosphere treatments as a phytosanitary measure (2014-006)) because of technical differences. However, they took into account revisions made during the May 2018 SC meeting and adjusted the present draft to ensure that, wherever possible, it was aligned with the other standards.
Hierarchy of treatment standards – Some contracting parties suggested considering whether specific phytosanitary treatments (PTs, Annexes to ISPM 28 (Phytosanitary treatments for regulated pests)) could fit under the new standards on treatment requirements. (E.g. adopted PTs on fumigation could be moved to become annexes to the draft ISPM on Requirements for the use of fumigation as a phytosanitary measure (2014-004) once adopted). The SC-7 agreed that the SC should consider this issue during a future meeting.

Effectiveness vs. efficacy – Some comments suggested using effectiveness instead of efficacy in some instances. The TPG considered that the two terms have a different meaning in English, efficacy referring to the capacity of producing a result under ideal conditions and effectiveness meaning the degree to which a measure is effective under the present conditions. They also noted that this distinction is not made in French or Spanish.

Use of tenses – The TPG noted that the draft standard contained ‘will’ in several instances, which could be translated as future tense. They recommended to instead use either present tense (if expressing a fact) or ‘may’ (if expressing a possibility). The Steward incorporated this recommendation into the draft.

Fumigation treatment – Several comments from contracting parties on this and other treatment ISPMs questioned the use of the term ‘fumigation treatment’ as the glossary defines fumigation as a treatment thus it is not necessary to use both words together. In their revisions, the Steward and the SC-7 consistently used the term ‘fumigation’ whenever the treatment was discussed.

Technical justification – Several comments suggested that technical justification of specific requirements (e.g. values) be included in the standard. The Steward discussed this issue with the TPPT and the experts explained that the values in the draft have been taken over from treatment manuals used by NPPOs, and reflect the level of confidence these have traditionally accepted. The Steward recommended that the SC-7 should consider deleting or replacing unreferenced values with examples.

Minimum dose vs. concentration – One member had concerns about the use of concentration instead of minimum dose and the SC-7 discussed which term to use throughout the standard. It was clarified that ‘dose’ means a concentration over a specified duration, but could also be interpreted as the amount of fumigant applied in the beginning of the treatment (e.g. amount of phosphine added to achieve a required concentration over time). Concentration of fumigant is measured over time to determine the concentration-time product (CT). The SC-7 considered ‘concentration over a specified duration’ to be more clear and agreed to use this wording throughout the standard.

Bulk commodities – Some comments pointed out that the draft standard is more oriented to the fumigation of packaged commodities and should also have guidelines on fumigation of bulk products (e.g. grain in ship holds), to differentiate the requirements from those for packaged goods in fumigation facilities. It was clarified that in many cases bulk grain is fumigated with phosphine and thus requires a different approach as compared to the fumigation of packaged goods (e.g. fresh fruit). For example, measuring CT values across the entire lot might not be required to ensure the efficacy of phosphine gas. The SC-7 agreed with the Steward to provide additional guidance on fumigation of bulk commodities throughout the standard.

Entities/providers/facilities – Several comments voiced concerns over the use of the term ‘entities’. The TPG noted that in ISPM 42 entities are referred to when discussing authorization of entities, and this term covers providers, facilities or both. They recommended that ‘treatment provider’ and ‘facility’ be used when it was clear that either of those was referenced. The SC-7 agreed with the TPG and modified the text where necessary clarifying that in this standard ‘entities’ include both treatment providers (e.g. fumigation companies or individuals) and treatment facilities. This is also in alignment with the discussion in the SC 2018 on the draft ISPM on Requirements for the use of modified atmosphere treatments as a phytosanitary measure (2014-006).

Schedule vs. protocol – Some countries were concerned that the difference between these terms as used in the draft standard is unclear, as they are both translated to ‘protocolo’ in Spanish. The TPG agreed that as per Glossary definition ‘treatment schedule’ refers to the critical parameters to be met,
while ‘protocol’ is broader and contains additional information. They also recommended not using ‘programme’ in this context, as this would add to the confusion. A sentence was added to provide additional explanation of the term protocol in the text.

