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32nd edition

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Terrestrial Animal Health Code

General provisions

World Organisation for Animal Health

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VOLUME 1

FOREWORD

The Terrestrial Animal Health Code (the Terrestrial Code) provides standards for the improvement of animal health, animal welfare and veterinary public health worldwide. These standards should be used by Members to set up measures for the prevention, early detection, reporting and control of pathogenic agents in terrestrial animals (mammals, reptiles, birds and bees), including zoonotic agents. Implementation of the recommendations in the Terrestrial Code ensures the safety of international trade in animals and animal products, while avoiding unjustified sanitary barriers.

The World Organisation for Animal Health (WOAH, founded as OIE) has developed and published international standards since 1968. The World Trade Organization (WTO) Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement) recognises the role of the Organisation (under its foundational name 'Office International des Epizooties') as the international standard setting organisation for animal health and zoonoses.

The development of new and revised standards for the Terrestrial Code is under the responsibility of the Terrestrial Animal Health Standards Commission (the Code Commission), which comprises six elected members. The Code Commission draws upon the expertise of internationally renowned experts to contribute to standards development to ensure that the standards are based on the latest scientific information. Comments from Members and partner International Organisations are sought through the twice-yearly circulation of new or revised texts. The Code Commission collaborates closely with other Specialist Commissions.

The Terrestrial Code is published annually in English, French and Spanish and may be viewed and downloaded from the World Organisation for Animal Health website (www.woah.org).

This edition includes new and amended texts in the following sections and chapters that were adopted by the World Assembly of Delegates of the World Organisation for Animal Health at the 91st General Session in May 2024:

- *Glossary*
- *Disease, infections and infestations listed by WOAH (Chapter 1.3.)*
- *Application for official recognition by WOAH of free status for foot and mouth disease (Chapter 1.11.)*
- *General hygiene in semen collection and processing centres (Chapter 4.6.)*
- *Collection and processing of bovine, small ruminant and porcine semen (Chapter 4.7.)*
- *Responsible and prudent use of antimicrobial agents in veterinary medicine (Chapter 6.10.)*
- *Slaughter of animals (Chapter 7.5.)*
- *Infection with foot and mouth disease virus (Chapter 8.8.)*
- *Infection with Rift Valley fever virus (Chapter 8.16.)*
- *Infection with Trichinella spp. (Chapter 8.18.)*
- *Infection with Coxiella burnetii (Q fever) (a new Chapter 8.22.)*
- *Infection with Trypanosoma evansi (a new Chapter 8.23.)*
- *Rabbit haemorrhagic disease (Chapter 13.2.)*
- *Infection with African swine fever virus (Chapter 15.1.)*
- *Infection with Camelpox virus (a new Chapter 16.1)*
- *Terminology: Use of terms 'Competent Authority', 'Veterinary Authority' and 'Veterinary Services'.*

Details of the amendments made in this edition can be found in the 91st General Session report and Specialist Commissions reports, available on the World Organisation for Animal Health website (www.woah.org).

I wish to thank the members of the Code Commission, Delegates, international experts and other Specialist Commissions for their expert advice. Thanks also to the World Organisation for Animal Health staff who contributed to the work that has resulted in the publication of this 32nd edition of the Terrestrial Code.

Dr Monique Eloit
Director General
World Organisation for Animal Health

Members of the Code Commission (2023-2024):
President: Dr Etienne Bonbon
Vice-President: Dr Gaston Maria Funes
Vice-President: Prof. Salah Hammami
Members: Dr Lucio Ignacio Carbajo Goñi, Dr Kiyokazu Murai and Dr Bernardo Todeschini.

July 2024

USER'S GUIDE

A. Introduction

1) The WOAH *Terrestrial Animal Health Code* (hereafter referred to as the *Terrestrial Code*) establishes standards for the improvement of terrestrial animal health and welfare and veterinary public health worldwide. The purpose of this guide is to advise the Veterinary Authorities of WOAH Member Countries on how to use the *Terrestrial Code*.

2) Veterinary Authorities should use the standards in the *Terrestrial Code* to set up measures providing for early detection, internal reporting, notification, control or eradication of pathogenic agents, including zoonotic ones, in terrestrial animals (mammals, birds, reptiles and bees) and preventing their spread via international trade in animals and animal products, while avoiding unjustified sanitary barriers to trade.

3) WOAH standards are based on the most recent scientific and technical information. Correctly applied, they protect animal health and welfare and veterinary public health during production and trade in animals and animal products, and in the use of animals.

4) The absence of chapters, articles or recommendations on particular pathogenic agents or commodities does not preclude the application of appropriate sanitary measures by the Veterinary Authorities, provided they are based on risk analyses conducted in accordance with the *Terrestrial Code*.

5) The year that a chapter was first adopted and the year of its last revision are noted at the end of each chapter.

6) The complete text of the *Terrestrial Code* is available on WOAH Web site and individual chapters may be downloaded from: https://www.woah.org/.

B. *Terrestrial Code* content

1) Key terms and expressions used in more than one chapter in the *Terrestrial Code* are defined in the Glossary, in the case where common dictionary definitions are not deemed to be adequate. The reader should be aware of the definitions given in the Glossary when reading and using the *Terrestrial Code*. Defined terms appear in italics. In the on-line version of the *Terrestrial Code*, a hyperlink leads to the relevant definition.

2) The term "(under study)" is found in some rare instances, with reference to an article or part of an article. This means that this part of the text has not been adopted by the World Assembly of Delegates and the particular provisions are thus not part of the *Terrestrial Code*.

3) The standards in the chapters of Section 1 are designed for the implementation of measures for the diagnosis, surveillance and notification of diseases, infections and infestations. The standards include procedures for notification to WOAH and procedures for the recognition of the animal health status of a country, zone or compartment.

4) The standards in Section 2 are designed to guide the importing country in conducting import risk analysis in the absence of WOAH recommendations on particular pathogenic agents or commodities. The importing country should also use these standards to justify import measures which are more stringent than existing WOAH standards.

5) The standards in the chapters of Section 3 are designed for the establishment, maintenance and evaluation of Veterinary Services, including veterinary legislation and communication. These standards are intended to assist the Veterinary Services and Veterinary Authority of Member Countries to meet their objectives of improving terrestrial animal health and welfare and veterinary public health, as well as to establish and maintain confidence in their international veterinary certificates.

6) The standards in the chapters of Section 4 are designed for the implementation of measures for the prevention and control of pathogenic agents. Measures in this section include animal identification, traceability, zoning, compartmentalisation, disposal of dead animals, disinfection, disinsection and general hygiene precautions. Some chapters address the specific sanitary measures to be applied for the collection and processing of semen and embryos of animals.

7) The standards in the chapters of Section 5 are designed for the implementation of general sanitary measures for trade. They address veterinary certification and the measures applicable by the exporting, transit and importing countries. A range of model veterinary certificates is provided to facilitate consistent documentation in international trade.

8) The standards in the chapters of Section 6 are designed for the implementation of preventive measures in animal production systems. These measures are intended to assist Member Countries in meeting their veterinary public health objectives. They include ante- and post-mortem inspection, control of hazards in feed, biosecurity at the animal production level, and the control of antimicrobial resistance in animals.

9) The standards in the chapters of Section 7 are designed for the implementation of animal welfare measures. The standards cover production, transport, and slaughter or killing, as well as the animal welfare aspects of free-roaming dog population control and the use of animals in research and education.

