



IPPC STRATEGIC FRAMEWORK 2020 - 2030

1. Introduction

- [1] The draft Strategic Framework 2020 - 2030 is the result of discussions in the Strategic Planning Group (SPG) since 2014 when the group discussed the topic “The IPPC in 20 Years”. At the 4th meeting of the SPG in 2015, the group decided that the exercise on the IPPC in 20 years should form the basis of the revision of the IPPC Strategic Framework. It was thought that the “IPPC Strategic Framework 2020 - 2030” should be an ambitious undertaking in which the IPPC could explore new activities in the years following the proposed International Year of Plant Health in 2020. The SPG and the CPM Bureau envisaged that the official adoption of the strategic framework may be anticipated as a major aspect of a possible ministerial CPM during the IYPH 2020. The SPG thought it was important to start drafting the strategic framework soon in order to ensure that an acceptable draft strategic framework can be adopted in 2020. The SPG members Mr Peter Thomson (NZ) and Mr Ralf Lopian (FI) volunteered to lead the drafting process for the strategic framework.
- [2] At CPM-12 (2017) the meeting discussed a draft Strategic Framework 2020 - 2030 put forward via the SPG. An evening session was conducted to collect comments from participants in order to amend the Strategic Framework 2020 - 2030 to be discussed at SPG in 2017.

2. Timeline

- [3] The following time-line for the future development, discussions and adoption of the IPPC Strategic Framework 2020 -2030 was recommended by the SPG to CPM-12:
- 2017 - Provision of a first draft to CPM-12 based on SPG discussions
 - 2018 - Principal agreement of the CPM-13 on major strategic issues identified in the draft.
 - 2018 - If no principal agreement can be reached during CPM-13 a Technical Consultation / face-to-face workshop on the draft strategic framework will be called.
 - 2019 – In principle acceptance of the IPPC Strategic Framework 2020 - 2030 at CPM-14.
 - 2020 - Final adoption of the IPPC Strategic Framework 2020 - 2030 at the ministerial section of CPM-15.
- [4] In order to observe this time-line and to have a principal agreement on major strategic issues at CPM-13 it is of essence that SPG in 2017 recommends to CPM-13 the major elements of the Strategic Framework 2020 - 2030 for principal agreement.

3. Changes to the draft Strategic Framework 2020 - 2030

- [5] At CPM-12 a one page graphic summary of the Strategic Framework 2020 - 2030 was presented along with the envisaged “development agenda” of new or improved activities for 2020 - 2030. While there were a multitude of suggestions, a number of issues were raised which were of broad substance:
- The pest risk related impacts of climate change should be incorporated more prominently.
 - Communication activities should be placed as an important activity.
 - The development agenda should more reflect the core activities of the CPM.
 - Commodity class standards should be envisaged.
- [6] The volunteer drafters of the Strategic Framework 2020 - 2030 tried to incorporate these as best as possible into the proposed document. With regard to the development agenda, instead of deleting some issues which may not have a direct impact on the core activities of the CPM a number of new programmes were added, proposing now 13 programme activities. This should give the SPG and CPM-13 sufficient alternatives to choose from and to select the 5-7 programme activities for which broad

agreement could be reached. The one page graphic summary was revised to reflect accurately the content of the draft Strategic Framework 2020 - 2030.

4. SPG discussions and decisions

[7] In order to be able to observe the time-line set at CPM-12 it would be necessary that the SPG can agree on the major elements of the proposed draft Strategic Framework 2020 - 2030. The SPG should also discuss the components of the “development Agenda!” and agree on a number of programme activities which could be proposed to the CPM. It is envisaged that the SPG will present to CPM-13 (2018) a draft Strategic Framework 2020 - 2030, which would contain the major elements for principal agreement by the CPM in 2018.

[8] The SPG is invited to:

- (1) *provide* comments to the proposed Strategic Framework 2020 - 2030 as attached in Appendixes,
- (2) *agree* on major elements of the Strategic Framework 2020 - 2030,
- (3) *propose* a draft Strategic Framework 2020 - 2030 for principal agreement at CPM-13 (2018).

INTERNATIONAL PLANT PROTECTION CONVENTION

STRATEGIC FRAMEWORK 2020-2030



OUR MISSION

Protecting plant resources from pests and facilitating safe global trade



OUR VISION

The spread of plant pests through human interactions is minimized and their impacts within countries are effectively managed

OUR AMBITION

All countries have the harmonised standards and capacity they need to reduce pest spread and minimise the impact of established pests, and as a result they see improvements in trade, economic growth, food security, and environmental protection

STRATEGIC OBJECTIVES

A

Facilitate trade development and economic growth

B

Enhance global food security & protect sustainable agriculture

C

Protect the environment from the impacts of plant pests

CORE ACTIVITIES



International harmonisation through standards development



Implementation & capacity development



Communication



Effective governance & management

DEVELOPMENT AGENDA 2020-2030

1. Harmonisation of Electronic Data Exchange.
2. Commodity, Commodity Class, and Pathway Specific Standards.
3. Management of E-commerce and Courier Mail Pathway.
4. Enabling the Use of Third Party Services.
5. Phytosanitary Emergency Response System.
6. Global Pest Alert System.
7. New Treatment Technologies.
8. Global Phytosanitary Research Coordination.
9. Diagnostic Laboratory Network.
10. Capacity Development Brokering Service.
11. Worldwide Plant Health Education.
12. Public-Private Partnerships Mechanism.
13. Review the State of Plant Health in the World.

CONTRIBUTING TO UN 2030 SUSTAINABLE DEVELOPMENT GOALS



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**Strategic Framework
for the
International Plant Protection Convention (IPPC)
2020 – 2030**

Protecting the World's Plant Resources from Pests

Developed by the Commission on Phytosanitary Measures

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Purpose of This Document

This document is designed to quickly communicate the work of the Commission on Phytosanitary Measures (the Commission) and our focus for the coming 10 years.

Readers will be able to quickly understand the International Plant Protection Convention is, the work of the Commission, what we are trying to achieve, why it matters.

This document will guide our actions over the period 2020 - 2030. Ten years is a long time though, so as we move forward we expect to adapt and respond to ensure we stay on course, not with what we decide today, but with where we need to be in the future.

Who Should Read This Document

The target audiences for this document are broad.

Contracting Parties and National Plant Protection Organisations – you will use this document at all levels of government and across governmental and non-governmental organisations to quickly communicate how the work of the Commission supports your country to achieve its goals in the areas of trade and economic development, food security, and environmental protection.

FAO Agencies and Sections – you will quickly be able to see work the IPPC Secretariat is doing that could benefit your projects. Or, you might see how the IPPC Secretariat could benefit from knowing about or getting involved in your work. When it is easier to see what others are doing, we increase the opportunities for alignment of effort, improve resource utilisations, and increase the chance of delivering better results.

Donor Agencies – you will be able to quickly identify opportunities to achieve your goals through working with the IPPC. You might find specific areas where you want to invest to effect change at a global level, or it may help you to identify priority areas as you work with individual countries.

Delegates to the annual Commission meetings – you will use this document to stay focused on agreed outcomes and priorities for the coming years. We know effecting change can take many years, so this document will help us remember what we considered to be important and why, and help us to pause before changing direction.

How You Can Help

Add some notes about how people and organisations external to the IPPC can help:

- Identifying how our and their objectives align.
- Talk to us about how we can work together or even just understand what we are each doing.
- Most items on the development agenda are additional to core activities funded by the FAO. Countries and donors agencies can talk to us about resource needs for specific items.

Glossary of Abbreviations

IPPC International Plant Protection Convention

Commission	In this document references to ‘the Commission’ are to the Commission on Phytosanitary Measures
Convention	In this document references to ‘the Convention’ are to the International Plant Protection Convention
CPM	Commission on Phytosanitary Measures, “the Commission”
IPPC	International Plant Protection Convention, “the Convention”
ISPM	International Standard for Phytosanitary Measures
NPPO	National Plant Protection Organisation
RPPO	Regional Plant Protection Organisation
TFA	World Trade Organization’s Trade Facilitation Agreement
WTO	World Trade Organisation
SPS –	The Agreement on the Application of Sanitary and Phytosanitary Measures, the "SPS Agreement"
WCO, the CBD, the IAEA, the STDF	

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Executive Summary

[To be written when the document is completed].

Strategic Framework on a Page

INTERNATIONAL PLANT PROTECTION CONVENTION STRATEGIC FRAMEWORK 2020-2030



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CONTRIBUTING TO UN 2030 SUSTAINABLE DEVELOPMENT GOALS



Introduction

The Commission on Phytosanitary Measures (Commission) is the governing body for the International Plant Protection Convention (IPPC). The IPPC is the primary international treaty for protecting global plant resources (including forests, non-cultivated plants and biodiversity) from plant pests and for facilitating the safe movement of plants and plant products in international trade. The IPPC is deposited with and administered through the Food and Agriculture Organization of the United Nations (FAO). The IPPC was established as a convention in 1951 and amended in 1979 and 1997.