[55] Fumigation certification – Some contracting parties suggested to refer to fumigation certificates and the SC-7 discussed whether to include the obligation for the fumigation provider to produce certificates in order to prove that the treatment has been applied. One SC-7 member explained that a fumigation certificate is sometimes used as the basis for issuing a phytosanitary certificate and thus should be an additional requirement. The SC-7 decided to not include a requirement for certification of fumigation treatments in this standard, as they considered this to be a country-specific requirement and did not want to confuse it with phytosanitary certificates as specified in ISPM 12.

[56] CPM recommendation on the use of methyl bromide (MB) – Some contracting parties commented on the use of examples in several sections of the draft standard, especially on the application of MB and requested these be deleted. The SC-7 agreed with the comments and noted that the CPM recommended elimination of this fumigant from phytosanitary measures where possible. They modified the text to exclude examples if they were not necessary and deleted reference to MB throughout the draft standard.

[57] The SC-7 revised the standard as follows.

Scope:

[58] In agreement with some comments and the SC decision, the SC-7 considered aligning this section with the draft ISPM on Requirements for the use of modified atmosphere treatments as a phytosanitary measure (2014-006). One member suggested including general guidance in the scope, but the SC-7 decided that this standard should focus on providing technical guidance.

[59] They discussed whether to include a definition of fumigation in the scope, but as the Glossary contains a definition for fumigation, decided to only include a sentence to differentiate this standard from modified atmosphere treatments. One member noted that the current Glossary definition of ‘fumigation’ may be understood to include modified atmosphere and suggested that the SC consider requesting the TPG to revise the definition.

[60] The SC-7 discussed whether to include in the scope that the standard also provides guidance for NPPOs on how to authorize fumigation entities. One member raised a concern as this was not included in the draft ISPM Requirements for the use of modified atmosphere treatments as a phytosanitary measure (2014-006) and it may be duplicated in the draft ISPM on Authorization of entities (2014-002). The SC-7 considered that some text on authorizing entities could perhaps also be included in the draft ISPM on Requirements for the use of modified atmosphere treatments as a phytosanitary measure (2014-006), and agreed to include a sentence in this standard.

Outline of Requirements:

[61] Some contracting parties commented on the structure of this section and recommended rewording it. The TPG agreed and noted in their recommendation that it should contain a summary of the main requirements of the standard and not take the form of an extended scope. The SC-7 discussed this section and reworded it to highlight and summarize the main requirements in accordance with the TPG recommendation.

Background:

[62] Some contracting parties suggested rewording of this section for clarification. The SC-7 agreed with the TPG recommendation to delete wording on the definition of fumigation, because it was inconsistent with its Glossary definition. In addition, they agreed to restructure this section in line with the decisions of the SC and in alignment with the other treatment standards.

5 CPM recommendation R-03 - Replacement or reduction of the use of methyl bromide as a phytosanitary measure: https://www.ippc.int/en/publications/84230/
One member queried whether this standard would help in the application of fumigations other than the ones annexed to ISPM 28. It was clarified that this standard should provide guidance to apply all kinds of fumigations but specifically the ones annexed to ISPM 28.

**Fumigation objective:**

Multiple comments suggested and the SC-7 agreed to modify the title of this section to be consistent with the title of the corresponding section of the draft ISPM on *Requirements for the use of modified atmosphere treatments as a phytosanitary measure* (2014-006).

**Fumigation entities/Treatment providers** – One SC-7 member recommended deleting this section, since this draft standard should not provide details on the treatment providers and this section did not specify any requirements. The SC-7 noted that guidance will be provided in the draft ISPM on *Authorization of entities* (2014-002), which was approved for first consultation in the May 2018 SC meeting, and agreed that this standard should primarily deal with the technical issues of fumigation. The section was deleted and some information on treatment providers included in the section on ‘Fumigation Application’.

**Fumigation application:**

This section was aligned with ISPM 42 where possible. One contracting party comment suggested modifying the bullet list to include the concept of applying fumigation upon arrival before or after unloading (e.g. off-shore fumigation), to differentiate it from fumigation in the exporting country, and this was added to the bullet list. One member commented that ‘before unloading’ could be considered to mean ‘during transport’. Another member noted that the wording in this bullet gives the importing country the option to treat the consignment after arrival if necessary.

The SC-7 considered adding an example to specify that during transport can mean ‘in transit’, but this was not agreed to as ‘transit’ has a specific meaning in IPPC standards. They also decided to remove ‘of commodity’ from the supply chain as it was considered too restrictive.

The paragraph specifying the critical parameters required to achieve the desired fumigation efficacy was modified to remove mention of CT, and instead to include reference to concentration or dose, temperature and treatment duration.

