



# Characterization of **National Capabilities** to Respond To Emergencies in Animal Health and Plant Protection

María de Lourdes Fonalleras, Ricardo Molins, Amy Delgado,  
Ericka Calderón, Ana Marisa Cordero



# Characterization of **National Capabilities** to Respond To Emergencies in Animal **Health and Plant Protection**

María de Lourdes Fonalleras, Ricardo Molins, Amy Delgado,  
Ericka Calderón, Ana Marisa Cordero

Inter-American Institute for Cooperation on Agriculture (IICA). 2014



Characterization of National Capabilities to Respond to Emergencies in Animal Health and Plant Protection is published under license from [Creative Commons Attribution-NonCommercial-ShareAlike 3.0 unported](https://creativecommons.org/licenses/by-nc-sa/3.0/)  
Available in PDF format at [www.iica.int](http://www.iica.int)

IICA encourages the fair use of this document. Proper citation is requested.

This publication is also available in electronic (PDF) format from IICA's Web site at <http://www.iica.int>

Editorial coordination: Ana Marisa Cordero  
Translation: Marguerite Groves  
Layout: Carlos Umaña  
Cover design: Carlos Umaña

Fonalleras, María de Lourdes

Characterization of National Capabilities to Respond to Emergencies in Animal Health and Plant Protection / María de Lourdes Fonalleras...[et.al] – San José, C.R.: IICA, 2014

45 p.; 15,24 cm x 22,86 cm

ISBN: 978-92-9248-523-8  
Published also in spanish

1. Plant protection 2. Animal health 3. Disease control 4. Animal diseases 5. Pest control 6. Plant diseases 7. Phytosanitary measures 8. Public health I. IICA II. Title

AGRIS

E50

DEWEY

632

San José, Costa Rica  
2014

# Introduction

---

The fast-paced movement of people and products worldwide and changes in the use of habitat can lead to the introduction or emergence of animal diseases and plant pests. These types of outbreaks can significantly hurt the economy and society because of their impact on public health, means of livelihood, sustainability of the rural environment and food security. The economic, social and environmental sectors are affected; national and international trade suffers losses, production declines, the quality of products is lowered and the agricultural sector is weakened.

Emergency response procedures also involve high costs, especially if compensation (for destruction or depopulation) is part of the pest or disease control strategy. Certain measures can have direct consequences on production and, therefore, on communities that depend on agriculture. Sectors like tourism and transport can also be affected.

An inappropriate response can result in a loss of confidence in the authorities and tarnish the relationship between the government and producers. Certain measures, such as the burial of dead animals or extensive use of pesticides, can also have a serious and permanent impact on the environment. Consequently, agencies that are responsible for animal health and plant health are under pressure to respond quickly and efficiently to any outbreak that may occur.

Although many countries have been able to move ahead with emergency response planning, their efforts usually focus on a single aspect of the process or on a single disease. Responding appropriately to a new or emerging disease and having the capacity to control its spread requires the adoption of a comprehensive approach that includes aspects such as prevention, early detection, the capacity to prevent its spread and recovery of the original status.

This guide is intended to make available to the countries a method that will help them to determine their degree of preparedness in the event of a sanitary or phytosanitary emergency. The results can be used to identify strengths and weaknesses, define which areas need to be improved, monitor achievements, modernize procedures and prepare projects for institutional strengthening.

The terms used are consistent with those used in the glossaries of the Terrestrial Animal Health Code and the Aquatic Animal Health Code of the World Organization for Animal Health (OIE) as well as in the Glossary of Phytosanitary Terms (2012) of the International Plant Protection Convention (IPPC). Annex I includes the definitions established in those glossaries.

# Tool for Characterizing National Capacity to Deal with a Sanitary or Phytosanitary Emergency

---

Experience has shown that an emergency plan for animal and plant health should include the following components:

- a) **Prevention:** the capacity and authority to reduce risks caused by animal diseases and plant pests. This refers to the identification and control of pathways of entry of a disease or pest and preventing its spread.
- b) **Detection:** the capacity and authority to identify and record the presence of outbreaks of diseases or pests in an area where its absence had been verified, or an increase in the incidence of a disease or pest in an area of low prevalence.
- c) **Response capacity:** the capacity and authority to respond rapidly to a sanitary or phytosanitary emergency.
- d) **Re-establishment** of the animal health status or the pest condition of an area: the capacity and authority to re-establish the productive cycle and trade relations.
- e) **Evaluation:** the capacity of the authorities to evaluate the emergency plan and emergency response.

Several competencies are assigned to each component and a qualitative level of progress is assigned to each competence. Each performance level shows the cumulative level of progress of each variable in terms of percentage relative to the optimal (100%). A higher level of progress means that the service meets the current and previous levels satisfactorily. To make the process as complete as possible, space is provided to clarify or expand upon the answers given.

Below is a hypothetical example for competence "3.1", which is one of the 33 competencies that make up the tool.

## Use of the results

### A. Technical capacity and legal authority

- 0% The agencies responsible for animal health or plant protection agencies lack technical capacity to declare a sanitary or phytosanitary emergency and respond to it appropriately.
- 33% In some instances, the agencies responsible for animal health or plant protection have the capacity to determine whether there is a sanitary or phytosanitary emergency, but they lack the legal authority to respond appropriately to such an emergency.
- 66% The agencies responsible for animal health or plant protection have the capacity as well as the technical/administrative procedures in place to declare a sanitary or phytosanitary emergency for the main diseases and quarantine pests. They also have the legal authority required to adopt measures for responding to these emergencies.
- 100% The same holds true here as at the previous level, but the agencies responsible for animal health or plant protection also have institutional guidelines and mechanisms that enable them to coordinate emergency activities with other pertinent government entities or institutions, as well as with the private sector.