The core purpose of the IPPC is to secure common and effective action to prevent the spread and introduction of pests of plants and plant products, and to promote appropriate measures for their control.

The Convention extends beyond the protection of all cultivated plants to the protection of natural flora and plant products. It includes both direct and indirect damage by pests, and includes weeds. It also covers vehicles, aircraft and vessels, containers, storage places, soil and other objects or material that can harbour or spread pests.

The Convention provides a framework and a forum for international cooperation, harmonization of action, and technical exchange between contracting parties. The Convention is recognized by the World Trade Organization's (WTO) Agreement on the Application of Sanitary and Phytosanitary Measures (the SPS Agreement) as the only international standard setting body for plant health.

Implementation of the Convention involves collaboration by National Plant Protection Organizations (NPPOs) the official services established by governments to discharge the functions specified by the IPPC; and Regional Plant Protection Organizations (RPPOs), which can act as coordinating bodies at a regional level to achieve the objectives of the IPPC.

The IPPC is governed by the Commission on Phytosanitary Measures (Commission). The Commission comprises delegates from each of the contracting parties, 183 as at September 2017. The Commission meets during March or April each year usually at FAO headquarters in Rome, Italy, to promote cooperation and agree a work plan to implement the objectives of the IPPC. In particular, the Commission:

- reviews the state of plant protection around the world
- identifies action to control the spread of pests into new areas
- develops and adopts international standards and guidelines
- approves programmes to support implementation of the Convention and adopted standards; and
- cooperates with international organizations on matters covered by the Convention

Today, the International Plant Protection Convention (IPPC) has become particularly significant and relevant in the light of evolving phytosanitary risks associated with the spread of pests, and the need to support the safe expansion of global trade and economic growth opportunities for all, protect plant resources and biodiversity, and to ensure food security.

The work plan approved by the Commission is administered by the IPPC Secretariat.

Plant Pests

[Two page spread of case studies with pictures and edited down to fit on 1 page.]

The spread or outbreak of plant pests has significantly affected food security and economic prosperity (see Box 1). A vast range of plant pests and diseases (collectively called pests under the IPPC) threaten global food production (including animal feed), the productivity and biodiversity of forests and the wild flora of the natural environment. Some historical impacts of plant pests are well known, such as the potato blight (*Phytophthora infestans*) on potatoes in Ireland, coffee leaf rust (*Hemileia vastatrix*) on coffee in Sri Lanka and Brazil, phylloxera (*Viteus vitifoliae*) on grapes in Europe and the United States, South American leaf blight of rubber (*Microcyclus ulei*) on rubber in Brazil, Stem rust (*Puccinia graminis*) on wheat in North America, Dutch Elm disease (*Ophiostoma ulmi*) on elm in Europe and the United States and Asian Gypsy Moth (*Lymantria dispar*) in the north eastern forests of North America.

Although the impacts of pests range from negligible to extremely high, it is often difficult to fully assess these impacts ahead of time. Preventing pests from spreading and establishing in new countries and regions is invariably more cost effective than maintaining long-term control, containment, or eradication (if possible), or the consequences unchecked impact.

Pest Case Studies

Halyomorpha halys, the Brown Marmorated Stink Bug, is native to Asia. It has recently invaded both Europe and the United States, where it has spread aggressively. In the mid-Atlantic region, serious losses have been reported for a range of crops. Hosts in invaded areas include many tree fruits, vegetables, row crops, ornamentals and native vegetation. BMSB is also a major nuisance pest due its overwintering behaviour. In autumn adults can aggregate in very large numbers in houses and other manmade structures, emitting a pungent smell when disturbed. This aggregative association with manmade structures (such as shipping containers) also increases the likelihood of long distance transport of BMSB as a hitchhiker. The IPPC has adopted an International Standard for Phytosanitary Measures (ISPM) on the international movement of vehicles, machinery and equipment to minimize the likelihood of introduction of contaminating pests on these pathways.

Xylella fastidiosa (Xf) is the causal agent of Pierce's disease of grapevines, and of diseases of many other important crops including citrus, avocado, olives and stonefruit. The bacterium is vectored by xylem-feeding insects, particularly sharpshooters and spittle bugs. The host range of Xf is wide, and expanding rapidly as it encounters new hosts and new vectors in invaded ranges. Over 300 plant species can be affected by one or more of its subspecies or strains. In the 1990s a strain emerged in Brazil as citrus variegated chlorosis disease (CVC). CVC rapidly became one of the most economically important diseases of orange production, causing annual losses of several million dollars. Xf has recently emerged and spread rapidly in Europe, causing a serious outbreak on olives.

Prostephanus truncatus, the larger grain borer (LGB) is native to Central America and surrounding regions. It was introduced into Tanzania in the late 1970s and has spread through much of sub-Saharan Africa through movement of infested grain. It is a serious pest of stored maize and dried cassava roots (Africa's most important food crops), and will attack maize in the field just before harvest. LGB is now considered the most destructive pest of these crops in both West and East Africa. In West Africa, yield losses of up to 100% of stored maize and 45% of cassava have been reported as a result of LGB infestation. The IPPC is currently considering the development of an ISPM for the international movement of grain, which may help to reduce the spread of this type of pest.

Oriental fruit fly, *Bactrocera dorsalis* (OFF) is a highly invasive Asian species and an example of the significant impact economic fruit flies can have on production and trade. It has spread to parts of the Americas and Oceania, and most of sub-Saharan Africa (as *Bactrocera invadens*). OFF and closely

related species in this complex are amongst the world's most important horticultural pests, attacking hundreds of species of commercial and wild fruits. Larval infestations affect primary production, while new invasions threaten export markets and prompt costly eradication attempts. Invasive OFF has been shown to be highly competitive with native fruit flies, quickly becoming the dominant fruit fly pest. The identity of constituent species of the complex is a matter of some debate, so a new annex to ISPM 27 (Diagnostic protocols for regulated pests) is currently being drafted to provide international harmonization by NPPOs and facilitate trade. Phytosanitary treatments for OFF have been approved or are currently being drafted under ISPM 28.

Pine Wood Nematode, *Bursaphelenchus xylophilus* (PWN) is the causal agent of the economically and environmentally significant 'pine wilt disease' in species of pine (*Pinus* spp.). PWN is native to North America and is vectored by species of the wood-inhabiting longhorn beetle *Monochamus*. PWN was introduced into Asia (Japan) at the turn of the 20th century via timber exports, and has now spread into China, Korea and Taiwan. PWN was first detected in Europe (Portugal) in 1999 and now has now spread to Spain. While spread of the disease from tree to tree is primarily through the vector (*Monochamus*), and the emergence of adult beetles from PWN infested wood is believed to be the most likely method of introduction, species of *Monochamus* have not been introduced with PWN. Local species of *Monochamus* that can vector PWN are found throughout the Northern Hemisphere. The IPPC introduced ISPM 15: Regulation of wood packaging material in international trade, to minimise the likelihood of PWN or its vectors spreading internationally via wood packaging material, and is developing further ISPMs (e.g. for wood and wood products) to manage other potential pathways for introduction. The IPPC has also produced a diagnostic protocol for *Bursaphelenchus xylophilus* (ISPM 27 Annex 10) and phytosanitary treatments for PWN and its vectors are currently being drafted under ISPM 28.

Operating Environment 2020 – 2030

To plan for the future we need an appreciation for what the future might look like. Rather than attempt to make specific predictions a useful approach is to identify and extrapolate emerging trends. These provide a general picture of the future that this strategic framework needs to address, both in terms of challenges and opportunities. Trends we expect to be present during this period with relevance to the Commission and its members include:

[Insert a pictograph of the future using the bullets below]

- Governments continue to pursue economic growth strategies that rely on expanding trade and seek access to new markets.
- Pace of trade continues to increase. Border clearance processes are simplified to increase speed of product to consumer.
- Volume and speed of passenger and freight movements increases, with global tourism e-commerce, air freight, all with potential to move pests faster.
- Complex global supply-production chains result in goods crossing multiple borders for processing before being sold as finished product.
- Direct to consumer supply expands rapidly decreasing size and increasing number of consignments.
- Demand for fresh, pesticide-free fruits and vegetables increases as does the risk of pest presence.
- Countries expect higher levels of protection, and debates on appropriate technical measures intensify.
- Scientific advances improve ability to detect pests faster than new risk management options can be developed.
- “Big data” and new analytical tools (applications) provide new opportunities to detect patterns and target pest surveillance and border inspections.
- Differing capacities among nations to monitor and respond to pest threats impact trade and put neighbouring countries at risk.
- Communication and data exchange capabilities enable easier access to specialist expertise and sharing of information on pest risks.
- Climate change alters locations and methods of food production around the world.
- Climate change effects epidemiology and the global distribution and range of pests.
- Water security becomes an increasing challenge for more regions in the world, affecting where crops are grown and marketed.
- New or mutated pests emerge and impact on significant crops.
- More frequent extreme weather events impact negatively on food production in all countries.
- Public sector and international organization funding continues be constrained putting pressure on agencies to innovate to find efficiencies such as targeted inspection and other risk-based interventions.
- Public trust in government declines and licence to operate is under constant pressure. Funding for cores services including plant health regulatory programmes face more constraints.
- Less developing countries continue to face difficulties setting up viable phytosanitary systems and participating in agricultural trade.

