

Submission form for topics for Standards and Implementation

(Updated by the IPPC Secretariat 2018-04-27)

Name of Country or Organization: North American Plant Protection Organization (NAPPO)

Introduction

In Accordance with CPM-13 decision, a combined call for topics for standards and tools for implementation is opened in 2018. IPPC contracting parties and RPPOs are invited to submit proposals for topics to be included as gaps in the Framework for Standards and Implementation for consideration to be put onto the IPPC work programme. Each submission should clearly define the problem needing resolution in sufficient detail to determine how it fits into the Framework for Standards and Implementation and the cost/benefit of the development of the standard or tool. Submitters are requested to consult the current IPPC Framework for Standards and Implementation (<https://www.ippc.int/en/publications/82439/>) to identify areas where the proposal can contribute.

Standards

This form covers submissions for new ISPMs, new components to an existing ISPM and revision or amendments to an ISPM, supplement, annex or appendix, including diagnostic protocols. Please note that a separate call for phytosanitary treatments (PTs) is made, more information on this call is available at <https://www.ippc.int/en/core-activities/standards-setting/calls-treatments/>.

Please refer to the IPPC Standard Setting Procedure Manual¹ for an explanation of the hierarchy of terms for standards (technical area, topic and subject). The list of topics for IPPC standards adopted by the CPM is available at <https://www.ippc.int/core-activities/standards-setting/list-topics-ippc-standards>.

Implementation

This form covers submissions for new IPPC implementation resources for implementation of the Convention, ISPMs and CPM recommendations or for revisions to IPPC implementation resources. Please refer to the IPPC Framework for Standards and Implementation on implementation resources that have been adopted/developed, are under development or are planned to be developed.

Submission

This completed form should be submitted by the IPPC official contact point, preferably via e-mail, to the IPPC Secretariat (ippc@fao.org) no later than **31 August 2018**. Please use one form per topic.

An electronic version of this form is available at <https://www.ippc.int/en/core-activities/standards-and-implementation/call-for-topics-standards-and-implementation/>.

Save and submit the completed submission form as:

2018_TOPIC_*[Country or Organization name – Proposed title of topic]*.docx.

| Submission form for topics for Standards and Implementation | |
|--|--|
| 1. Proposed by: | Dr. Stephanie Bloem |
| 2. Contact: (Contact information of an individual able to clarify issues relating to this submission) | |
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¹ IPPC Standard Setting Procedure Manual URL: <https://www.ippc.int/en/publications/85024/>

3. Proposed Topic (Choose one box only)
 Standard (go to 4) Implementation resource (go to 5)

4. Standards
4.1 Type of topic: (Choose one box only)

| | | |
|---|---|--|
| <p>A. New ISPM: <input type="checkbox"/> Concept <input type="checkbox"/> Pest specific <input type="checkbox"/> Commodity specific <input type="checkbox"/> Reference</p> | <p>B. New component to an existing ISPM: <input type="checkbox"/> Supplement <input checked="" type="checkbox"/> Annex <input type="checkbox"/> Appendix <input type="checkbox"/> Technical panel (technical area) <input type="checkbox"/> Diagnostic protocol (subject)</p> | <p>C. Revision/Amendment of: <input type="checkbox"/> ISPM <input type="checkbox"/> Supplement <input type="checkbox"/> Annex <input type="checkbox"/> Appendix</p> |
|---|---|--|

Draft specification:
 As agreed by CPM-7 (2012) and CPM-11 (2016), submissions in answer to the call for topics (except for draft diagnostic protocols, which are subject to additional criteria, see below) should be accompanied by a draft specification. Proposals for phytosanitary treatments are submitted using a different submission form in a separate call: <https://www.ippc.int/en/core-activities/standards-setting/calls-treatments/>.

An annotated template for the draft specification for Standards is available on the IPP (<https://www.ippc.int/en/publications/81324/>) in English, French and Spanish.

