



International Plant Protection Convention
Protecting the world's plant resources from pests

CAPACITY DEVELOPMENT

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Establishing a National Plant Protection Organization

A guide to understand the principal requirements for establishing an organization to protect national plant resources from pests



Establishing a National Plant Protection Organization

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This will help the IPPC Secretariat and Capacity Development Committee strengthen this and other training resources.

This paper presents a guide to establishing a national plant protection organization (NPPO) created as a component of the IPPC National Phytosanitary Capacity Building Strategy, which was adopted by the fifth session of the Commission on Phytosanitary Measures (CPM) (2010) of the IPPC. This work has been developed by selected experts and reviewed by the IPPC Capacity Development Committee (including phytosanitary experts from the seven FAO regions), the technical consultation among regional plant protection organizations (RPPOs) and the IPPC Secretariat. The elaboration of this manual was possible thanks to the financial contribution of the Standard and Trade Development Facility (STDF 350).

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IPPC Definitions Used

Area of low pest prevalence

An area, whether all of a country, part of a country, or all or parts of several countries, as identified by the competent authorities, in which a specific pest is present at low levels and which is subject to effective surveillance or control measures [IPPC, 1997; revised CPM, 2015]

Emergency action

A prompt phytosanitary action undertaken in a new or unexpected phytosanitary situation [ICPM, 2001]

National plant protection organization

Official service established by a government to discharge the functions specified by the IPPC [FAO, 1990; formerly plant protection organization (national)]

Official control

The active enforcement of mandatory phytosanitary regulations and the application of mandatory phytosanitary procedures with the objective of eradication or containment of quarantine pests or for the management of regulated non-quarantine pests [ICPM, 2001; revised CPM, 2013]

Pest

Any species, strain or biotype of plant, animal or pathogenic agent injurious to plants or plant products. Note: in the IPPC, plant pest is sometimes used for the term pest [FAO, 1990; revised FAO, 1995; IPPC, 1997; revised CPM, 2012]

Pest free area

An area in which a specific pest is absent as demonstrated by scientific evidence and in which, where appropriate, this condition is being officially maintained [FAO, 1995; revised CPM, 2015]

Pest risk analysis

The process of evaluating biological or other scientific and economic evidence to determine whether an

organism is a pest, whether it should be regulated, and the strength of any phytosanitary measures to be taken against it [FAO, 1995; revised IPPC, 1997; ISPM 2, 2007]

Phytosanitary legislation

Basic laws granting legal authority to a national plant protection organization from which phytosanitary regulations may be drafted [FAO, 1990; revised FAO, 1995]

Phytosanitary measure

Any legislation, regulation or official procedure having the purpose to prevent the introduction or spread of quarantine pests, or to limit the economic impact of regulated non-quarantine pests [FAO, 1995; revised IPPC, 1997; ICPM, 2002; revised CPM, 2013]

Plant quarantine

All activities designed to prevent the introduction or spread of quarantine pests or to ensure their official control [FAO, 1990; revised FAO, 1995; revised CPM, 2013]

Quarantine pest

A pest of potential economic importance to the area endangered thereby and not yet present there, or present but not widely distributed and being officially controlled [FAO, 1990; revised FAO, 1995; IPPC 1997]

Regulated pest

A quarantine pest or a regulated non-quarantine pest [IPPC, 1997]

Treatment

Official procedure for the killing, inactivation or removal of pests, or for rendering pests infertile or for devitalization [FAO, 1990, revised FAO, 1995; ISPM 15, 2002; ISPM 18, 2003; ICPM, 2005]

Note: These definitions are sourced from the IPPC *Glossary of phytosanitary terms* (ISPM 5). This list includes only the glossary terms that are used in this guide. The glossary is updated annually based on decisions taken by the IPPC Commission on Phytosanitary Measures. The complete and updated glossary is maintained at: www.ippc.int/publications/glossary-phytosanitary-terms. The definitions are accurate as of August 2015.



Acronyms and Abbreviations

CBD	Convention on Biological Diversity
CP	Cartagena Protocol
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CPM	Commission on Phytosanitary Measures
FAO	Food and Agriculture Organization of the United Nations
IPPC	International Plant Protection Convention
ISPM	International Standard for Phytosanitary Measures
ISSB	International standard-setting body
LMO	Living modified organism
MOA	Memorandum of agreement
NPPO	National plant protection organization
PRA	Pest risk analysis
RPPO	Regional plant protection organization
SPS	Agreement on the Application of Sanitary and Phytosanitary Measures of the WTO
WTO	World Trade Organization

1. Introduction

Recognition that the movement of pests around the world can have devastating consequences on national plant resources and food security has sparked a global response to prevent the introduction and spread of plant pests and to promote measures for their control. The International Plant Protection Convention (IPPC) was established in 1951 with this specific purpose. The latest revision (in 1997) of the Convention provided closer alignment with the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS) of the World Trade Organization (WTO), and provides a framework for international cooperation towards achieving its purpose.

The requirement to make provision for the establishment of a national plant protection organization (NPPO) as the official competent authority for plant protection is one of the key obligations for contracting parties that was included in the “New Revised Text” (IPPC, 1997). This sets out clear functions for the NPPO, which for many contracting parties creates a need to establish a new organization to address plant protection issues and/or broaden their scope of operations and establish systems to address IPPC requirements and responsibilities.

The establishment or update of an NPPO by each contracting party is a major step towards international cooperation to prevent the introduction and spread of plant pests. Contracting parties have established various models for an NPPO. These are based largely on their

National plant protection organization

Official service established by a government to discharge the functions specified by the IPPC [FAO, 1990; formerly plant protection organization (national)]

competencies and understanding of the range of functions and responsibilities of the NPPO, as well as on their level of appreciation for the importance of the NPPO in food security and market access, and the protection of national environments, biodiversity and plant resources from pests.

This manual aims to provide information to support the establishment of a functional NPPO as the competent and legally responsible body for regulatory plant protection functions, as outlined in the IPPC. It acknowledges that most countries already have an organization in place and that the choice of a new or updated model for that organization is the responsibility of the contracting party. The manual therefore addresses the key elements and considerations that contracting parties may use to review and upgrade their NPPOs with respect to fulfilling the functions outlined by the IPPC.

NPPO managers should consider the sustainability of the organization's operations in all the areas discussed throughout this manual. This includes sourcing sustainable financing, planning for long-term staffing arrangements, having contingency plans in place for changes in political contexts and planning for natural disasters, among other areas, to ensure the organization remains sustainable and adaptable over the long term.

This manual was produced to give broadly applicable information and should be adapted to the specific context of each user. It is highly recommended that contracting parties conduct a needs assessment process, such as using the

Pest

Any species, strain or biotype of plant, animal or pathogenic agent injurious to plants or plant products. Note: in the IPPC, plant pest is sometimes used for the term pest. [FAO, 1990; revised FAO, 1995; IPPC, 1997; revised CPM, 2012]



Credit: Ilya Mityushev

Phytosanitary Capacity Evaluation tool, to understand the national context in which the NPPO operates and to prioritize the activities, resources and planning of the organization (see www.ippc.int/en/core-activities/capacity-development/phytosanitary-capacity-evaluation/ for more information).

Readers should also consult the companion document *Operation of a National Plant Protection Organization*, which provides information on the key functions and operations of an NPPO. Further materials on establishment and

operation of NPPOs and a range of manuals on other topics relevant to NPPOs are available at www.phytoprotection.info. Feedback on this manual and suggested case studies for future editions are being collected at <https://www.surveymonkey.com/r/establishingnppomanual>.

Each section of this manual begins with a box highlighting what you can learn from that section. The discussion questions at the end of each section can then be used to assess your level of understanding. Definitions of terms are also provided throughout the text.

2. General Overview of an NPPO

Learning objectives

- Understand how to establish an NPPO
- Give an overview of NPPO objectives, national legal frameworks, policy requirements, infrastructure and institutional arrangements, enforcement, and review and auditing

2.1 NPPO objectives

The objectives of an NPPO within the context of national development plans may be translated into three broad areas of responsibility:

- ◆ to protect plant resources (including cultivated, wild and aquatic plants) through implementation of appropriate phytosanitary measures
- ◆ to support national food security and a healthy environment through effective pest exclusion procedures
- ◆ to facilitate market access and safe international trade in agricultural commodities by establishing effective phytosanitary certification systems and procedures.

The fulfilment of these objectives requires a well-organized, fully functional NPPO with appropriate national, regional and international networks. Sections 2.2–2.7 summarize the key factors contributing to the establishment of such an NPPO.

2.2 National legal frameworks

The NPPO should be defined by national legislation as the official service established by the government to discharge the functions specified by the IPPC. The national legislation (including law and regulations) should provide to the NPPO the legal authority and sole responsibility regarding the discharge of its functions, as outlined by the IPPC. Legal frameworks should be consistent with the national constitution and guided by regional and international treaties to

Phytosanitary measure

Any legislation, regulation or official procedure having the purpose to prevent the introduction or spread of quarantine pests, or to limit the economic impact of regulated non-quarantine pests [FAO, 1995; revised IPPC, 1997; ICPM, 2002; revised CPM, 2013]

Quarantine pest

A pest of potential economic importance to the area endangered thereby and not yet present there, or present but not widely distributed and being officially controlled [FAO, 1990; revised FAO, 1995; IPPC 1997]

which the contracting party is a signatory, in order to function properly in a global trading environment.

The legislation should, among other things:

- ◆ be independent and accountable in function, creating predictability and certainty through good governance and respect for the rule of law
- ◆ have a clear definition of functions and powers, and clarify the roles, responsibilities and rights of stakeholders
- ◆ establish a clear hierarchical relationship with subnational authorities, if applicable
- ◆ provide for implementation of the International Standards for Phytosanitary Measures (ISPMs) adopted by the Commission on Phytosanitary Measures (CPM).

2.3 Policy requirements

The policy requirements of an NPPO are as follows:

- ◆ consistency of NPPO goals and operations with government policy and legislation
- ◆ institutional stability (this should be properly considered and provided for)
- ◆ well-defined public goals, direction on how to achieve them and a broad course of action to address phytosanitary risks
- ◆ policy on disseminating information among stakeholders in support of transparency, and cooperation regarding phytosanitary requirements and phytosanitary regulations
- ◆ technical and scientific decision-making that is free from political interference
- ◆ adequate administrative support for all NPPO programmes.

2.4 Sustainability considerations

Conditions contributing to the sustainability of an NPPO are as follows:

- ◆ adequate and appropriately trained staff with the required levels of competency and access to resources
- ◆ good staff development and retention
- ◆ secured sources of funding, including resources for dealing with phytosanitary emergencies and crises
- ◆ prioritized and adequately funded phytosanitary programmes
- ◆ meaningful stakeholder relations and awareness-creation programmes.