10) The standards in each of the chapters of Sections 8 to 16 are designed to prevent the pathogenic agents of WOAH listed diseases, infections or infestations from being introduced into an importing country. The standards take into account the nature of the traded commodity, the animal health status of the exporting country, zone or compartment, and the risk reduction measures applicable to each commodity.

These standards assume that the agent is either not present in the importing country or is the subject of a control or eradication programme. Sections 8 to 16 each relate to the host species of the pathogenic agent: multiple species or species of Apinae, Aves, Bovinae, Equidae, Leporidae, Caprinae, Suidae and Camelidae. Some chapters include specific measures to prevent and control the infections of global concern. Although WOAH aims to include a chapter for each WOAH listed disease, not all WOAH listed diseases have been covered yet by a specific chapter. This is work in progress, depending on available scientific knowledge and the priorities set by the World Assembly of Delegates.

C. Specific issues

1) Notification

Chapter 1.1. describes Member Countries' obligations under Organic Statutes of the Office International des Epizooties. Listed and emerging diseases, as prescribed in Chapter 1.1., are compulsorily notifiable. Member Countries are encouraged to also provide information to WOAH on other animal health events of epidemiological significance.

Chapter 1.2. describes the criteria for the inclusion of an infection or infestation in the WOAH List and Chapter 1.3. gives the current list. Diseases are divided into nine categories based on the host species of the aetiological agents.

2) Diagnostic tests and vaccines

It is recommended that specified diagnostic tests and vaccines in *Terrestrial Code* chapters be used with a reference to the relevant section in the WOAH *Manual of Diagnostic Tests and Vaccines for Terrestrial Animals* (hereafter referred to as the *Terrestrial Manual*). Experts responsible for facilities used for disease diagnosis and vaccine production should be fully conversant with the standards in the *Terrestrial Manual*.

3) Freedom from a disease, infection or infestation

Article 1.4.6. provides general principles for declaring a country or zone free from a disease, infection or infestation. This article applies when there are no specific requirements in the listed disease-specific chapter.

4) Prevention and control

Chapters 4.4. and 4.5. describe the measures that should be implemented to establish zones and compartments. Zoning and compartmentalisation should be considered as some of the tools used to control diseases and to facilitate safe trade.

Chapters 4.6. to 4.12. describe the measures which should be implemented during collection and processing of semen and embryos of animals, including micromanipulation and cloning, in order to prevent animal health risks, especially when trading these commodities. Although the measures relate principally to WOAH listed diseases or infections, general standards apply to all infectious disease risks. Moreover, in Chapter 4.8. diseases that are not listed are marked as such but are included for the information of Member Countries.

Chapter 4.15. addresses the specific issue of the control of bee diseases and some of its trade implications. This chapter should be read in conjunction with the specific bee disease chapters in Section 9.

Chapter 6.5. is designed for the implementation of general biosecurity measures in intensive poultry production. Chapters 6.6., 6.13. and 6.14. provide recommendations for some specific on-farm prevention and control plans for the unlisted foodborne pathogenic agent *Salmonella* as part of the Veterinary Services mission to prevent, eliminate or control food safety hazards in animal production.

Chapter 6.12. deals specifically with the zoonotic risk associated with the movements of non-human primates and gives standards for certification, transportation and import conditions for these animals.

5) Trade requirements

Animal health measures related to international trade should be based on WOAH standards. A Member Country may authorise the importation of animals or animal products into its territory under conditions different from those recommended by the *Terrestrial Code*. To scientifically justify more stringent measures, the importing country

should conduct a risk analysis in accordance with WOAH standards, as described in Chapter 2.1. Members of the WTO should refer to the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement).

Chapters 5.1. to 5.3. describe the general obligations and ethical responsibilities of importing and exporting countries in international trade. Veterinary Authorities and all veterinarians directly involved in international trade should be familiar with these chapters. Chapter 5.3. also describes the WOAH informal procedure for dispute mediation.

WOAH aims to include an article listing the commodities that are considered safe for trade without the need for risk mitigation measures specifically directed against a particular listed disease, infection or infestation, regardless of the status of the country or zone of origin for the agent in question, at the beginning of each listed disease-specific chapter in Sections 8 to 16. This is work in progress and some chapters do not yet contain articles listing safe commodities. When a list of safe commodities is present in a chapter, importing countries should not apply trade restrictions to such commodities with respect to the agent in question. Chapter 2.2. describes the criteria used to assess the safety of commodities.

6) International veterinary certificates

An international veterinary certificate is an official document that the Veterinary Authority of an exporting country issues in accordance with Chapters 5.1. and 5.2. It lists animal health requirements and, where appropriate, public health requirements for the exported commodity. The quality of the exporting country's Veterinary Services is essential in providing assurances to trading partners regarding the safety of exported animals and products. This includes the Veterinary Authority's ethical approach to the provision of veterinary certificates and their history in meeting their notification obligations.

International veterinary certificates underpin international trade and provide assurances to the importing country regarding the health status of the animals and products imported. The measures prescribed should take into account the health status of both exporting and importing countries, and zones or compartments within them, and be based upon the standards in the *Terrestrial Code*.

The following steps should be taken when drafting international veterinary certificates:

a) identify the diseases, infections or infestations from which the importing country is justified in seeking protection because of its own health status. Importing countries should not impose measures in regards to diseases that occur in their own territory but are not subject to official control programmes;

b) for commodities capable of transmitting these diseases, infections or infestations through international trade, the importing country should apply the relevant articles in the listed disease-specific chapters. The application of the articles should be adapted to the disease status of the country, zone or compartment of origin. Such status should be established according to Article 1.4.6. except when articles of the relevant listed disease chapter specify otherwise;

c) when preparing international veterinary certificates, the importing country should endeavour to use terms and expressions in accordance with the definitions given in the Glossary. International veterinary certificates should be kept as simple as possible and should be clearly worded, to avoid misunderstanding of the importing country's requirements;

d) Chapters 5.10. to 5.13. provide, as further guidance to Member Countries, model certificates that should be used as a baseline.

7) Guidance notes for importers and exporters

It is recommended that Veterinary Authorities prepare “guidance notes” to assist importers and exporters understand trade requirements. These notes should identify and explain the trade conditions, including the measures to be applied before and after export and during transport and unloading, and the relevant legal obligations and operational procedures. The guidance notes should advise on all details to be included in the health certification accompanying the consignment to its destination. Exporters should also be reminded of the International Air Transport Association rules governing air transport of animals and animal products.

GLOSSARY

For the purposes of the *Terrestrial Code*:

ANIMAL

means a mammal, reptile, bird or bee.

ANIMAL FOR BREEDING OR REARING

means a domesticated or confined *animal* which is not intended for *slaughter* within a short time.

ANIMAL FOR SLAUGHTER

means an *animal* intended for *slaughter* within a short time, under the control of the relevant *Competent Authority*.

ANIMAL HANDLER

means a person with a knowledge of the behaviour and needs of *animals* who, with appropriate experience and a professional and positive response to an *animal*'s needs, can achieve effective management and good *welfare*. Competence should be gained through formal training or practical experience.

ANIMAL HEALTH MANAGEMENT

means a system designed to optimise the physical and behavioural health and welfare of *animals*. It includes the prevention, treatment and control of diseases and conditions affecting the individual *animal* and *herd* or *flock*, including the recording of illness, injuries, mortalities and medical treatments where appropriate.

ANIMAL HEALTH STATUS

means the status of a country, *zone* or *compartment* with respect to an animal disease in accordance with the criteria listed in the relevant disease-specific chapter or Chapter 1.4. of the *Terrestrial Code*.