Mission of the IPPC

Protecting plant resources from pests and facilitating safe global trade

Vision of the Commission on Phytosanitary Measures

The spread of plant pests through human interactions is minimized and their impacts within countries are effectively managed

Ambition of the Commission on Phytosanitary Measures

All countries have the harmonised standards and capacity they need to reduce pest spread and minimise the impact of established pests, and as a result they see improvements in trade, economic growth, food security, and environmental protection

Strategic Objectives

The Commission does not exist to serve its own interests. As an international body the Commission is focused on outcomes at a global level. The core purpose of the IPPC is to prevent the international spread of plant pests and reduce their impact, but this only matters to the extent it enables the achievement of broader outcomes. Achieving the purpose of the Convention contributes positively to outcomes that are important to the entire world.

The Commission has identified three Strategic Objectives that capture the major contributions we make in a global context. Each Strategic Objective is supported by:

Development Agenda initiatives – Specific initiatives the Commission will pursue over the 2020-2030 period to advance achievement of the Strategic Objectives.

Key Results – The impact we expect to see under each Strategic Objective when the Commission, contracting parties, and partnering organisations successfully deliver this Strategic Framework.

The Commission's three Strategic Objectives are to:

A. Facilitate trade development and economic growth

B. Enhance global food security and protect sustainable agriculture

C. Protect the environment from the impacts of plant pests

The IPPC, as a convention established under FAO Article XIV, plays a critical role in supporting each of these Strategic Objectives through its programmes, standards, and actions.

All IPPC core activities contribute to these Strategic Objectives. In addition, the 2020-2030 Development Agenda initiatives that will significantly strengthen the impact the work of the Commission will have on these Strategic Objectives. Delivery of the Development Agenda will depend on whether sufficient resources can be secured in addition to the FOA regular programme funding for core activities.

Within the framework of the IPPC the NPPO's and RPPO's play a critical role in advancing the implementation of the convention at a national and regional level. The NPPO's are important partners to the IPPC in terms of developing concrete actions at a national level to fulfil their mandated role, implement the convention and ISPM's and prevent the spread of pests that can affect agriculture, food security and biodiversity. RPPO's are also critically important in coordinating these efforts at a regional level and especially in developing and implementing capacity building programmes. For this reason effective partnerships with NPPO's and RPPOs are essential for achieving progress with these Strategic Objectives.

A. Facilitate Trade Development and Economic Growth

Trade is a critically important part of most national economies. Trade in plants and plant products and the foreign exchange earnings from this trade, stimulates economic growth and bring well-being and prosperity to rural communities and agricultural sectors. The main pathway for the spread and introduction of harmful pests is through international trade.

Minimising production losses from pests and reducing pest control costs is important to maximising returns for domestic growers. Eradicating newly established pest populations, or creating recognised pest free areas simplifies access to export markets. Exporting countries need strong phytosanitary systems to assure their trading partners that the imports they receive will not come with pests that would harm the importing country economy or environment. When the phytosanitary assurances and certification of exporting countries have integrity, trade pathways are smoothed and barriers to trade can be less.

Economies and citizen benefit from imported plant products through availability of a greater variety of products, and year round access. Imports are also an important source of new plant varieties or breeding material to grow the agricultural economy. Importing countries need good systems to understand the pest risks that may be associated with inward trade in plants and plant products. This capability supports robust border controls, science-based trade negotiations, and the establishment of technically justified phytosanitary measures.

The IPPC provides harmonized standards (ISPMs) for countries to develop import and export systems that manage the pest risks associated with trade in plants and plant products. When properly implemented trade can occur safely – without spreading plant pests. When countries operate their phytosanitary systems according to the Convention and the harmonised standards adopted by the Commission, trading partners have a common understanding, they can trust each other's assurances, and trade negotiations should be simpler and quicker.

The World Trade Organization's (WTO) Trade Facilitation Agreement (TFA), which came into force on 22 February 2017, will impact NPPOs in their operation as border agencies. There will be increasing imperatives to work more closely with other border operations, including Customs. The IPPC will seek to increase collaboration with the World Customs Organisation and the WTO on the trade facilitation agenda.

Development Agenda 2020-2030

[Briefly describe each initiative – enough so we know what we are agreeing too and some of the benefits, but not a plan for how to do it.]

- ***Harmonisation of Electronic Data Exchange*** - A global system for production and exchange of electronic certification information has been developed and will be implemented into trading systems over the next decade. A significant global effort is required to implement it in all countries. The system will further strengthen and simplify trade in plants and plant products, reduce transaction costs and eliminate fraud. There are drivers to ensure this and other e-systems are integrated into other trading systems such as single window to government outlined in the TFA.
- ***Commodity, Commodity Class and Pathway Specific Standards*** - ISPM's developed for specific commodities and commodity classes, and specific pathways, with accompanying diagnostic protocols and phytosanitary treatments. These will provide NPPOs with ready-made phytosanitary measures eliminating the need to undertake comprehensive pest risk assessments or bilaterally negotiate unique treatments for common pests. This will simplify trade and speed up market access negotiations.
- ***Management of E-commerce and Courier Mail Pathway*** – Increasing volumes of material is purchased online in small quantities and shipped via courier pathways which have traditionally been difficult to manage. A coordinated international effort will be commenced

to address the spread of pests and pest hold material sold through e-commerce and distributed through rapid mail and courier pathways.

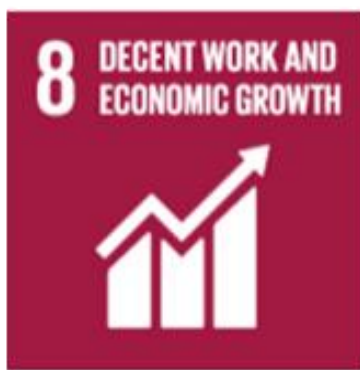
- **Enabling the Use of Third Party Services** – Increasingly the resources available to regulators is constrained and innovative solutions are needed to manage risk. Standards will be adopted to enable use of third parties to perform various phytosanitary services, including treatments, inspections, issuing phytosanitary certificates, etc. Accreditation systems should provide more timely services for stakeholders and result in cost savings for government and business. While not third party service provision, the TFA concept of ‘safe trader’ for pathways with a history of compliance will also provide opportunities for the IPPC and NPPOs to better manage phytosanitary risks through government-industry partnerships.

2030 Key Results

- Pest specific and commodity specific standards with harmonised phytosanitary measures have sped up trade negotiations and simplified trade in significant plant products.
- Detections of pests on trade pathways are declining as exporting countries take more responsibility to manage the pest risk on exports and importing countries report detections more quickly.
- Economic losses caused by plant pests are stable or starting to decline due to fewer incursions and more timely and cost effective incursion responses.
- NPPOs have ready access to expert advice on phytosanitary issues in trade.
- NPPOs have been supported to established export assurance and certification systems that have strong integrity and are trusted by trading partners.
- The cost of administering export certification systems has reduced and the circulation of fraudulent certificates has been eliminated through the electronic phytosanitary certification systems including the Generic National System and the Global ePhyto Hub.

Contribution to the UN 2030 Sustainable Development Agenda

The work of the IPPC for this Strategic Objective strongly supports the UN 2030 sustainable development goals 1, 8, and 17.



Goal 1. End poverty in all its forms everywhere.

Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.

Goal 17. Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development

B. Enhance Global Food Security and Protect Sustainable Agriculture

Food security – the availability of and access to adequate food supplies – has many dimensions, including population dynamics, land use choices, climate change, crop production practices and management of plant pests (including invasive alien species), access to genetic resources, new production technologies, trade, food aid, and rural development.

Demographic trends may exert pressure on the food security situation globally but particularly in developing regions. Overall, FAO estimates that global agricultural output needs to expand by about 70 percent to meet the food needs of the population expected in 2050. Crop production is expected to continue to account for over 80 percent of the world's food.

High impact pests can challenge primary production and food supplies in all nations. Global crop losses due to plant pests and pest plants (weeds) are typically estimated to range between 20% and 35% of potential production. The losses caused by the spread of a new pest into new areas or crops can be much more catastrophic, sometimes causing total loss of crops until new strategies can be deployed to combat the pest.

