FUTURE NEEDS FOR PHYTOSANITARY TREATMENTS in the IPPC TO prevent THE INTERNATIONAL MOVEMENT OF PLANT PESTS

1. In preparation for the 2014 Strategic Planning Group (SPG)[[1]](#footnote-1), members were invited to reflect on the topic of the future of the IPPC, including changes occurring in technology, trade pathways, and new phytosanitary threats that might affect the relevance of the IPPC. 2014 SPG developed a list of seven themes summarizing the key items for consideration surrounding the potential roles of the IPPC. The themes are:
2. Technology, innovation and data
3. Resource mobilization
4. Advocacy and awareness through strong communication
5. Implementation, participation and collaboration
6. The IPPC is a centre of excellence and innovation
7. The IPPC contribution to food security, environmental protection and economic prosperity
8. Simplify regulatory environment for the complexities of future global trade
9. The Commission on Phytosanitary Measures (CPM) in its 10th Session (2015)[[2]](#footnote-2) noted the narratives, understanding that these will serve as the basis for future SPG discussions on strategic directions that the IPPC should consider in the next 10-20 years. The CPM agreed to consider and discuss the themes in the context of the development of the new IPPC Framework (2020-2030).
10. At the June 2015 meeting of the CPM Bureau[[3]](#footnote-3)it was agreed that the SPG focus its discussion on the themes 1, 4, 5, 6 and 7 over the next four years, concentrating on one theme each year. Theme 7 was considered by SPG in October 2015.
11. Phytosanitary treatments fall under Theme 1, which aims to enhance IPPC credibility, efficacy and efficiency in a changing global environment, but are also relevant to themes 4, 6 and 7. To achieve this goal, the IPPC takes advantage and instigates the development of new technology and innovations for the purpose of developing, assessing and responding to emerging risks and exchanging information, data management and communication, development of new standards, tools and guidance material including pest diagnostic methods and treatments, e-Phyto and bar coding.
12. The SPG 2015[[4]](#footnote-4), in considering the concept of a commodity standard, agreed that relevant phytosanitary treatments should be developed in tandem with any commodity standard to ensure that the world has tools to implement it. It also noted that there may be even greater need for treatments rather than commodity standards, and acknowledged that the Secretariat would not be able to address this issue with existing resources.
13. The Standards Committee (SC) discussed phytosanitary treatments in the context of a call for new treatments to continue the work of the Technical Panel for Phytosanitary Treatments (TPPT)[[5]](#footnote-5) at its meeting in November 2015[[6]](#footnote-6). The SC strongly agreed that the IPPC phytosanitary treatments are critically important because they help protect plants and plant products while greatly facilitating trade. It also agreed to provide input for this paper, which will outline the national and regional needs for phytosanitary treatments to substantiate the need for further IPPC phytosanitary treatments and justify the need for additional resources to be allocated for progressing their development and adoption.The Secretariat fully supported the need for additional IPPC phytosanitary treatments but stressed that there would not be sufficient financial or human resources to manage the work in relation to a call for treatments in conjunction with current priorities, which have been set by CPM.
14. The objective is to optimize the identification, development and application of phytosanitary treatments to facilitate the safe movement of plants and plant products in international trade as:
* Agreed actions for CPM and its bodies, and the IPPC Secretariat over the next five years
* Strategic actions and outcomes in the 2020-30 Strategic Framework.
1. The SPG is requested to:
2. *Confirm* the need for a strong focus in the IPPC on phytosanitary treatments as critical for effectively managing pest risks associated with the international movement of plants and plant products in trade;
3. *Consider* the inclusion in the 2020-30 IPPC Strategic Framework of strategic elements that enhance contracting parties’ access to phytosanitary treatments;
4. *Identify* strategic and operational elements of the phytosanitary treatment access programme that can be captured in short, medium and long term strategies and work plans, including resource requirements, dependencies, outcomes and milestones;
5. *Advise* the Bureau on priorities and outcomes for the development and implementation of phytosanitary treatments in the lead up to 2020;
6. *Propose* a sustainable funding mechanism for the development, publication and effective implementation of phytosanitary treatments.

Appendix 1

**ADDRESSING FUTURE NEEDS FOR PHYTOSANITARY TREATMENTS in the IPPC TO PREVENT THE INTERNATIONAL MOVEMENT OF PLANT PESTS**

**ISSUE/CONTEXT**

1. A key challenge for the 21st century will be access to the phytosanitary treatments necessary to effectively manage pest risks associated with the international movement of plants and plant products in trade. These treatments must be supported by sufficient technical data to assure National Plant Protection Organizations (NPPOs) of their defined level of efficacy and enable their appropriate use to manage plant pests in trade. Treatments must be fit for purpose and not present an unacceptable threat to people, animals and the environment through their use.