(go to 6)

OR

5 Implementation
5.1 Type of topic: (Choose one box only)

| | |
|--|---|
| <p>A. New implementation resource: <input type="checkbox"/> Guide (e.g. Manual) <input type="checkbox"/> Training material (e.g. e-Learning) <input type="checkbox"/> Awareness material <input type="checkbox"/> Other (Please specify _____)</p> | <p>B. Revision of implementation resource <input type="checkbox"/> Guide (e.g. Manual) <input type="checkbox"/> Training material (e.g. e-Learning) <input type="checkbox"/> Awareness material <input type="checkbox"/> Other (Please specify _____)</p> |
|--|---|

5.2 Featured Convention articles, ISPMs and CPM recommendations in the proposed implementation resource
 for Convention articles (Please specify _____)
 for ISPM (Please specify _____)
 for CPM Recommendation (Please specify _____)

Draft outline:
 Submissions for topics on implementation should be accompanied by a draft outline of implementation resource defining a scope and purpose, or a draft implementation resource. Commitment for financial/in-kind resources to support the development of the implementation resource may be included in the submission (non-obligatory).

(go to 6)

6. Proposed title of document

*ISPM 38- International movement of seeds: **Annex 1** - Design and use of systems approaches for phytosanitary certification of seeds*

7. Proposed priority

1 (high) 2 3 4 (low)

Comments:

8. Featured outcome of standard/implementation resource

FAO has stated that seeds are the “primary basis for human sustenance” and food security is dependent on the delivery of high quality seeds. Reportedly, 90 percent of all food crops grown globally originate as seeds and fully 60 percent of the world population’s energy intake comes from five cereal crops (rice, wheat, maize, millet and sorghum) that are all grown from seed. Seed-borne diseases pose a serious threat to global food security. For example, maize is the most important cereal crop in sub-Saharan Africa where 85 percent of the crop is consumed as food. In recent years, maize lethal necrosis disease (MLN) has emerged as a serious threat to maize crops, Losses in Kenya alone ranged from 30 to 100 percent. MLN is caused by a synergistic coinfection of maize viruses. While insect transmission is the primary means of spread within a field, these viruses may be introduced into new areas via infected seed. ISPM 38 notes that seed-borne and seed transmitted pests are effectively spread by seed. The systems approach described in this proposed Annex offers a harmonised global system for assuring production and international movement of clean seed resulting in a global benefit in the form of reduced pests impacts on crops, access to new germplasm, greater productivity, food for consumption and trade.

From a phytosanitary perspective, the global seed production and trade system presents a number of challenges for National Plant Protection Organizations (NPPOs). It is not uncommon to breed and produce seed in multiple countries in different hemispheres, then send that seed to operations centers in different countries for cleaning, treatment, testing, blending and packaging. Commercial seed is then distributed to many more countries worldwide. There is also a temporal aspect as seed companies may use seed lots of parental lines for multiple years. The global and temporal aspects of seed trade affect how seed is regulated. Destination (importing) countries may have different import requirements that need to be taken into account at the time of seed production. Importing countries’ NPPOs may have requirements that are not recognized as valid by the NPPO of the exporting country, complicating the phytosanitary certification process. Furthermore, the volume of seed shipments has increased significantly, as has the complexity of trade with hundreds of seed species and thousands of varieties traded internationally.

The volume, complexity and global nature of seed trade creates the opportunity for many potentially seed-borne pests to move in international trade. In turn, NPPOs must confront an increasing demand for documentation and different declarations attesting to the absence of an ever-growing number of pests. In the face of these challenges, certifying officials in exporting and re-exporting countries must issue hundreds of thousands of Phytosanitary Certificates (PCs) each year only after confirming that differing import requirements of multiple countries have been met. Where the exporting country has not grown the seed, it may be difficult to provide accurate or truthful declarations on a PC for an importing country. These many consignment-by consignment certifications strain NPPO resources.

Implementation of the proposed systems approach alternative to consignment by consignment phytosanitary certification may relieve the strain on NPPO resources, while perhaps more significantly, providing better risk management and transparency of industry practices to NPPOs. With current industry trends to “just in time inventory management,” their benefits consist of either a faster release of the product to its destination or reduced operational costs, or both, resulting from harmonised import requirements simplifying the international movement of seeds.