Crop production intensification and pest management strategies must be more sustainable than current or historical ones i.e. they must value and enhance ecosystem services such as soil nutrient dynamics, pollination, pest population control, and water conservation. They must also build on elements that include integrated pest management, conservation agriculture, access to and sustainable use of plant genetic resources, while also reducing soil, air and water pollution.

The impact of plant pests on food security is particularly evident in the developing world where phytosanitary regulatory frameworks often lack capacity.

Development Agenda 2020-2030

[Briefly describe each initiative – enough so we know what we are agreeing too and some of the benefits, but not a plan for how to do it.]

- ***Phytosanitary Emergency Response System*** - A phytosanitary emergency response system will be established to facilitate detection and reporting of emerging issues and expedite more timely action against new pest incursions. It will also support countries through the provision of emergency response systems, tools and knowledge. Examples of components of the system include:

2030 Key Results

- All NPPOs have effective pest surveillance systems in place for timely detection of new pest arrivals.
- All NPPOs have strong capacities to monitor, detect, report, and prepare rapid responses to pest outbreaks, so these pests do not have major impacts on food supplies and they do not spread to threaten other regions and trading partners.
- A phytosanitary emergency response system facilitates timely action against new pest incursions and supports countries with emergency response systems tools and knowledge.
- Sustainable pest management 'systems approaches' are implemented widely to minimise pest impacts right through the production process and harvesting, and minimise the need for endpoint treatments.
- Production losses caused by plant pests are stable or starting to decline due to fewer incursions and more timely and cost effective incursion responses.
- Countries have ready access to expert advice on pest management to minimise production losses.

Contribution to the UN 2030 Sustainable Development Agenda

The work of the IPPC for this Strategic Objective strongly supports the UN 2030 sustainable development goals 2 and 12.



Goal 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture

Goal 12. Ensure sustainable consumption and production patterns

C. Protect the Environment, Forests and Ecosystems from the Impacts of Plant Pests

Awareness has increased of the importance of invasive alien species, which can and do have a significant and devastating impact on the terrestrial, marine and freshwater environments, agriculture and forests. Continuing concern with climate change and protecting the environment compels the Commission and NPPO's to be aware of the potential for pest distribution and impacts to change with the changing climate. Governments' policies to minimize harm to the environment, climate change and invasive alien species will have to be matched with the need to maintain sustainable food production in order to ease poverty and feed their populations. Identification and promotion of environmentally sustainable measures to manage plant pests will be needed.

The IPPC standards and the IPPC framework are applied to address environmental concerns as they relate to plant biodiversity and emerging problems associated with invasive alien species that are plant pests. As climate change impacts as felt more widely, more frequent extreme weather events have the potential to increase the rate of natural windborne spread. Climate is often a limiting factor for pests both in terms of their survival and fecundity. As climates modify the environmental range and impact of pest has potential to increase significantly.

Whereas the Convention on Biodiversity addresses biodiversity and the environment in general, the IPPC deal specifically with those invasive alien species that are pests of plants and establishes standards and provides guidance for protection against them. Many ISPMs have elements directed to protection of biodiversity. The IPPC standards on pest risk analysis, for example, can be essential and important tools for the assessment of environmental pest risks. The standard concerning the treatment of wood packaging material is aimed at risk management of tree and wood pests that can affect biodiversity or commercial forests.

The IPPC is progressing the development of a number of other standards, guidance and recommendations dealing with the potential movement of invasive alien species important to the protection of biodiversity. **These deal with minimizing pest movement by sea containers and air containers and reducing the pest risk of waste material from ships.**

The IPPC also makes accessible a wide range of resources environmental agencies to take action against plant pests with environmental and biodiversity impacts.

Development Agenda 2020-2030

[Briefly describe each initiative – enough so we know what we are agreeing too and some of the benefits, but not a plan for how to do it.]

- **Global Pest Alert System** – Establish a global pest alert system with mechanisms to evaluate and communicate emerging pest risks, so countries can proactively adapt their phytosanitary systems to reduce the risk of introduction and establishment.
- **New Treatment Technologies** - A strengthened and coordinated effort is resourced to identify and develop new sustainable phytosanitary treatment technologies and risk management strategies that can be harmonised to assist NPPOs mitigate pest risks and impacts.

2030 Key Results

- NPPOs recognise management of environmental plant pests as part of their responsibilities and work with national environmental sector agencies to support pest management programmes aimed at environmental protection.
- NPPOs have mechanisms in place to control the spread of environmental contaminant pests on non-plant trade pathways, e.g. invasive ants on vehicles and machinery, or gypsy moth egg masses on sea containers and vessels.
- Mechanisms are in place to share adaptation strategies for responding to the impacts of climate change.

- Agencies with environmental and natural forest stewardship responsibilities regularly access information and other resources managed by the IPPC Secretariat.

Contribution to the UN 2030 Sustainable Development Agenda

The work of the IPPC for this Strategic Objective strongly supports the UN 2030 sustainable development goals 13 and 15.



Goal 13. Take urgent action to combat climate change and its impacts

Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

Core Activities

International Harmonisation through Standards Development

The IPPC is recognized by the World Trade Organization (WTO) Agreement on the Application of Sanitary and Phytosanitary Measures (the SPS Agreement) as the only international standard setting body for plant health. International Standards for Phytosanitary Measures (ISPMs) are the standards adopted by the Commission on Phytosanitary Measures (the Commission). The standards, guidelines and recommendations adopted by the Commission are recognized as the basis for phytosanitary measures applied in trade by the Members of the World Trade Organization. The standards in themselves are not regulatory instruments but come into force once countries establish aligned requirements within their national legislation.

The standard setting work of the IPPC is led by the Commission's Standards Committee. The Standards Committee is supported by various technical panels, working groups, and the IPPC Secretariat.

Three main types of standards have been developed to provide a harmonised internationally agreed approach for phytosanitary regulation and to guide and assist NPPO's in performing their various functions.

1. Concept Standards – these establish internationally accepted principles and approaches for NPPO's to undertake such activities as pest risk analysis, establishing pest free areas, surveillance, establishing a phytosanitary certification system, pest reporting, etc.
2. Phytosanitary treatments – these establish internationally accepted treatments for pests on commodities such as irradiation, fumigation, temperature treatment, etc.
3. Diagnostic Protocols – these are targeted at specific pests and establish the internationally accepted method for accurate diagnostic pest identification.

The Commission is now moving to develop ISPM's for specific commodities and pathways. Currently there is only one pathway standard for regulation of wood packaging material in international trade (ISPM 15), and one commodity standard for pest free potato mini-tubers. Developing ISPM's for major traded commodities would fill a significant need when used as the starting point for market access agreements, have the potential to significantly simplify bilateral trade negotiations. Similarly ISPM's for pathways (such as used vehicles and machinery) could do much to limit the spread of invasive alien species that commonly spread as contaminating pests on inanimate objects.

Increasingly the IPPC is including industry bodies in working groups to provide advice on development of ISPM's. There is much to be gained from industry knowledge on the practicalities of options to manage phytosanitary risk, but conflicts of interest also exist and need to be carefully managed.

Development Agenda 2020-2030

[Briefly describe each initiative – enough so we know what we are agreeing too and some of the benefits, but not a plan for how to do it.]

- **Global Phytosanitary Research Coordination** – Establish a voluntary mechanism for global phytosanitary research coordination, to accelerate development of science to support new commodity, commodity class and pathway standards, new phytosanitary treatments, and new diagnostic pest identification protocols, with priority research challenges identified and communicated internationally by the Commission each biennium.

2030 Key Results

- 20 specific major traded commodities, commodity classes, or trade pathways are covered by an ISPM adopted or being developed by the commission.
- NPPOs can be seen to be basing their phytosanitary systems and import requirements on adopted ISPMs.
- Efficient mechanisms are in place to globally coordinate plant health research, with evidence that duplication of effort is reducing.

Implementation and Capacity Development

The IPPC is typically referred to as a standard setting body, which it is. However, the IPPC has long recognised the futility of setting standards without also supporting capacity development to enable the Convention and its standards to be effectively implemented by member countries.

Within each member country, fully functioning NPPOs are charged with operating an effective national system to prevent the introduction and spread of pests. Delivery of the system often required requires the joint effort of multiple government agencies and the private sector. The Phytosanitary Capacity Evaluation tool was developed by the Commission many years ago to help countries evaluate their capacity to implement the convention. This forms the basis for many capacity development plans, and also provides an insight into global capacity needs and programs.

Through the suite of ISPMs and capacity development programmes, the Commission provides the framework for the NPPOs and the support to help NPPOs build capacity to carry out their functions. Examples of national capacity include the ability to establish and operate of an import regulatory system, the ability to conduct pest risk analysis, pest surveillance, pest eradication operations, and operation of an export system capable of providing official assurances through phytosanitary certification.