The SC-7 discussed other parameters that may be necessary to consider as they affect fumigation efficacy, e.g. different types of enclosures (containers and ship holds) or loading configurations (loaded in boxes or in bulk). They reworded the paragraph to clarify that some parameters apply universally, while others, such as penetration or circulation of the fumigant are affected by loading configurations, and should therefore be considered when necessary.

**Treatment protocol** – some contracting parties commented on the need to clarify that treatment protocols consist of procedures developed or approved by the NPPO and that fumigation should not affect commodity quality. The SC-7 agreed and also included a sentence on the possible effect of fumigants on commodities and other materials to be taken into account by the NPPOs.

**Ways of fumigation application:**

Several contracting parties commented on the use of the terms ‘types’ and ‘forms’ of fumigation in this section and suggested that some explanation on the differences between those was needed. The Steward explained that in ISPM 42 ‘types’ is used to explain different temperature treatment types (one cold and four different heat treatments). In this standard, however, there is only one treatment type, but several ways of applying it (single or in combination). Since in this context the use of ‘types’ or ‘forms’ is misleading, the Steward had suggested to modify the text to contain ‘groups’ or ‘configurations’ of fumigations.

The SC-7 further discussed the issue and, to simplify translation into Spanish (where ‘formas’ can have different meanings), agreed on a new heading, which now states ‘ways of fumigation application’. After
extensive discussions the SC-7 decided to simplify the structure of the section and describe both sequential and concurrent combination treatments under ‘Combination treatments’.

[73] **Fumigation under special conditions** – The SC-7 discussed whether modified atmosphere and vacuum as applied in this standard are considered treatments, or are only ‘special conditions’ under which the effectiveness of the fumigation increases. As the draft ISPM on *Requirements for the use of modified atmosphere treatments as a phytosanitary measure* (2014-006) specifies the modified atmosphere treatment as *lowering* the oxygen level and this section describes *increasing* the atmospheric oxygen in order to increase fumigant uptake, the SC-7 considered not regarding this as a combination treatment. The SC-7 therefore agreed to add a new subheading ‘Fumigation under special conditions’ to describe fumigation under modified atmosphere or under vacuum.

**Fumigation Enclosures and Equipment:**

[74] **Fumigation enclosure** – Some contracting parties suggested adding wording to clarify that fumigation enclosures need to be properly sealed to prevent fumigant escape. The SC-7 discussed that, unlike modified atmosphere treatments, which can only be conducted in facilities specifically designed for the purpose, fumigation can also be done in enclosures such as ship holds, containers or tents, provided they are properly sealed and approved by the NPPO. The paragraph on pressure testing fumigation enclosures was removed and partially incorporated into the section ‘Gas tightness test’.

[75] **Fumigation equipment** – The SC-7 considered several comments on who is performing calibrations and agreed to add the qualifier ‘NPPO specifications’, to avoid mention of calibration companies in alignment with other treatment standards. Some comments recommended adding some text to clarify that a gas vaporizer should be appropriately pressure resistant depending on the fumigant. The Steward explained that the pressure-resistant capacity refers to the vaporizer and not the enclosure and the SC-7 modified the wording accordingly.

[76] **Measuring equipment** – The SC-7 debated whether to include the need to measure the humidity of the environment of the enclosure, in addition to the moisture content of the commodity. Some members suggested adding some wording to specify that for some commodities knowing the moisture content is important, and the SC-7 agreed that, even though this is also briefly mentioned in the section on ‘Fumigation application’, it should be included in this paragraph. They also decided to include an additional sentence on measuring environmental humidity as that may affect the efficacy of the treatment.

The members discussed the section on ‘Instruments to measure vacuum’, and agreed to add clarification that measuring the pressure is only needed when fumigating under vacuum.

[78] **Safety equipment** – The SC-7 noted that the equivalent section in the draft ISPM on *Requirements for the use of modified atmosphere treatments as a phytosanitary measure* (2014-006) was removed by the SC after discussions during the May 2018 SC meeting. They considered that Environment, Health and Safety (EHS) issues are beyond the scope of the ISPM and not considered a phytosanitary requirement. One member explained that the standard is supposed to outline the requirements for the NPPO in order to apply effective phytosanitary treatments, however, safety requirements are not directly connected to the efficacy of the treatments. The SC-7 felt that it was an important aspect of the fumigant application and may have serious health implications, but, as it is not a phytosanitary requirement, decided not to include it in the standard. Nevertheless, since this ISPM is about toxic substances, which may be harmful to the operators, they agreed to include some guidance in the section ‘Responsibilities’. They also noted that environmental aspects were covered in the section on ‘Impacts on the Biodiversity and the environment’.