*Current status*

1. In recognition of the critical role of phytosanitary treatments to manage pest risks and facilitate trade, and to realize benefits from the harmonization of these treatments, the International Plant Protection Convention (IPPC) adopted ISPM 28 (*Phytosanitary treatments for regulated pests*) in 2007 and established the Technical Panel on Phytosanitary Treatments (TPPT) in 2004. At December 2015, 19 phytosanitary treatments have been adopted as international standards. A further 15 phytosanitary treatments and 5 draft International Standards for Phytosanitary Measures (ISPMs) on treatment requirements are under development. Adopted standards have focused on the harmonization of irradiation treatments, cold treatments and vapor heat treatment against fruit flies.
2. A treatment, as defined in ISPM 5 is “*an official procedure for the killing, inactivation or removal of pests or for rendering pest infertile or for devitalization*”. A treatment schedule describes the critical parameters of a treatment which need to be met to achieve the intended outcome of the treatment at a stated efficacy. A phytosanitary treatment must be both effective to a stated level of efficacy against a defined pest(s) every time, and must be compatible with the production and trading systems in which they are used to manage risks to an acceptable level of risk of the country that is importing the plants or plant products. This distinguishes phytosanitary treatments from many other pest control practices.
3. There are many treatments available that control pests. A subset of these are useful for managing regulated pests in trade. A further subset could be adopted as international standards, where there is a wide benefit to be gained from the harmonization of treatments in globally traded commodities.

*Future needs and opportunities*

1. There is little visibility of the phytosanitary treatments used by importing and exporting countries to manage regulated pests. Notable exceptions include the United States of America treatment manual, which is referenced by a number of countries as a source of treatments applied in trade. A Methyl Bromide Alternatives Information System (MBAIS) was developed by Australia around 2006 as a repository for phytosanitary treatments that could be used in place of methyl bromide (MB), but this has since been withdrawn. Establishing a mechanism within the Phytosanitary Resources page for NPPOs accepted treatments used in trade along with any supporting implementation standards, audit procedures and guidance. This would allow the material to become more widely available as a global resource.
2. The TPPT is in the process of assessing a number of phytosanitary treatments for adoption as annexes to ISPM 28. It is being assisted by a Phytosanitary Treatments Working Group (e.g. Phytosanitary Measures Research Group (PMRG)), which has been established to review available treatment research data and information, identify data gaps and consolidate it into a robust data set as the basis for further treatment standards that could be harmonized and adopted as ISPMs to facilitate trade. The TPPT is also developing harmonized ISPMs on requirements for the use of phytosanitary treatments as a phytosanitary measure, for the application of treatments to assist their effective delivery and assurance of efficacy as a result. Priorities include application of temperature, fumigation, modified atmosphere, chemical and irradiation treatments. This guidance for the application of irradiation treatments exists in ISPM 18 (*Guidelines for the use of irradiation as a phytosanitary measure*) and it is in the TPPT work program for revision. These requirements for the use of PTs could form the basis of capacity development and training on the application and/or oversight and audit of phytosanitary treatments, thereby increasing confidence that treatments have been applied correctly and providing greater assurance that pests have been effectively managed.
3. The phytosanitary treatments adopted as annexes to ISPM 28 have been largely data driven. That is, a phytosanitary treatment has been proposed for adoption where sufficient data to meet the requirements outlined in ISPM 28 is available. An alternative approach that focuses the development of treatment ISPMs where there is greatest impact on harmonization of measures to facilitate trade and proactively generating the necessary data, is likely to enhance both the relevance and reputation of the IPPC and reduce the spread of pests. Analysis of traded volumes, pest risks, interceptions, emerging pest risks would assist in setting priorities for international phytosanitary treatment standards. This activity may fall into the mandate of the new IC and potentially be informed by a joint call for topics or investigation by the IRSS.
4. Identifying existing treatments and the opportunities to enable trade through harmonization is a platform for identifying future needs, based on current or anticipated gaps. Strategic partnerships between the IPPC Secretariat, NPPOs and the international research community that address these gaps provide opportunities for the development of phytosanitary treatments that are innovative, effective, utilize new and emerging technologies, and of utmost importance, are fit for our purposes. These public and private sector partnerships offer opportunities for co-investment of financial, intellectual and human resources and capital. For example, we do not have effective measures for managing *Xylella fastidiosa*. A consortium established to solve this problem, which brought together a diversity of resources, offers opportunities for solutions than can be applied globally because they are technically robust and built on a common understanding of the pest.
5. The research community should be encouraged to publish research outcomes, and where testing or demonstrating the efficacy of treatments that could be used to manage regulated pests, take into account the data requirements outlined in ISPM 28. This would ensure that candidate treatments are able to be considered for adoption as an international standard.
6. Many of the phytosanitary treatments that are widely used in trade operate as a single ‘kill-step’. For example, methyl bromide has a broad and well understood spectrum of use; hot and cold treatments for economic fruit flies apply at least Probit 9 levels of efficacy. The application of systems approaches and combination treatments to manage pests in traded plants and plant products is less common and would benefit from wider access to case studies or examples, and greater guidance on their implementation.
7. The development of international phytosanitary standards requires coordination by the IPPC Secretariat and SC oversight of technical expertise through the operations of the TPPT. While the importance of treatments is acknowledged, the commitment of the necessary resources to this activity must be balanced against other priorities. Having a clear sense of the relative priorities of phytosanitary treatments, implementation of the Convention and diagnostic protocols in developing standards, in both the short and medium term, will assist the Secretariat allocate resources to achieve them. These would be incorporated into the Secretariat work plan, which may make some allowance for resources to address any urgent issues arising that require global action.