The Commission collaboration with donor partners to assist NPPO's to develop the required capacity. This collaborative work is essential for countries to capitalise on the economic growth opportunities available through trade development, and protect their natural resources.

In 2014 the Commission agreed to significantly strengthen its focus on implementation of the Convention and ISPM's. Since then:

- the first major implementation pilot programme has been established focused on pest surveillance,
- the IPPC Secretariat has been reorganised to more strongly focus on implementation and capacity development, and
- a new subsidiary body has been created, the Implementation and Capacity Development Committee charged with oversight of the IPPC's long-term Capacity Development Strategy.

While substantial efforts are being focused on implementation and capacity development, most of this work can only occur when extra-budgetary resources are secured (additional to the FAO regular programme funds). Fortunately, there are many development agencies willing to assist with programs to increase capacity of countries to improve their economy through trade and support communities in areas of health, wealth and welfare. Capacity development projects can have a major positive impact on the ability of NPPOs to discharge their responsibilities. The project to develop and implement a Global ephyto Hub and Generic National System funded by the STDF and member country contributions is an outstanding and current example of this (see inset box).

[INSERT A BOX BRIEFLY DESCRIBING THE EPHYTO PROJECT AS A CASE STUDY]

Development Agenda 2020-2030

[Briefly describe each initiative – enough so we know what we are agreeing too and some of the benefits, but not a plan for how to do it.]

- **Diagnostic Laboratory Network** – Establish a system of recognised diagnostic laboratory services is established to support countries to identify pests in a more reliable and timely manner. National laboratories with strong diagnostic functions may be formally recognised as capable of offering reliable services within regions or globally, reducing the need for all countries to develop duplicated capacity.
- **Capacity Development Brokering Service** – Establish a proactive mechanism is established to match NPPO capacity development needs with appropriate donors and or NPPOs willing to share their expertise and capacity development resources. The mechanism would assist countries to access the assistance, support project establishment, and monitor short and long-term success.
- **Worldwide Plant Health Education** – Establish a cooperation programme with key universities in regional around the world to ensure NPPOs are supported by access to suitably qualified graduates in relevant plant health disciplines, and post-graduate continuing education.
- **Public-Private Partnerships Mechanism** – Develop policy and processes to support the Commission engaging with private entities in standards development and capacity development work programmes. Also, develop guidance to support NPPOs establishing public-private partnerships to deliver collaborative phytosanitary activities.
- **Interpretation Service** – Establish training programmes and harmonised independent interpretation of the convention and adopted standards to reduce and avoid costly trade disruption and disputes. With the growing number of standards, NPPOs will value a proactive service provided by the IPPC Secretariat to assist them to navigate and understand the obligations of the convention and adopted ISPMs.
- **State of Plant Health in the World** – Establish a practical and efficient mechanism for the Commission to review and understand the state of plant health in the world, identify emerging trends and gaps that need to be addressed and report this for a global audience.

2030 Results

- The state of plant health in the world is understood, needs are known and mechanisms to facilitate action are functioning.
- All countries have used the Phytosanitary Capacity Evaluation tool to understand strengths and weaknesses and develop plans to address issues.
- The IPPC Secretariat is resourced to help countries access assistance to address phytosanitary capacity needs.

Communication

The communications efforts of the Commission are aimed at ensuring understanding of the potential for serious negative impacts from introduced pests worldwide. This must be understood not just by the plant health community but also by key audiences such as national governments and decision makers (policy and financial), to demonstrate the importance of plant health being a national and global priority that justifies and receives appropriate and sustainable support.

These communication efforts are guided by the [IPPC Communications Strategy](#). The four objectives of the IPPC Communications Strategy are to:

1. increase global awareness of the importance of the Convention and of the vital importance to the world of protecting plants from pests;
2. highlight the IPPC's role as the sole international plant health standard setting organization with the objective of helping to ensure the safe trade of plants and plant products
3. improve the implementation of the International Standards for Phytosanitary Measures (ISPMs); and
4. support the activities of the IPPC Secretariats Resource Mobilization programme.

The IPPC make use of many different opportunities to promote itself and increase support. Annual themes have been introduced to promote specific aspects of the IPPC mandate on an annual basis. For the period 2016-2019 the IPPC focused on the following themes:

- **2016 Plant Health and Food Security**
- **2017 Plant Health and Trade Facilitation**
- **2018 Plant Health and Environmental Protection**
- **2019 Plant Health and Capacity Development**

In addition, through the efforts of contracting parties to the IPPC, the United Nations proclaimed **2020 the International Year of Plant Health (IYPH)**.

A significant amount of advocacy material to promote the IPPC and is already available through the **IPPC Media Kit**. Other materials are available on the IPPC **YouTube channel** and on other social media accounts: **Twitter**, **Facebook** and **LinkedIn**.

Effective Governance and Management

Governance

The IPPC is governed by the Commission made up of 183 IPPC contracting parties. Three Commission subsidiary bodies provide oversight and direction between Commission meetings:

1. Commission Bureau – the seven-member elected executive body of the Commission that acts on behalf of the Commission to provide guidance to the IPPC Secretariat and Commission subsidiary bodies between the annual meetings of the Commission.
2. Standards Committee (SC) – the oversight body for the standard setting process
3. Implementation and Capacity Development Committee (ICDC) – the oversight body for implementation and capacity development programme

In its governance role the Commission (and subsidiary bodies) provides oversight in the interests of all contracting parties to enable the purposes of the IPPC to be achieved. The Commission determines the strategy and direction of the IPPC, approves annual work plans and budgets, monitors and reviews progress and ensures coherence and alignment within the organisation and externally.

The Commission has approved a number of strategies to guide various aspects of the work programme over both the short and long-term. These include:

- IPPC Strategic Framework
- IPPC National Capacity Development Strategy
- IPPC Resource Mobilization Strategy
- IPPC Communications Strategy
- IPPC National Reporting Obligations Strategy
- IPPC Framework for Standards and Implementation

The most significant governance challenge for the Commission is to establish sustainable funding mechanism sufficient to support delivery of the growing ambitions of the organisation, particularly in the implementation and capacity development area.

Management

The IPPC Secretariat is hosted by FAO and its Headquarters is in Rome, Italy. The staff of the IPPC Secretariat currently consists of a Secretary, and several professional officers and administrative staff. The Secretariat is complemented by contracting parties providing staff resources through various contributions.

The IPPC Secretariat provides the management function to ensure the smooth operation of the Commission and coordination of the work programmes of the Standards Committee and the Implementation and Capacity Development Committee. In addition, the Secretariat delivers a wide range of functions including planning and budgeting, communication and websites, advocacy and resource mobilisation, facilitating information exchange and fulfilling of national reporting obligations, and provides a dispute avoidance service to contracting parties.

The Secretariat plays an important role in liaising and partnering within the FAO and externally with international bodies such as the WTO SPS Committee, the WCO, the CBD, the IAEA, the STDF, and other organisations with an interest in the work of the Commission.

In 2016 the Secretariat, under the direction of a new Secretary, restructured to better align with the core functions it is supporting. The Secretariat now has sections focused on:

- Standard setting
- Implementation & Capacity Development
- Integration and Support

This structure enables enhanced focus in critical area, clearer accountabilities, and more efficient operating.

IPPC Development Agenda 2020-2030 at a Glance

[An infographic page summarising the development agenda items]

1. **Harmonisation of Electronic Data Exchange** – Implementing a global system for production and exchange of electronic certification information
2. **Commodity, Commodity Class, and Pathway Specific Standards** - ISPM's developed for specific commodities, commodity classes and pathways, with accompanying diagnostic protocols and phytosanitary treatments.
3. **Management of E-commerce and Courier Mail Pathway** – A coordinated international effort to address the spread of pests and pest host material sold through e-commerce and distributed through rapid mail and courier pathways.
4. **Enabling the Use of Third Party Services** – Enable use of third parties to perform phytosanitary services, including treatments, inspections, issuing phytosanitary certificates, etc.
5. **Phytosanitary Emergency Response System** - A phytosanitary emergency response system to facilitate more timely action against new pests.
6. **Global Pest Alert System** – A global pest alert system with mechanisms to evaluate and communicate emerging pest risks, so countries can proactively adapt their phytosanitary systems to reduce the risk of introduction and establishment.
7. **New Treatment Technologies** - A strengthened and coordinated effort to identify and develop new sustainable phytosanitary treatment technologies and risk management strategies.
8. **Global Phytosanitary Research Coordination** – A voluntary mechanism for global phytosanitary research coordination, to accelerate development of science to support all regulatory phytosanitary activities.
9. **Diagnostic Laboratory Network** – A network of recognised diagnostic laboratory services to support countries to identify pests in a more reliable and timely manner.
10. **Capacity Development Brokering Service** – A proactive mechanism is established to match NPPO capacity development needs with appropriate donors and NPPOs willing to share their expertise and capacity development resources.
11. **Worldwide Plant Health Education** – A cooperation programme with key universities in regions around the world to ensure NPPOs are supported by access to suitably qualified graduates in relevant plant health disciplines, and post-graduate continuing education.
12. **Public-Private Partnerships Mechanism** – A policy and processes to support engaging with private entities in standards development and capacity development work programmes at global and country levels.
13. **Review the State of Plant Health in the World** – A practical and efficient mechanism for the Commission to review and understand the state of plant health in the world, identify emerging trends and gaps that need to be addressed, and report this for a global audience.