Phytosanitary certification of small seed lots used to support research and breeding programs around the world are an additional challenge for NPPOs using current approaches. The small size of these (seed) lots and their high value for breeding companies make statistically significant sampling and testing of individual consignments difficult.

ISPM 38 recognizes that seed production practices, when combined under a systems approach (ISPM 14), can manage phytosanitary risk to a level consistent with the pest risk involved. ISPM 38 does not address the issue of how to apply a systems approach as an alternative to current phytosanitary certification systems that rely on endpoint inspection and testing of seed consignments. One approach is to adapt existing seed production risk management practices and combine them (with regulatory oversight) to create a risk-based systems approach to manage the phytosanitary risks of international seed trade. The proposed Annex outlines the design and implementation of a global phytosanitary hazard analysis and critical control point-based (HACCP) systems approach. The Annex would define general requirements of a harmonised systems approach to achieve high seed health. The systems approach can be applied to

commercial sized seed lots as well as small seed lots including breeder seed, and to all seed varieties moving in international trade. The Annex provides guidance on the documentation of system requirements and defined audit and verification standards for consistent implementation and acceptance by NPPOs.

NPPOs of exporting (production) countries could accredit seed production systems based on compliance with the systems approach. This accreditation would form the basis for phytosanitary certification and would serve as an alternative to the current consignment-by-consignment certifications based on inspection and testing at export or import. A systems approach provides an added benefit as a potential solution to the difficulty of sampling of small lots of seed (e.g., breeder’s lots) that frequently move internationally.

9. Contribution to filling the gaps of the Framework for Standards and Implementation: (2 lines max)

This proposal addresses the Framework for Standards and Implementation gap #51 Systems approach (ISPM 14): Clarification on the concepts of integrated measures and systems approach and specifically, guidance on systems approaches for commodities or pests.

10. Summary of justification for the proposal (2 lines max)

Currently, NPPOs and the seed industries in North and South America, Europe, Oceania and Asia are either developing or exploring the use of systems approaches to manage the phytosanitary risks of the international movement of seed as they seek to implement ISPM 38. To be effective, a uniform systems approach framework and a standardized accreditation and auditing guidance document must be developed and internationally accepted and the IPPC, through an Annex to ISPM 38, provides the only viable platform to achieve international acceptance of a globally harmonised systems approach as an alternative to consignment-by-consignment phytosanitary certification.

Criteria for justification and prioritization of proposed topics²:

Submissions should address the applicable criteria for justification of the proposal (as listed below). Where possible, information in support of the justification and that may assist in the prioritization should be indicated. All core criteria must be addressed; supporting criteria should be addressed if applicable. Priority will be given to topics with the largest global impact.

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

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

This proposed Annex provides guidance to NPPOs on the development and implementation of systems approaches for the purpose of providing common and effective action to prevent the spread and introduction of pests of seeds moving internationally. The flexibility that systems approaches provide and the adaptation of existing industry practices into a regulatory framework promote appropriate measures for their control.

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

FAO has stated that seeds are the “primary basis for human sustenance” and food security is dependent on the delivery of high quality seeds. Reportedly, 90 percent of all food crops grown globally originate as seeds and fully 60 percent of the world population’s energy intake comes from five cereal crops (rice, wheat, maize, millet and sorghum) that are all grown from seed. This primary role of seed production in food security is reflected in Strategic Objectives A and B that promote the protection of sustainable agriculture, enhance global food security and protect the environment, forests and biodiversity through the prevention of pest spread. The proposed Annex provides the framework for an effective and efficient approach to manage phytosanitary risk associated with international movement of seeds. It will do that by identifying and leveraging current seed production risk management practices and quality management systems, including audits, that reduce overall phytosanitary risk and integrating these measures into a harmonised systems approach for seed-borne and seed transmitted phytosanitary risks.