[79] **Equipment to capture fumigant emissions** – Similar to the section on Safety Equipment, this section received comments both to expand on the topic and to remove it entirely. The SC-7 discussed the pros and cons and decided to remove this section as they considered it beyond the scope of the standard and not a phytosanitary requirement.
**Fumigation procedures:**

[80] One contracting party comment suggested that this section be deleted, as the required procedures depend on the receiving country’s national requirements. The SC-7 considered whether the information included in this section is necessary and agreed to retain it with the rewording of the section as proposed by the Steward based on comments. Some contracting parties suggested defining ‘load factor’. However, the TPG recommended instead to use ‘load ratio (ratio of occupied space to the entire space)’. 

[81] **Commodity loading** – In response to a contracting party comment, the SC-7 included additional wording in order to also consider the fumigation of bulk commodities and added a reference to recirculation systems (i.e. tubing placed inside the cargo hold of a ship loaded with grain to ensure adequate circulation of the fumigant in order to reach the bottom parts of the commodity) to the paragraph.

[82] **Packaging** – Following some consultation comments, which questioned the inclusion of specific examples in the requirements of the standard, the SC-7 agreed with the Steward to modify the text to remove the examples and to include wording to explain that this section is only applicable when packaging is used.

[83] **Sorption** – Several contracting party comments suggested moving this text to the section on ‘Fumigation application’, as it provides examples of factors that may affect fumigation efficacy. The SC-7 discussed this proposal and considered whether the text is more an explanation or a procedure. They agreed that the text provides useful guidance and information that e.g. highly sorptive materials should be taken into consideration as they may require longer periods to air after fumigation. They agreed to keep the text in the current section as other subsections also deal with factors affecting fumigation efficacy, and included some additional text suggested by contracting party comments.

[84] **Determination of fumigation temperature** – The SC-7 aligned the wording of this section with the draft ISPM on Requirements for the use of modified atmosphere treatments as a phytosanitary measure (2014-006), noting that the dose as well as the duration of exposure may increase when the temperature is low. Several contracting parties requested that the table providing examples of the required number of temperature sensors be deleted, as these are national requirements. The SC-7 agreed with the deletion of this table and also decided that the table on the boiling point temperatures for select fumigants in Appendix should be retained, as it provides useful information to contracting parties.

[85] **Gas tightness test** – Following several contracting party comments, some text from the section on ‘fumigation enclosure’ was moved to this section and the text was reorganized. The SC-7 discussed whether testing the gas tightness of an enclosure is within the scope of the standard or whether it should rather be within the remit of national regulations, and agreed to add some wording that the NPPO may specify the frequency of those tests. Furthermore, the SC-7 agreed to remove mention of the environment and regulation regarding emission tolerances as this was considered not part of phytosanitary requirements in line with the deletion of the section on ‘safety equipment’.

[86] **Introduction of the fumigant** – Some contracting parties commented on the table, which contains formulas for calculating volumes of common geometrical shapes provided in Appendix, either considering it superfluous or significant. The SC-7 agreed to keep the table in the Appendix, as it provides useful information to contracting parties.

[87] Some contracting party comments suggested an additional formula for calculating fumigant added as volume rather than weight. The SC-7 discussed whether it would be a requirement to use one of these formulas and also whether there were additional formulas that may be considered. They agreed to move the formulas to another Appendix, as they should not be considered requirements, and also removed the example for MB, in line with the CPM recommendation and because this standard should provide general guidance rather than specific examples.

[88] The SC-7 decided to include the differentiation between application of solid and liquid fumigants and modified the title of the section to be more general. The critical part of the section is that the required fumigant dosage is introduced.
The SC-7 discussed the definition and temperature range of ‘cool conditions’. It was clarified that in most cases fumigation should not be applied under 5 °C, and even temperatures above 5 °C might require additional provisions e.g. equipment to help to vaporize the fumigant. One member requested the TPPT to provide additional information to the SC in case there are comments arising during second consultation, noting, however, that this standard is dealing with generic, not specific requirements. The Steward agreed to forward the question to TPPT, and report back to SC November. The SC-7 agreed to incorporate the text as proposed by the comments with slight modifications.