The results of the application of the tool can help the Veterinary Services or the National Plant Protection Organization (NPPO) complement the results of the application of the Performance, Vision and Strategy (PVS) tool, when the latter has revealed flaws in the emergency response capacity. It can also be used alone to: a) evaluate the performance of the National Veterinary Service or the National Plant Protection Organization in each of the five components noted here; b) characterize the relative performance of each of the competencies; c) compare the performance of the National Veterinary Service or the NPPO to that of other services in the region or worldwide, so as to explore areas of cooperation; d) help determine the benefits and costs of investing in improvements and seeking assistance from financial and technical cooperation organizations; e) build a base for following up on activities and ensuring continuous improvement.

# 1

## Prevention

*The capacity and authority to reduce the risk caused by animal diseases or plant pests. This relates to the identification and control of entry pathways for a disease or pest and preventing its spread.*

### A. Surveillance

#### 1. Collection, recording and analysis of information on diseases and pests

- 0% The agencies responsible for animal health or plant protection do not have a system for collecting information on the situation of animal diseases or plant pests in the country.
- 25% The agencies responsible for animal health or plant protection collect, record and analyze, on a preliminary basis, information on the situation of animal diseases and plant pests that affect the main basic commodities in the country and in some neighboring countries and trading partners.
- 50% The agencies responsible for animal health or plant protection maintain an updated system of information on the situation of animal diseases and plant pests within the country's borders, and on those which present a risk and are present in neighboring countries and other trading partners.
- 75% Same as the previous level, but in addition, the agencies responsible for animal health or plant protection take into account the guidelines established by international standards for the establishment of surveillance systems.
- 100% The same holds true here as in the previous level, but in addition, the agencies responsible for animal health or plant protection submit the information to a process of analysis that is focused on prevention and risk analysis, and periodically prepare a report summarizing their activities and surveillance, making it available to the users and trading partners.



## 2. Geographical information systems

- 0% The agencies responsible for animal health or plant protection do not have a system to record geographical locations within the country.
- 25% The agencies responsible for animal health or plant protection have a system that allows them to identify, record and visualize basic infrastructure and the most vulnerable transport points (highways, border crossings, airports, sea ports, etc.).
- 50% The same holds true here as in the previous level, but in addition, the agencies responsible for animal health or plant protection have identified and recorded the geographical location of the most relevant places in an agricultural production or livestock farming chain (farms, markets, processing facilities, slaughterhouses, etc.).
- 75% The same holds true here as in the previous level, but in addition, the agencies responsible for animal health or plant protection analyze data from their geographical information system in order to identify the areas that are most vulnerable to the introduction of diseases or pests or to outbreaks.
- 100% The same holds true here as in the previous level, but in addition, the agencies responsible for animal health or plant protection also use the geographical information to investigate diseases or when outbreaks occur in order to adopt the appropriate response measures.

### 3. Risk assessment

- 0% The agencies responsible for animal health or plant protection do not have data on their countries or on other countries that would enable them to identify possible dangers and assess their risk.
- 25% The agencies responsible for animal health or plant protection have some data and have the capacity to conduct basic analyses that enable them do an approximation of the identification and understanding of possible dangers.
- 50% The agencies responsible for animal health or plant protection carry out assessment processes that enable them to identify the danger, understand the risk and recognize the pathways of entry of a disease or pest.
- 75% The same holds true as in the previous level, but in addition, the agencies responsible for animal health or plant protection are in a position to estimate or calculate the risk of the introduction of a disease or pest.
- 100% The same holds true as in the previous level, but in addition, the agencies responsible for animal health or plant protection engage in risk assessment processes, in accordance with international standards, and apply them to establish sanitary or phytosanitary measures.

## B. Risk management

### 1. Definition of sanitary and phytosanitary measures

- 0% The agencies responsible for animal health or plant protection apply basic inspection procedures, as well as sanitary and phytosanitary measures, which are also basic, mainly at border posts.
- 33% The agencies responsible for animal health or plant protection occasionally update the inspection procedures or other sanitary or phytosanitary measures at border posts, and for this they use information obtained from the surveillance system.
- 66% The agencies responsible for animal health or plant protection establish sanitary and phytosanitary import requirements as well as inspection procedures and sanitary and phytosanitary control measures, based on a surveillance system that they apply at border posts and throughout the rest of the country. Occasionally they rely on risk assessment procedures.
- 100% The agencies responsible for animal health or plant protection follow a formal risk assessment procedure in order to establish sanitary and phytosanitary import requirements as well as inspection procedures and sanitary and phytosanitary control measures which they apply at both border posts and throughout the rest of the country.

## 2. Cargo control

- 0% The agencies responsible for animal health or plant protection apply certain basic procedures for the inspection of commodities and consignments at border posts.
- 25% The agencies responsible for animal health or plant protection occasionally update inspection procedures and sanitary and phytosanitary measures, which they apply at both border posts and throughout the country, to commodities or consignments that could be considered risky.
- 50% The agencies responsible for animal health or plant protection periodically update inspection procedures and sanitary and phytosanitary measures, which they apply at both border posts and throughout the rest of the national territory, to commodities and regulated articles. The procedures are recorded in writing and the inspectors occasionally receive training in topics that are considered critical.
- 75% The agencies responsible for animal health or plant protection have issued formal inspection guidelines which differentiate between, and are specific to, commodities, containers, conveyance, and facilities, and which require that they periodically review the inspection processes or other sanitary or phytosanitary control measures applied to all regulated commodities or articles at both border posts and throughout the rest of the country. The officials keep themselves up-to-date on technical and procedural issues.
- 100% The same holds true here as at the previous level, but in addition, international standards are taken into account. The pertinent international and regional organizations, as well as trading partners are advised of any updates or new procedures. The procedures are audited by the agencies responsible for animal health or plant protection in the country. When these agencies consider it necessary, they also audit the procedures that the neighboring countries and other trading partners apply.