² As agreed by CPM-13 (2018)

The development of a multilaterally accepted systems approach that is risk-based and evidence-driven will lead to a more efficient and predictable system for NPPOs to provide phytosanitary certification for the import and export of seeds with a high level of assurance. The outcome links to Objective C by facilitating economic and trade development through the promotion of harmonised scientifically-based phytosanitary measures. Implementation of the Annex will facilitate economic and trade development both for developed and developing countries. A number of developing countries are important seed production locations, while many more are dependent on accessing clean, quality seed. Development of an efficient phytosanitary system is relevant to them as their NPPO resources may be limited.

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

With the recent adoption of ISPM 38, a number of individual NPPOs and regional plant protection organizations (RPPOs; e.g., NAPPO, COSAVE) and the seed industry (e.g., International Seed Federation-ISF, American Seed Trade Association-ASTA and the Asociación Mexicana de Semilleros-AMSAC) are setting the stage for implementation of the the standard and this proposed Annex by conducting ISPM 38 implementation workshops.

The Annex is expected to be developed within a reasonable timeframe since expertise is available within NPPOs and industry in the countries that are major exporters or importers of seeds. Several countries (e.g., Australia, France, United States) are actively developing seed systems approaches while other Contracting Parties (Australia, Canada, Chile, Mexico, United States) regional plant protection organizations (OIRSA, CAHFSA) and the global seed industry, through regional and global seed associations (SAA, CSTA, ASTA, ISF), have expressed support in international forums for a systems approaches as an alternative method for phytosanitary certification of seeds.

The ISF has demonstrated its commitment to systems approaches for seed by organizing an ISF Systems Approach Working Group and sponsoring the first of what is expected to be a series of seed experts Systems Approach Workshops in Rome, in April 2018. The final minutes of the Rome meeting reflect ISF’s (industry’s) vision for “One globally accepted Systems Approach that serves as an alternative to existing pest risk management options to secure phytosanitary certification for the international movement of seed.” The minutes further reflect workshop participants’ agreement that “this is an important issue to be pursued collaboratively by NPPOs and industry” and that “it would be beneficial for NPPOs to propose such a systems approach during the IPPC call for topics for standards or implementation in July 2018.”

Implementation will refocus expertise of NPPOs, from the current emphasis on consignment-by-consignment inspection and testing to a focus on HACCP-based seed production system audits. This is in line with the framework that is in development for the new ISPM on ‘Authorization of entities to perform phytosanitary actions (2014-002)’. Such activities can be spread easier over the year (easier planning) than individual consignment-by-consignment inspections e.g. during the growing season. Also, specific activities may be outsourced to authorized third parties. The systems approach will be built around seed production risk management practices that are already in place with additional measures as needed to address specific phytosanitary risks. Systems approaches offer more flexibility and more opportunities to employ equivalent measures as an alternative to single measures or where single measures may not exist. They allow NPPOs to address uncertainty by varying the strength and number of measures.

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

Today’s seed industry is a global enterprise with seed producers locating production operations in many different countries to take advantage of climate, logistics and economics. Re-export is a common business practice in the seed industry. The volume and number of seed shipments has increased significantly, as have the number of seed species traded internationally. It is estimated that over 300 species and 65,000 varieties are commercially traded globally. In the 2011-2016 period (the most recent statistics available), total world exports of seed for sowing increased from 2.75 million metric tons to 4.43 million metric tons. The number of PC additional declarations for specific pests required by importing countries continue to rise very quickly as does the variation in import requirements. Tomato seeds alone are regulated for 180 different pests worldwide with import requirements varying widely among importing countries. In the face of these challenges, certifying officials in exporting and re-exporting countries must issue hundreds of thousands of PCs each year only after confirming that the large variety of import requirements have been met. These many consignment-by consignment certifications based on the very wide variety of import requirements and even wider variety in PC additional declarations strain NPPO resources.

Despite strenuous efforts over several decades by governments and industry bodies, with the objective of harmonising regulations and encouraging regional or international seed trade, there are still considerable differences in seed laws and regulations. These differences, coupled with countries' plant health status, mean that seed cannot always move freely between countries.

Phytosanitary certification of small lots of seed used to support research and breeding programs around the world are an additional challenge for NPPOs to address with current approaches. The small size of these lots and their high value make statistically significant sampling and testing of individual consignments difficult.