ANIMAL IDENTIFICATION

means the combination of the identification and *registration* of an *animal* individually, with a unique identifier, or collectively by its *epidemiological unit* or group, with a unique group identifier.

ANIMAL IDENTIFICATION SYSTEM

means the inclusion and linking of components such as identification of *establishments* or owners, the persons responsible for the *animals*, movements and other records with *animal identification*.

ANIMAL PRODUCT

means any part of an *animal*, or a raw or manufactured product containing any material derived from *animals*, excluding *germinal products*, *biological products* and *pathological material*.

ANIMAL TRACEABILITY

means the ability to follow an *animal* or group of *animals* during all stages of its life.

ANIMAL WELFARE

means the physical and mental state of an *animal* in relation to the conditions in which it lives and dies.

ANTIMICROBIAL AGENT

means a naturally occurring, semi-synthetic or synthetic substance that exhibits antimicrobial activity (kill or inhibit the growth of micro-organisms) at concentrations attainable *in vivo*. Anthelmintics and substances classed as disinfectants or antiseptics are excluded from this definition.

APIARY

means a *beehive* or group of *beehives* whose management allows them to be considered as a single *epidemiological unit*.

APPROVED

means officially approved, accredited or registered by the *Veterinary Authority*.

BEEHIVE

means a structure for the keeping of honey bee colonies that is being used for that purpose, including frameless hives, fixed frame hives and all designs of moveable frame hives (including nucleus hives), but not including packages or cages used to confine bees for the purposes of transport or isolation.

BIOLOGICAL PRODUCT

means a product of animal or microorganism origin, used in the diagnosis of diseases, for treatment, control and prevention of diseases, or in the collection and processing of *germinal products*.

BIOSECURITY

means a set of management and physical measures designed to reduce the *risk* of introduction, establishment and spread of animal diseases, *infections* or *infestations* to, from and within an animal population.

BIOSECURITY PLAN

means a plan that identifies potential pathways for the introduction and spread of disease in a *zone* or *compartment*, and describes the measures which are being or will be applied to mitigate the disease *risks*, if applicable, in accordance with the recommendations in the *Terrestrial Code*.

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.

CAPTIVE WILD [ANIMAL]

means an *animal* that has a phenotype not significantly affected by human selection but that is captive or otherwise lives under or requires human supervision or control.

CASE

means an individual *animal* infected by a pathogenic agent, with or without clinical signs.

CASINGS

means intestines and bladders that, after cleaning, have been processed by tissue scraping, defatting and washing, and have been treated with salt.

COLLECTION CENTRE

means a facility approved by the *Veterinary Authority* for the collection of oocytes or embryos and used exclusively for donor animals which meet the conditions of the *Terrestrial Code*.

COMMODITY

means a live *animal*, an *animal product*, *germinal products*, a *biological product* or *pathological material*.

COMPARTMENT

means an animal *subpopulation* contained in one or more *establishments*, separated from other susceptible *populations* by a common *biosecurity* management system, and with a specific *animal health status* with respect to one or more *infections* or *infestations* for which the necessary *surveillance*, *biosecurity* and control measures have been applied for the purposes of *international trade* or disease prevention and control in a country or *zone*.

COMPETENT AUTHORITY

means a Governmental Authority of a Member Country having the responsibility in the whole or part of the territory for the implementation of certain standards of the *Terrestrial Code*.

CONTAINER

means a non-self-propelled receptacle or other rigid structure for holding *animals* during a *journey* by one or several means of transport.

CONTAINMENT ZONE

means an *infected zone* defined within a previously free country or *zone*, which includes all suspected or confirmed *cases* that are epidemiologically linked and where movement control, *biosecurity* and *sanitary measures* are applied to prevent the spread of, and to eradicate, the *infection* or *infestation*.

DAY-OLD BIRDS

means birds aged not more than 72 hours after hatching.

DISINFECTION

means the application, after thorough cleansing, of procedures intended to destroy the infectious or parasitic agents of animal diseases, including zoonoses; this applies to premises, *vehicles* and different objects which may have been directly or indirectly contaminated.

DISINFESTATION

means the application of procedures intended to eliminate *infestation*.

DISTRESS

means the state of an animal, that has been unable to adapt to stressors, and that manifests as abnormal physiological or behavioural responses. It can be acute or chronic and may result in pathological conditions.

EARLY WARNING SYSTEM

means a system for the timely detection, reporting and communication of occurrence, incursion or emergence of diseases, *infections* or *infestations* in a country, *zone* or *compartment*.

EMERGING DISEASE

means a new occurrence in an *animal* of a disease, *infection* or *infestation*, causing a significant impact on animal or public health resulting from:

a) a change of a known pathogenic agent or its spread to a new geographic area or species; or

b) a previously unrecognised pathogenic agent or disease diagnosed for the first time.

EPIDEMIOLOGICAL UNIT

means a group of *animals* with the same likelihood of exposure to a pathogenic agent. In certain circumstances, the epidemiological unit may be a single *animal*.

ERADICATION

means the elimination of a pathogenic agent from a country or *zone*.

ESTABLISHMENT

means the premises in which *animals* are kept.

EUTHANASIA

means the *killing* of an *animal* using a method that causes a rapid and irreversible loss of consciousness with minimum *pain* and *distress*.

EXPORTING COUNTRY

means a country from which *commodities* are sent to another country.

FEED

means any material (single or multiple), whether processed, semi-processed or raw, which is intended to be fed directly to terrestrial *animals* (except bees).

FEED INGREDIENT

means a component part or constituent of any combination or mixture making up a *feed*, whether or not it has a nutritional value in the *animal*'s diet, including feed additives. Ingredients are of plant (including aquatic plants) or terrestrial or aquatic animal origin, or other organic or inorganic substances.

FERAL [ANIMAL]

means an *animal* of a domesticated species that lives without requiring human supervision or control.

FLOCK

means a number of *animals* of one kind kept together under human control or a congregation of gregarious *wild animals*. A *flock* is usually regarded as an *epidemiological unit*.

FREE COMPARTMENT

means a *compartment* in which the absence of the animal pathogenic agent causing the disease under consideration has been demonstrated by all requirements specified in the *Terrestrial Code* for free status being met.

FREE-ROAMING DOG

means any *owned dog* or unowned dog that is without direct human supervision or control, including *feral* dogs.

FREE ZONE

means a *zone* in which the absence of a specific *infection* or *infestation* in an animal *population* has been demonstrated in accordance with the relevant requirements of the *Terrestrial Code*.

FRESH MEAT

means *meat* that has not been subjected to any treatment irreversibly modifying its organoleptic and physicochemical characteristics. This includes frozen *meat*, chilled *meat*, minced *meat* and mechanically recovered *meat*.

GERMINAL PRODUCTS

means animal semen, oocytes, embryos or *hatching eggs*.

GOOD MANUFACTURING PRACTICE

means a production and testing practice recognised by the *Competent Authority* to ensure the quality of a product.

GREAVES

means the protein-containing residue obtained after the partial separation of fat and water during the process of rendering.

HATCHING EGGS

means fertilised bird eggs, suitable for incubation and hatching.

HAZARD

means a biological, chemical or physical agent in, or a condition of, an *animal* or animal product with the potential to cause an adverse health effect.

HEADQUARTERS

means the Permanent Secretariat of the World Organisation for Animal Health located at:

12, rue de Prony, 75017 Paris, FRANCE
Telephone: 33-(0)1 44 15 18 88
Fax: 33-(0)1 42 67 09 87
Electronic mail: woah@woah.org
WWW: http://www.woah.org

HERD

means a number of *animals* of one kind kept together under human control or a congregation of gregarious *wild animals*. A *herd* is usually regarded as an *epidemiological unit*.