IPPC Development Agenda 2020 - 2030

The IPPC Development Agenda aims to identify priority programmes of new work aligned to the Commissions' Vision, Mission, and Strategic Objectives. The identification of these priority programmes is based on the prospective changes to the operational environment of national, regional, and global plant protection organizations.

The Commission, as an international body with an underlying secretarial structure will be subject to policy and budgetary changes of its hosting entity, FAO. The success of the Commission to deliver on the purpose of the Convention will ultimately be measured against its ability to support the needs of member countries to stop the spread and reduce the impact of pests, but it will also be measured on its contribution to achieving the UN Sustainable Development Goals. To face possible budgetary constraints the Commission may have to streamline operations and integrate operational delivery much more closely with relevant FAO departments and offices.

The Development Agenda 2020 – 2030 helps to address these anticipated changes to the operational environment of the Commission by proposing several development programmes for the 2020 – 2030 period. Delivery of these programmes will contribute significantly to achieving the Strategic Objectives of the Commission and also the UN 2030 Sustainable Development Goals. The development programmes are firmly grounded within the strategic objectives. They ensure that the Commission is well positioned to continue development and coordination of international plant health activities to well beyond 2030. However, each of the new programmes is subject to securing required resources to sustain them.

Thirteen development programmes have been identified. Each of these are listed here described in terms of the outcome envisaged for 2030. This is followed by a more detailed description of each development programme.

1. ***Harmonisation of Electronic Data Exchange*** - A global system for production and exchange of electronic certification information is fully operational and integrated into single trading windows identified in the TFA. The system is supported by a sustainable business model and is self-funded. A significant global effort to implement it in all countries has been completed. The system has strengthened and simplified trade in plants and plant products, reducing transaction costs, expediting the clearance of compliant products and eliminating fraud.
2. ***Commodity, Pest and Pathway Specific Standards*** – Twenty new ISPM's have been adopted and implemented for specific commodities, specific commodity classes, and specific pathways, with accompanying diagnostic protocols and phytosanitary treatments. They provide NPPOs with ready-made phytosanitary measures, eliminating the need to undertake comprehensive pest risk assessments or bilaterally negotiate unique treatments for common pests. This has simplified trade and expedited market access negotiations.
3. ***Management of E-commerce and Courier Mail Pathway*** – A coordinated international effort has largely addressed the spread of pests and pest host material sold through e-commerce and distributed through rapid mail and courier pathways. Volumes of high risk plant material purchased online in small quantities and shipped via courier pathways is sourced from high health programs and compliance is tracked and enforced in collaboration with other border agencies, the international postal services and courier services.
4. ***Enabling the Use of Third Party Services*** – Standards have been adopted and implemented that enable use of third parties to perform various phytosanitary services, including

treatments, inspections, issuing phytosanitary certificates, etc. Accreditation systems provide more timely services for stakeholders and result in cost savings for government and business. This allows governments to direct resources to areas of highest risk.

5. ***Phytosanitary Emergency Response System*** - A phytosanitary emergency response system is resulting in much more timely action against new pest incursions. Countries are supported through the provision of emergency response systems, tools and knowledge. Examples of components of the system include:
 - a. a rapidly accessible network of phytosanitary emergency response expertise
 - b. an international repository of emergency response plans that countries use including delimitation methods, diagnostic protocols, containment protocols, control options, etc.
 - c. a register of lures and attractants for common pest to speed up deployment during an emergency response, etc.
6. ***Global Pest Alert System*** – A global pest alert system with mechanisms to evaluate and communicate emerging pest risks is in place, providing regular information to NPPOs on changes in pest status around the world. NPPOs are using this to quickly adapt their phytosanitary systems to reduce the risk of introduction and establishment.
7. ***New Treatment Technologies*** - New sustainable phytosanitary treatment technologies and risk management strategies are continually being developed through a global coordination and funding program, ensuring a strong technical basis for harmonisation and effective tools for NPPOs to mitigate pest risks and impacts.
8. ***Global Phytosanitary Research Coordination*** – A mechanism for global phytosanitary research coordination is in place, which accelerates development of science to support new commodity and pathway standards, new phytosanitary treatments, and new diagnostic pest identification protocols. The Commission identifies and communicates each biennium the international priority research challenges it faces.
9. ***Diagnostic Laboratory Network*** – An international network of recognised diagnostic laboratory services provides reliable and timely pest identifications. National laboratories with strong diagnostic functions are formally recognised as capable of offering reliable services within regions or globally, reducing the need for all countries to develop duplicated capacity.
10. ***Capacity Development Brokering Service*** – A proactive mechanism is in place to match NPPO capacity development needs with appropriate donors and NPPOs who are willing to share their expertise and capacity development resources. Countries are now able to more rapidly access assistance, gain support during project establishment, and more easily monitor and report short and long-term success.
11. ***Worldwide Plant Health Education*** – A cooperation network of key universities around the world provides NPPOs with suitably qualified graduates in relevant plant health disciplines, and post-graduate continuing education. An international curriculum framework is reviewed periodically to ensure that programs remain relevant and integrates technical and operational innovation.
12. ***Public-Private Partnerships Mechanism*** – The Commission engagement with private entities in standards development and capacity development work programmes are undertaken

consistent with policies and processes that safeguard the integrity of IPPC products. Guidance provides support to NPPOs establishing public-private partnerships to deliver collaborative phytosanitary activities.

13. ***Review the State of Plant Health in the World*** – A practical and efficient mechanism for the Commission to review and understand the state of plant health in the world is informed by a biennial conference, which identifies emerging trends and gaps that need to be addressed.

1. Harmonisation of Electronic Data Exchange: Implementing a global system for production and exchange of electronic certification information

Electronic systems to facilitate the implementation of the Convention and its standards have been focused on by the Commission for several years. The establishment of an international hub for the exchange of electronic phytosanitary certificate information (ePhyto) has received much attention and been viewed as a major key to facilitating safe trade. The successful establishment of an ePhyto system firmly positions the Commission within the trade facilitation context our ability to contribute more than just ISPMs to support the trade environment.

The development of any electronic system faces the prospect of rapidly advancing technology which makes it impossible to fathom now what the developments and opportunities will be from 2020 - 2030. For the Commission, the aim must be to keep abreast of the newest developments in electronic systems and identify their potential to enable implementation of the Convention and its ISPMs. This would primarily focus on information exchange activities and further extension of the ePhyto system. An activity of the Commission could be to investigate the value of a centralized import requirements database, based on information uploaded by each importing country. It could simplify achieving common understanding of each country's phytosanitary requirements. In addition, it could be connected to an extended ePhyto system to simplify the certification process. Other notification requirements, such as notification of non-compliance, could be included into the ePhyto system.

To intensify the Commissions' efforts to maintain or develop electronic systems to facilitate the implementation of the IPPC and international harmonization, would significantly contribute to trade development and the implementation of the Convention and its standards.

Activities to be carried out during 2020 - 2030 would include:

- Successful establishment of the IPPC ePhyto hub as the international system for exchange of electronic phytosanitary certificate information.
- Successful establishment of the IPPC Generic National System for production of electronic phytosanitary certificate information.
- The successful implementation of both the ePhyto hub and the Generic National System, where needed, in all member countries.
- Investigation of including other databases into the ePhyto hub or associating them with the electronic certification requirements.
- Establishment of pilot projects for new or improved electronic systems.

2. Commodity, Commodity Class & Pathway Specific ISPM's: ISPM's developed for specific commodities, commodity classes and pathways, with accompanying diagnostic protocols and phytosanitary treatments.

Trade is no longer characterized by the exchange of finished products alone, but also by the co-production of goods between countries. Some of the largest agricultural companies diversify their presence and production around the world. This enables companies to shift plants and plant products around the world to respond to fluctuations in demand, as well as source agricultural materials from different countries and regions. Plant health strategies need to evolve to respond and manage pest risks in this type of changing business practises. The IPPC can respond by generating future commodity, commodity class or pathway specific standards that will facilitate safe trade and reflect traditional and changing business practices for the international movement of plants and plant products. These standards could also include pest specific elements of diagnostics, treatments and surveillance.