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

The use of phytosanitary HACCP or systems approaches and quality management systems are not new concepts in seed production. Existing examples to draw on as resources include the ASTA Guide to Quality Management Practices and GSPP-Good Seed and Plant Practices. There are additional examples from outside the seed industry including nursery certification programs in Australia (Biosecure HACCP), Canada (Greenhouse Certification Program) and the United States (SANC- Systems Approach to Nursery Certification).

The Seed Health Working Group of the Quads Countries (Australia, Canada, New Zealand and the United States) is developing a case-study for a limited pilot to test the use of systems approaches for phytosanitary certification and generate information and data for global implementation.

Most of the data on efficacy of existing industry practices in reducing pest risk in the seed production pathway resides with the seed producers. At the June 2018 International Clean Seed Pathways workshop sponsored by the Australian NPPO in Brisbane, the seed industry acknowledged that most data resides with them and expressed a willingness to share information with NPPOs in order to develop the systems approach described in the proposed Annex.

Supporting criteria (information may be provided, as appropriate):

Supporting criteria (Practical)

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

As noted above, regional and international examples of systems approaches both for seeds (e.g., ASTA Guide to Quality Management Practices and GSPP), and plants for planting (Biosecure HACCP and SANC) are in place. Both ISPM 38 and ISPM 14 provide guidance to NPPOs on components of systems approaches as does NAPPOs RSPM 40 on Principles of Pest Risk Management for the Import of Commodities. None of these resources provide specific guidance on the use of systems approaches as an alternative approach to phytosanitary certification of international shipments of seed. However, several initiatives are currently underway to develop the approach. In Australia, the "Global Integrated System of Seed Production" concept has been proposed while the Regulatory Framework for Seed Health-ReFreSH is being developed in the United States.

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

Seed experts from Australia, Chile, the Netherlands, South Africa and the United States attended an ISF-sponsored meeting on seed systems approaches in Rome earlier in 2018. Furthermore, seed health experts from at least ten different countries attended the June 2018 International Clean Seed Pathways workshop sponsored by the Australian NPPO in Brisbane. Other NPPOs have experience employing systems approaches for other commodities like fruits and vegetables, as well as technical experience in the areas of accreditation and certification.

A wealth of knowledge exists with seed producers as well. The international seed industry is willing to provide any support that may be needed. As a result of daily involvement in trade, the industry can provide extensive knowledge about import and export of seeds and its challenges.

Supporting criteria (Economic)

- 1) Estimated value of the plants protected.
- 2) Estimated value of trade including new trade opportunities affected by the proposed standard and/or implementation resource (e.g. volume of trade, value of trade, the percentage of Gross Domestic Product of this trade) if appropriate.

The systems approach to be described in the proposed Annex is intended to be applicable across all seed sectors (vegetable, cereal, row crop, farm and lawn, flower), all seed importing and exporting countries and all sizes of seed production entities. The total value of seed traded internationally in 2016 was ca. 11.4 billion US\$: 4.0 billion in vegetable seeds; 0.3 billion in flower seeds; and 7.1 billion in field crop seeds).

Supporting criteria (Environmental)

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

Systems approaches offer more flexibility and more opportunities to employ equivalent measures as an alternatives to single measures (e.g., fumigation) or where single measures may not exist. During the presentation on 'Biosecure HACCP' at the June 2018 International Clean Seed Pathways workshop in Brisbane, it was noted that nurserymen participating in that plants-for-planting systems approach reduced pesticide use significantly.

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

The proposed systems approach framework includes measures for all classes of pests including pathogens, arthropods and weed seeds. Since the system contains measures for all classes of pests it has the potential for proactively managing new and emerging pests that may occupy the same or similar ecological niches.

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

See response above at 1) and 2).

Supporting criteria (Strategic)

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

NAPPO sponsorship of this proposed topic indicates support for it from Canada, the United States and Mexico. The Quads countries (Australia, Canada, New Zealand and the United States) have also expressed strong support for the proposal by creating a Quads Seed Health Working Group that is currently developing a case study to inform the design of the systems approach. Countries in South America and the Asia Pacific have expressed support or interest in the topic.