### 3. Passenger control

- 0% The agencies responsible for animal health or plant protection apply basic mechanisms for occasionally inspecting the luggage of international passengers so as to prevent the introduction of diseases or pests.
- 25% The agencies responsible for animal health or plant protection have mechanisms for randomly inspecting a portion of the luggage of international passengers and means of transport, as well as their waste material, so as to prevent the introduction of diseases or pests.
- 50% The same holds true here as at the previous level, but in addition, the agencies responsible for animal health or plant protection compile information on the origin, quantity and destination of regulated commodities and consignments and keep that information in a data base or register.
- 75% The same holds true as at the previous level, but in addition, the agencies responsible for animal health or plant protection use historical data on the interception of a consignment or a pest to prepare inspection procedures that increase the random inspection of passenger luggage and of means of transport and their waste material.
- 100% The same holds true here as at the previous level, but in addition, the agencies responsible for animal health or plant protection regularly inform other agencies and trading partners of efforts underway to prevent the introduction of diseases or pests.

#### 4. Good Livestock Practices (GLP) and Good Agricultural Practices (GAP)

- 0% The agencies responsible for animal health or plant protection do not actively promote the implementation of GLP and GAP.
- 25% The agencies responsible for animal health or plant protection occasionally produce educational material or offer training to promote GLP and GAP, which can help to reduce the introduction of diseases and pests and their spread.
- 50% The agencies responsible for animal health and plant protection frequently, and in cooperation with the private sector, produce educational material or offer training to promote GLP and GAP, including practices to minimize the introduction of diseases and pests and their spread.
- 75% The same holds true here as at the previous level, but in addition, the agencies responsible for animal health or plant protection also apply methodologies such as Hazard Analysis and Critical Control Points (HACCP) and keep the agricultural sector informed of the results.
- 100% The same holds true here as at the previous level, but in addition, the agencies responsible for animal health or plant protection promote the implementation of GLP and GAP through incentives or inspections carried out by specialists in animal or plant health.

## 5. Outreach and public education

- 0% The agencies responsible for animal health or plant protection lack mechanisms for educating the public about the risks associated with animal or plant health.
- 33% The agencies responsible for animal health or plant protection have mechanisms for informing the public about risks associated with animal diseases and plant pests, e.g., placing posters at border crossings or at airport terminals indicating that the entry of agricultural products is prohibited and explaining the reason for the prohibition.
- 66% The agencies responsible for animal health or plant protection have structured plans for keeping the public informed (through the mass media, such as television, radio, web sites, etc.) and, especially, transport companies during periods in which the risk of the introduction of diseases or pests is higher.
- 100% The same holds true here as at the previous level, but in addition, the agencies responsible for animal health or plant have developed educational programs for users in the agricultural and agro-industrial sectors (transport companies, live animal markets, fairs, blacksmiths, etc.) that could promote the introduction or spread of diseases or pests.

# 2

## Detection

*Capacity and authority to identify and record the presence of diseases or pests in an area where their absence was verified, or an increase in their presence in areas of low prevalence.*

### A. Surveillance

#### 1. Notification

- 0% The agencies responsible for animal health or plant protection do not have mechanisms that enable agricultural producers to advise of the possible presence of a pest or disease.
- 25% The agencies responsible for animal health or plant protection have a basic mechanism that allows agricultural producers to report situations where there is a suspicion of the presence of diseases or pests.
- 50% The same holds true here as at the previous level, but in addition, the agencies responsible for animal health or plant protection follow up on reports of suspicion of diseases or pests, within a reasonable time frame, through formal investigation which includes the collection of samples and, whenever necessary, laboratory testing for the purpose of diagnosis.
- 75% The same holds true here as at the previous level, but in addition, the agencies responsible for animal health or plant protection regularly offer training and workshops, in conjunction with the agricultural sector, and prepare educational material to help producers, professionals and other users to recognize symptoms that could indicate the presence of diseases or pests, and use the notification mechanism.
- 100% The same holds true here as at the previous level, but in addition, the agencies responsible for animal health or plant protection regularly prepare reports of their investigations, based on the concerns of agricultural producers, and make those reports available to the production and industrial sectors of the country, international and regional organizations, and trading partners.



## 2. Specific surveillance

- 0% The agencies responsible for animal health or plant protection do not have an official surveillance system that makes it possible to detect the entry of pests or diseases from abroad or from other areas in the country.
- 25% Agencies responsible for animal health or plant protection have an official surveillance system with established procedures for detecting the presence of pests or diseases of economic importance. These procedures are based on elementary sampling systems or use samples that have been gathered for other purposes.
- 50% The same holds true here as at the previous level, but in addition, agencies responsible for animal health or plant protection watch out for specific diseases and pests and use random preventive sampling.
- 75% The same holds true here as in the previous level, but in addition, agencies responsible for animal health or plant protection design and adjust the specific surveillance of diseases and pests coming from abroad and from other areas of the country, based on risk assessments.
- 100% The same holds true here as at the previous level, but in addition, the agencies responsible for animal health or plant protection do an audit and test the specific surveillance programs that are part of the official surveillance system.

### 3. Communication as a tool for detecting diseases

- 0% The agencies responsible for animal health or plant protection do not have a communication mechanism that facilitates dialogue with other national, state, provincial or local government institutions, or with the private sector.
- 33% The agencies responsible for animal health or plant protection maintain informal channels of communication with other national, state, provincial and local government institutions, and with the private sector, to identify trends or changes in the symptoms or signs of diseases and in the behavior of pests that could give an indication of their introduction.
- 66% The agencies responsible for animal health or plant protection promote official dialogue with other national, state, provincial and local government institutions, and with the private sector, to identify trends or changes in the symptoms or signs of diseases, and in the behavior of pests that could give an indication of their introduction.
- 100% The same holds true here as at the previous paragraph, but in addition, agencies responsible for animal health or plant protection regularly review data related to trends or changes in the symptoms or signs of diseases and in the behavior of pests and share that information with other national, state, provincial and local government institutions and with the private sector.