2.5 Infrastructure and institutional arrangements

The infrastructure and institutional arrangements of an NPPO reflect its functions and should be organized for effective and efficient implementation of its mandate and discharge of its responsibilities to its stakeholders. This includes:

- ◆ a good management structure with appropriate lines of authority and information flow
- ◆ effective cooperation and collaboration among stakeholders (private and public sector)
- ◆ robust inspection and verification capabilities at the borders or entry/exit points, with consistent actions
- ◆ adequately supported border points with appropriate equipment, supporting laboratories and physical space for inspections
- ◆ a media focal point
- ◆ effective communication systems to address internal and external communications
- ◆ a good information documentation and retrieval system.

2.6 Enforcement

An NPPO needs to have carefully considered enforcement mechanisms. These include:

- ◆ support for pest prevention
- ◆ export certification
- ◆ import verification
- ◆ regionalization.

2.7 Review and auditing

An NPPO needs to perform periodic review, incident review and auditing (internal or external).

Discussion Questions:

- ◇ What are the three broad areas of responsibility of an NPPO in the context of a national development plan?
- ◇ List the key factors that need to be in place when establishing an NPPO.

3. International Framework for the Application of Sanitary and Phytosanitary Measures

Learning objectives

- Understand the role of an NPPO within the IPPC and Agreement on the Application of Sanitary and Phytosanitary Measures and other relevant international treaties

3.1 NPPO relationship with international SPS bodies

Overview

The WTO Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement; WTO, 1994) is an agreement on how governments can apply food safety, animal health and plant health measures without unnecessary obstacles to trade.

With regard to plant health, the SPS Agreement allows countries to set their own measures to protect their economy or environment from damage caused by the entry, establishment or spread of pests. The SPS Agreement encourages countries to use international standards, guidelines and recommendations when developing their sanitary and phytosanitary measures (Article 3 of the SPS Agreement).

The SPS Agreement also states that plant health measures shall be science-based and not used for trade protection. It requires that phytosanitary measures are based on an assessment of the risk to plant health, taking into account risk assessment techniques developed by the relevant international standard-setting body (ISSB), and that the measures are technically justified.

The WTO recognizes the IPPC as the relevant ISSB for plant health, and encourages its WTO members to harmonize their sanitary and phytosanitary measures based on the IPPC's international standards. In this way, international standards that are adopted under the IPPC set out the basic internationally agreed elements for the establishment of harmonized plant health standards and phytosanitary measures.

Sanitary (human and animal health) and phytosanitary (plant health) measures (SPS measures) typically apply to trade in, or movement of, animal-based and plant-based goods within or between countries. However, the SPS Agreement applies to all SPS measures that may directly or indirectly affect international trade.

The SPS Agreement recognizes that developing and least-developed country WTO members may encounter special difficulties in complying with the sanitary and phytosanitary measures of importing countries. Because of this, the SPS Agreement allows for phased introduction of new measures, when appropriate, in order to allow exports to continue with minimal interruption while aiming to meet the appropriate level of protection needed to safeguard human, plant and animal health. Furthermore, there are provisions in the SPS Agreement that enable time-limited exceptions from obligations, taking into account the financial, trade and development needs of developing countries.

Rights and obligations

Provisions of the SPS Agreement identify the rights and obligations of WTO members in the application of sanitary or phytosanitary measures. The following list provides brief summaries of these rights and obligations.

- ◆ WTO members have the right to determine the level of SPS protection they deem appropriate. This is referred to as "appropriate level of sanitary or phytosanitary protection."
- ◆ An importing member has the sovereign right to take measures to achieve the level of protection

it deems appropriate to protect human, animal or plant life or health within its territory.

- ◆ An SPS measure must be based on scientific principles and not be maintained without sufficient scientific evidence.
- ◆ An importing member shall avoid arbitrary or unjustifiable distinctions in levels of protection, if such distinctions result in discrimination or a disguised restriction on international trade.
- ◆ An SPS measure must not restrict trade more than is necessary to achieve an importing member's appropriate level of protection, taking into account technical and economic feasibility.
- ◆ An SPS measure should be based on an international standard, guideline or recommendation where these exist, unless there is a scientific justification for a measure that results in a higher level of SPS protection to meet the importing member's appropriate level of protection.
- ◆ An SPS measure that conforms to an international standard, guideline or recommendation is deemed necessary to protect human, animal or plant life or health, and consistent with the SPS Agreement.
- ◆ When an international standard, guideline or recommendation does not exist, or when a measure needs to provide a higher level of protection in order to meet an importing member's appropriate level of protection than the relevant international standard would provide, such a measure must be based on a risk assessment; the risk assessment must take into account available scientific evidence and relevant economic factors.
- ◆ Where the relevant scientific evidence is insufficient, an importing member may provisionally adopt SPS measures on the basis of available relevant information. In such circumstances, members shall seek to obtain the additional information necessary for a more objective risk assessment, and review the SPS measure accordingly within a reasonable period.
- ◆ An importing member shall accept the measures of other countries as equivalent, if it is objectively demonstrated that the measures

meet the importing member's appropriate level of protection.

- ◆ SPS measures must be adapted to the SPS characteristics of the area from which the product originated and for which the product is destined. WTO members are also required to recognize the concepts of pest/disease-free areas and areas of low pest/disease prevalence.

3.2 The IPPC and other international treaties

International Plant Protection Convention

The IPPC is a multilateral treaty whose main purpose 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 IPPC was adopted in 1951 and revised twice, in 1979 and in 1997. The "New Revised Text" (IPPC, 1997) came into force in October 2005. The IPPC is recognized as:

- ◆ a multilateral treaty for international cooperation in plant protection
- ◆ the global instrument for the harmonization of phytosanitary measures in commerce and the environment
- ◆ the phytosanitary standard-setting organization named in the WTO SPS Agreement.

The implementation of the IPPC requires NPPOs to be established by contracting parties as defined by the IPPC.

Agreement on Technical Barriers to Trade

This treaty preceded the SPS Agreement. Among other things, it addresses technical quality requirements regarding food safety, human and animal health. The Technical Barriers to Trade Agreement aims to ensure that technical regulations, standards and conformity assessment procedures are non-discriminatory and do not create unnecessary obstacles to trade.

Other relevant international treaties

Many contracting parties to the IPPC are signatories to other international treaties, such as the Convention on Biological Diversity (CBD), the

Cartagena Protocol (CP) and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). These treaties address issues relating to the protection of biodiversity and the environment. The NPPO needs to be mindful of these treaties in order to support shared goals and avoid duplication of functions and activities. These treaties may be administered by different agencies, which are usually responsible for environment and customs, and the NPPO needs to liaise with designated contact points.

Convention on Biological Diversity: The CBD imposes obligations on member states with regard to invasive alien species. Article 8(h) requires each contracting party to "prevent the introduction of, control or eradicate those alien species which threaten ecosystems, habitats or species". Since most invasive plant species can be categorized as plant pests, the CBD reinforces the need for governments to address these threats under phytosanitary legislation, with responsibility lying with the NPPOs.

Cartagena Protocol on Biosafety to the Convention on Biological Diversity: The CP contributes to ensuring an adequate level of protection in safe transfer, handling and use of living modified organisms (LMOs) resulting from modern biotechnology that may have diverse effects on the conservation and sustainable use of biological diversity, taking also into account risks to human health, and specifically focusing on transboundary movements.

Regarding plant health, this is addressed in ISPM 11 (2013) *Pest risk analysis for quarantine pests*, which includes an annex on phytosanitary risks that may be associated with LMOs and should be taken into account in the application of pest risk analysis (PRA). The regulation of LMOs that are plants may be a part of the regular mandate of the NPPO.

Pest risk analysis (PRA)

The process of evaluating biological or other scientific and economic evidence to determine whether an organism is a pest, whether it should be regulated, and the strength of any phytosanitary measures to be taken against it [FAO, 1995; revised IPPC, 1997; ISPM 2, 2007]

Phytosanitary legislation

Basic laws granting legal authority to a national plant protection organization from which phytosanitary regulations may be drafted [FAO, 1990; revised FAO, 1995]

Convention on International Trade in Endangered Species of Wild Fauna and Flora: CITES is an international agreement between governments. It aims to ensure that international trade in wild animals and plants does not threaten their survival. It provides a framework to be respected by each party, which has to adopt its own domestic legislation to ensure that CITES is implemented at the national level. Examples of international trade in plants include plants, food products, exotic leather goods, wooden musical instruments, timber and tourist souvenirs, all of which may be regulated under plant health legislation.

Discussion Question:

- ◇ List the major international treaties that govern the work of an NPPO. What is the responsibility of the NPPO with regard to each of these?

4. The National Plant Protection Organization

Learning objectives

- Understand the definition and legal basis of an NPPO
- Understand the obligations, rights and benefits of contracting parties to the IPPC

4.1 Definition and concept

The NPPO is defined as the official service established by a government to discharge the functions specified by the IPPC.

The NPPO should be the competent and legally responsible body for discharging the functions as outlined in the "New Revised Text" (IPPC, 1997).

4.2 Legal basis

"With the purpose of securing 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 contracting parties undertake to adopt the legislative, technical and administrative measures specified in this convention and in supplementary agreements" (IPPC, 1997: Article I).

"Each contracting party shall make provision, to the best of its ability, for an official national plant protection organization with the main responsibilities set out in this Article." (IPPC, 1997: Article IV).

4.3 Obligations, responsibilities, rights and benefits of contracting parties to the IPPC

Obligations and responsibilities

- ◆ The "New Revised Text" (IPPC, 1997) details the obligations of its contracting parties. Each contracting party shall make provision, to the best of their ability, for an official NPPO. The responsibilities of an official NPPO shall include,

Regulated pest

A quarantine pest or a regulated non-quarantine pest [IPPC, 1997]

as stated in Article IV of the Convention (IPPC, 1997), the issuance of certificates relating to the phytosanitary regulations [...]

- ◆ the surveillance of growing plants [...] and wild flora [...]
- ◆ the inspection of consignments of plants and plant products moving in international traffic and, where appropriate, the inspection of other regulated articles [...]
- ◆ the disinfection or disinfection of consignments of plants and plant products moving in international traffic [...]
- ◆ the protection of endangered areas and the designation, maintenance and surveillance of pest free areas and areas of low prevalence
- ◆ the conduct of PRA
- ◆ to ensure [...] the phytosanitary security of consignments after certification [...]
- ◆ training and development of staff.

Each contracting party shall also make provision, to the best of its ability for:

- ◆ the distribution of information within the territory of the contracting party regarding regulated pests and the means of their prevention and control
- ◆ research and investigation in the field of plant protection



Credit: FAO/IPPC/Vladimir Rodas

- ◆ the issuance of phytosanitary regulation
- ◆ the performance of any other necessary function required for the implementation of the Convention.