IMPORTING COUNTRY

means a country that is the final destination to which *commodities* are sent.

INCIDENCE

means the number of new *cases* or *outbreaks* of a disease that occur in a population at risk in a particular geographical area within a defined time interval.

INCUBATION PERIOD

means the longest period that elapses between the introduction of the pathogenic agent into the *animal* and the occurrence of the first clinical signs of the disease.

INFECTED ZONE

means a *zone* either in which an *infection* or *infestation* has been confirmed, or one that is defined as such in the relevant chapters of the *Terrestrial Code*.

INFECTION

means the entry and development or multiplication of a pathogenic agent in the body of humans or *animals*.

INFECTIVE PERIOD

means the longest period during which an affected *animal* can be a source of *infection*.

INFESTATION

means the external invasion or colonisation of *animals* or their immediate surroundings by arthropods, which may cause clinical signs or are potential *vectors* of pathogenic agents.

INTERNATIONAL TRADE

means importation, exportation and transit of *commodities*.

INTERNATIONAL VETERINARY CERTIFICATE

means a certificate, issued in accordance with Chapter 5.2., describing the animal health and public health requirements that are fulfilled by the exported *commodities*.

JOURNEY

An *animal* transport journey commences when the first *animal* is loaded onto a *vehicle*/*vessel* or into a *container* and ends when the last *animal* is unloaded, and includes any stationary resting/holding periods. The same *animals* do not commence a new journey until after a suitable period for rest and recuperation, with adequate *feed* and water.

KILLING

means any procedure that causes the death of an *animal*.

LABORATORY

means a properly equipped institution staffed by technically competent personnel under the control of a specialist in veterinary diagnostic methods, who is responsible for the validity of the results. The *Veterinary Authority* approves and monitors such laboratories with regard to the diagnostic tests required for *international trade*.

LAIRAGE

means pens, yards and other holding areas used for accommodating *animals* in order to give them necessary attention (such as water, *feed*, rest) before they are moved on or used for specific purposes including *slaughter*.

LISTED DISEASE

means a disease, *infection* or *infestation* listed in Chapter 1.3. after adoption by the World Assembly of Delegates.

LOADING/UNLOADING

Loading means the procedure of moving *animals* onto a *vehicle*/*vessel* or into a *container* for transport purposes, while unloading means the procedure of moving *animals* off a *vehicle*/*vessel* or out of a *container*.

MARKET

means a place where *animals* are assembled for the purposes of trade or sale.

MEAT

means all edible parts of an *animal*.

MEAT PRODUCTS

means *meat* that has been subjected to a treatment irreversibly modifying its organoleptic and physicochemical characteristics.

MILK

means the normal mammary secretion of milking *animals* obtained from one or more milkings without either addition to it or extraction from it.

MILK PRODUCT

means the product obtained by any processing of *milk*.

MONITORING

means the intermittent performance and analysis of routine measurements and observations, aimed at detecting changes in the environment or health status of a *population*.

NOTIFIABLE DISEASE

means a disease listed by the *Veterinary Authority*, and that, as soon as detected or suspected, should be brought to the attention of this *Authority*, in accordance with national regulations.

NOTIFICATION

means the procedure by which:

a) the *Veterinary Authority* informs the *Headquarters*,

b) the *Headquarters* inform the *Veterinary Authority*,

of the occurrence of disease, *infection* or *infestation* in accordance with Chapter 1.1.

OFFICIAL CONTROL PROGRAMME

means a programme which is approved, and managed or supervised by the *Veterinary Authority* of a Member Country for the purposes of controlling a *vector*, pathogenic agent or disease by specific measures applied throughout that Member Country, or within a *zone* or *compartment* of that Member Country.

OFFICIAL VETERINARIAN

means a *veterinarian* authorised by the *Veterinary Authority* of the country to perform certain designated official tasks associated with animal health or public health and inspections of *commodities* and, when appropriate, to certify in accordance with Chapters 5.1. and 5.2.

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.

OUTBREAK

means the occurrence of one or more *cases* in an *epidemiological unit*.

OWNED DOG

means a dog for which a person claims responsibility.

PAIN

means an unpleasant sensory and emotional experience associated with actual or potential tissue damage. It may elicit protective actions, result in learned avoidance and *distress* and may modify species-specific traits of behaviour, including social behaviour.

PATHOLOGICAL MATERIAL

means samples obtained from live or dead *animals*, containing or suspected of containing infectious or parasitic agents, to be sent to a *laboratory*.

PLACE OF SHIPMENT

means the place where the *commodities* are loaded into the *vehicle* or handed to the agency that will transport them to another country.

POPULATION

means a group of *units* sharing a common defined characteristic.

POULTRY

means all birds reared or kept in captivity for the production of any commercial animal products or for breeding for this purpose, fighting cocks used for any purpose, and all birds used for restocking supplies of game or for breeding for this purpose, until they are released from captivity.

Birds that are kept in a single household, the products of which are used within the same household exclusively, are not considered *poultry*, provided that they have no direct or indirect contact with *poultry* or *poultry* facilities.

Birds that are kept in captivity for other reasons, including those that are kept for shows, racing, exhibitions, zoological collections and competitions, and for breeding or selling for these purposes, as well as pet birds, are not considered *poultry*, provided that they have no direct or indirect contact with *poultry* or *poultry* facilities.

PRE-JOURNEY PERIOD

means the period during which *animals* are identified, and often assembled for the purposes of *loading* them.

PREVALENCE

means the total number of *cases* or *outbreaks* of a disease that are present in a population at risk, in a particular geographical area, at one specified time or during a given period.

PROTEIN MEAL

means any final or intermediate solid protein-containing product, obtained when animal tissues are rendered, excluding peptides of a molecular mass less than 10,000 daltons and amino-acids.

PROTECTION ZONE

means a *zone* where specific *biosecurity* and *sanitary measures* are implemented to prevent the entry of a pathogenic agent into a free country or *zone* from a neighbouring country or *zone* of a different *animal health status*.

QUALITATIVE RISK ASSESSMENT

means an assessment where the outputs on the likelihood of the outcome or the magnitude of the consequences are expressed in qualitative terms such as 'high', 'medium', 'low' or 'negligible'.

QUANTITATIVE RISK ASSESSMENT

means an assessment where the outputs of the *risk assessment* are expressed numerically.

QUARANTINE STATION

means an establishment under the control of the *Veterinary Authority* where *animals* are maintained in isolation with no direct or indirect contact with other *animals*, to ensure that there is no transmission of specified pathogenic agents outside the establishment while the *animals* are undergoing observation for a specified length of time and, if appropriate, testing or treatment.

REGISTRATION

is the action by which information on *animals* (such as identification, animal health, movement, certification, epidemiology, *establishments*) is collected, recorded, securely stored and made appropriately accessible and able to be utilised by the *Competent Authority*.

RESPONSIBLE DOG OWNERSHIP

means the situation whereby a person accepts and commits to perform various duties in accordance with the legislation in place and focused on the satisfaction of the behavioural, environmental and physical needs of a dog and to the prevention of risks (aggression, disease transmission or injuries) that the dog may pose to the community, other *animals* or the environment.

RESTING POINT

means a place where the *journey* is interrupted to rest, *feed* or water the *animals*; the *animals* may remain in the *vehicle*/*vessel* or *container*, or be unloaded for these purposes.

RESTRAINT

means the application to an *animal* of any procedure designed to restrict its movements.

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.