In most cases, trade can only occur after bilateral negotiation between countries to ensure they are satisfied phytosanitary risks will be appropriately managed. These negotiations are based on SPS principles and IPPC standards. Currently, multiple trading partners separately bilaterally negotiate rules to manage pest risks associated with a commodity or commodity class, even though often, many of the pests associated with the commodity are identical in each of the bilateral negotiations. Significant advances in trade facilitation would be made if standards (ISPM's) were developed that established a baseline level of risk management for the major pests associated with a commodity, commodity class or pathway. Countries would still be free to negotiate measures for pests of concern not cover by the baseline commodity or pathway specific ISPM.

Future standard setting will focus more and more on commodity, commodity class or pathway specific topics rather than on broad conceptual issues which have been largely addressed. This may necessitate that standard setting formats, procedures and practices are reviewed and if necessary adjusted to facilitate a smooth identification and prioritization of topics as well as the efficient development and adoption of such standards.

Activities to be carried out during 2020 - 2030 would include:

- Development of pilot commodity, commodity class, and pathway specific ISPM's with adjustments to the standard setting process as required.
- Agreement on a priority list of commodity, commodity class and pathway specific ISPM's and securing country commitments to support development.
- Development and adoption of new commodity, commodity class, and pathway specific ISPM's.
- Facilitating the implementation of these standards.

3. Management of E-commerce and Courier Mail Pathway: A coordinated international effort to address the spread of pests and pest host material sold through e-commerce and distributed through rapid mail and courier pathways.

Sales of plants and plant products ordered through the internet (e-commerce) and courier mail services have increased significantly in the years since the IPPC and most ISPMs were adopted. E-commerce is fueling an increasing volume of traded commodities. In many cases online traders of plants and plant products do not take into account a customer's location before agreeing to a sale and shipping their purchases to them. This lack of knowledge of a customer's location can lead to consignments of regulated articles being imported into a country without any effort to meet the phytosanitary requirements of the customers country.

It is expected that e-commerce and the shipment of products via courier services will grow significantly. This will be associated with an upsurge in regulated articles traded and shipped

internationally by mail services. Phytosanitary services around the world will need efficient tools and procedures to screen courier mail and small packages. In addition, the international harmonization of measures and procedures for e-commerce and courier mail operators may be the most efficient way to address this problem. Cooperation with other sectors such as customs (WCO) and the prevention of trade in endangered species (CITES) who face similar problems as the phytosanitary services may help to develop a far reaching and efficient international system.

Activities to be carried out during 2020 - 2030 would include:

- An international communications effort targeting companies selling through e-commerce channels and consumers, to ensure they understand the need and how to comply with importing country phytosanitary requirements.
- Establishment of an inter-agency network (CITES/WCO/IPPC) to create synergy in developing a joint policy and requirement catalogue with regard to E-commerce and courier/postal pathways.
- Establishment of a joint inter-agency toolkit for the regulation and screening of E-commerce and courier/postal pathways.

4. Enabling the Use of Third Party Services: Enable use of third parties to perform phytosanitary services, including treatments, inspections, etc.

Authorization of third party services to perform specific phytosanitary actions such as inspection, testing, surveillance and treatment on behalf of the NPPO is becoming increasingly common in various countries throughout the world. In many cases the authorization process is regulated by general country legislation which is not necessarily plant health specific. This causes the problem that in many countries different systems of authorizing third party services are applied with different degrees of oversight, control and verification in place which may trigger misconceptions on the reliability of the activities undertaken by the third party service provided on behalf of the NPPO. These misconceptions may lead to trade difficulties where importing countries do not trust the reliability of the third party services in the exporting country.

An ISPM on the “Authorization of entities to perform phytosanitary actions” is currently being developed. This ISPM will provide good guidance to NPPOs, however the need for further harmonised guidance is anticipated as the use of third parties becoming a growing practice. The IPPC may develop additional policy on third party involvement in official phytosanitary actions and may establish a “Code of conduct” comprising the guidance provided for in several ISPMs on the matter. The IPPC may also promote the use of international accreditation to increase confidence in the activities of third parties carrying out phytosanitary actions on behalf of the NPPO.

Activities to be carried out during 2020 - 2030 would include:

- Adoption of relevant ISPM(s) providing guidance on a variety of aspects on authorization of third party services to perform specific phytosanitary actions such as inspection, testing, surveillance and treatment on behalf of the NPPO.
- Explore on how confidence in authorization systems can be increased internationally, e.g. through an international accreditation system.
- Provide capacity develop resources as needed to assist NPPOs wanting to start using a third party service delivery model.

5. Phytosanitary Emergency Response: Facilitating phytosanitary emergency responses to new or changed plant health risks

Outbreaks and spread of pests presents challenges to the countries or the region in which these pests occur. Challenges such as the lack of know-how, lack of funding or insufficient plant health capacity in science or operational delivery, are in many cases not addressed sufficiently to prevent further spread and mitigate impacts on crops. This results in unnecessary threats to trade, food security and the environment. It is critical to be able to respond quickly, through access to immediate support mechanisms for emergency activities. In many cases regional coordination structures to efficiently combat emerging pests on a regional level are not specifically developed. The need to develop a global mandate, model structure and potential scope for emergency pest response activities within or facilitated by the Commission is warranted.

IPPC ARTICLE XI 2(a): *‘review the state of plant protection in the world and the need for action to control the international spread of pests and their introduction into endangered areas’* is a provision which delegates this task to the Commission. Consequently, and in order to implement the Convention, a policy and structure must be established to address emergency pest response. This policy and structure should include concepts for voluntary funding mechanisms and should take into account responsibilities of NPPOs and RPPOs. In addition, the need to establish supplementary agreements to the IPPC, as provided for in Article XVI of the IPPC, should be explored.

The ability to react in a timely and efficient manner to outbreaks of emerging pests is of critical importance for all IPPC contracting parties. This development initiative to establish a global emergency pest response structure and policy is of high relevance to all of the Commissions’ strategic objectives.

Activities to be carried out during 2020 - 2030 could include:

- establish a network of phytosanitary emergency response expertise
- facilitate engagement of expertise and response resources in a timely manner
- develop an international repository of emergency response plans that countries can use including delimitation methods, diagnostic protocols, containment protocols, control options, etc.
- establish a register of lures and attractants for common pests to speed up deployment during an emergency response, etc.
- establishment of pilot projects.

6. Global Pest Alert System: A global pest alert system with mechanisms to evaluate and communicate emerging pest risks, so countries can proactively adapt their phytosanitary systems to reduce the risk of introduction and establishment.

The speed and volume of internationally traded commodities provides the opportunity for pests to disseminate into endangered areas in considerably swiftness. For NPPOs to keep abreast with rapidly changing pest occurrences and distribution scenarios considerable investments in emerging risk scanning is necessary. This scanning activity could be undertaken efficiently with a centralized hub providing global scanning.

A Global Pest Alert System could be an essential component of a Global Phytosanitary Emergency Response Programme. Such a global pest alert system should include mechanisms to receive, evaluate, and communicate emerging pest risks, so countries can proactively adapt their phytosanitary systems to reduce the risk of introduction and establishment. Based on an improved national reporting

arrangement as well as additional resources to scan scientific reports, the IPPC Secretariat could take the lead, in association with RPPOs. Such a pest alert system could, however, be only functional if contracting parties committed to participate in an efficient, timely and comprehensive pest reporting system.

Activities to be carried out during 2020 - 2030 could include:

- Develop an improved policy for reporting pest occurrence.
- Set-up of a dedicated and proactive mechanism to report pest occurrences and pest risks.
- Establish an implementation programme to promote the reporting of pest occurrence and the analysis of pest risks.

7. New Treatment Technologies: A strengthened and coordinated effort to identify and develop new sustainable phytosanitary treatment technologies and risk management strategies.

Treatment technologies and risk management strategies stand at the forefront of NPPO's considerations when trying to mitigate pest risks posed by international trade. For many countries the treatment of commodities has been the primary requirement before a specific commodity is allowed to enter the country. Concerns over the use of Methyl Bromide (MB) even if only for phytosanitary purposes has caused considerable concern through-out the phytosanitary community. It can be envisaged that the current quarantine and pre-shipment exemption for MB could be phased out or more severely constrained in the medium-term future.

To facilitate international trade and thus economic development in most countries it is important to have a suite of viable and verified treatment technologies available for specific commodities. Increasingly, these new technologies need to have a very low environmental impact while still being efficacious against target pests. Although the IPPC has focused over the last decade on the development of treatment protocols, the pace of the adoption of such protocols does not correspond to the need of contracting parties. Consequently, the IPPC could intensify its current work on treatments and risk management options to facilitate the needs of its contracting parties.

Activities to be carried out during 2020 - 2030 could include:

- Identify top priority commodities for new treatments and communicate to the science and treatment provider community.
- Intensify current activities on phytosanitary treatments.
- Establish technical panels to develop specific risk management options for individual pests or commodities.