Each contracting party shall submit a description of its official NPPO organization and of changes in such organization to the IPPC Secretary.

Rights

Rights of contracting parties to the IPPC are outlined in the "New Revised Text" (IPPC, 1997) and guided by important principles, including the sovereign right to regulate, establishing phytosanitary measures. However, measures should not discriminate between members; should be based on international standards and appropriate risk analysis; and should be transparent. A contracting party also has the right to challenge a phytosanitary measure that it believes to be technically unjustified. Another right includes the opportunity to shape international phytosanitary policy and interact directly with the phytosanitary community through active participation in the activities of the Convention.

Benefits

Benefits to contracting parties relate to:

- ◆ increased efficacy in preventing the introduction and spread of pests
- ◆ consistency with the WTO SPS Agreement
- ◆ most major trading partners and WTO members are contracting parties to the IPPC
- ◆ increased credibility of national phytosanitary systems for trading partners
- ◆ direct and active input into processes of global harmonization, particularly in the development of ISPMs
- ◆ opportunities are provided to interact with other international agreements related to trade and environment (e.g. WTO SPS Agreement, CBD, CITES).

Discussion Question:

- ◇ What are the obligations, responsibilities, rights and benefits of contracting parties to the IPPC?

5. Considerations for Establishing an NPPO

Learning objectives

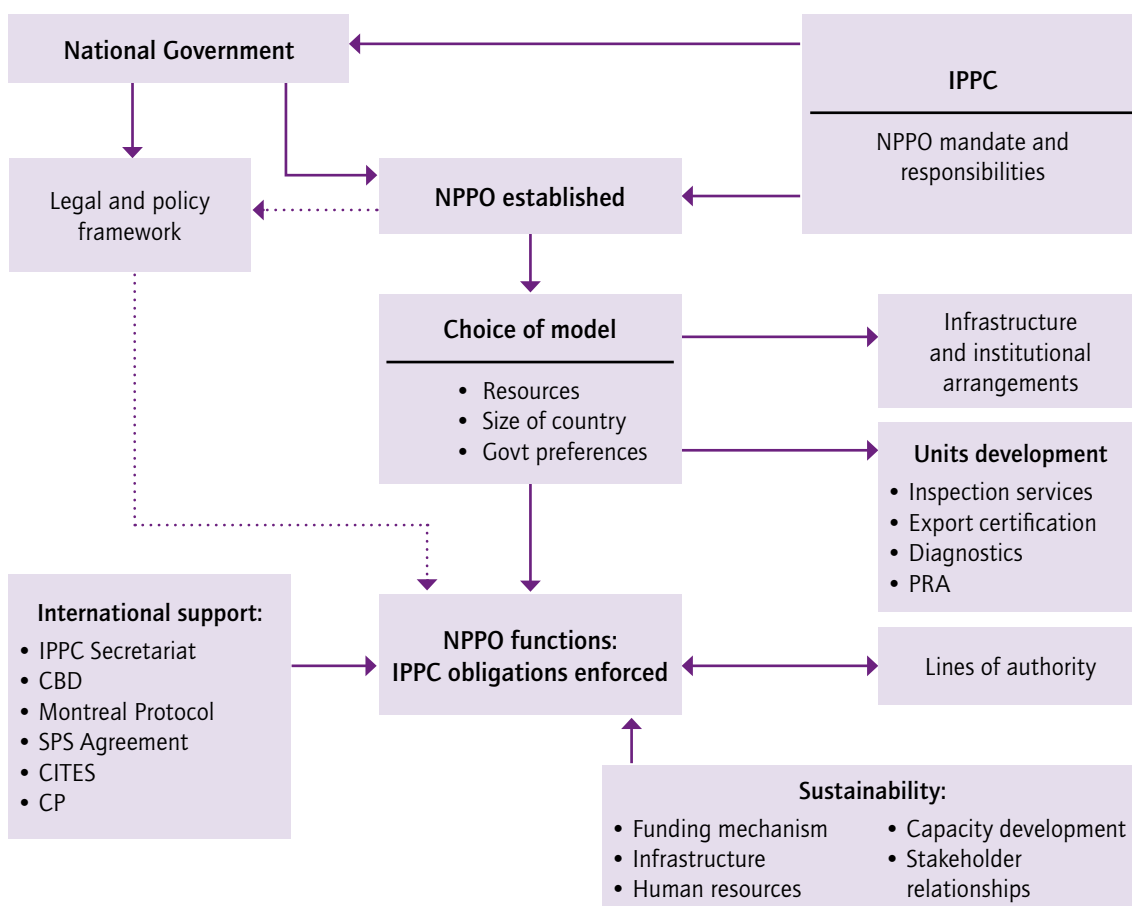
- Understand the mandate and functions of the NPPO
- Learn about the necessary supporting national legislation and policy

5.1 Mandate and functions

The functions of the NPPO are outlined clearly by the IPPC (1997: Article IV) and summarized below:

- ◆ the issuance of phytosanitary certificates
- ◆ the surveillance of growing plants, particularly with the object of reporting the occurrence, outbreak and spread of pests, and of controlling those pests, including the reporting referred to under Article VIII paragraph 1(a)
- ◆ the inspection of consignments of plants and other regulated articles moving in international traffic

Figure 1: NPPO establishment considerations



- ◆ the disinfection/disinfection of consignments of plants and other regulated articles moving in international traffic
- ◆ the protection of endangered areas and the designation, maintenance and surveillance of pest free areas and areas of low pest prevalence
- ◆ the conduct of PRA
- ◆ ensuring the phytosanitary security of consignments after certification regarding composition, substitution and reinfestation is maintained prior to export
- ◆ training and development of staff.

5.2 Legal and policy considerations

NPPO establishment, maintenance and the conduct of its functions must be supported by national legislation and policy. In accepting international obligations, governments commit to amending their current national legislation to conform to their new responsibilities. In this sense, international obligations prevail over national dispositions, and national provisions that contravene international obligations must be repealed (Vapnek and Manzella, 2007).

Legal provisions

National plant protection legislation allows countries to protect their agricultural resources and natural environment from the introduction or spread of pests. It defines the institutional framework needed for effective plant protection and improves the efficiency and effectiveness of national authorities toward this end.

National legal frameworks related specifically to plant protection should:

- ◆ provide the legal authority and regulations for implementing the provisions of the law
- ◆ designate a competent body (NPPO) responsible for the implementation of phytosanitary legislation
- ◆ create predictability and certainty through good governance and respect for the rule of law
- ◆ clarify roles, responsibilities and rights of stakeholders
- ◆ define powers to act (essential for enforcement) and negotiate (e.g. equivalency of measures and import requirements)
- ◆ be independent and accountable in function

Pest free area

An area in which a specific pest is absent as demonstrated by scientific evidence and in which, where appropriate, this condition is being officially maintained [FAO, 1995; revised CPM, 2015]

Area of low pest prevalence

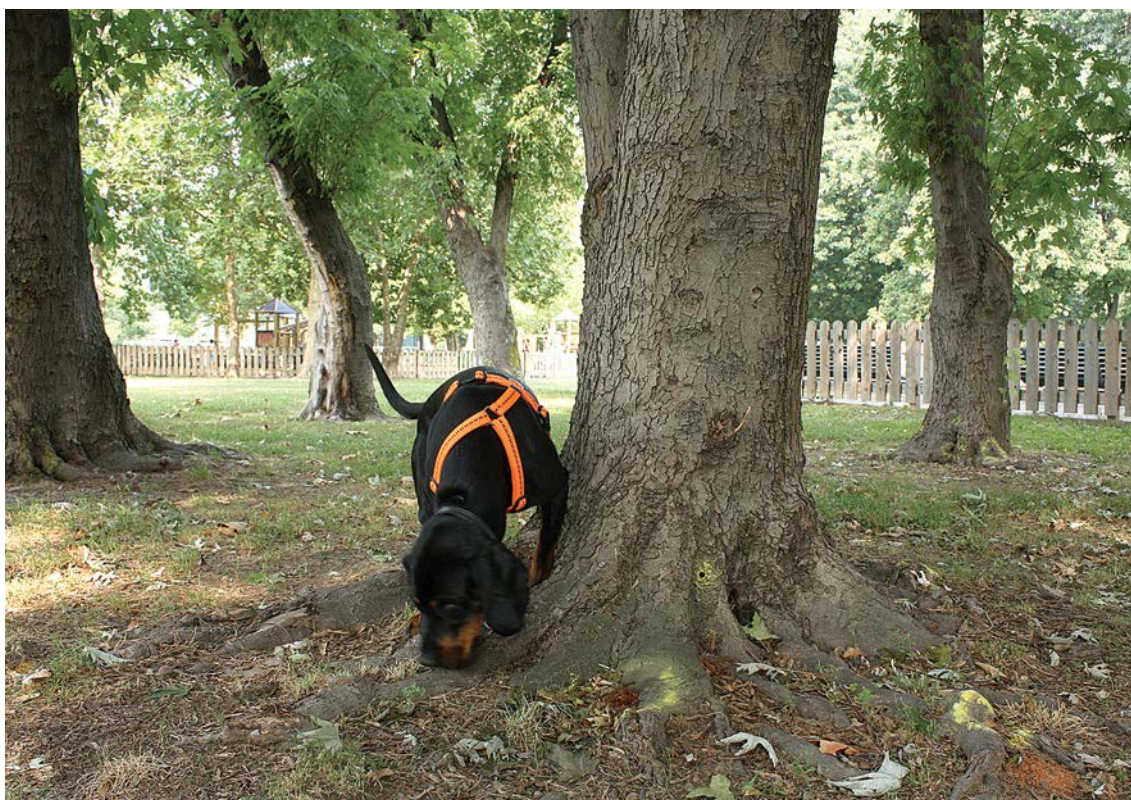
An area, whether all of a country, part of a country, or all or parts of several countries, as identified by the competent authorities, in which a specific pest is present at low levels and which is subject to effective surveillance or control measures [IPPC, 1997; revised CPM, 2015]

- ◆ establish a clear hierarchical relationship with subnational authorities, if applicable
- ◆ clearly define functions and powers
- ◆ not overlap or conflict with other existing national legislation (this is important in avoiding disputes regarding delegated responsibilities)
- ◆ set provisions for funding (from government budgets, fees, grants, etc.).