RISK ANALYSIS

means the process composed of *hazard* identification, *risk assessment*, *risk management* and *risk communication*.

RISK ASSESSMENT

means the evaluation of the likelihood and the biological and economic consequences of entry, establishment and spread of a *hazard*.

RISK COMMUNICATION

is the interactive transmission and exchange of information and opinions throughout the *risk analysis* process concerning *risk*, *risk*-related factors and *risk* perceptions among *risk* assessors, *risk* managers, *risk* communicators, the general public and other interested parties.

RISK MANAGEMENT

means the process of identifying, selecting and implementing measures that can be applied to reduce the level of *risk*.

SAFE COMMODITY

means a *commodity* that can be traded without the need for *risk* mitigation measures specifically directed against a particular *listed disease*, *infection* or *infestation* and regardless of the status of the country or *zone* of origin for that disease, *infection* or *infestation*.

SANITARY MEASURE

means a measure, such as those described in various chapters of the *Terrestrial Code*, designed to protect animal or human health or life within the whole territory or a *zone* of a Member Country from *risks* arising from the entry, establishment or spread of a *hazard*.

SEMEN COLLECTION CENTRE

means an *approved* facility that meets the conditions set out in the *Terrestrial Code* for the collection, processing and storage of semen.

SLAUGHTER

means the *killing* of an *animal* primarily intended for human consumption.

SLAUGHTERHOUSE/ABATTOIR

means premises, including facilities for moving or lairaging *animals*, used for the *slaughter* of *animals* to produce animal products and approved by the relevant *Competent Authority*.

SPACE ALLOWANCE

means the measure of the floor area and height allocated per individual or body weight of *animals*.

SPECIFIC SURVEILLANCE

means the *surveillance* targeted to a specific disease or *infection*.

STAMPING-OUT POLICY

means a policy designed to eliminate an *outbreak* by carrying out under the authority of the *Veterinary Authority* the following:

a) the *killing* of the *animals* which are affected and those suspected of being affected in the *herd* or *flock* and, where appropriate, those in other *herds* or *flocks* which have been exposed to *infection* by direct animal to animal contact, or by indirect contact with the causal pathogenic agent; *animals* should be killed in accordance with Chapter 7.6.;

b) the disposal of carcasses and, where relevant, animal products by rendering, burning or burial, or by any other method described in Chapter 4.13.;

c) the cleansing and *disinfection* of *establishments* through procedures defined in Chapter 4.14.

STOCKING DENSITY

means the number or body weight of *animals* per unit area on a *vehicle*/*vessel* or *container*.

STUNNING

means any procedure that causes loss of consciousness for the purpose of *killing* without avoidable *distress*, fear and *pain*.

SUBPOPULATION

means a distinct part of a *population* identifiable in accordance with specific common animal health characteristics.

SURVEILLANCE

means the systematic ongoing collection, collation, and analysis of information related to animal health and the timely dissemination of information so that action can be taken.

TERRESTRIAL CODE

means the WOAH *Terrestrial Animal Health Code*.

TERRESTRIAL MANUAL

means the WOAH *Manual of Diagnostic Tests and Vaccines for Terrestrial Animals*.

TRANSIT COUNTRY

means a country through which *commodities* destined for an *importing country* are transported or in which a stopover is made at a *border post*.

UNIT

means an individually identifiable element used to describe, for example, the members of a *population* or the elements selected when sampling; examples of *units* include individual *animals*, *herds*, *flocks* and *apiaries*.

VACCINATION

means the administration of a vaccine, in accordance with the manufacturer's instructions and the *Terrestrial Manual*, when relevant, with the intention of inducing immunity in an *animal* or group of *animals* against one or more pathogenic agents.

VECTOR

means an insect or any living carrier that transports an infectious agent from an infected individual to a susceptible individual or its food or immediate surroundings. The organism may or may not pass through a development cycle within the *vector*.

VEHICLE/VESSEL

means any means of conveyance including train, truck, aircraft or ship that is used for carrying *animals*.

VETERINARIAN

means a person with appropriate education, registered or licensed by the relevant *veterinary statutory body* of a country to practice veterinary medicine/science in that country.

VETERINARY AUTHORITY

means the Governmental Authority of a Member Country having the primary responsibility in the whole territory for coordinating the implementation of the standards of the *Terrestrial Code*.

VETERINARY LEGISLATION

means laws, regulations and all associated legal instruments that pertain to the veterinary domain.

VETERINARY MEDICINAL PRODUCT

means any product with approved claims to having a prophylactic, therapeutic or diagnostic effect or to alter physiological functions when administered or applied to an *animal*.

VETERINARY PARAPROFESSIONAL

means a person who, for the purposes of the *Terrestrial Code*, is authorised by the *veterinary statutory body* to carry out certain designated tasks (dependent upon the category of *veterinary paraprofessional*) in a territory, and delegated to them under the responsibility and direction of a *veterinarian*. The tasks for each category of *veterinary paraprofessional* should be defined by the *veterinary statutory body* depending on qualifications and training, and in accordance with need.

VETERINARY SERVICES

means the combination of governmental and non-governmental individuals and organisations that perform activities to implement the standards of the *Terrestrial Code*.

VETERINARY STATUTORY BODY

means an autonomous regulatory body for *veterinarians* and *veterinary paraprofessionals*.

WILD [ANIMAL]

means an *animal* that has a phenotype unaffected by human selection and lives independently without requiring human supervision or control.

WILDLIFE

means *feral animals*, *captive wild animals* and *wild animals*.

ZONE

means a part of a country defined by the *Veterinary Authority*, containing an animal *population* or *subpopulation* with a specific *animal health status* with respect to an *infection* or *infestation* for the purposes of *international trade* or disease prevention or control.

NB: FIRST ADOPTED IN 1968; MOST RECENT UPDATE ADOPTED IN 2024.

SECTION 1.

ANIMAL DISEASE DIAGNOSIS, SURVEILLANCE AND NOTIFICATION

CHAPTER 1.1.

NOTIFICATION OF DISEASES AND PROVISION OF EPIDEMIOLOGICAL INFORMATION

Article 1.1.1.

For the purposes of the *Terrestrial Code* and in terms of Articles 5, 9 and 10 of the Organic Statutes of the Office International des Epizooties, Member Countries shall recognise the right of the *Headquarters* to communicate directly with the *Veterinary Authority* of its territory or territories.

All *notifications* and all information sent by WOAH to the *Veterinary Authority* shall be regarded as having been sent to the country concerned and all *notifications* and all information sent to WOAH by the *Veterinary Authority* shall be regarded as having been sent by the country concerned.

Article 1.1.2.

1) Member Countries shall make available to other Member Countries, through WOAH, whatever information is necessary to minimise the spread of important animal diseases, and their pathogenic agents, and to assist in achieving better worldwide control of these diseases.

2) To achieve this, Member Countries shall comply with the *notification* requirements specified in Articles 1.1.3. and 1.1.4.

3) For the purposes of this chapter, an “event” means a single *outbreak* or a group of epidemiologically related *outbreaks* of a given *listed disease* or *emerging disease* that is the subject of a *notification*. An event is specific to a pathogenic agent and strain, when appropriate, and includes all related *outbreaks* reported from the time of the initial *notification* through to the final report. Reports of an event include susceptible species, the number and geographical distribution of affected animals and *epidemiological units*.

4) To assist in the clear and concise exchange of information, reports shall conform as closely as possible to the WOAH disease reporting format.