**Monitoring, measuring and recording** – The SC-7 discussed this section and agreed that continuous measuring was not always required, as for example when using phosphine in fumigation the concentration of fumigant is not measured over time. Furthermore, some contracting parties commented that the term ‘monitoring’ was not used according to its Glossary definition and is not the proper term to use for measuring treatment conditions. The section was reworded to reflect that measurements are not always needed and the title modified to “Continuous measuring and recording” to align with the draft ISPM on the *Requirements for the use of modified atmosphere treatments as a phytosanitary measure* (2014-006) and TPG recommendation. In addition, the Steward and SC-7 followed the TPG recommendation to avoid the use of different words for the same concept (e.g. measuring/determining/verifying/recording etc) and agreed to use the term ‘measuring’ throughout the draft.

**Number of sampling lines** – Some contracting parties suggested to remove the table in this section (number of sampling lines required), as the technical justification for the numbers was missing and it did not include guidance on smaller enclosures (<15,000 m³). The SC-7 agreed with deleting the table, as they considered it too specific, and because some guidance on the number of sampling lines was already included in the text. Some contracting parties recommended providing additional guidance on the placement of sampling lines depending on the loading configuration, and an introductory sentence was added to address their concerns.

**CT calculation** – While CT calculation is very important for fumigation, the methodology of its estimation appears to be difficult to explain in short. Multiple comments questioned the formula for the calculation of the CT provided in the draft ISPM and some contracting parties provided alternative formulas. The Steward explained that there are different ways to calculate CT, and for each application there are experimentally determined values for CT. A draft paper by the TPFQ written in 2010⁶ provided five different ‘practical methods of estimating CT products’ although only the formulas of two methods were provided in the draft ISPM (for leaky and leak proof conditions).

Some comments recommended deleting the entire section because it was considered too technical, while others requested more information and explanation on the calculation of the CT. The SC-7 considered that additional information could perhaps be best addressed in a manual. They agreed to keep an introductory sentence in the main body of the standard including some guidance on using the lowest reading in the enclosure to calculate the CT. The formulas were moved to the Appendix as examples.

**Completion of fumigation** – The SC-7 revised the text to indicate that if at the end of the treatment period the CT is not yet achieved, a small extension to the fumigation period may be permitted for some fumigants under certain conditions.

**Safety after fumigation** – Some contracting parties requested the addition of a section on safety procedures, such as ventilation and proper labelling. While the SC-7 felt these comments were very important, they consider this section outside the remit of the IPPC in line with previous discussions on Safety Equipment and agreed to not include it. They noted that in the section on ‘Responsibilities’ the NPPOs are requested to ensure that appropriate health and safety measures are taken.

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⁶ TPFQ discussion paper on calculating CT values URL: https://www.ippc.int/static/media/files/publications/en/2013/06/05/1284067679_2010-TPFQ-37_-_Calculating_CT_Pr.pdf
**Adequate Systems at Treatment Facilities:**

[96] The title and, where necessary, the content of this section was changed in alignment with the other standards on treatment requirements.

[97] **Authorization of fumigation entities** – In continuation of the discussion during the SC May 2018 on the draft ISPM on ‘Authorization of entities’ (2014-002) and in alignment with the draft ISPM on the *Requirements for the use of modified atmosphere treatments as a phytosanitary measure* (2014-006), the text in this section was simplified and, where parts of the entity were mentioned, modified to specifically refer to facilities and providers. ‘Fumigation’ in the title was retained to clarify that entities in this draft were specifically those providing fumigation services. One member mentioned that in some cases the NPPO might be the treatment provider, and not authorized entities. The SC-7 noted that this concept is covered in the section on ‘Responsibilities’.

[98] **Monitoring and auditing** – The SC-7 agreed that monitoring of the treatment programme is an official procedure and thus aligns with the glossary definition of ‘monitoring’. ‘Treatment programme’ is used in a broad sense here and refers to the entire application of the treatment, which the NPPO of the country where the treatment is initiated or conducted should monitor. Since this paragraph is dealing with authorization of the entity to do the treatment, the SC-7 decided to move it directly after the section on authorization.