## B. Capacity to identify/diagnose diseases and pests

- 0% The agencies responsible for animal health or plant protection do not have the capacity to diagnose the presence of diseases in animals through clinical observation (symptoms and signs), or in pests, through the morphological characteristics of the pest insects.
- 25% The agencies responsible for animal health or plant protection can diagnose the presence of diseases in animals through clinical observation (symptoms and signs) and the presence of pests, based on their morphological characteristics, but they cannot confirm their identity through laboratory tests.
- 50% The agencies responsible for animal health or plant protection collect samples and send them appropriately and within the expected time frame to official laboratories, or laboratories designated for that purpose so that they can confirm the presence of diseases and pests of economic importance.
- 75% The agencies responsible for animal health or plant protection have established procedures for the collection of samples at the points of entry into the country or at border posts. The samples are managed appropriately and are sent within the expected time to official laboratories or laboratories designated for that purpose so that they can confirm the presence of diseases and pests of economic importance.
- 100% The same holds true here as at the previous level, but in addition, the agencies responsible for animal health or plant protection promote the accreditation or official approval of private laboratories and audit the quality of the diagnostic and collection procedures and the dispatch of samples. The national network of laboratories, as well as private laboratories have good insurance programs and are in a position to respond to an increase in the number of samples that require a rapid diagnosis or measures have been taken for other laboratories to be able to do this type of diagnosis in the event of an emergency.

### C. Demarcation capacity

- 0% The agencies responsible for animal health or plant protection have not anticipated the possibility of carrying out surveys to demarcate the infected or infested area when one or more cases of disease have been detected in an epidemiological unit or a pest population has been identified.
- 33% While it is true that the agencies responsible for animal health or plant protection have not anticipated how to conduct surveys to demarcate the infected or infested area, once one or more cases of disease have been detected in an epidemiological unit, or the presence of a pest has been identified, they do go to the trouble of obtaining information (from informal sources) to estimate the extent of the new sanitary or phytosanitary status.
- 66% The agencies responsible for animal health or plant protection have anticipated the use of surveys to demarcate the infested area following the detection of one or more cases of disease in an epidemiological unit or pest population. The results of the survey are useful in determining the sanitary or phytosanitary measures that are adopted.
- 100% The same holds true here as at the previous level, but in addition, technical criteria that are consistent with the detected disease or pest are considered for the design of surveys to demarcate the infected or infested area.

**D. Capacity to communicate the presence of diseases or pests to production and industrial sectors, to trading partners and to the pertinent regional and international organizations**

- 0% The agencies responsible for animal health or plant protection lack mechanisms for advising of the presence of reportable diseases or quarantine pests.
- 33% The agencies responsible for animal health or plant protection sporadically use informal mechanisms to communicate the detection of reportable diseases and or quarantine pests.
- 66% The agencies responsible for animal health and plant protection have formal mechanisms for advising of the detection of reportable diseases or quarantine pests, but they use them only on certain occasions.
- 100% The agencies responsible for animal health and plant protection have formal mechanisms for providing information on the detection of reportable diseases and quarantine pests, and constantly make this information available to the parties concerned.

# 3

## Response capacity

*Capacity and authority to respond rapidly to a sanitary or phytosanitary emergency, such as outbreaks of a disease or pest.*

### A. Technical capacity and legal authority

- 0% The agencies responsible for animal health or plant protection do not have either the technical to recognize a sanitary or phytosanitary emergency capacity or the legal authority to declare it and to respond appropriately.
- 33% The agencies responsible for animal health and plant protection do, in some cases, have the necessary technical capacity to determine whether or not there is a sanitary or phytosanitary emergency, but they lack the authority to respond appropriately to such emergencies.
- 66% The agencies responsible for animal health or plant protection have the technical capacity and the technical/administrative procedures in place to recognize and declare a sanitary or phytosanitary emergency in the case of recognized diseases and quarantine pests. They also have the legal authority to respond appropriately to the emergency.
- 100% The same holds true here as at the previous level, but in addition, the agencies responsible for animal health or plant protection have institutional mechanisms that enable them to coordinate emergency activities with other government institutions and with the private sector.

## B. Contingency funds

- 0% No contingency funds for implementing corrective action plans have been anticipated and the agencies responsible for animal health or plant protection can only obtain special resources by legislative or presidential decree.
- 33% A limited amount of contingency funds for implementing corrective action plans have been approved, but in order to access them, the agencies responsible for animal health or plant protection must obtain legislative or presidential authorization or else authorization from the pertinent ministry.
- 66% There are sufficient contingency funds for implementing corrective action plans in the agencies responsible for animal health or plant protection and have them available, when needed.
- 100% The same holds true here as at the previous level, but in addition, cooperative arrangements have been made to anticipate specific contributions from the private sector, when this is deemed necessary.

## C. Emergency response plans/Corrective action plans

- 0% The agencies responsible for animal health or plant protection do not have an emergency response plan, or a corrective action plan, for dealing with sanitary or phytosanitary emergencies.
- 25% The agencies responsible for animal health or plant protection have identified and assigned some functions to the response personnel in the event of a sanitary or phytosanitary emergency, but these are not always in writing.
- 50% The agencies responsible for animal health or plant protection have a sanitary or phytosanitary emergency response plan, which takes into account the structure and chain of command, but it is incomplete and does not have formal approval.
- 75% The agencies responsible for animal health or plant protection have a formal emergency response plan for one or more diseases or pests of interest, or a response plan for any type of danger, for dealing with sanitary or phytosanitary emergencies, which includes a standard chain of command and communication. The functions of the personnel in charge are established in writing.
- 100% The same holds true here as at the previous level, but in addition, the agencies responsible for animal health or plant protection have trained all their personnel in their functions in the event of sanitary or phytosanitary emergencies. The chain of command and communication is clearly established. The effectiveness of the response plan has been put to the test through simulation exercises.



## D. Capacity to identify the origin of an emergency

- 0% The agencies responsible for animal health or plant protection make no effort to determine the origin of a disease or pest, the pathway of entry or the mode of propagation.
- 33% The agencies responsible for animal health or plant protection maintain informal contact with stakeholders who could help them to have an idea of the origin of a disease or pest, the pathways of entry or the mode of propagation.
- 66% The agencies responsible for animal health or plant protection follow up on and verify information aimed at determining the origin or entry pathway of a disease or pest. This includes both technical and documentary information.
- 100% In addition to the foregoing, agencies responsible for animal health or plant protection report their findings to the international and regional organizations, trading partners from the country and other counterparts. They do so through official mechanisms and make the information available to the public.