- 2) Frequency with which the issue to be addressed, as identified in the submission emerges as a source of trade disruption (e.g. disputes or need for repeated bilateral discussions, number of times per year trade is disrupted).

NPPOs are confronted with a continuously increasing workload and continuously decreasing resources to deal with phytosanitary certification of seed lots for export or re-export. Each year, NPPOs must issue hundreds of thousands of PCs based on a large variety of import requirements and additional declarations and this strains resources. This frequently causes delays in release of consignments, e.g. in countries that re-test all seed consignments at import. It is estimated that worldwide, trade is disrupted on a daily basis by seed lots being stopped at a border.

- 3) Relevance and utility to developing countries.

Many developing countries are important seed producing countries as well as seed importers. The proposed systems approach is relevant for them as their NPPO resources are often limited. All seed trading countries, including developing countries, will benefit from transparency of the harmonised requirements resulting in the facilitation of safe trade.

- 4) Coverage (application to a wide range of countries/pests/commodities).

Nearly all countries import seed, export seed or both. The proposed Annex has potential global coverage. The systems approach described in the Annex will manage pest risk of all classes of pests across all seed sectors. It may serve as a model for similar approaches for other commodities or pathways.

- 5) Complements other standards and/or implementation resources (e.g. potential for the standard to be used as part of a systems approach for one pest, complement treatments for other pests).

ISPM 14 established guidance on the general design and use of systems approaches. ISPM 38 acknowledged the potential for systems approaches and seed production risk management measures to reduce pest risk in international seed movements. The proposed Annex builds on ISPMs 38 and 14 by providing a general framework for a seed systems approach as a voluntary alternative to existing consignment-by-consignment certification.

- 6) Conceptual standard and/or implementation resource to address fundamental concepts (e.g. treatment efficacy, inspection methodology).

The concept proposed is for a global systems approach that applies HACCP principles and uses existing seed production risk management measures to produce healthy seed. The system is based on defined general requirements for accreditation. NPPOs would recognize the accreditation as the basis for issuing PCs. Significantly, the system would provide an alternative to the current system of consignment-by-consignment phytosanitary certification.

- 7) Urgent need for the standard and/or implementation resource.

It is estimated that worldwide seed trade valued at 11.4 billion US\$ is disrupted on a daily basis by seed lots being stopped at a border. At the same time, the current system of phytosanitary certification strains limited NPPO resources. Currently, a nexus of aligned NPPO and industry interests provides an excellent opportunity for a closer collaboration between government and industry leading to more attention to plant health issues and more responsibility in sharing between the public and private sectors.

Diagnostic protocols are subject to additional criteria. For proposals for DPs, please elaborate on the following criteria to help the future consideration of the subject proposed:

- Need for international harmonization of the diagnostic techniques for the pest (e.g. due to difficulties in diagnosis or disputes on methodology)
- Relevance of the diagnosis to the protection of plants including measures to limit the impact of the pest.
- Importance of the plants protected on the global level (e.g. relevant to many countries or of major importance to a few countries).
- Volume/importance of trade of the commodity that is subjected to the diagnostic procedures (e.g. relevant to many countries or of major importance to a few countries).
- Other criteria for topics as determined by CPM that are relevant to determining priorities
- Balance between pests of importance in different climatic zones (temperate, tropics etc.) and commodity classes.
- Number of labs undertaking the diagnosis.
- Feasibility of production of a protocol, including availability of knowledge and expertise.

Literature review³ (This section will provide a **summary of the topic** based on scientific and technical publications, including a referenced **list of literature reviewed**. This will help provide the scientific basis for the content of the standard/implementation resource to be used by the selected experts during the development of the standard/implementation resource).

³ As agreed by CPM-7 (2012) and CPM-11 (2016).

ASTA. 2016. The Guide to Seed Quality Management. American Seed Trade Association, Alexandria, VA. Last accessed 12 January, 2018, <https://www.betterseed.org/resources/guide-to-seed-quality-management/>.