[99] The SC-7 discussed whether the NPPO of the exporting country is responsible for monitoring and auditing of fumigations during transport. One member considered that while fumigation during transport cannot be easily monitored, the exporting country is still responsible for ensuring that the treatment schedule is met through regular monitoring and auditing of the fumigation entity. The SC-7 considered that even though in practice the NPPOs are not directly involved in the treatment, they are still responsible, because shipping companies should in this context be considered authorized entities. The NPPO of the importing country has to verify if the fumigation requirements have been met. The SC-7 agreed to clarify this in the section on ‘Responsibilities’.

[100] In alignment with the other ISPMs on treatment requirements, some additional text was included in this section, highlighting monitoring and auditing requirements that may be required by NPPOs.

[101] **Prevention of infestation after fumigation** – In response to some contracting party comments and in alignment with the draft ISPM on the *Requirements for the use of modified atmosphere treatments as a phytosanitary measure* (2014-006), the SC-7 specified the consignment owner being responsible for prevention of infestation after fumigation, specifying that they should work in cooperation with the fumigation provider.

[102] **Environment, health and safety** – The SC-7 considered that Environment, Health and Safety issues are beyond the scope of the ISPM and not considered a phytosanitary requirement and as it is not a phytosanitary requirement, decided to not include it in the standard.

[103] **Labelling** – The text of this paragraph was aligned with ISPM 42 to indicate that labels should be placed on visible locations. The SC-7 discussed how labelling should be done for bulk commodities, as ideally labels should be attached directly to the commodity. One member explained that treatments of bulk commodities e.g. in a ship hold are indicated in treatment logs, but that is more a safety record than a label. Another member explained that when fumigating bulk commodities, the fumigated lots are kept separately and the receptacle marked. The SC-7 agreed that in this context the main purpose of the label is information exchange and to inform the receiving NPPO that the consignment has been fumigated, and this can be done through either a certificate or label.

[104] The SC-7 also discussed who would be responsible for labelling the commodity and agreed that it is the responsibility of the exporting NPPO to inform the importing NPPO about the consignment being fumigated (especially if during transport). A sentence was added to the section on ‘Responsibilities’ to clarify this.
[105] **Requirements for treatment entities** – Several contracting party comments recommended aligning this section with the other treatment standards. The SC-7 discussed whether this section should be deleted as its content is included in ‘Authorization of entities’, and agreed to move this section to ‘Monitoring and auditing’. The bullet list was aligned with the draft ISPM on the **Requirements for the use of modified atmosphere treatments as a phytosanitary measure** (2014-006), with some rewording to clarify that NPPOs should be granted access to fumigation facilities for audits.

**Documentation:**

[106] One contracting party comment suggested deleting this section, as it was considered a national requirement. The SC-7 disagreed, as a similar section is also included in the other treatment standards, and modified the text in alignment with the draft ISPM on the **Requirements for the use of modified atmosphere treatments as a phytosanitary measure** (2014-006). Since in case of fumigation the treatment is often done during transport of the consignment, ‘or initiated’ was included to align with previous sections of this draft.

[107] **Documentation of procedures** – The SC-7 discussed the level of obligation in terms of documentation and agreed that the items listed in this section should only be required ‘when appropriate’, because some points do not apply to bulk commodities. The SC-7 also deleted some text to align with the draft ISPM on the **Requirements for the use of modified atmosphere treatments as a phytosanitary measure** (2014-006), but decided to retain mention of ‘fumigation entity’ instead of ‘facility’, since for fumigation the entity is emphasized more.

[108] Some comments requested including an item on ‘provisions for handling accidents and emergencies’, but the SC-7 decided that while it is an important point, it is not a phytosanitary issue and, in alignment with other sections on EHS, agreed to not include it.

[109] **Record keeping** – One contracting party comment asked to differentiate between general record keeping and specific record keeping for individual treatments. One member suggested to provide clarity that entities should keep general records covering all activities and the entire system with regards to their authorization, not just on the fumigations they perform. The SC-7 discussed the issue and agreed that general record keeping is covered in the previous section on ‘documentation of procedures’, while specific records related to individual treatments are covered in the paragraph on ‘record keeping’. The text of this section was adjusted to clarify that the fumigation provider should keep records for each application.

**Inspection:**

[110] Some contracting parties commented on whether the presence of target or non-target pests during inspection should determine if the treatment was successful. The SC-7 discussed the issue and agreed that if a non-target pest is found, this does not automatically mean treatment failure because it can be a more resistant pest than that targeted by the fumigation schedule or have been introduced after fumigation. However the Secretariat recalled a TPPT discussion where the panel members agreed that it is useful guidance to be alert when seeing non-target pests.