Policy provisions

Government policies, strategies and priorities affect the nature and operations of the NPPO. Policy provisions may relate to agricultural policy, environment, land use and trade. Good governance policies, such as access to information, participation in decision-making, the degree of centralization versus decentralization, independence in the decision-making process, transparency and accountability of public authorities, will also affect the nature and operation of the NPPO. Policy provisions relating to phytosanitary control should:

- ◆ be sustained over time for institutional stability
- ◆ set out a broad course of action to address phytosanitary risks
- ◆ define public goals and identify how these goals could be achieved
- ◆ provide a consistent basis for assessing risks and priorities
- ◆ allow technical and scientific decision-making free from political interference



Credit: Matteo Maspero

- ◆ support technical appointments based on technical merit
- ◆ provide administrative support to technical functions and established systems to maintain, for example:
 - appropriate technical competencies
 - import monitoring and enforcement system
 - phytosanitary certification system
 - domestic surveillance and control systems
 - regulation development and notification systems
 - information management system.

Discussion Question:

- ◇ List the functions of the NPPO, as outlined by the IPPC (1997: Article IV). What are the main legal and policy provisions required when establishing an NPPO?

6. Structure of the NPPO

Learning objectives

- Understand the principles of establishing an NPPO, including the required infrastructure and organizational structure
 - Learn about the strengths and weaknesses of different models of institutional arrangement
 - Be aware of the need for shared resources and understand how to establish effective arrangements for resource sharing
-

6.1 Establishing an appropriate organization

Principles and guidelines

When establishing an NPPO, contracting parties should take into account some basic principles.

- ◆ The contracting party should commit to establish and develop an NPPO as an obligation under the IPPC.
 - ◆ The NPPO structure should reflect its functions, necessary capacities and mandate to ensure that it is capable of discharging its responsibilities and fulfilling its functions effectively and efficiently.
 - ◆ The NPPO needs a structure and size appropriate to the scope and nature of the activities it conducts. It may involve delegation of some tasks to third parties.
 - ◆ Hierarchical arrangement of lines of authority, rights and duties of an organization should be clearly defined.
 - ◆ The structure determines how the roles, power and responsibilities are assigned, controlled and coordinated, and how information and communication flows among the different levels of management and stakeholders.
 - ◆ Depending on the size of a country, structures may be decentralized and regional. Subregional and provincial offices may have different degrees of autonomy.
- ◆ In a decentralized structure, regional and subregional autonomy should conform to the national operational procedures and be guided by procedural manuals established at the central level for uniformity and quality control. These could include inspection procedures or commodity inspection, sampling, phytosanitary certification, etc.
 - ◆ The NPPO needs to have adequate resources to discharge its responsibilities, which include:
 - capacity development
 - conducting or otherwise supporting research

Plant quarantine

All activities designed to prevent the introduction or spread of quarantine pests or to ensure their official control [FAO, 1990; revised FAO, 1995; revised CPM, 2013]

Official control

The active enforcement of mandatory phytosanitary regulations and the application of mandatory phytosanitary procedures with the objective of eradication or containment of quarantine pests or for the management of regulated non-quarantine pests [ICPM, 2001; revised CPM, 2013]

- participation in national, regional and international fora
- approval or authorization procedures for third party involvement.
- ◆ Policy should be results-oriented; for example, services, fee structures, stakeholder relations and market access are properly considered in order to develop a proactive, efficient and results-based system.
- ◆ Structure should be reflected in the NPPO legal framework.

Infrastructure

The nature of the mandate of the NPPO (as defined under the IPPC) requires robust administrative, technical and operational support. National legislation may also require the NPPO to take responsibility for activities beyond this mandate; for example, domestic control of plant pests of national concern, pesticide regulation, residue analyses and other quality issues related to market requirements. The NPPO therefore requires an administrative centre or headquarters where coordination and management staff can perform the following tasks:

- ◆ strategic planning
- ◆ international liaison
- ◆ information management
- ◆ document development
- ◆ policy development
- ◆ logistical and administrative support
- ◆ facilities for meetings and training
- ◆ media functions.

Special facilities may also be available at decentralized locations, depending on regional requirements. These provide technical support, for example:

- ◆ surveillance
- ◆ diagnostics
- ◆ inspections
- ◆ sampling and testing
- ◆ treatments
- ◆ export certification and import verification.

Border inspection must be supported adequately by a legal framework, appropriate facilities and trained personnel. Requirements include the following:

- ◆ effective communication systems that allow for easy contact between headquarters, regional

Treatment

Official procedure for the killing, inactivation or removal of pests, or for rendering pests infertile or for devitalization [FAO, 1990, revised FAO, 1995; ISPM 15, 2002; ISPM 18, 2003; ICPM, 2005]

- and subregional offices, border posts and other border agencies (e.g. customs)
- ◆ information and information management systems, including appropriate hardware and software in support of phytosanitary decision-making, trace-back and transparency
- ◆ physical space and operational areas, well-positioned logistically in relation to other border functions and providing suitable areas for inspection, retention and treatments; adequate lighting; well-equipped supporting laboratories and adequate transport.

Organizational structure

In the structure presented in Figure 2, the NPPO is organized by the capabilities or branches (technical management, pest diagnostics and operational services) required to perform the basic functions (national programmes) in PRA, import verification, export certification, pest surveillance, regionalization (including containment, control, eradication and freedom from pests) and phytosanitary training and promotion.

Figure 2 shows an autonomous structure that may represent an NPPO in many countries, except for very small ones where no regional offices are required. Typically, the headquarters is largely administrative, providing technical guidelines for the regional offices and border inspection posts. The regional offices may be both administrative and technical, or only technical. They may serve the subregional offices (if appropriate) and may provide technical and operational support to the border inspection posts. This type of organizational structure allows for the introduction of new programmes (e.g. pesticide register), which are not under the scope of the IPPC but may be required at the national level.

Figure 2: Organogram of the functions that should be fulfilled by an NPPO. This example is for an autonomous NPPO.

Manager (IPPC focal point; budget; strategic programming; advocacy; legislation)		
Technical Officer	Diagnostic Officer	Field Operations Officer
Legislation Officer <ul style="list-style-type: none"> • Pest risk analysis • Import permits • Import notification 	Manager and experts of the central laboratory <ul style="list-style-type: none"> • Regulatory and ambulatory services: virology, bacteriology, nematology, entomology, weed science • Quality insurance (standardized procedures and manuals) • Verification • Reference biological collections 	Principal Import Inspector and other inspectors <ul style="list-style-type: none"> • Commodities inspection • Vessels, boats and airplanes traffic • Sampling • Emergency actions • Non-conformity • Pest interceptions • Tents/phytosanitary actions • Post-entry quarantine • Destruction of regulated articles (including waste)
Surveillance Officer (for regulated pests) <ul style="list-style-type: none"> • Monitoring on general surveillance data • Lists of pests • Lists of regulated pests • Status of pests 		
Pest Management Officer <ul style="list-style-type: none"> • Quarantine • Eradication campaigns • Establishment of pest free areas • Establishment of areas of low pest prevalence 		
Media Officer <ul style="list-style-type: none"> • Awareness-raising campaigns • Communication programme 	Satellite diagnostic services Service undertaken by specialized inspectors (export and/or import) at an entry or production point <ul style="list-style-type: none"> • Rapid diagnostics for imported commodities • Basic diagnostic for exported commodities • Ambulatory diagnostic services 	Principal Export and Transit Certification Inspector and other inspectors <ul style="list-style-type: none"> • Certification inspection (in nursery, at production places, of transit, at the points of entry and exit, on packaging and storage zones) • Supervise loading • Ensure commodity security • Issue phytosanitary or re-export certificates
Data Officer <ul style="list-style-type: none"> • Collection and analysis of data from specific surveillance programmes, campaigns, inspections, imports, export certification, diagnostics • Notification to the IPPC International Phytosanitary Portal 		Regulated Pests Surveillance Programme Officer and Surveillance Officers <ul style="list-style-type: none"> • Delimitation prospection • Specific prospection (determination of the status of pests) • Delimiting prospection (nurseries, non-cultivated areas, production places, nurseries, zones non-cultivated, production sites, packaging and storage zones)

Each of the functional areas should have a technical manager. For smaller countries, some functional areas may be combined. The Operations Branch should execute the fieldwork under the coordination of the technical managers

of the corresponding national programmes of the Technical Management Branch. Similarly, the Diagnostic Branch should provide the analytical results required by the national programmes of the Technical Management Branch and the

Operations Branch. Direct lines of command should be established among all the structural elements, both horizontally and vertically, to ensure smooth operation. The structure should have an International Liaison Unit to perform relevant functions including the obligations of notification and pest reporting.

Figure 3 shows a decentralized structure that may represent an NPPO in many countries, except for small island states. It addresses the various levels of management that may be needed to avoid inefficiency by assigning responsibilities at different levels of the organization. Typically, the headquarters is largely administrative. The regional offices are both administrative and technical. They serve the subregional offices, which provide technical and operational support to the border posts.

6.2 Models illustrating institutional arrangements

The NPPO institutional structure varies from country to country and is influenced by policy and legal considerations, availability of resources and national competencies. More recently, models with greater autonomy or an integrated approach (associating plant health competencies, as well as animal health and food security ones) have been

adopted, as they are more appropriate to fulfilling broader functions.

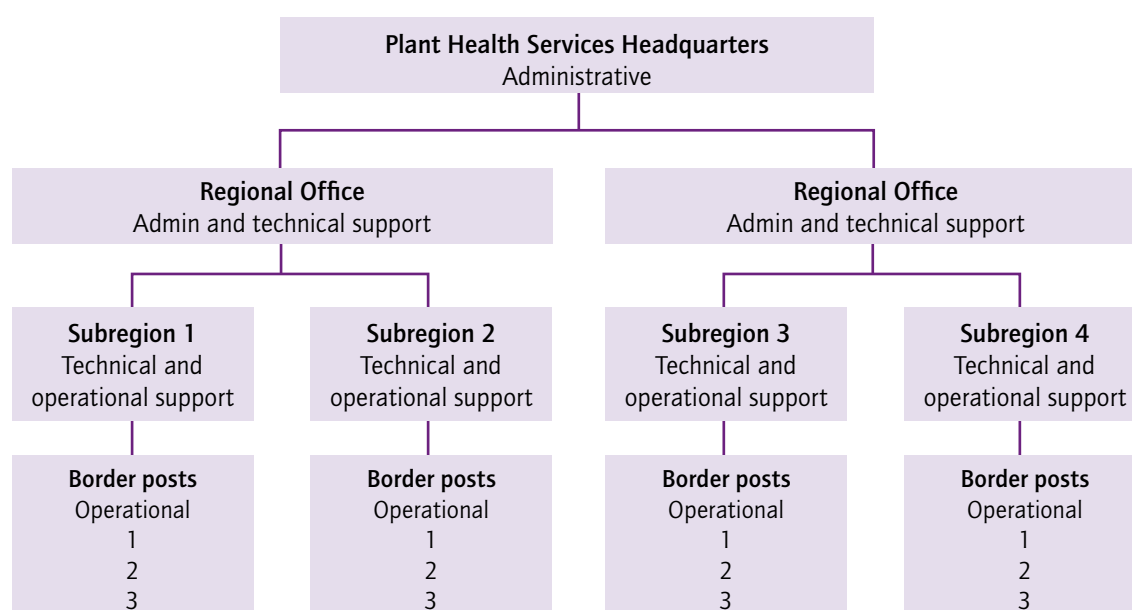
This section describes five models, highlighting their characteristics. **It is not intended to promote any single model, since national capacities and characteristics vary.** All models have strengths and weaknesses and it is not the intention of this document to give any kind of recommendation. Only after a careful analysis, possibly supported by the application of the Phytosanitary Capacity Evaluation tool (see www.ippc.int/en/core-activities/capacity-development/phytosanitary-capacity-evaluation/ for more information), a country should take decision about the most appropriate model for its use.