Effectiveness of biosecurity controls for importation of tomato and carrot seeds. 2016. Department of Agriculture and Water Resources, Canberra. 125 pp.

García-Figuera, S. and McRoberts, N. 2017. Review of quality management systems and accreditation programs to mitigate phytosanitary risk in seed trade. Quantitative Biology and Epidemiology Laboratory, Department of Plant Pathology, UC Davis. 27 pp.

Good Seed and Plant Practices. GSPP Good Seed and Plant Practices, Gouda. Last accessed 12 January, 2018, <https://www.gspp.eu/>.

International Seed Federation Regulated Pest List Database. Nyon, Switzerland, ISF. Available at http://pestlist.worldseed.org/isf/pest_lists_db.html

International Standards for Phytosanitary Measures ISPM 11: Pest risk analysis for quarantine pests. FAO, Rome. 40 pp.

International Standards for Phytosanitary Measures ISPM 14: The use of integrated measures in a systems approach for pest risk management. FAO, Rome. 16 pp.

International Standards for Phytosanitary Measures. ISPM 38: International Movement of Seed. International Plant Protection Convention FAO, Rome. 19 pp.

Regional Standards for Phytosanitary Measures. RSPM 40. Principles of Pest Risk Management for the Import of Commodities. North American Plant Protection Organization, Raleigh. 28 pp.

A Systems Approach to Nursery Certification. National Plant Board. Last accessed 12 January, 2018, <http://sanc.nationalplantboard.org/>.

ReFreSH- Regulatory Framework for Seed Health Concept Paper. USDA-APHIS-PPQ, Riverdale, MD. 25 pp.

Sequeira, R. A., Takeuchi, Y. and Kalaris, T. 2006. Potential for Using a Phytosanitary Hazard Analysis and Critical Control Point (P-HACCP) System as a New Alternative for SPS Quarantine Pest Risk Management and Trade Facilitation. 2006 North American Plant Protection Organization Annual Meeting, Ft. McDowell, AZ.

Send submissions to:

E-mail: ippc@fao.org

(Subject line: “Call for topics 2018”)

Address: IPPC Secretariat (AGDI)

Food and Agriculture Organization of the UN

Viale delle Terme di Caracalla

00153 Rome, Italy

DRAFT SPECIFICATION FOR ISPM: [ISPM 38 - International movement of seeds: Annex 1- Design and use of systems approaches for phytosanitary certification of seeds] ([Topic no.]

Status box

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|--|---------------------------------|
| This is not an official part of the specification and it will be modified by the IPPC Secretariat after approval | |
| Date of this document | [2017-03-13] |
| Document category | Draft specification for an ISPM |
| Current document stage | Proposed topic for annex |
| Major stages | 2018-8 Topic proposed |
| Steward history | |
| Notes | |

Title

[1] ISPM 38 - International movement of seeds: Annex 1- Design and use of systems approaches for phytosanitary certification of seeds

[Reason for the standard] [Reason for the revision of the standard] [Reason for the annex to the standard]

[2] Currently, NPPOs and the seed industries in North and South America, Europe, Oceania and Asia are either developing or exploring the use of systems approaches to manage the phytosanitary risks of the international movement of seed as they seek to implement ISPM 38. To be effective, a uniform systems approach framework and a standardized accreditation and auditing guidance document must be developed and internationally accepted and the IPPC, through an Annex to ISPM 38, as it provides the only viable platform to achieve international acceptance of a globally harmonised systems approach as an alternative to consignment-by-consignment phytosanitary certification.

Scope

[3] The proposed Annex will apply to any seed moving internationally in trade or as breeder lots. The systems approach described by the Annex will provide a general framework of risk management measures including existing seed industry risk management practices in combination with a quality management system that includes defined audit and verification standards for consistent implementation of the system. The Annex will define a globally harmonised system to accredit compliance with the systems approach. This accreditation is recognized by NPPOs as the basis for phytosanitary certification and provides a voluntary alternative to the current system of consignment-by-consignment certification.