[111] One member suggested to include only ‘pest’ instead of ‘non-target pest’, but the SC-7 decided to keep the original text in line with the draft ISPM on the **Requirements for the use of modified atmosphere treatments as a phytosanitary measure** (2014-006).

**Responsibilities:**

[112] The SC-7 changed the wording in line with the draft ISPM on the **Requirements for the use of modified atmosphere treatments as a phytosanitary measure** (2014-006) to include auditing instead of monitoring. The SC-7 discussed whether the first sentence was also applicable when the NPPO conducts the treatment itself (and not an authorized entity) and decided to modify the sentence to clarify this. In reference to the discussions on safety equipment, the SC-7 noted that a paragraph from ISPM 18 (Guidelines for the use of irradiation as a phytosanitary measure) that was also included in the draft ISPM on the **Requirements for the use of modified atmosphere treatments as a phytosanitary measure**
(2014-006) refers to the responsibilities of the NPPO in relation to safety measures and agreed to add it to this section.

The SC-7 discussed whether to add a sentence on information exchange between exporting and importing country when fumigating during transport. One member thought this was not needed as communication was already included in the previous section ‘Labeling’. The SC-7 agreed to not include information exchange in this section, as this should be covered either through phytosanitary certificates as specified in ISPM 12, or agreed bilaterally between the importing and exporting country.

**Appendices:**

The appendix on ‘Guidance for fumigation efficacies’ was deleted from this standard in line with contracting party comments and in alignment with other treatment standards. It will be included in the TPPT section of the Procedure Manual for Standard Setting. The SC-7 agreed that the SC should consider whether and which appendices are useful and needed in ISPMs.

**Chemical properties of common fumigants** (Appendix 1) and **Formulas for common geometrical shapes** (Appendix 3) – Contracting party comments suggested both to delete and keep these appendices. The SC-7 discussed whether the information provided in the tables was relevant or merely useful and considered that if it were useful it should be part of guidance material. One member argued that the information in Appendix 1 is relevant as the requirement for keeping a certain temperature is specified in the standard. One member considered that even though the information can be found online, having it readily available as Appendices to the standard will facilitate implementation. The SC-7 considered the arguments and agreed to keep the appendices for the SC to ultimately decide based on comments from the second consultation.

**Formulas** (Appendix 2 and 4) – Continuing the discussion from the sections ‘Introduction of the fumigant’ and ‘CT calculation’, the SC-7 considered whether the formulas in these sections were needed and useful, in which case they should be included in a new appendix. One member suggested that if the formula is definitive, it is fairly important, and specific to fumigation.

**Introduction of fumigant:** The SC-7 developed the appendix by structuring it to differentiate between the calculation for fumigant by weight and by volume and adding the formula previously in the draft and the one suggested in a comment in the two sections. An introductory sentence from the body text was included. The SC-7 discussed that excess leakage or sorption is already taken into consideration when calculating dosage in the introductory sentence, so no additional example was included as suggested by a comment. The SC-7 discussed the definition of ‘fumigant purity’ and decided to change the wording to explain that it indicates the percentage of active ingredient in the commercially available product, as indicated on the product label.

**CT calculations:** The SC-7 decided to include two calculation (to be used under leaky and non-leaky conditions).

**Implementation issues:**

Some comments, especially from less developed countries, addressed potential difficulties in implementing this standard efficiently. Main issues raised were challenges in infrastructure, lack of appropriate facilities, training of staff and approval of quality systems. One contracting party commented that this standard would require adjustments to procedures and would serve as a basis for capacity building assistance and best practice fumigation training. Another comment requested the development of additional guidance and manuals and suggested that the appendices could form part of a manual.

The SC-7 discussed these issues and agreed that development of additional guidance in the form of manuals could be beneficial to effectively implement fumigation as a phytosanitary measure. One member suggested that the CT calculation could be explained more thoroughly in a manual or factsheet. One member also suggested that a manual on safety issues (e.g. on handling the fumigated or potentially fumigated consignment) could be useful.
The SC-7 agreed to forward the raised implementation issues to the Implementation and Capacity Development Committee.

The SC-7:

3. approved the draft ISPM on the Requirements for the use of fumigation as a phytosanitary measure (2014-004) as modified in this meeting for submission to the second consultation.