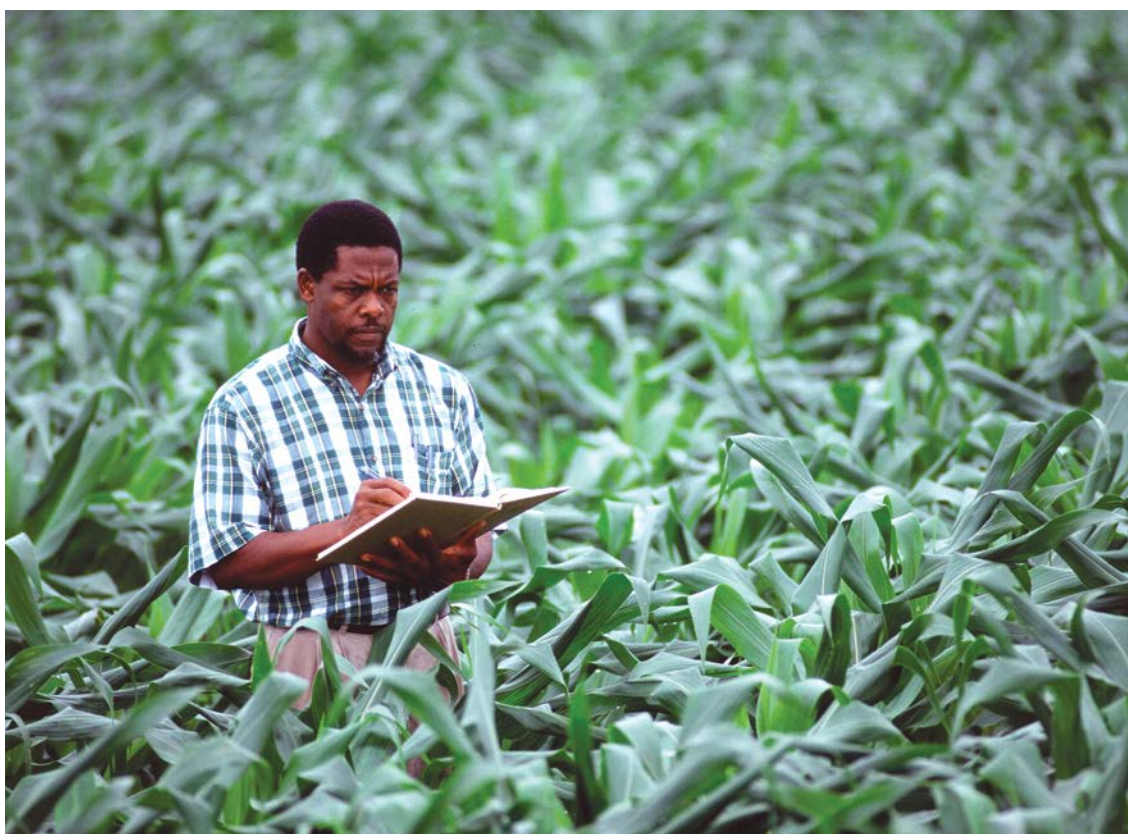
Model 1: Plant protection and quarantine sections or departments of the Ministry of Agriculture functioning as the NPPO

This model could be perceived as limiting, considering the current broader NPPO mandate, and may suffer from a lack of priority in the Ministry, which will have many departments competing for limited resources. The main features of this structure are:

- ◆ dependence on resources allocated by the Ministry of Agriculture

Figure 3: Structure of a decentralized NPPO





Credit: Scott Bauer

- ◆ limited flexibility in resource allocation and independent revenue generation
- ◆ user fees often go to the national treasury rather than back to the NPPO for its improvement
- ◆ difficulty in making funds available for emergencies, since provisions are not always made in the regular budget
- ◆ requirement for administrative instruments for collaboration among units in order to implement phytosanitary measures, as outlined by the IPPC
- ◆ sometimes a lack of competent personnel and overdependence on external agencies renders this arrangement prone to untimely responses; scientifically justified measures applied may also be compromised.

Model 2: The Ministry of Agriculture as the designated NPPO

In this model, the Ministry of Agriculture is legally the NPPO. In its national legislation, various units or departments (e.g. plant quarantine, plant protection, national agricultural research institutes and diagnostics) are given responsibilities that may

fulfil national obligations under the IPPC in various degrees. Such an arrangement is also limited by its dependence on the Ministry's policies and resource allocation. The main features of this structure are:

- ◆ a lack of independence in function and limitation of the level of cooperation among units
- ◆ requirement for at least an internal administrative instrument; for example, establishment of a management and coordination body drawn from the various functional units to promote shared goals, identify priorities and plan activities towards the implementation of the IPPC
- ◆ lack of business orientation (i.e. support for private sector, encouraging traceability, market access, import/export and phytosanitary programmes in a cost-effective manner)
- ◆ requirement for a level of independence in technical decision-making to ensure that the principles of the IPPC are respected
- ◆ susceptibility to political changes and interventions
- ◆ limited ability to allocate or attract resources independently.

Model 3: NPPO with some key functions delegated to third parties

This model may represent a mature NPPO that has control over third-party authorization, and involvement and auditing of third parties or collaborating institutions. These may be government agencies or independent institutions with specific capabilities. Pest surveillance, treatment and diagnosis are examples of activities that may be contracted out, but the NPPO remains responsible for their implementation. The main features of this structure are:

- ◆ legally binding contractual arrangements and responsibilities
- ◆ robust monitoring of procedures and processes
- ◆ auditing to ensure that compliance with the IPPC is maintained
- ◆ competent personnel to undertake necessary monitoring for compliance
- ◆ ability to fund operations
- ◆ fees are retained for improvement of the NPPO and its operations.

Model 4: Semi-autonomous or autonomous organization

This is a semi-autonomous or autonomous institution with competencies and capabilities for fulfilling the functions of the NPPO. It is normally supervised by a ministry or government and has the following features:

- ◆ independence to establish its own vision, mission and core values

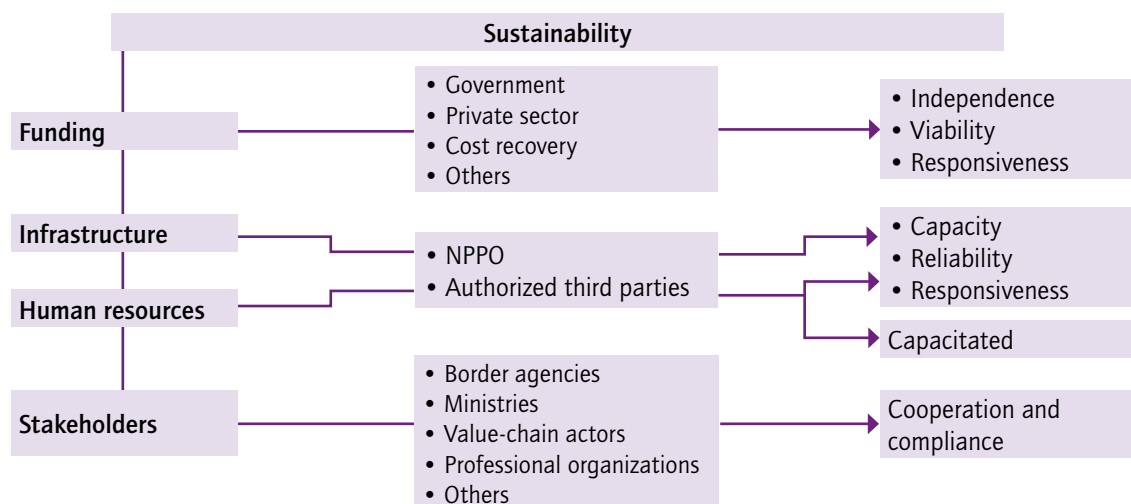
- ◆ flexibility to establish the systems and policies needed to implement its functions effectively
- ◆ budgetary independence
- ◆ ability to attract funding from stakeholders
- ◆ flexibility in resource allocation
- ◆ strong business orientation
- ◆ ability to establish relationships with stakeholders and third-party providers
- ◆ responsibility for its work culture
- ◆ good accountability, with international-level auditing, high level of recognition and good authorization procedures
- ◆ usually responsible for additional plant protection issues (e.g. pesticides, seed certification and genetic resources).

Model 5: Integrated institution

In recent years, some countries have opted for an integrated model, which consolidates their SPS regulatory functions under a single agency (i.e. plant health, animal health and food safety competencies). The main features of this structure are:

- ◆ consistent administrative provisions across functional bodies
- ◆ adequate technical and managerial support for each functional unit
- ◆ umbrella agency responsible for procuring funding and setting fee structures
- ◆ officers may be cross-trained in SPS measures or remain as specialists in their own areas of sanitary or phytosanitary measures

Figure 4: Elements of sustainability



- ◆ greater collaboration among sectors of the institution including border control
- ◆ established authority for managing different sectors
- ◆ components share resources and work together towards a common goal
- ◆ integrated systems for implementation, monitoring and review
- ◆ develops its own framework for emergency/crisis management/incursion management
- ◆ needs a strong political will and coordination abilities
- ◆ consolidated legal frameworks covering the three functional SPS units (these sometimes present difficulties because peculiarities in each of the disciplines are not often covered appropriately; it is more appropriate for each unit to have its own legislation, with the umbrella body providing the necessary administrative support. In some cases the organization may be consolidated as a statutory body, or within the government structure with greater autonomy and independence.)
- ◆ the NPPO may lose its independence in the decision-making process
- ◆ at risk from budgetary constraints, which tend to affect plant health before veterinary or food safety issues
- ◆ visibility of plant health issues could increase.