*Program objectives*

1. The objective of this program is to optimize the identification, development and application of phytosanitary treatments to facilitate the safe movement of plants and plant products in international trade as:
* Agreed actions for CPM and its bodies, and the IPPC secretariat over the next five years
* Strategic actions and outcomes in the 2020-30 Strategic Framework.

*Global challenges*

1. The United Nations estimates that the world’s population will increase from 7 billion in 2011 to more than 10 billion by the end of the century. To feed this growing population, food production and its distribution must increase in quality and in efficiency. Furthermore, the ability to trade plants and plant products will remain fundamental to commerce and essential to many national economies. Advances in transportation, handling, and storage will continue, and should improve the efficiency in distribution, creating even greater trade and marketing opportunities at the regional and international levels. It is also expected that the type and origin of plants and plant products traded internationally will increase in diversity and complexity in terms of how and where they were produced, processed, handled, packaged, and shipped, resulting in new challenges and potential new phytosanitary threats.
2. A key and increasing challenge for NPPOs will be how to manage pest risks associated with this increasingly complex trade environment. Increasing trade will also be reflected in the proliferation of traded commodities resulting in new pathways with previously unknown pest risks.
3. Besides the challenges posed by increased international trade in plants and plant products, agricultural production will experience considerable changes. NPPOs will need to adapt their pest risk management strategies and tools to accommodate changing weather patterns and other environmental pressures that may force the production of new plants or new varieties and translate into changing pest risk area configurations and pest pressures. Traditional treatments may no longer be available, or their uses may be constrained. New treatment technologies may be developed that are cheaper, safer or more effective and will need to be integrated into trading systems.
4. With respect to trade, commercial entities around the world will continue to seek government action to reduce the costs and impediments related to regulations, including providing a more predictable and transparent regulatory environment that allows for the smooth and efficient movement of their products.
5. NPPOs will need to work with these commercial entities and other stakeholders, including the global research community, to ensure that phytosanitary import requirements are met, for example by ensuring that their plant production systems and handling, treatment, processing and storage processes provide sufficient safeguards.
6. It must be recognized that, given the importance of trade and national plant resources to the global economy, the IPPC can be a key factor in ensuring that the conditions for improved, sustained economic growth in the plant-based sectors are present. The IPPC’s role in this important segment of the economy is vastly understated.

**PROPOSED SOLUTIONS/MEASURES**

1. The continued development of phytosanitary treatments and their availability to NPPOs, either as international standards, or as treatment options for managing plant pests in trade, is critical to achieving the Convention objectives to prevent the international movement of plant pests. Priority actions over the next five years could include:
* *Continue to promote global harmonisation of pest risk management in trade through the development, adoption and implementation of phytosanitary treatment ISPMs*

Global harmonization of effective phytosanitary treatments is one of the key aspects of facilitating international trade while ensuring a high degree of phytosanitary security. The IPPC can enable a more predictable, transparent, science and rule-based trade environment through the harmonisation of priority phytosanitary treatments. Priority for harmonized treatment ISPMs should be given to those that generate the greatest global benefits from facilitating the trade of plants or plant products.