5) The detection of the pathogenic agent of a *listed disease* in an *animal* should be reported, even in the absence of clinical signs. Recognising that scientific knowledge concerning the relationship between diseases and their pathogenic agents is constantly developing and that the presence of a pathogenic agent does not necessarily imply the presence of a disease, Member Countries shall ensure, through their reports, that they comply with the spirit and intention of point 1 above.

6) In addition to notifying new findings in accordance with Articles 1.1.3. and 1.1.4., Member Countries shall also provide information on the measures taken to prevent the spread of diseases. Information shall include *biosecurity* and *sanitary measures*, including restrictions applied to the movement of *animals*, animal products, biological products and other miscellaneous objects which could by their nature be responsible for the transmission of diseases. In the case of diseases transmitted by *vectors*, the measures taken against such *vectors* shall also be specified.

Article 1.1.3.

Veterinary Authorities shall, under the responsibility of the Delegate, send to the *Headquarters*:

1) in accordance with relevant provisions in the disease-specific chapters, *notification*, through the World Animal Health Information System (WAHIS) or by fax or email within 24 hours, of any of the following events:

   a) first occurrence of a *listed disease* in a country, a *zone* or a *compartment*;

   b) recurrence of an eradicated *listed disease* in a country, a *zone* or a *compartment* following the final report that declared the event ended;

   c) first occurrence of a new strain of a pathogenic agent of a *listed disease* in a country, a *zone* or a *compartment*;

   d) recurrence of an eradicated strain of a pathogenic agent of a *listed disease* in a country, a *zone* or a *compartment* following the final report that declared the event ended;

   e) a sudden and unexpected change in the distribution or increase in incidence or virulence of, or morbidity or mortality caused by, the pathogenic agent of a *listed disease* present within a country, a *zone* or a *compartment*;

   f) occurrence of a *listed disease* in an unusual host species;

2) weekly reports subsequent to a *notification* under point 1 above, to provide further information on the evolution of the event which justified the *notification*. These reports should continue until the *listed disease* has been eradicated or the situation has become sufficiently stable that six-monthly reporting under point 3 will satisfy the obligation of the Member Country. For each event notified, a final report should be submitted;

3) six-monthly reports on the absence or presence and evolution of *listed diseases* and information of epidemiological significance to other Member Countries;

4) annual reports concerning any other information of significance to other Member Countries.

Article 1.1.4.

Veterinary Authorities shall, under the responsibility of the Delegate, send to the *Headquarters*:

1) a *notification* through WAHIS or by fax or email, when an *emerging disease* has been detected in a country, a *zone* or a *compartment*;

2) periodic reports subsequent to a *notification* of an *emerging disease*:

   a) for the time necessary to have reasonable certainty that:

      i) the *infection* or *infestation* has been eradicated; or

      ii) the situation has become stable;

   OR

   b) until sufficient scientific information is available to determine whether it meets the criteria for inclusion in the WOAH list as described in Chapter 1.2.;

3) a final report once point 2 a) or 2 b) above has been complied with.

Article 1.1.5.

1) Although Member Countries are only required to notify *listed diseases* and *emerging diseases*, they are encouraged to provide WOAH with other important animal health information.

2) The *Headquarters* shall communicate by email or through the interface of WAHIS to *Veterinary Authorities* all *notifications* received as provided in Articles 1.1.2. to 1.1.4. and other relevant information.

NB: FIRST ADOPTED IN 1968; MOST RECENT UPDATE ADOPTED IN 2021.

CHAPTER 1.2.

CRITERIA FOR THE INCLUSION OF DISEASES, INFECTIONS AND INFESTATIONS IN THE WOAH LIST

Article 1.2.1.

Introduction

This chapter describes the criteria for the inclusion of diseases, *infections* and *infestations* in Chapter 1.3.

The objective is to support Member Countries by providing information needed to take appropriate action to prevent the transboundary spread of important animal diseases, including zoonoses. This is achieved through transparent, timely and consistent *notification*.

Each *listed disease* normally has a corresponding chapter that assists Member Countries in the harmonisation of disease detection, prevention and control and provides standards for safe *international trade* in *animals* and their products.

The requirements for *notification* are detailed in Chapter 1.1.

Principles and methods of validation of diagnostic tests are described in Chapter 1.1.6. of the *Terrestrial Manual*.

Article 1.2.2.

The criteria for the inclusion of a disease, *infection* or *infestation* in the WOAH list are as follows:

1) International spread of the pathogenic agent (via live *animals* or their products, *vectors* or fomites) has been proven.

AND

2) At least one country has demonstrated freedom or impending freedom from the disease, *infection* or *infestation* in populations of susceptible *animals*, based on the provisions of Chapter 1.4.

AND

3) Reliable means of detection and diagnosis exist and a precise *case* definition is available to clearly identify *cases* and allow them to be distinguished from other diseases, *infections* or *infestations*.

AND

4)

a) Natural transmission to humans has been proven, and human infection is associated with severe consequences.

OR

b) The disease has been shown to have a significant impact on the health of domestic *animals* at the level of a country or a *zone* taking into account the occurrence and severity of the clinical signs, including direct production losses and mortality.

OR

c) The disease has been shown to, or scientific evidence indicates that it would, have a significant impact on the health of *wildlife* taking into account the occurrence and severity of the clinical signs, including direct economic losses and mortality, and any threat to the viability of a *wildlife* population.

NB: FIRST ADOPTED IN 2004; MOST RECENT UPDATE ADOPTED IN 2017.

CHAPTER 1.3.

DISEASES, INFECTIONS AND INFESTATIONS LISTED BY WOAH

Preamble

The diseases, *infections* and *infestations* in this chapter have been assessed in accordance with Chapter 1.2. and constitute the WOAH list of terrestrial animal diseases.

In case of modifications of this list adopted by the World Assembly of Delegates, the new list comes into force on 1 January of the following year.

Article 1.3.1.

The following are included within the category of diseases, *infections* and *infestations* of multiple species:

– Anthrax
– Crimean Congo hemorrhagic fever
– Equine encephalomyelitis (Eastern)
– Heartwater
– Infection with Aujeszky's disease virus
– Infection with bluetongue virus
– Infection with *Brucella abortus*, *Brucella melitensis* and *Brucella suis*
– Infection with *Coxiella burnetii* (Q fever)
– Infection with *Echinococcus granulosus*
– Infection with *Echinococcus multilocularis*
– Infection with epizootic hemorrhagic disease virus
– Infection with foot and mouth disease virus
– Infection with *Leishmania* spp. (Leishmaniosis)
– Infection with *Mycobacterium tuberculosis* complex
– Infection with rabies virus
– Infection with Rift Valley fever virus
– Infection with rinderpest virus
– Infection with *Trichinella* spp.
– Infection with *Trypanosoma brucei*, *Trypanosoma congolense*, *Trypanosoma simiae* and *Trypanosoma vivax*
– Infection with *Trypanosoma evansi* (Surra)
– Japanese encephalitis
– New World screwworm *(Cochliomyia hominivorax)*
– Old World screwworm *(Chrysomya bezziana)*
– Paratuberculosis
– Tularemia
– West Nile fever.

Article 1.3.2.

The following are included within the category of diseases, *infections* and *infestations* of apinae:

– Infection of honey bees with *Melissococcus plutonius* (European foulbrood)
– Infection of honey bees with *Paenibacillus larvae* (American foulbrood)
– Infestation of honey bees with *Acarapis woodi*

– Infestation of honey bees with *Tropilaelaps* spp.
– Infestation of honey bees with *Varroa* spp. (Varroosis)
– Infestation with *Aethina tumida* (Small hive beetle).

Article 1.3.3.