6.3 Elements of sustainability

The role of the NPPO in contributing to national development relies on the sustainability of its programmes. Sustainability should therefore be considered in its establishment to ensure that it functions effectively and predictably. Factors contributing to the sustainability of the NPPO include:

- ◆ independence from political influence
- ◆ regular and adequate national budget to fund phytosanitary programmes
- ◆ secured sources of funding for phytosanitary emergencies and crises
- ◆ access to minimum resources via third parties if the NPPO does not possess them
- ◆ adequate numbers of appropriately trained staff with the required levels of competency
- ◆ good staff development and retention practices
- ◆ meaningful stakeholder relations and awareness-creation programmes.

6.4 Competencies and shared resources

An NPPO needs various competencies and specialized skills to perform its required functions. For example, subject specialists are required for pest diagnostics, surveillance, PRA, information management, export certification and import verification. It is suggested that each of the key functions (e.g. issue of phytosanitary certificates) is assigned to a discrete section or division within the NPPO and that the NPPO has the necessary capacity to fulfil these.

While the NPPO is not required to possess all the required competencies, it needs to have access to them. This can be through in-kind collaboration or systems of authorization, where the responsibility always lies with the NPPO. The use of an approval or authorization system should be supported by a considered cost-recovery mechanism. When establishing (and operating) an NPPO, the contracting party should be aware of national, regional and international bodies that may be able to provide additional resources beyond those of the NPPO. National institutions such as universities, relevant research institutions, regional plant protection organizations (RPPOs), centres of phytosanitary excellence, private companies and international organizations all represent resources that may be tapped.

Prerequisites for successful sharing of resources will include the following:

- ◆ the NPPO or the contracting party should establish instruments of collaboration or authorization (e.g. letters of agreement, contracts and memoranda of understanding) with these institutions to ensure the NPPO is served in a timely manner
- ◆ collaborating institutions or service providers should be made aware of the national obligations to be fulfilled under relevant international conventions
- ◆ protocols, manuals or standard operating procedures should be developed for the

collaborating institutions based on ISPMs and they should be trained on relevant standards to ensure that the integrity of their inputs is not compromised

- ◆ the collaborating institutions acting on behalf of the NPPO should be approved, monitored and audited according to requirements established by the NPPO
- ◆ performance and instruments of collaboration and authorization should be reviewed, as necessary.

Discussion Question:

- ◇ Sketch out a potential organizational diagram or structure appropriate to an NPPO in your country. Which model of institutional structure is most appropriate to your situation? Could this model be improved? How?



Credit: Scott Bauer

7. Positioning the NPPO in the National Context

Learning objectives

- Understand the need to establish meaningful relationships with stakeholders
 - Learn about the different types of stakeholders who will be involved in NPPO activities
-

Signatories to international treaties, such as the IPPC and the WTO SPS Agreement, require an appropriate national response in fulfilling their obligations under these treaties. The NPPO can only achieve this when it recognizes and establishes meaningful relationships with its stakeholders.

7.1 Border agencies

Border, immigration, customs, port, food safety and animal health agencies or authorities work at the borders of the country in a collaborative manner. Provisions for border control are facilitated largely by other border authorities and they must understand NPPO phytosanitary requirements. Immigration cards, which may include the declaration of regulated articles, must be agreed by all regulatory agencies. Customs and postal services are well placed to refer interceptions or advise the NPPO regarding the entry of regulated articles declared in manifests and assist in enforcement of phytosanitary regulations.

7.2 Ministries

The term “ministries” is used here in a generic sense, recognizing that government institutions may be named differently in some countries, while performing similar functions. It is also acknowledged that government institutions in separate countries may group their functions differently.

Environment: The ministry responsible for the environment may become an important partner when dealing with such issues as the use of pesticides for disinfestation, strategies for eradication or control

of pests, invasive alien species, environmental impact assessments and observing international environmental agreements (e.g. the Montreal Protocol, CBD and CITES).

Justice: The NPPO deals with the ministry responsible for justice regarding the enactment or amendment of legislation so that appropriate legal frameworks provide the authority needed for NPPO functions, in addition to prosecution functions if necessary under legislation.

Trade and commerce: This ministry is responsible for setting import requirements and issuing import licences (where applicable) and should be made aware of phytosanitary procedures (e.g. risk analysis), phytosanitary measures for export certification and other activities that promote access to external markets.

Finance: The finance ministry should understand the importance of NPPO functions in relation to food security and the protection of national plant resources and the environment. Such awareness establishes the rationale for the provision of regular funding support and additional funds when it becomes necessary to deal with phytosanitary emergencies.

Foreign affairs: This ministry is the interface between trading partners and international organizations such as the WTO, Food and Agriculture Organization of the United Nations (FAO) and Biological Weapons Convention.

Agriculture, forestry and rural development:

Working with this ministry can create synergies across relevant departments in support of NPPO functions, since NPPOs have responsibility for the protection of cultivated and wild plants.

Education: The ministry responsible for education should be aware of the need for appropriate training and human resource development in plant protection.

Science and technology: This ministry may be an important partner in phytosanitary research and technology development.

Health and food safety: This ministry may be a close partner in efforts to address such issues as the safe disposal of waste from cruise ships, food quality relating to pest infestations and the regulation of pesticides.

Tourism: This ministry can inform tourists about NPPO requirements regarding bringing food or plants into the country.

Security and defence: This ministry may be involved in enforcing national legislation relating to plant health at the borders, assisting in eradication campaigns and internal quarantine enforcement activities.

7.3 Private sector and consumers

This group includes producers, importers, exporters, consumers, traders and processors that are key clients and beneficiaries of the NPPO and are involved in the production, marketing and consumption chain. It is very important to build a good relationship with these groups. The benefits of building stakeholder relations include:

- ◆ increased compliance with NPPO requirements
- ◆ greater awareness and understanding of the importance and implications of phytosanitary requirements and measures
- ◆ provision of funds to the NPPO for specific facilities and services that are critical to businesses' success

- ◆ creation of a powerful lobby for NPPO improvement
- ◆ early detection of new pests or pest outbreaks and timely responses by the NPPO to changing pest status
- ◆ valuable contributions to discussions on new SPS measures, ISPMs, emerging issues and changes in regulations that may affect the private and civil society sectors.

Producers can assist the NPPO by:

- ◆ complying appropriately with phytosanitary regulations
- ◆ undertaking pest surveillance, where appropriate
- ◆ recording and promptly reporting the detection of new pests
- ◆ improving their knowledge of pests associated with crops or plants.

Exporters and importers can assist the NPPO by:

- ◆ complying appropriately with import/export requirements for inspection, verification and certification
- ◆ being vigilant and prompt in reporting new pests or pest problems
- ◆ providing information about importing countries' phytosanitary requirements
- ◆ providing comments on or assist in investigating notifications of non-compliance
- ◆ improving their knowledge of export-import regulation.

Consumers can assist the NPPO by:

- ◆ safely confining infested commodities and associated pests
- ◆ promptly reporting to the NPPO cases of infested commodities, including the name of the commodity, where it was purchased, date of purchase, date of observation of pests and storage conditions, where appropriate
- ◆ participating in pest surveillance projects through citizen science, where appropriate
- ◆ recording and promptly reporting the detection of new pests.



Credit: FAO/IPPC/Alessandra Benedetti

7.4 Institutions

Institutions may provide services to the NPPO. They include universities, research centres, disinfestation and disinfection companies and diagnostic laboratories. The benefits of building good working relationships with these stakeholders include the following.

Universities:

- ◆ access to subject specialists
- ◆ research relating to plant health
- ◆ inclusion of phytosanitary modules in degree programmes, where appropriate
- ◆ training of NPPO staff in relevant topics
- ◆ joint research programmes with shared costs
- ◆ surveillance and development of pest data sheets and databases.

Disinfestation and disinfection companies:

- ◆ effective and compliant treatment of regulated articles
- ◆ disinfestation/disinfection of regulated articles in emergency response situations.

Diagnostic institutions:

- ◆ provide pest diagnoses and develop pest data sheets
- ◆ train NPPO staff in pest recognition and identification.

Discussion Question:

- ◇ List the main stakeholder groups who need to work with your NPPO. How will you engage them?



8. Mechanisms for Funding NPPOs

Learning objectives

- Understand the need to establish an adequate and stable funding base
 - Learn about the different sources of funding available to an NPPO
-

The mechanisms for funding an NPPO are based largely on its institutional arrangements and level of autonomy. NPPOs are most efficient and effective when they have an adequate, stable funding base. National legislation may provide guidance on this issue. NPPOs in many countries are funded by government allocations and collected fees. This chapter describes the principal sources of funds.

8.1 Government budget

When NPPOs depend solely on government funding, they may compete with other national institutions. Since government priorities sometimes change, reallocation of funds may have a negative effect on NPPO programmes. Furthermore, allocation may change from year to year and this will affect the ability of the NPPO to pursue its strategic goals. Government funding is usually linked to approved work plans and may limit flexibility to allocate emergency funding. Staff numbers may be constrained by government approval policies and allocations.

8.2 User fees

User fees allow the NPPO to recover the costs of plant protection services in full or in part. This includes issuing phytosanitary certificates, performing inspections and conducting PRAs, among others. A cost-recovery system supports the continuous improvement of phytosanitary services. In many countries, however, user fees go straight into the government treasury and government priorities determine what portion, if any, is allocated to phytosanitary improvement. There appears to

be a growing trend in which part or all of the user fees collected are transferred to the NPPO. In these cases it is important to retain a separate budget for staffing to avoid overdependence on fees.

User fees should be:

- ◆ fair, uniform and related to the cost of delivering the service
- ◆ reasonable and not represent a barrier to trade imports and exports
- ◆ considerate of social and development implications, e.g. monitoring of pest free areas may be an important part of national development plans promoted by the government
- ◆ reviewed at regular intervals
- ◆ applied to overtime activities (reimbursable overtime services) and rationalized based on the cost and time required for providing these services.

8.3 Contingency and other emergency funds

The NPPO needs access to extraordinary financial resources so it can respond to phytosanitary emergencies. These include containment or eradication of an introduced quarantine pest or other pest outbreaks, and compensating growers whose farms may be quarantined or whose crops have to be destroyed. In an ideal situation, the NPPO would have a contingency fund supplied by government and industry donors. Without such an emergency fund, the NPPO may be unable to respond to the spread of a quarantine pest, thus making eradication difficult or impossible. The serious consequences would include the following:

- ◆ significant damage to crops and threats to food security, economic growth and the environment
- ◆ loss of internal markets and increased costs of pest management
- ◆ loss of external markets and foreign exchange due to quarantine restrictions
- ◆ unemployment and possible social dislocation due to reduced crop production, the closing of processing plants and the cessation of export activities.