E. Sanitary or phytosanitary or emergency measures: capacity and authority to define and apply control measures in response to an outbreak caused by a disease or pest

*I. Definition of control measures*

- 0% The agencies responsible for animal health or plant protection do not use information on the area or areas affected by the outbreak, nor on the animal health status, when determining the sanitary or phytosanitary emergency measures to be implemented in response to an emergency or an outbreak caused by an illness or a pest.
- 25% The agencies responsible for animal health or plant protection use information on the area or areas affected by the outbreak, and on the disease or pest, in order to determine some of the sanitary or phytosanitary emergency measures to be taken in response to an emergency or an outbreak caused by a disease or pest.
- 50% The animal health and plant protection agencies define some of the sanitary, phytosanitary or emergency measures to be implemented in response to an emergency or an outbreak caused by a disease or pest, based on current technical information, while others are older procedures.
- 75% All the sanitary or phytosanitary emergency measures implemented by the agencies responsible for animal health or plant protection to respond to an outbreak caused by a disease or a pest, are determined on the basis of current technical information.
- 100% All the sanitary or phytosanitary emergency measures implemented by the agencies responsible for animal health or plant protection to respond to an outbreak caused by a disease or a pest, are determined on the basis of current technical information and as a result of a risk assessment process. Moreover, the relevant international and regional organizations and trading partners are advised of the measures.

## 2. *Identification and traceability*

- 0% The agencies responsible for animal health or plant protection do not have a program that enables them to identify and trace animals, plants, their products or other regulated articles.
- 25% In cooperation with the private sector, the agencies responsible for animal health and plant protection have established tracking systems for certain animals and plants and their products and other regulated articles at specific points on the production and marketing chain.
- 50% The agencies responsible for animal health or plant protection have adopted procedures that enable them to identify and trace certain animals and plants and their products, or other regulated articles, throughout the production and marketing chains that have the greatest economic importance for the country.
- 75% The same holds true here as at the previous level, but in addition, the information on traceability is systematized and covers the entire country.
- 100% The same holds true here as at the previous level, but in addition, the agencies responsible for animal health or plant protection conduct audits on their traceability procedures in cooperation with other government institutions and trading partners.

### 3. *Testing*

- 0% The animal health and plant protection agencies do not have laboratory supplies or field personnel or the required training to take samples and do tests on animals, plants, their respective products or other regulated articles that could be affected by a disease or pest.
- 33% The animal health and plant protection agencies have the necessary laboratory supplies and field personnel to take samples and do tests on animals, plants, their products or other regulated articles that might be affected, but the personnel is not trained to take samples in the case of emerging diseases or pests or diseases or pests from abroad.
- 66% Animal health and plant protection agencies have the necessary laboratory supplies, field personnel and training to take samples and conduct tests on animals, plants, their products or other regulated articles that could be affected by a disease or pest, including those that could enter from abroad and are considered as being of greatest importance.
- 100% The same holds true here as at the previous level, but in addition, the availability of inputs is permanent and the agencies responsible for animal health or plant protection have established partnerships with other institutions and the private sector to ensure the availability of additional personnel in the event of a sanitary or phytosanitary emergency.

F. Mobilization of animals and plants, and their products, as well as other regulated articles

*I. Capacity to organize and record the mobilization*

- 0% The agencies responsible for animal health or plant protection lack a system that enables them to organize the mobilization of animals and plants and their products, as well as other regulated articles, during an outbreak.
- 25% The agencies responsible for animal health or plant protection have a system that enables them to organize, authorize, restrict and record the mobilization of certain animals and plants and their products as well as other regulated articles, during an outbreak.
- 50% The agencies responsible for animal health or plant protection have a computerized system that includes forms, which are available on the Internet, to grant permits and record the mobilization of certain animals and plants and their products, as well as other regulated articles, during an outbreak.
- 75% The same holds true here as at the previous level, but in addition, the computerized system of the agencies responsible for animal health or plant protection makes it possible to organize and record the mobilization of all animals, plants, their products, or other regulated articles, as necessary. Additionally, a record is made of data or other types of information relating to the mobilization of animals, plants, their products, or other regulated articles, in order to carry out a risk assessment.
- 100% The same holds true here as at the previous level, but, in addition, the agencies responsible for animal health or plant protection take risk management decisions relating to the mobilization of animals and plants and their products, as well as other regulated articles, based on scientific principles.

## 2. *Mobilization control*

- 0% The agencies responsible for animal health or plant protection lack authority to regulate the mobilization of animals and plants and their products, as well as other regulated articles, during a sanitary or phytosanitary emergency.
- 25% The agencies responsible for animal health or plant protection have the authority to regulate the mobilization of animals, plants, their products and other regulated articles, but they do not have the capacity to enforce the restrictions.
- 50% The agencies responsible for animal health or plant protection have the legal authority to regulate the mobilization of animals, plants, their products and other regulated articles and, in addition, they impose sanctions for noncompliance with the provisions.
- 75% The same holds true here as at the previous level, but in addition, the agencies responsible for animal health or plant protection have the support of police institutions or institutions of the armed forces to ensure compliance with the restriction of movement during sanitary or phytosanitary emergencies.
- 100% The same holds true here as at the previous level, but in addition, effective application of the sanctions is confirmed.

## G. Depopulation/destruction

- 0% The agencies responsible for animal health or plant protection do not have a plan that enables them to depopulate/destroy animals, plants, their products and other regulated articles, if the emergency so warrants.
- 25% The agencies responsible for animal health or plant protection have informal plans that enable them to depopulate/destroy animals, plants, their products and other regulated articles, if the emergency so warrants.
- 50% The agencies responsible for animal health or plant protection have formal, written plans that enable them to depopulate/destroy certain animals, plants, their products or other regulated articles, if the emergency so warrants.
- 75% The same holds true here as at the previous level, but in addition, the agencies responsible for animal health and plant protection have formal procedures that establish responsibilities and describe how to proceed during the depopulation/destruction of animals, plants, their products or other regulated articles as required for the different species, products or regulated articles.
- 100% The same holds true here as at the previous level, but in addition, the agencies responsible for animal health and plant protection have established partnerships with institutions, environmentalist groups and other stakeholders to ensure humane, safe and reasonable depopulation/destruction practices.