8. Global Phytosanitary Research Coordination: A voluntary mechanism for global phytosanitary research coordination, to accelerate development of science to support all regulatory phytosanitary activities.

International research collaboration across nations, institutions, and disciplines, leads to higher quality science, efficiencies of resource use, better outcomes and wider adoption of results. However, these benefits of collaboration only occur where there is mutual interest and alignment of goals, leadership, and support for collaboration. The ingredients for successful collaboration are facilitating processes and structures, leadership, a 'vision' and ultimately funding - for both research and collaboration. In

addition, the need to develop a balanced portfolio of research work, ranging from strategic to applied research and extension for adoption, is essential in creating synergistic collaboration.

To establish an international research coordination and collaboration it is important to develop an Commission policy on the matter and to agree on structures. Collaboration with EUPHRESKO, a plant health research coordination structure housed within the European and Mediterranean Plant Protection Organization (EPPO), may present perspectives for the policy and structural planning.

Science stands at the base of all plant health related activities of NPPOs, RPPOs and the Commission. For this reason, the development of an initiative to establish a global phytosanitary research coordination policy and structure is an important component for the Commissions' strategic objectives.

Activities to be carried out during 2020 - 2030 would include:

- Analysis of existing research international coordination policies and structures.
- Development of an IPPC policy and structure, if appropriate.
- Adoption of an IPPC international research coordination and policy and structure.

9. Diagnostic Laboratory Network: A network of recognised diagnostic laboratory services to support countries to identify pests in a more reliable and timely manner.

Diagnostic expertise is one of the major capabilities for the proper functioning of any NPPO. For many countries, however, the availability of diagnostic expertise or services is severely restricted due to structural capacity and know-how limitations. Any country wishing to partake in the trade of agricultural commodities must be able to demonstrate that its products are free from pests. To do that only access to diagnostic services will suffice. In addition, without proper access to diagnostic expertise countries are not able to reliably detect pests in imported commodities and therefore are in danger of accidentally allowing the entry of pests which may cause considerable damage to agriculture or environment.

Establishing world-class diagnostic laboratories and keeping up with advances in diagnostic technology is extremely costly. It is emerging that the only viable option for many countries to access high-end diagnostic services will be through cooperation across countries to access diagnostic capacity at an international, regional or sub-regional level. For example a diagnostic laboratory, established on a sub-regional level could efficaciously and efficiently service the needs of several countries in the region. Country A in the region may have a laboratory for entomology while country B may specialise in plant pathogens and country C nematodes, etc. In the near future, joint diagnostic centres and laboratory may be the only way to provide state of the art diagnostic services to a majority of countries.

The IPPC could focus on this lack of access to diagnostic capacity by establishing standards and a network of diagnostic laboratories. A mechanism to assess laboratory capability would be developed and laboratories recognised or accredited for specific diagnostic procedures. Finally, the IPPC may develop a project model for sub-regional diagnostic centres which could serve as a blue-print for donors when providing Technical Assistance to developing countries (e.g. STDF).

Activities to be carried out during 2020 - 2030 would include:

- Conceive a model for the establishment of sub-regional joint diagnostic laboratories.
- Establish required standards and protocols
- Facilitate the establishment of an international laboratory network.

- Establish and communicate a repository of available diagnostic laboratories and their expertise.

10. Capacity Development Brokering Service: A proactive mechanism is established to match NPPO capacity development needs with appropriate donors and or NPPOs willing to share their expertise and capacity development resources.

In many contracting parties, the capacity of the NPPO to implement the Convention and its standards are considerably limited. Consequently, the IPPC has over recent years stepped up its activities to facilitate implementation. The resources at the disposal of the Commission are insufficient to cover all technical assistance and capacity building activities needed by NPPOs around the world.

To facilitate the provision of phytosanitary technical assistance beyond the financial technical capacity of the Commission, it may be of value to establish a system in which the IPPC Secretariat acts as a broker to match capacity development needs with willing donors or partners. Using the Phytosanitary Capacity Evaluation tool, the Secretariat could assist NPPOs to assess and document their needs and direct them to the most appropriate source of assistance. Similar systems may mirror parts of this offering, for example the Standards and Trade Development Facility (STDF) which identifies technical assistance and capacity proposals and pairs them with interested donors.

Activities to be carried out during 2020 - 2030 would include:

- Establish a capacity development brokering service.
- regular donor conferences to interest donors.

11. Plant Health Education World-wide: Increasing linkages and cooperation with universities and other educational institutions to strengthen plant health education world-wide.

Universities and other educational institutions are the foundations for the development and distribution of plant health knowledge to agricultural and environmental professionals world-wide. Only if universities and other educational institutions are fully involved in plant health matters can they successfully transmit this knowledge to their students. In many countries there is no clear connection between NPPOs and universities and other educational institutions. Only in few universities and even fewer lower educational institutions offer dedicated courses for plant health. This leads to situations where universities and other educational institutions are disconnected from the regulatory “world” of plant health and students graduate with little knowledge of plant health career opportunities. NPPOs and other regulatory bodies in turn have difficulties in finding competent graduates and are in many cases dependent on training their new appointments on the job from a low base of plant health knowledge and little understanding of phytosanitary and regulatory principles.

In order to strengthen plant health education world-wide and to reap the benefits of having well trained graduates and increased research in plant health, the IPPC should develop a policy and a programme to enable engagement with universities and other educational institutions. The policy may include aspects such as balance and levels of educational institutions the IPPC cooperates with, the degree of cooperation in developing plant health specific curricula and the involvement of universities and other educational institutions in aspects of the Commissions’ work.

Activities to be carried out during 2020 - 2030 would include:

- Development and adoption of an IPPC policy and structure on the cooperation with universities and other educational institutions.
- Development of IPPC guidelines for NPPOs on the cooperation with universities and other educational institutions.
- Consideration of developing in cooperation with universities a curriculum for plant health.

12. Public-Private Partnerships Mechanism: Development of Public-Private partnerships between the IPPC and stakeholders to support global plant health efforts

Public-Private partnerships are tools to engage stakeholders in collaborative phytosanitary activities with the aim to achieve more together, than would be possible alone, and to improve the effectiveness of the results generated. Although stakeholder involvement in phytosanitary activities has been promoted for national levels its application within the proceedings of the Commission has been limited. For some standard setting activities, private stakeholder representatives have been invited, but for policy development within the Commission stakeholder input is not usually directly solicited.

Close stakeholder cooperation with the Commission can yield substantial benefits for the organization and its international acceptance. It may also provide opportunities to extend the Commissions' resource base. To involve the private sector into Commission activities clear policy would have to be developed. It would involve clear directions for which activities these public-private partnerships would be designed and what the rules of engagement would be. Activities such as regular biennial stakeholder conferences could be elaborated in such a policy.

Activities to be carried out during 2020 - 2030 would include:

- Development of an IPPC policy on stakeholder involvement.
- Adoption of an IPPC policy and structure for public-private partnerships.
- Establishment of public-private partnerships activities.

13. Reviewing the Status of Plant Protection in the World: A practical and efficient mechanism for the Commission to review and understand the state of plant health in the world, identify emerging trends and gaps that need to be addressed.

Article XI 2(a) of the IPPC provides that the function of the Commission shall be to promote the full implementation of the objectives of the convention and in particular to '*review the state of plant protection in the world and the need for action to control the international spread of pests and their introduction into endangered areas*'. Although the review of the status of plant protection in the world is an obligatory task for the Commission this has not been carried out or initiated since the adoption of the revision of the IPPC in 1997. In fact, there is no clear or general understanding what the "review of the status of plant protection in the world" actually involves.

To implement the Convention, the Commission is required to address the issue of the review of the status of plant protection in the world. To do this we first must define carefully what such a review incorporates. A simple step towards the review of the status of plant protection in the world, would be to improve reporting of pest outbreaks and the distribution of pests, and systematically publish this as a global status report. This would also have the benefit of fulfilling the contracting parties' obligation to report the occurrence, outbreak or spread of pests (IPPC Article VIII 1(a)). An "International Phytosanitary Conference" could be of benefit to encourage official reporting and to assess the

implications of the reports conclusions. In addition, the establishment of an IPPC Secretariat based electronic retrieval system for pest distribution, based on official reporting, may assist contracting party's efforts to conduct Pest Risk Analysis.

Activities to be carried out during 2020 - 2030 would include:

- Defining the content and scope of the review of the status of plant protection in the world.
- Development and adoption of an IPPC policy and structure on the establishment of regular international plant health conferences as the underlying basis of the review.
- Intensifying efforts for countries to comply with their obligations to report the occurrence, outbreak or spread of pests.
- Establishment of an electronic reporting and retrieval system in the IPPC Secretariat for the occurrence and distribution of pests in the world.