8.4 Grants, aid and other contributions

The NPPO may secure significant investment for improved services and infrastructure from extraordinary allocations or special line items from the general treasury, co-funding and partnership arrangements with the private sector and donations from international or regional organizations. Investment loans and grants may be obtained by the government or autonomous NPPO from a donor or lending institution.

8.5 Securing funds

The NPPO needs to have good ability to access financial resources to ensure its sustainability. Defined and independent NPPOs tend to be better able to attract external funding.

Government allocation of funding is influenced by its priorities. The level of awareness of the phytosanitary service in terms of national food security, market access and protection and

improvement of its plant resources is sometimes not well understood. The NPPO has to be positioned properly in the list of priorities in order to secure adequate funding. It therefore needs to educate all stakeholders, including politicians and consumers, about the following:

- ◆ the specific national obligations and functions of contracting parties, as outlined by the IPPC
- ◆ the costs and benefits of conducting these functions
- ◆ the value of consignment rejections and revenue lost due to inadequate certification procedures
- ◆ problems in accessing or maintaining export markets due to lack of credibility in export certification or in establishing equivalency recognition agreements as alternative SPS measures
- ◆ the implications and consequences of the introduction of a quarantine pest on the national economy, food security and environment, and the potential impacts of inadequate pest exclusion on livelihoods.

Discussion Question:

- ◇ What is the main funding source for your NPPO? How could you broaden your sources of funding?

9. Third-Party Service Providers

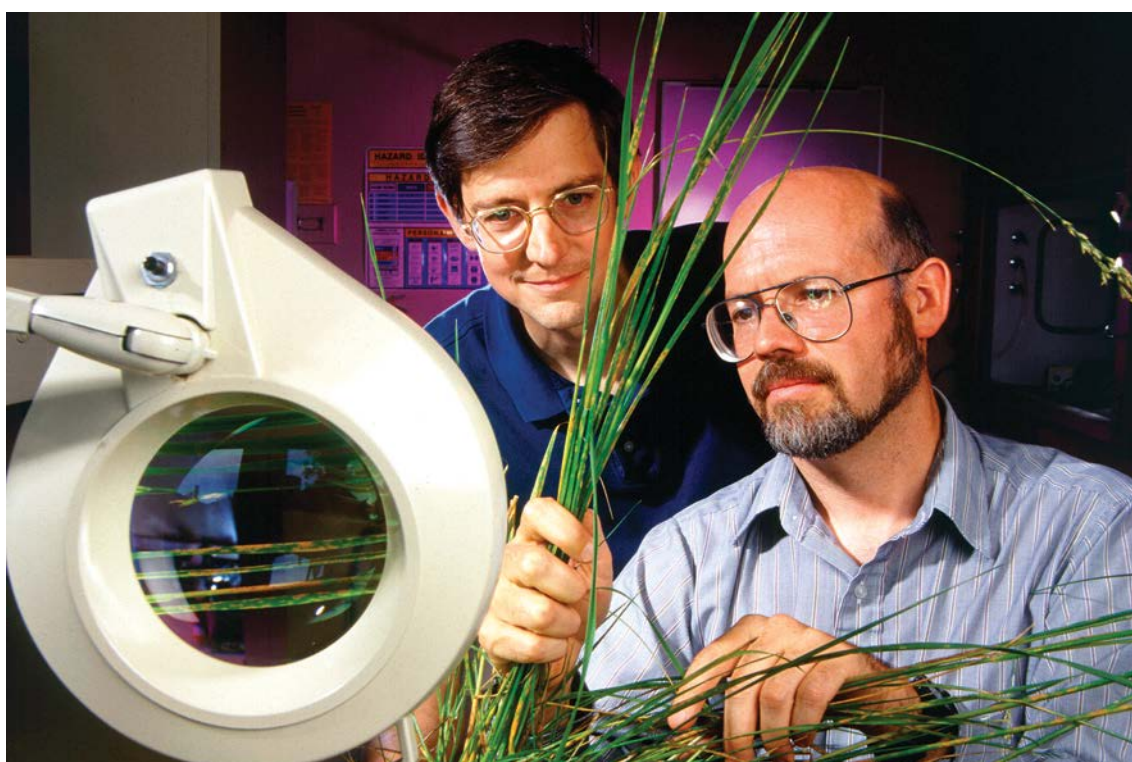
Learning objectives

- Understand when the NPPO may need to work with third parties
- Learn about the approval procedures and instruments of engagement that can be used when establishing working arrangements with third parties

Due to the wide range of activities required in the application of phytosanitary measures consistent with the IPPC, many NPPOs use third parties to support them or to perform certain functions on their behalf. For example:

- ◆ laboratories with specific competencies may be approved and authorized to perform tests and pest diagnoses to support certification of regulated articles
- ◆ approved companies may conduct disinfection or disinfestation of regulated articles, e.g. wood packaging materials
- ◆ universities and research institutions may conduct surveillance in accordance with ISPMs, making the information available to the NPPO
- ◆ institutions or individuals may develop the initiation and assessment phases of PRAs externally, while the NPPO oversees the management phase and determines what options to put in place (see ISPM 2, 2007; ISPM 11, 2013; ISPM 21, 2004).

The NPPO is legally responsible for all actions performed internally or by third parties. A responsible NPPO acquires the services of a third party



Credit: Brian Pechtel

when necessary through a formal agreement to hold the third party accountable and liable. Several forms of agreement can be prepared with various legal weightings. It is important for the NPPO to retain oversight and maintain accountability, reliability and independence.

9.1 Approval procedures

In the context of this manual, approval (or authorization) by the NPPO ensures that the potential service providers or collaborators have the required capacity and have no conflicts of interest in providing the specified services. The process of approval involves several steps:

- ◆ identify a potential service provider (e.g. laboratory, company, institution or individual)
- ◆ determine the requirements of approval by the NPPO
- ◆ conduct monitoring, assessment and auditing to ensure compliance with the requirements
- ◆ grant approval status for a prescribed time once the required level of compliance has been achieved
- ◆ monitor, audit and review procedures for recertification.

9.2 Instruments of engagement

The NPPO may establish formal agreements to ensure that the service providers and collaborators are held accountable and are legally liable. The NPPO will most likely need legal assistance to develop these. Potential instruments available to the NPPO are listed below.

Letter of agreement

A letter of agreement is a formal statement setting out the terms of a working relationship involving individuals or organizations. It can be used to define the agreement between the NPPO and the third party. A written agreement helps to protect the legal rights of the NPPO and details its own and the

third party's responsibilities. The NPPO may use a letter of agreement to start negotiations or instead of a more formal business contract.

Contract

A contract defines the relationship between two or more persons or organizations in which there is a promise to do something in return for a valuable benefit known as a consideration. It has specific terms and, in some cases, a contract can consist of several documents, including letters, orders, offers and counter-offers.

Memorandum of agreement

A memorandum of agreement (MOA) (also referred to as memorandum of understanding or cooperative agreement) is a document written between parties (internal or external) to formalize their cooperation on a project or to meet an objective. It serves as a written understanding of the agreement. An MOA can be used to formalize a relationship among agencies and the federal or state governments, organizations and individuals. In addition to laying out the ground rules, it can be used to outline the terms governing the working of two entities on certain projects, or as a general partnership. It will list the agreed responsibilities of the partners and the benefits to each party. The agreement usually contains binding terms that make the partnership a cohesive unit and there may be an obligation to provide funds.

Discussion Question:

- ◆ List the main third-party providers of services to your NPPO. What is the best form of agreement for each?



10. Mechanisms for Enforcement and Redress

Learning objectives

- Understand the role of the NPPO in enforcement of national phytosanitary regulations
 - Learn about the different partner agencies, resources, offences and penalties, litigation and redress associated with enforcement
 - Understand the need for effective public awareness of phytosanitary regulations
-

The responsibility for law enforcement may be assigned to the courts, the Minister of Agriculture, the head of the NPPO or the phytosanitary inspectors themselves. Modern phytosanitary legal frameworks should clearly define enforcement and redress mechanisms to ensure that the legislation is being applied after enactment. Without provision for enforcement, a country will be exposed to unnecessary phytosanitary risks and instances of non-compliance with import requirements may lead to the introduction of pests.

10.1 Legal provisions for enforcement of national regulations

NPPO inspectors

The role and authority of NPPO inspectors (or other technically competent personnel acting under the authority of the NPPO) should be made very clear and adequate provisions made for them to discharge their duties effectively. Border inspectors are particularly important since they are the front line of phytosanitary defence. NPPO inspectors have the following authority (Vapnek and Manzella, 2007):

- ◆ examine plants and plant products in warehouses, means of transport and industrial premises as well as areas of land, irrespective of the type of management thereof, of the form of property, season and other circumstances
- ◆ take samples of plants and plant products, growing mediums, seeds and propagating material according to established procedures

- ◆ assign persons to carry out the destruction of plants and plant products, the treatment with relevant pesticide and disinfection of plants, plant products and premises or transport if infested with regulated pests
- ◆ assign the use of specified devices and methods for destruction of infested plants or plant products
- ◆ prohibit the sowing of particular seeds, the planting and cultivation of plants, the use of soil contaminated with pests, the use of infected seeds or propagating material, and the transportation and sale of infected plants or plant products
- ◆ prohibit or determine restrictions regarding the importation, exportation and inland circulation of plants and plant products if nonconformity with the requirements has been determined.

Customs and immigration

The customs service is a close partner to the NPPO in the enforcement of phytosanitary regulations. Customs legislation gives the customs officers the authority and responsibility to act in enforcing national associated legislation. Customs officers have the following authority:

- ◆ advise the NPPO of plant and plant products and other regulated articles listed in manifests or declared by importers
- ◆ remove seals or other safety devices attached to containers or conveyances known to carry plant and plant products in the presence of the

phytosanitary inspector

- ◆ detect and refer plant and plant products to the NPPO
- ◆ retain plant and plant products for phytosanitary inspection and further action in the absence of the NPPO
- ◆ assist the phytosanitary inspector in search and seizure procedures, where appropriate
- ◆ monitor customs declaration forms relating to the import of regulated articles, including plants and plant products.

Similarly, the immigration service assists the NPPO by:

- ◆ including on immigration forms regulated articles that must be declared
- ◆ categorizing or directing passengers with regulated articles to the appropriate area for checking
- ◆ questioning passengers in relation to goods being brought into the country
- ◆ assessing (via immigration forms) which passengers may represent a phytosanitary hazard.

Others

The national phytosanitary legislation should impose a duty on both government officials and private citizens to report the detection of new pests. These groups include:

- ◆ plant protection officers
- ◆ extension agents
- ◆ farmers
- ◆ industry groups
- ◆ consumers
- ◆ researchers
- ◆ postal and courier services
- ◆ military establishments (regarding movement of regulated articles capable of harbouring pests)
- ◆ personnel involved in Internet trade.