4. asked the Secretariat to forward the implementation issues on the draft ISPM Requirements for the use of fumigation as a phytosanitary measure (2014-004) identified during first consultation to the Implementation and Capacity Development Committee (IC).

5. invited the SC to consider whether specific phytosanitary treatments (PTs, Annexes to ISPM 28 (Phytosanitary treatments for regulated pests)) should be placed under the new standards on treatment requirements. (E.g. adopted PTs on fumigation could be moved to become annexes to the draft ISPM on Requirements for the use of fumigation as a phytosanitary measure (2014-004) once adopted).

6. Invited the SC to consider whether the definition of fumigation should be revised by the TPG to clarify the use of modified atmospheres.

7. Asked the TPPT to clarify the concept of ‘cool conditions’ as used in the draft ISPM on the Requirements for the use of fumigation as a phytosanitary measure (2014-004) until the November 2018 SC meeting.

5. Other business

There was no other business.

6. Close of the meeting

The Chairperson and Secretariat thanked the SC-7 members for their hard work and active participation this week. They also especially thanked the Stewards for their work before the meeting on preparing the drafts and reviewing a record number of consultation comments.

The SSU lead reminded the SC-7 that the Secretariat is here to support the SC and SC-7 in their work but also needs the SC to support the Secretariat in the creative implementation of the IPPC work programme, in order to give good guidance to the IFU/IC for the implementation of developed standards.

The Chairperson thanked the Secretariat for their excellent support during and between meetings, acknowledged Ms HA (Vietnam) for her contributions, as it was her last meeting as SC-7 member, and closed the meeting.
### Appendix 01 – Agenda

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<td>- Steward: Laurence <strong>BOUHOT-DELDUC</strong></td>
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<td>- Assistant Steward: Ebbe <strong>NORDBO</strong></td>
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<td>- Steward’s additional notes and potential implementation issues: Draft amendments to ISPM 5: Glossary of Phytosanitary Terms (1994-001)</td>
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<td>- Steward: David <strong>OPATOWSKI</strong></td>
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<td>- Assistant Stewards: Yuejin <strong>WANG</strong> and Mike <strong>ORMSBY</strong></td>
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# Appendix 02 - Documents List

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### Appendix 03 - Participants List

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<td>✓</td>
<td>Africa Member SC-7</td>
<td><strong>Ms Esther KIMANI</strong>&lt;br&gt;Ag. Managing Director&lt;br&gt;Kenya Plant Health Inspectorate&lt;br&gt;Service- KEPHIS&lt;br&gt;P.O. BOX 49592-00100, Nairobi&lt;br&gt;<strong>KENYA</strong>&lt;br&gt;Tel: (+254) 356171, Mobile: (+254) 0722 226 239</td>
<td><a href="mailto:ekimani@kephis.org">ekimani@kephis.org</a></td>
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<tr>
<td>✓</td>
<td>Asia Member SC-7</td>
<td><strong>Ms Thanh Huong HA</strong>&lt;br&gt;Deputy Director of Plant Quarantine Division, Plant Protection Department&lt;br&gt;149 Ho Dac Di Street&lt;br&gt;Dong Da district&lt;br&gt;Hanoi City&lt;br&gt;<strong>VIET NAM</strong>&lt;br&gt;Tel: (+844) 35331033&lt;br&gt;Fax: (+844) 35330043</td>
<td><a href="mailto:ppdhuong@yahoo.com">ppdhuong@yahoo.com</a>&lt;br&gt;<a href="mailto:ppdhuong@gmail.com">ppdhuong@gmail.com</a></td>
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<td>✓</td>
<td>Europe Member SC-7</td>
<td><strong>Mr Nicolaas Maria HORN</strong>&lt;br&gt;Senior Officer Plant Health, Netherlands Food and Consumer Product Safety Authority (NVWA) Division Plant and Nature National Plant Protection Organization (NPPO)&lt;br&gt;P.O. Box 9102&lt;br&gt;6700 HC Wageningen&lt;br&gt;<strong>THE NETHERLANDS</strong>&lt;br&gt;Phone: (+31) 651998151</td>
<td><a href="mailto:n.m.horn@nvwa.nl">n.m.horn@nvwa.nl</a></td>
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<td>Latin America and Caribbean Member SC-7</td>
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**Observers or stewards:**

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