H. Preventive sanitary or phytosanitary measures (for individuals who apparently remain healthy during an outbreak).

- 0% The animal health and plant protection agencies do not have a plan to contain/control diseases and pests (e.g. vaccination, phytosanitary treatments) in the event of an outbreak.
- 33% The agencies responsible for animal health or plant protection have an informal plan to contain/control diseases and pests which enables them to apply certain sanitary or phytosanitary measures (e.g. vaccination, phytosanitary treatments) in the event of an outbreak.
- 66% The agencies responsible for animal health or plant protection have a formal plan to contain/control diseases and pests, which contemplates the application of sanitary and phytosanitary measures (e.g. vaccination, phytosanitary treatments) in the event of an outbreak. The plan is available to users and interested counterparts.
- 100% The same holds true here as at the previous level, but in addition, the agencies responsible for animal health or plant protection actively request comments from, and the participation of, the public in formulating and updating the plan which is available on the Internet.



## I. Compensation

- 0% Agencies responsible for animal health or plant protection lack funds to compensate producers for animals, plants and their products, or for other regulated articles destroyed as a result of implementation of the sanitary or phytosanitary emergency measures applied in response to an outbreak.
- 25% Agencies responsible for animal health or plant protection have some resources for compensating affected producers, but there are no objective parameters for defining that compensation (profile of the beneficiaries, method for calculating payment, etc.).
- 50% Agencies responsible for animal health or plant protection have limited resources for compensating the producers affected by the response to an outbreak. Moreover, there are guidelines which, at least in the case of a disease, outline the parameters for giving objective compensation (profile of the beneficiaries, method for calculating the payment, etc.).
- 75% Agencies responsible for animal health or plant protection have sufficient resources available to compensate producers affected by the emergency sanitary and phytosanitary measures applied in response to an outbreak. They also have guidelines that outline the parameters for giving objective compensation (profile of the beneficiaries, method for calculating the payment, etc.).
- 100% The same holds true here as at the previous level, but in addition, at least a portion of the resources comes from the tariffs that the users of the agencies responsible for animal health or plant protection pay for services rendered. The producers also have access to insurance for economic losses resulting from an outbreak.

### *1. Internal communication*

- 0% The agencies responsible for animal health or plant protection lack mechanisms for communicating with other ministries and entities that have competencies associated with the sanitary and phytosanitary measures that should be implemented during an outbreak and whose participation is deemed advisable/necessary.
- 33% The agencies responsible for animal health or plant protection have mechanisms for communicating promptly within their own agency when an outbreak occurs, and they maintain informal communication with other ministries and entities that have competencies associated with the sanitary or phytosanitary measures that should be implemented during an outbreak and whose participation is deemed advisable/necessary.
- 66% The agencies responsible for animal health or plant protection have formal mechanisms for communicating with one another internally and with other entities of the public sector that have competencies associated with the sanitary or phytosanitary measures that should be implemented during an outbreak and whose participation is deemed advisable/necessary.
- 100% The same holds true here as at the previous level, but in addition, communication tasks have been clearly assigned to a specific post in a command and communication structure that has been anticipated to respond to an outbreak.

## 2. External communication

- 0% The agencies responsible for animal health or plant protection lack procedures for communicating with the public or with the private sector in the event of an outbreak.
- 25% The agencies responsible for animal health or plant protection apply informal procedures for communicating with the public and the private sector in the event of an outbreak.
- 50% The agencies responsible for animal health or plant protection apply formal procedures for communicating with the public and the private sector in the event of an outbreak.
- 75% The same holds true here as at the previous level, but in addition, the agencies responsible for animal health or plant protection have a formal plan for communicating risk, which indicates the procedures that should be followed during an outbreak. In addition, they have personnel trained in risk and crisis communication during an outbreak who can manage information with both the general and specialized press.
- 100% The same holds true here as at the previous level, but the communication functions have been assigned to a specific post in a pre-established chain of command and communication structure for giving reports in the event of an outbreak.

# 4

## Re-establishment of sanitary status or the condition of a pest (in a given area)

*Capacity and authority to re-establish the productive cycle and trade relations.*

### A. Re-establishment of recognition of the sanitary and phytosanitary situation as well as of trade relations

- 0% The agencies responsible for animal health or plant protection do not have procedures for ensuring recognition by regional and international organizations and other counterparts, of the sanitary or phytosanitary situation of an area with respect to diseases or pests, prior to the outbreak, or for re-establishing trade.
- 25% The agencies responsible for animal health or plant protection have certain procedures for recognizing the sanitary or phytosanitary situation prior to the outbreak and for re-establishing trade, but only with certain trading partners.
- 50% The same holds true here as at the previous level, but in addition, the agencies responsible for animal health or plant protection have established procedures for restoring the sanitary or phytosanitary status required for international trade.
- 75% The same holds true here as at the previous level, but in addition, the agencies responsible for animal health or plant protection have field personnel and laboratories who support them with restoring the sanitary or phytosanitary status required to resume international trade.
- 100% The same holds true here as at the previous level, but in addition, the agencies responsible for animal health or plant protection have their own resources, or have external resources, to finance reconnaissance missions by trading partners.

## B. Rural assistance and recovery

- 0% Agencies responsible for animal health and plant protection have not established links with other government agencies or groups working in rural development, or with state, provincial or local governments.
- 25% Agencies responsible for animal health and plant protection have established informal channels of communication with other government agencies and groups working in rural development and with certain state, provincial or local governments, but they do not regularly seek their participation to formulate emergency or community recovery plans.
- 50% Agencies responsible for animal health and plant protection have formal channels of communication with other government agencies and groups working in rural development and with some state, provincial or local governments, and occasionally seek their participation in formulating emergency or community recovery plans.
- 75% Agencies responsible for animal health and plant protection have established strategic partnerships with other government agencies and groups working in rural development and with state, provincial or local governments for emergency planning and to formulate plans for the recovery of the affected communities.
- 100% The same holds true here as at the previous level, but in addition, the agencies responsible for animal health and plant protection have plans for collaborating with other government agencies or groups working in rural development, as well as with state, provincial or local governments, with the aim of identifying the needs of the rural areas, after carrying out disease control or an eradication campaign that could have affected the livelihood of the community.