10.2 Resources for enforcement

Legislation may prove difficult to implement or enforce because of a simple lack of resources or because of a failure to anticipate the pragmatic details of putting the law into effect, such as modes of enforcement and costs of implementation. There are many examples of well-drafted laws that have

been enacted without sufficient prior attention to the level of development of a country and its existing resources and which, as a result, prove difficult to implement (Vapnek and Manzella, 2007). Resources should take into account the availability of:

- ◆ adequate supporting facilities and equipment for conducting phytosanitary activities (e.g. inspections, confinement, sample collections and delivery to laboratories)
- ◆ adequate and logistically suitable inspection and holding areas
- ◆ required number of sufficiently trained personnel
- ◆ funding for phytosanitary actions
- ◆ adequate transport for movement of inspectors to points of inspection
- ◆ documented procedures and pest data
- ◆ information and information management system
- ◆ collaborative arrangements with other relevant agencies in support of national phytosanitary security
- ◆ provision that police and other government organizations, at the request of the NPPO, should provide assistance to ensure the implementation of regulatory requirements.

10.3 Offences and penalties

Offences must be defined, along with the penalties that may be imposed and the procedures that may be applied once an offence has been committed. It is a policy decision which activities are to be considered civil or criminal offences under the law. Some common offences covered by phytosanitary legislation include the following:

- ◆ importing or exporting plants or plant products without proper documentation or through an unapproved port of entry
- ◆ importing or exporting contraband material
- ◆ obstructing or hindering an inspector in the performance of his or her official functions or failing to comply with an inspector's instructions
- ◆ failing to carry out measures prescribed by the NPPO to contain or eradicate a regulated pest
- ◆ knowingly or recklessly providing false information to a representative of the NPPO
- ◆ breaking the seal on a sealed container

containing plants, plant products or other regulated articles, except in the presence of an inspector

- ◆ intentionally permitting or causing the introduction or spread of a harmful pest
- ◆ failing to safeguard the phytosanitary security of a consignment after issuance of a phytosanitary certificate
- ◆ unlawfully importing plants, plant products and regulated articles
- ◆ unlawfully using imported plants, plant products and regulated articles for purposes other than those for which they were imported.

Phytosanitary legislation gives powers to the NPPO inspectors (or those authorized to act on behalf of the NPPO) to, for example, confiscate, destroy or reship regulated articles that are prohibited or deemed not to meet the phytosanitary requirements of the importing country. Some of the actions mentioned above may already constitute an offence according to the general criminal law in the country and may not need to be set out in the phytosanitary legislation.

Regarding penalties, specific penalties may be listed for some offences in the legislation. Penalties should be serious enough to act as a deterrent, but not disproportionate to the offence committed. Punishment should be linked to the nature of the offence and to its magnitude. A judge may impose a confiscation of property, a fine or imprisonment, or all three. In some cases, enhanced fines are imposed for persistent offenders.

To prevent penalties becoming obsolete and insufficient over time and to maintain their deterrent effect, a range of penalties (rather than specific penalties) may be listed and the court given the power to select the appropriate penalty within the listed range. Fines may also be linked to the rate of inflation. For minor infractions, such as those committed by travellers who fail to declare plants or plant products when entering the country, inspectors may impose a system of immediate fixed penalties or "spot fines".

Administrative penalties constitute a viable alternative enforcement mechanism that can be more cost-effective, timely and practical than

criminal penalties. In administrative sanctions, the power to impose penalties is vested in an administrative agency, not a judicial body. This means that part of the executive branch of government or the NPPO would have the power to punish certain kinds of phytosanitary violations. Administrative penalties are imposed outside the judicial process, i.e. without the intervention of any court. Where administrative penalty schemes are in use, the law should provide for resort to courts by persons aggrieved by such administrative decisions (Vapnek and Manzella, 2007). Under a system of administrative penalties (defined in national phytosanitary legislation), the NPPO may, with established procedures, take the following actions:

- ◆ impose a fine
- ◆ order that regulated articles are re-exported
- ◆ destroy a regulated article
- ◆ order remedial action to be carried out (or cost borne) by the violator
- ◆ withdraw licence or permission to import after repeated violations.

10.4 Litigation and redress

Phytosanitary legislation routinely contains provisions to address liabilities and redress. For example, inspectors or officials are not liable for anything done in good faith in the performance of their functions under the law. Similarly, there is no liability associated with damage to plants or plant products imported contrary to the legislation, or for destruction of plants where the government has a legitimate reason for taking phytosanitary action.

Most phytosanitary laws will allow landowners, importers and individuals to appeal against decisions made by inspectors to destroy, dispose of or treat plants, plant products or other regulated articles, with the details of the appeals procedure set out in regulations.

Offences that can be committed by inspectors or other representatives of the NPPO include:

- ◆ seizing plants or plant products for any reason other than that they are likely to introduce or spread a pest (this is to prevent corruption)
- ◆ disclosing to another person information acquired in the exercise of official functions under the law

- ◆ directly or indirectly asking for or taking any personal payment or other reward, or abstaining from conducting an official action for improper reasons.

10.5 Non-compliance

The IPPC makes provision for contracting parties to report significant instances of the non-compliance of consignments with phytosanitary import requirements and to take emergency action when required. Such instances include failure to comply with phytosanitary import requirements, detection of regulated pests and failure to comply with documentary requirements. Instances of non-compliance put the importing country or transit country at risk. Enforcement procedures for compliance require adequate staff, appropriate reporting, and efficient communication and documentation systems.

10.6 Public awareness

A public awareness programme is necessary to inform and capacitate the public and other stakeholders about the national phytosanitary regulations and their importance to protecting national plant resources, food security and market access. It will also help to secure cooperation with and support for phytosanitary laws and regulations. A public awareness programme should promote knowledge and understanding of phytosanitary control among government ministries, agencies

and private sector groups. Suggested components include the following:

- ◆ communication system (internal and/or external) with appropriate expertise and networks
- ◆ communication strategy that includes different media; for example, television, radio, social media applications, newspapers, booklets, brochures and courses
- ◆ media focal point and media management system to ensure consistency in the quality and nature of the information exchanged between the NPPO, the press and other clients.

Emergency action

A prompt phytosanitary action undertaken in a new or unexpected phytosanitary situation [ICPM, 2001]

Discussion Question:

- ◇ What is the role of NPPO inspectors in enforcing phytosanitary law? What other services are involved in your country and what are their responsibilities?

11. Monitoring, Review and Evaluation

Learning objectives

- Understand the areas of the NPPO that may require regular evaluation
-

A review mechanism is a structured and on-going process designed to determine the extent to which the NPPO is fulfilling its obligations under national, regional and international expectations. When developed appropriately, a review mechanism assists the NPPO to improve its procedures and policies.

Specific areas for review include:

- ◆ the level of collaboration among functional units
- ◆ any gaps in the ability of the NPPO to discharge its mandate
- ◆ resource availability and ability to attract resources
- ◆ performance of NPPO staff at various levels of operation
- ◆ legislative frameworks for dealing with current and emerging issues
- ◆ level of stakeholder satisfaction
- ◆ suitability of policies in relation to the NPPO mandate
- ◆ effectiveness of institutional arrangements in support of procedural issues
- ◆ level of independence and credibility of the NPPO in dealing with technical matters with its clients and trading partners.

A review group may be comprised of experts (internal or external or private sector) who can evaluate the NPPO objectively against its mandate. This supports transparency and provides a desired basis for improvement of the organization. A review mechanism could include on-going monitoring as well as periodic reviews.

It is highly recommended that contracting parties conduct a review of their functions, such as using the Phytosanitary Capacity Evaluation tool, to understand the national context in which the NPPO operates and to detect gaps, prioritize the activities and resources and planning of future activities (see www.ippc.int/en/core-activities/capacity-development/phytosanitary-capacity-evaluation/ for more information).

Discussion Question:

- ◇ Which areas could be covered by a monitoring, review and evaluation plan in your NPPO? Who will be responsible for its implementation?

12. References and Resources

IPPC. 1997. *International Plant Protection Convention (1997)*. Rome, Secretariat of the IPPC, FAO.

ISPM 2. 2007. *Framework for pest risk analysis*. Rome, IPPC, FAO.

ISPM 5. 2015. *Glossary of phytosanitary terms*. Rome, IPPC, FAO.

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WTO. 1994. *The WTO Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement)*. World Trade Organization, available at https://www.wto.org/english/tratop_e/sps_e/spsagr_e.htm (accessed August 2015).

Vapnek, J. and Manzella, D. 2007. *Guidelines for the revision of national phytosanitary legislation*. FAO Legal Papers Online No. 63. Rome, FAO, available at www.fao.org/fileadmin/user_upload/legal/docs/lpo63.pdf (accessed August 2015).

Easy-access list of additional resources

Department of Agriculture, Department of Commerce, Department of Defense, Department of Health and Human Services, Department of Homeland Security, Department of the Interior, Department of Justice, Department of State & Environmental Protection Agency. 2005. *Memorandum of Agreement for an Integrated Consortium of Laboratory Networks (ICLN)* available online at www.icln.org/docs/moa.pdf (accessed August 2015).

International Plant Protection Convention website: www.ippc.int

Adopted ISPMs: <https://www.ippc.int/core-activities/standards-setting/ispm>

IPPC Convention text: <https://www.ippc.int/publications/1997-international-plant-protection-convention-new-revised-text>

Phytosanitary Resources page: www.phytosanitary.info – manuals, training materials, and other resources. Materials posted to the page have been reviewed and noted by the IPPC Capacity Development Committee for relevance and consistency with the IPPC framework.

Training manuals and e-learning course on PRA: <http://phytosanitary.info/pra>

Additional materials can be contributed (in any language) through a form on the page, for review by the IPPC Capacity Development Committee.

IPPC helpdesk: <http://irss.ippc.int/helpdesk> – includes a question and answer forum, frequently asked questions and links to additional resources.

IPPC

The International Plant Protection Convention (IPPC) is an international plant health agreement that aims to protect cultivated and wild plants by preventing the introduction and spread of pests. International travel and trade are greater than ever before. As people and commodities move around the world, organisms that present risks to plants travel with them.

Organization

- ◆ The number of contracting party signatories to the Convention exceeds 181.
- ◆ Each contracting party has a national plant protection organization (NPPO) and an Official IPPC contact point.
- ◆ 10 regional plant protection organizations (RPPOs) have been established to coordinate NPPOs in various regions of the world.
- ◆ IPPC liaises with relevant international organizations to help build regional and national capacities.
- ◆ The Secretariat is provided by the Food and Agriculture Organization of the United Nations (FAO-UN).



International Plant Protection Convention (IPPC)

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