The following are included within the category of diseases and *infections* of aves:
– Avian chlamydiosis
– Avian infectious bronchitis
– Avian infectious laryngotracheitis
– Duck virus hepatitis
– Fowl typhoid
– Infection with high pathogenicity avian influenza viruses
– Infection of birds other than *poultry*, including *wild* birds, with influenza A viruses of high pathogenicity
– Infection of domestic and *captive wild* birds with low pathogenicity avian influenza viruses having proven natural transmission to humans associated with severe consequences
– Infection with *Mycoplasma gallisepticum* (Avian mycoplasmosis)
– Infection with *Mycoplasma synoviae* (Avian mycoplasmosis)
– Infection with Newcastle disease virus
– Infectious bursal disease (Gumboro disease)
– Pullorum disease
– Turkey rhinotracheitis.

Article 1.3.4.

The following are included within the category of diseases and *infections* of bovinae:
– Bovine anaplasmosis
– Bovine babesiosis
– Bovine genital campylobacteriosis
– Bovine spongiform encephalopathy
– Enzootic bovine leukosis
– Haemorrhagic septicaemia (*Pasteurella multocida* serotypes 6:b and 6:e)
– Infection with bovine pestiviruses (Bovine viral diarrhoea)
– Infection with lumpy skin disease virus
– Infection with *Mycoplasma mycoides* subsp. *mycoides* (Contagious bovine pleuropneumonia)
– Infection with *Theileria annulata*, *Theileria orientalis* and *Theileria parva*
– Infectious bovine rhinotracheitis/infectious pustular vulvovaginitis
– Trichomonosis.

Article 1.3.5.

The following are included within the category of diseases and *infections* of equidae:
– Dourine
– Equine encephalomyelitis (Western)
– Equine infectious anaemia
– Infection with African horse sickness virus
– Infection with *Burkholderia mallei* (Glanders)
– Infection with equid herpesvirus-1 (Equine rhinopneumonitis)
– Infection with equine arteritis virus

– Infection with equine influenza virus
– Infection with *Taylorella equigenitalis* (Contagious equine metritis)
– Infection with *Theileria equi* and *Babesia caballi* (Equine piroplasmosis)
– Venezuelan equine encephalomyelitis.

Article 1.3.6.

The following are included within the category of diseases and *infections* of leporidae:
– Infection with pathogenic rabbit lagoviruses (Rabbit haemorrhagic disease)
– Myxomatosis.

Article 1.3.7.

The following are included within the category of diseases and *infections* of caprinae:
– Caprine arthritis/encephalitis
– Contagious agalactia
– Contagious caprine pleuropneumonia
– Infection with *Chlamydia abortus* (Enzootic abortion of ewes, ovine chlamydiosis)
– Infection with peste des petits ruminants virus
– Infection with *Theileria lestoquardi*, *Theileria luwenshuni* and *Theileria uilenbergi*
– Maedi–visna
– Nairobi sheep disease
– Ovine epididymitis *(Brucella ovis)*
– Salmonellosis (*S.* abortusovis)
– Scrapie
– Sheep pox and goat pox.

Article 1.3.8.

The following are included within the category of diseases and *infections* of suidae:
– Infection with African swine fever virus
– Infection with classical swine fever virus
– Infection with porcine reproductive and respiratory syndrome virus
– Infection with *Taenia solium* (Porcine cysticercosis)
– Nipah virus encephalitis
– Transmissible gastroenteritis.

Article 1.3.9.

The following are included within the category of diseases and *infections* of camelidae:
– Infection with *Camelpox virus*
– Infection with Middle East respiratory syndrome coronavirus.

NB: FIRST ADOPTED IN 1976; MOST RECENT UPDATE ADOPTED IN 2024

CHAPTER 1.4.

ANIMAL HEALTH SURVEILLANCE

Article 1.4.1.

Introduction and objectives

1) In general, *surveillance* is aimed at demonstrating the absence of *infection* or *infestation*, determining the presence or distribution of *infection* or *infestation* or detecting as early as possible exotic diseases or *emerging diseases*. Animal health *surveillance* is a tool to monitor disease trends, to facilitate the control of *infection* or *infestation*, to provide data for use in *risk analysis*, for animal or public health purposes, to substantiate the rationale for *sanitary measures* and for providing assurances to trading partners. The type of *surveillance* applied depends on the objectives of the *surveillance*, the available data sources and the outputs needed to support decision-making. The general recommendations in this chapter may be applied to all *infections* or *infestations* and all susceptible species (including *wildlife*) and may be adapted to national or local settings. *Specific surveillance* is described in some *listed disease*-specific chapters.
2) *Wildlife* may be included in a *surveillance* system because they can serve as reservoirs of *infection* or *infestation* and as indicators of *risk* to humans and domestic *animals*. However, the presence of an *infection* or *infestation* in *wildlife* does not mean it is necessarily present in domestic *animals* in the same country or *zone*, or vice versa. *Surveillance* in *wildlife* presents challenges that may differ significantly from those in *surveillance* in domestic *animals*.
3) Prerequisites to enable a Member Country to provide information for the evaluation of its *animal health status* are:
    a) that the Member Country complies with the provisions of Chapters 3.1. to 3.5. on *Veterinary Services*;
    b) that, where possible, *surveillance* data be complemented by other sources of information, such as scientific publications, research data, *population* demographic data, animal production data, documented field observations and other data;
    c) that transparency in the planning, execution and results of *surveillance* activities, is in accordance with Chapter 1.1.
4) The objectives of this chapter are to:
    a) provide guidance on the design of a *surveillance* system and the type of output it should generate;
    b) provide recommendations to assess the quality of *surveillance* systems.

Article 1.4.2.

Definitions

For the purposes of this chapter the following definitions apply:

Bias means a tendency of an estimate to deviate in one direction from a true *population* parameter.

Confidence means the probability that the type of *surveillance* applied would detect the presence of *infection* or *infestation* if the *population* were infected and is equivalent to the sensitivity of the *surveillance*. Confidence depends on, among other parameters, the assumed prevalence of *infection* or *infestation*.

Probability sampling means a sampling strategy in which every *unit* is chosen at random and has a known non-zero probability of inclusion in the sample.

Sample means the group of elements (sampling *units*) drawn from a *population*, on which tests are performed or parameters measured to provide *surveillance* information.

Sampling unit means the *unit* that is sampled. This may be an individual *animal* or a group of *animals*, such as an *epidemiological unit*.

Sensitivity means the proportion of infected sampling *units* that are correctly identified as positive.

Specificity means the proportion of uninfected sampling *units* that are correctly identified as negative.

Study population means the *population* from which *surveillance* data are derived. This may be the same as the target *population* or a subset of it.

Surveillance system means the use of one or more *surveillance* components to generate information on the health status of animal *populations*.

Survey means a component of a *surveillance* system to systematically collect information with a predefined goal on a sample of a defined *population* group, within a defined period.

Target population means the *population* to which conclusions are to be inferred.

Test means a procedure used to classify a *unit* as either positive, negative or suspect with respect to an *infection* or *infestation*.

Article 1.4.3.

Surveillance systems

In designing, implementing and assessing a *surveillance* system, the following components should be addressed in addition to the quality of *Veterinary Services*.

1. Design of surveillance system

   a) Populations

   Surveillance should take into account all animal species susceptible to the *infection* or *infestation* in a country, *zone* or *compartment*. The *surveillance* activity may cover all individuals in the *population* or only some of them. When *surveillance* is conducted only on a *subpopulation*, inferences to the target *population* should be justified based on the epidemiology of the disease and the degree to which the *subpopulation* is representative of the target *population* stated.