# 5

## Evaluation

*Review of the emergency plan and lessons learnt to improve prevention*

### A. Evaluation of the emergency plan

- 0% The agencies responsible for animal health and plant protection do not regularly review or evaluate their emergency response plans for diseases or pests.
- 25% The agencies responsible for animal health or plant protection have done some simulation exercises (tabletop, field or laboratory) to evaluate at least one level of the emergency response plan.
- 50% The agencies responsible for animal health or plant protection systematically conduct simulation exercises (tabletop, field or laboratory) to evaluate all aspects of the emergency response plan (detection, response, communication, etc.).
- 75% The same holds true here as at the previous level, but in addition, the agencies responsible for animal health or plant protection share and harmonize their emergency response plans for diseases or pests at the regional level.
- 100% The same holds true here as at the previous level, but in addition, the agencies responsible for animal health or plant protection invite external auditors, including trading partners, to observe and evaluate their plan for dealing with sanitary and phytosanitary emergencies.

## B. Review of procedures (lessons learnt)

- 0% The agencies responsible for animal health or plant protection lack plans for evaluating their response to a sanitary or phytosanitary emergency.
- 25% The agencies responsible for animal health or plant protection do not have a plan for internally evaluating their response to a sanitary or phytosanitary emergency, but they do an informal evaluation and the results are used internally to make the appropriate improvements.
- 50% The agencies responsible for animal health or plant protection have a formal plan for internally evaluating their response to a sanitary or phytosanitary emergency, and the results are used internally to make the appropriate improvements.
- 75% The same holds true here as at the previous level, but, in addition, the results of the evaluation of the response to a sanitary or phytosanitary emergency are made available to the public and are used internally to make the appropriate improvements.
- 100% The same holds true here as at the previous level, but in addition, the procedures followed for dealing with the emergency are submitted for an external review. The results are made available to the public and the lessons are identified (improvements that would need to be made) to strengthen such procedures.

# Annex I. Definitions

Animal health status	Means the status of a country or a <i>zone</i> with respect to an animal <i>disease</i> , according to the criteria listed in the relevant chapter of the <i>Terrestrial Animal Code</i> dealing with the disease. <i>Terrestrial Animal Health Code. Glossary. OIE. 2011.</i>
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 occurs at low levels and which is subject to effective surveillance, control or eradication measures [IPPC, 1997; clarification, 2005; previously area of scarce pest prevalence. ISPM No. 5, IPPC. 2012
Border post	Means any airport, or any port, railway station or road check-point open to international trade of commodities, where import veterinary inspections can be performed. <i>Terrestrial Animal Health Code. Glossary.OIE. 2011.</i>
Commodities	Means live animals, products of animal origin, animal genetic material, biological products and pathological material. <i>Terrestrial Animal Health Code. Glossary. OIE. 2011.</i>
Commodity	Type of plant, plant product or other article being moved for trade or other purposes [FAO, 1990; revised IPPC, 2001; previously basic commodity; revised, CPM, 2009]. ISPM no. 5, IPPC. 2012.
Consignment	A quantity of plants, plant products and/or other articles being moved from one country to another and covered, when required, by a single phytosanitary certificate (a consignment may be composed of one or more commodities or lots) [FAO, 1990; revised IPPC, 2001]. ISPM no. 5, IPPC. 2012.
Control (of a pest)	Suppression, containment or eradication of a pest population [FAO, 1995]. ISPM no. 5, IPPC. 2012.
Corrective action plan	Documented plan of phytosanitary actions to be implemented in an area officially delimited for phytosanitary purposes if a pest is detected or a specified pest level is exceeded or in the case of faulty implementation of officially established procedures [CPM, 2009]. ISPM no. 5, IPPC. 2012.
Disease	Means the clinical and/or pathological manifestation of <i>infection</i> . <i>Terrestrial Animal Health Code. Glossary. OIE. 2011</i>



Emergency measure	A phytosanitary measure established as a matter of urgency in a new or unexpected phytosanitary situation. An emergency measure may or may not be a provisional measure [ICPM, 2001; revised ICPM, 2005.]
Emerging disease	Means a new <i>infection</i> resulting from the evolution or change of an existing pathogenic agent, a known <i>infection</i> spreading to a new geographic <i>area</i> or <i>population</i> , or a previously unrecognized pathogenic agent or <i>disease</i> diagnosed for the first time and which has a significant impact on <i>animal</i> or public health. Terrestrial Animal Health Code. Glossary. OIE. 2011.
Entry (of a pest)	Movement of a pest into an area where it is not yet present, or present but not widely distributed and being officially controlled. [FAO, 1995; clarification CPM, 2012]. ISPM no.5, IPPC. 2012.
Hazard	Means a biological, chemical or physical agent in, or in a condition of, an animal or animal product with the potential to cause an adverse health effect. Terrestrial Animal Health Code. Glossary. OIE. 2011.
Hazard identification	Means the process of identifying the pathogenic agents which could potentially be introduced in the <i>commodity</i> considered for importation. Terrestrial Animal Health Code. Glossary. OIE. 2011.
Incidence	Proportion or number of units in which a pest is present in a sample, consignment, field or other defined population [CPM, 2009]. ISPM no. 5, IPPC. 2012
Incursion	An isolated population of a pest recently detected in an area, not known to be established, but expected to survive for the immediate future. [IPPC, 2003]. ISPM no. 5, IPPC. 2012
Infection	Means the entry and development or multiplication of an infectious agent in the body of humans or animals. Terrestrial Animal Health Code. Glossary. OIE. 2011.
Infestation (of a commodity)	Presence in a commodity of a living pest of the plant or plant product concerned. Infestation includes infection [CEPM, 1997; revised CEPM, 1999]. ISPM no. 5, IPPC. 2012.
Inspection	Official visual examination of plants, plant products or other regulated articles to determine if pests are present or to determine compliance with phytosanitary regulations [FAO, 1990; revised FAO, 1995; previously inspect. ISPM no. 5, IPPC. 2012.]
Interception of a consignment	The refusal or controlled entry of an imported consignment due to failure to comply with phytosanitary regulations [FAO, 1990; revised fao1995]. [ISPM no. 5, IPPC. 2012.]