* *Enhance the capacity and capability of NPPOs to access and apply a wide range of phytosanitary treatment options used in the management of plant pests*

NPPOs define the phytosanitary measures required to manage pest risks to an appropriate level of protection, based on a pest risk analysis. They may apply treatments to consignments being exported or imported, or provide standards and oversight where treatments are applied under their authority. In this, NPPOs are central to the effective management of regulated pests.

The IPPC plays an essential role in ensuring that the tools available to members to manage pest risks through phytosanitary treatments are adopted in a practicable manner and meet the needs of IPPC members. The challenge for the IPPC is to be able to ensure that all members have opportunities to maximize their use of such tools and technologies.

The capacity of an NPPO to carry out or certify the application of phytosanitary treatments both effectively and efficiently translates directly into international credibility and consequently affects market access. Improvements to capacity will decrease risks of pest movement by enhancing the implementation of robust phytosanitary treatments, standards and measures.

* *Identify and actively work to fill gaps in current and future phytosanitary treatment needs and ensure that these are accessible to all member countries.*

IPPC provides a global forum for identifying future needs, based on current or anticipated gaps and facilitates actions to address them.

* *Establish effective partnerships with public and private research funders and providers to develop, test and apply new and innovative treatments to manage plant pests in trade*

To ensure that pests are effectively managed, countries must have access to state of the art technologies and tools, and have the ability and confidence to use them effectively. The IPPC can enable establishment of public and private partnerships that offer opportunities for co-investment of financial, intellectual and human resources and capital that can achieve phytosanitary treatments that are innovative, effective, utilize new and emerging technologies, and of utmost importance, are fit for purpose.

* *Establish a means by which NPPOs can access information on available phytosanitary treatments to enhance the management of regulated pests in trade*

The IPPC offers the sole fully international forum for its members to meet and exchange ideas on the global state of plant health, as well as share experiences and expertise that can benefit all members. There are many phytosanitary treatments available used to control pests, resulting in a great many options for NPPOs wanting to manage pests in traded plants and plant products to meet the appropriate level of protection of an importing country. By sharing information on needs, use and efficacy of phytosanitary treatments through the IPPC, countries can access technical, administrative and operational guidance on pest risk management options. The IPPC can play a critical role in collecting and publishing information on these treatments, making them both transparent and available to NPPOs and industries seeking to manage pests. This is a valuable resource that can also help identify sources of innovation and gaps in available tools – thereby assisting regulators and the research community to work together to develop new treatments or to expand the uptake of NPPO-accepted treatments used in trade.

**NEXT STEPS**

1. The above points describe a variety of areas of potentially increased activity for the IPPC which may require different degrees of political will and resources for their implementation. The SPG is requested to initiate consideration of the next steps for developing a strategy and work plan for phytosanitary treatments that will direct the development and implementation of work to ensure that pests of plants and plant products are effectively managed in trade. This will define strategic and operational elements that can be captured in short, medium and long term work plans, which includes resource requirements, dependencies, outcomes and milestones.
2. Implementing any strategy and work plan that may be agreed by CPM will require additional resources. As these will involve both the Secretariat and others, funding from both regular program and trust funds will need to be identified and sourced. The CPM Bureau, in considering next steps, should also request that CPM identify where the new resources would come from to do this work if it is a priority. It is anticipated that at a minimum, a long term (at least five years), dedicated staff resource with relevant technical expertise within the Secretariat would act as a focal point for this activity and drive the implementation of work plans.
1. SPG 2014 meeting report: <https://www.ippc.int/en/publications/2649/> [↑](#footnote-ref-1)
2. CPM - 10 Final Report (2015): <https://www.ippc.int/en/publications/81242/> [↑](#footnote-ref-2)
3. 2015-06 CPM Bureau Report: <https://www.ippc.int/en/publications/81307/> [↑](#footnote-ref-3)
4. SPG 2015 meeting report: <https://www.ippc.int/en/publications/81716/> [↑](#footnote-ref-4)
5. Technical Panel on Phytosanitary Treatments (TPPT) page: <https://www.ippc.int/en/core-activities/standards-setting/expert-drafting-groups/technical-panels/technical-panel-phytosanitary-treatments/> [↑](#footnote-ref-5)
6. 2015-11 Report of the Standards Committee: <https://www.ippc.int/en/publications/81824/> [↑](#footnote-ref-6)