Purpose

[4] Despite strenuous efforts over several decades, by governments and industry bodies, with the objective of harmonising regulations and encouraging regional or international seed trade, there are still considerable differences in seed laws and regulations. These differences, and countries' plant health status, mean that seed cannot always move freely between countries. It is estimated that worldwide the seed trade valued at 11.4 billion US\$ is disrupted on a daily basis by seed lots being stopped at a border.

At the same time, the current system of phytosanitary certification strains limited NPPO resources. This Annex provides an opportunity to harmonize seed regulation and provide a more efficient alternative to the current certification system.

Tasks

[5] The expert drafting group (EDG) should undertake the following tasks:

1. Consider existing relevant standards, e.g., as ISPMs 14 and 38, NAPPO RSPM 40.
2. Review existing requirements from different countries for importation of seeds and harmonised regional guidance, if such is available.
3. Review existing systems approaches and quality management systems for seed (e.g., ASTA Guide to Seed Quality Management, GSPP) and other commodity sectors (e.g., Biosecure HACCP, Systems Approach for Nursery Certification).
4. Examine existing seed production practices that can contribute to pest risk reduction and result in high health seed.
5. Define the general requirements of a systems approach as informed by the information gathered in tasks 1-4.
6. Describe a procedure to document the requirements of the systems and their application through a quality management system that includes defined audits and verification.
7. Consider whether the ISPM could affect in a specific way (positively or negatively) the protection of biodiversity and the environment. If this is the case, the impact should be identified, addressed and clarified in the draft ISPM
8. Consider implementation of the standard by contracting parties and identify potential operational and technical implementation issues. Provide information and possible recommendations on these issues to the Standards Committee (SC).

Provision of resources

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

Collaborator

[7] To be determined.

Steward

[8] Please refer to the *List of topics for IPPC standards* posted on the International Phytosanitary Portal (IPP) (see <https://www.ippc.int/core-activities/standards-setting/list-topics-ippc-standards>).

Expertise

[9] Five to seven experts with a wide knowledge and experience in in one or more of the following areas: the development and/or implementation of phytosanitary measures to manage pest risk associated with the production and international movement of seeds, pest risk analysis (PRA), seed testing and storage, and use of integrated measures in systems approaches. At least one person with knowledge of existing international guidance relating to the international movement of seed, at least one person knowledgeable in quality management systems and auditing for compliance and and at least one person knowledgeable in operational industry seed quality management, including seed production, seed processing and seed testing..

Participants

[10] [To be determined.]

References

[11] The IPPC, relevant ISPMs and other national, regional and international standards and agreements as may be applicable to the tasks, and discussion papers submitted in relation to this work.

ISPM 2. 2016. *Framework for pest risk analysis*. Rome, IPPC, FAO.

ISPM 5. 2018. *Glossary of phytosanitary terms*. Rome, IPPC, FAO.

ISPM 10. 2016. *Requirements for the establishment of pest free places of production and pest free production sites*. Rome, IPPC, FAO.

ISPM 11. 2017. *Pest risk analysis for quarantine pests*. Rome, IPPC, FAO.

ISPM 12. 2017. *Phytosanitary certificates*. Rome, IPPC, FAO.

ISPM 14. 2017. *The use of integrated measures in a systems approach for pest risk management*. Rome, IPPC, FAO.

ISPM 20. 2018. *Guidelines for a phytosanitary import regulatory system*. Rome, IPPC, FAO.

ISPM 23. 2016. *Guidelines for inspection*. Rome, IPPC, FAO.

ISPM 27. 2016. *Diagnostic protocols for regulated pests*. Rome, IPPC, FAO.

ISPM 31. 2016. *Methodologies for sampling of consignments*. Rome, IPPC, FAO.

ISPM 32. 2016. *Categorization of commodities according to their pest risk*. Rome, IPPC, FAO.

ISPM 38. 2018. *International movement of seeds*. Rome, IPPC, FAO.

Discussion papers

[12] Participants and interested parties are encouraged to submit discussion papers to the IPPC Secretariat (ippc@fao.org) for consideration by the EDG.