Interception of a pest	The detection of a pest during inspection or testing of an imported consignment [FAO, 1990; revised CEPM, 1996. ISPM no. 5, IPPC. 2012.
Introduction	The entry of a pest resulting in its establishment [FAO, 1990; revised FAO, 1995; IPPC, 1997]. ISPM no. 5, IPPC. 2012.
Official	Established, authorized or performed by a national plant protection organization [FAO, 1990]. ISPM no. 5, IPPC. 2012
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. (see Glossary Supplement no.1) [IPPC, 2001]. ISPM no. 5, IPPC. 2012
Official veterinary control	Means the operations whereby the Veterinary Services, knowing the location of the animals and after taking appropriate actions to identify their owner or responsible keeper, are able to apply appropriate animal health measures, as required. This does not exclude other responsibilities of the Veterinary Services e.g. food safety. Terrestrial Animal Health Code. Glossary. OIE. 2011.
Pathway	Any means that allows the entry or spread of a pest [FAO, 1990; revised FAO, 1995]. ISPM no. 5, IPPC. 2012
Pest	Any species, strain or biotype of plant, animal or pathogenic agent injurious to plants or plant products. Note: In the IPPC, the term "plant pests" is used on occasion instead of the term "pest" [FAO 1990; revised FAO, 1995; IPPC, 1997; revised CPM, 2012]
Pest diagnosis	The process of detection and identification of a pest [ISPM no. 27, 2006. ISPM no. 5, IPPC. 2012
Pest risk assessment (for quarantine pests)	Evaluation of the probability of the introduction and spread of a pest and the magnitude of the associated potential economic consequences (See Glossary Supplement no. 2) [FAO, 1995; revised ISPM no. 11, 2001; ISPM no. 2, 2007]. ISPM no. 5, IPPC. 2012
Pest risk (for quarantine pests)	The probability of introduction and spread of a pest and the magnitude of the associated potential economic consequences. ISPM no. 5, IPPC. 2012

Pest status (in an area)	Presence or absence, at the present time, of a pest in an area, including where appropriate its distribution, as officially determined using expert judgement on the basis of current and historical pest records and other information [CEPM, 1997; revised IPPC, 1998. ISPM no. 5, IPPC. 2012.
Phytosanitary measure (agreed interpretation) The agreed interpretation of the term phytosanitary measure accounts for the relationship of phytosanitary measures to regulated non-quarantine pests. This relationship is not adequately reflected in the definition found in Article II of the IPPC (1997).	Any legislation, regulation or official procedure having the purpose to prevent the introduction and/or spread of quarantine pests, or to limit the economic impact of regulated non-quarantine pests [FAO, 1995; revised IPPC, 1997; ICPM, 2002; clarification, 2005]. ISPM no. 5, ICPM. 2012
Points of entry	Airport, seaport or land border officially designated for the importation of consignments and/or entrance of passengers [FAO, 1995; previously point of entry].
Prevalence	Means the total number of cases or <i>outbreaks of a disease</i> that are present in a <i>population</i> at risk, in a particular geographical area, at one specified time or during a given period. Terrestrial Animal Code. Glossary. OIE. 2011.
Quarantine pests	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; clarification, 2005; clarification CPM, 2012]. ISPM no. 5, IPPC. 2012
Regulated article	Any plant, plant product, storage place, packaging, conveyance, container, soil and any other organism, object or material capable of harbouring or spreading pests, deemed to require phytosanitary measures, particularly where international transportation is involved. [FAO, 1990; revised FAO, 1995; IPPC, 1997; clarification, 2005. ISPM no. 5, IPPC. 2012
Risk	Means the likelihood of the occurrence and the likely magnitude of the biological and economic consequences of an adverse event or effect to animal or human health. Terrestrial Animal Code. Glossary. OIE. 2011.
Risk assessment	Means the evaluation of the likelihood and the biological and economic consequences of entry, establishment and spread of a hazard when within the territory of an importing country. Terrestrial Animal Health Code. Glossary. OIE. 2011.

Sanitary measure	Means a measure, such as those described in various chapters of the Terrestrial Code, destined to protect animal or human health or life within the territory of the OIE member from risks arising from the entry, establishment and/or spread of a hazard. Terrestrial Animal Health Code. OIE. 2011.
Spread	Expansion of the geographical distribution of a pest within an area [FAO, 1995; previously dissemination]. ISPM no.5, IPPC. 2012.
Surveillance	Any official process which collects and records data on pest occurrence or absence by survey, monitoring or other procedures [CEPM, 1996]. ISPM no. 5, IPPC. 2012.
Surveillance	Means the systematic ongoing collection, collation, and analysis of information related to animal health and the timely dissemination of information to those who need to know so that action can be taken. Terrestrial Animal Health Code. Glossary. OIE. 2011.
Test	Official examination other than visual, to determine if pests are present or to identify tests [FAO, 1990]. ISPM no. 5, IPPC. 2012



INTER-AMERICAN INSTITUTE FOR COOPERATION ON AGRICULTURE  
Agricultural Health and Food Safety Program  
Headquarters. P.O. Box 55-2200  
San Jose, Vazquez de Coronado, San Isidro 11101 — Costa Rica  
Phone: (+506) 2216 0413 / Fax: (+506) 2216 0221  
[saia@iica.int](mailto:saia@iica.int) / [www.iica.int](http://www.iica.int)