   Definitions of appropriate *populations* should be based on the specific recommendations of the relevant chapters of the *Terrestrial Code*.

   b) Timing and temporal validity of surveillance data

   The timing, duration and frequency of *surveillance* should be determined taking into consideration factors such as:

   – objectives of the *surveillance*;
   – biology and epidemiology (e.g. pathogenesis, *vectors*, transmission pathways, seasonality);
   – *risk* of introduction and spread;
   – husbandry practices and production systems;
   – disease prevention and control measures (e.g. *vaccination*, restocking after *disinfection*);
   – accessibility of target *population*;
   – geographical factors;
   – environmental factors, including climate conditions.

   c) Case definition

   Where one exists, the *case* definition in the relevant chapter of the *Terrestrial Code* should be used. If the *Terrestrial Code* does not give a *case* definition, a *case* should be defined using clear criteria for each *infection* or *infestation* under *surveillance*. For *wildlife infection* or *infestation surveillance*, it is essential to correctly identify and report host animal taxonomy, including genus and species.

   d) Epidemiological unit

   The relevant *epidemiological unit* for the *surveillance* system should be defined. To meet the objective of *surveillance*, the sampling *unit* selected for testing should reflect the defined *epidemiological unit*.

   A group of *animals* may be considered an *epidemiological unit* because they share a common environment or because of common management. Usually, an *epidemiological unit* is a *herd* or a *flock*. However, it may also be a group of *animals* in a pen or a group of *animals* belonging to residents of a village, or a group of *animals* sharing a communal animal handling facility or, in some circumstances, a single *animal*. The epidemiological relationship may differ from disease to disease, or even strain to strain of the pathogenic agent.

   e) Clustering

   Infection or *infestation* in a country, *zone* or *compartment* usually clusters rather than being uniformly or randomly distributed through a *population*. Clustering may occur at a number of different levels (e.g. a cluster

of infected *animals* within a *herd* or *flock*, a cluster of pens in a building, or a cluster of farms in a *compartment*). Clustering should be taken into account in the design of *surveillance* activities and considered in the statistical analysis of *surveillance* data.

f) Diagnostic tests

Surveillance involves the use of tests for detection of *infection* or *infestation* according to appropriate *case* definitions. Tests used in *surveillance* may range from clinical observations and the analysis of production records to rapid field and detailed laboratory assays.

The performance of a test at the *population* level (including field observations) may be described in terms of its sensitivity, specificity and predictive values. These values together with prevalence will have an impact on the conclusions drawn from *surveillance* and should be taken into account in the design of *surveillance* systems and analysis of *surveillance* data.

Laboratory tests should be chosen in accordance with the relevant chapters of the *Terrestrial Manual*.

g) Analytical methodologies

Surveillance data should be analysed using appropriate methodologies and at the appropriate organisational level to facilitate effective decision-making, whether it be for planning disease control interventions or demonstrating health status.

Methodologies for the analysis of *surveillance* data should be flexible to deal with the complexity of real life situations. No single method is applicable in all cases. Different methodologies may be used to accommodate different host species, pathogenic agents, production systems and *surveillance* systems, and types and amounts of data and information available.

The methodology used should be based on the best data sources available. It should also be in accordance with this chapter, fully documented and, whenever possible, supported by reference to scientific literature and other sources, including expert opinion. Sophisticated mathematical or statistical analyses may be carried out only when justified by the objectives of the *surveillance* and the availability and quality of field data.

Consistency in the application of different methodologies should be encouraged. Transparency is essential in order to ensure objectivity and rationality, consistency in decision-making and ease of understanding. The uncertainties, assumptions made, and the effect of these on the final conclusions should be documented.

h) Scope of the surveillance system

When designing the *surveillance* system consideration should be given to the purposes of *surveillance* and how the information it generates will be used, the limitations of the information it will generate, including representativeness of the study *population* and potential sources of bias as well as the availability of financial, technical and human resources.

i) Follow up actions

The design of the *surveillance* system should include consideration of what actions will be taken on the basis of the information generated.

2. Implementation of the surveillance system

a) Diagnostic tests

The sensitivity and specificity values of the tests used should be specified for target species and the method used to estimate these values should be documented in accordance with the *Terrestrial Manual*.

Samples from a number of *animals* or *units* may be pooled and subjected to a testing protocol. The results should be interpreted using sensitivity and specificity values that have been determined or estimated for that particular pool size and testing procedure.

b) Data collection and management

The success of a *surveillance* system is dependent on a reliable process for data collection and management. The process may be based on paper or electronic records. Even where data are collected for non-survey purposes (e.g. during disease control interventions, inspections for movement control or during disease eradication schemes), the consistency and quality of data collection and event reporting in a format that facilitates analysis is critical. Software may offer the possibility of extraction of multiple source data for aggregation and analysis. Factors influencing the quality of collected data include:

- the distribution of, and communication between, those involved in generating and transferring data from the field to a centralised location; this requires effective collaboration among all stakeholders, such as government or non-governmental organisations, and others, particularly for data involving *wildlife*;
- the ability of the data processing system to detect missing, inconsistent or inaccurate data, and to address these problems;
- maintenance of raw data rather than the compilation of summary data;
- minimisation of transcription errors during data processing and communication.

3. Quality assurance

Surveillance systems should be subjected to periodic auditing to ensure that all components function and provide verifiable documentation of procedures and basic checks to detect deviations of procedures from those specified in the design, in order to implement appropriate corrective actions.

Article 1.4.4.

Surveillance methods

Surveillance systems routinely use data collected by probability-based or non-probability-based methods, either alone or in combination. A wide variety of *surveillance* sources may be available. These vary in their primary purpose and the type of *surveillance* information they are able to provide.

1. Disease reporting systems

Disease reporting systems are based on reporting of animal health-related events to the *Veterinary Authority*. Data derived from disease reporting systems can be used in combination with other data sources to substantiate claims of *animal health status*, to generate data for *risk analysis* or for early warning and response. Effective laboratory support is an important component of any reporting system. Reporting systems relying on laboratory confirmation of suspected clinical *cases* should use tests that have high specificity as described in the *Terrestrial Manual*.

Whenever the responsibility for disease reporting falls outside the scope of the *Veterinary Authority*, for example human cases of zoonotic diseases or *infections* or *infestations* in *wildlife*, effective communication and data sharing should be established between the *Veterinary Authority* and other relevant authorities.

Participatory *surveillance* methods may be useful to collect epidemiological data that can support disease reporting systems.

2. Surveys

In addition to the principles in Article 1.4.3., the following should be considered when planning, implementing and analysing surveys.

Surveys may be conducted on the entire target *population* (i.e. a census) or on a sample.

The sources of data should be fully described and should include a detailed description of the sampling strategy used for the selection of *units* for testing. Also, consideration should be given to any biases that may be inherent in the survey design.

a) Survey design

The target and study *populations* should first be clearly defined. Depending on the design of the survey, appropriate sampling *units* should be defined for each stage.

The design of the survey will depend on the knowledge of the size, structure and distribution of the *population*, the epidemiology of the *infection* or *infestation* and the resources available.

Data on the size, structure and distribution of *wildlife populations* often do not exist. However, they should be estimated to the extent possible before the survey is designed. Expert opinion can be sought in the gathering and interpretation of such *population* data. Historical *population* data should be updated since these may not reflect current *populations*.

b) Sampling

i) Objective

The objective of sampling from a *population* is to select a subset of *units* from the *population* of interest with respect to the objective of the study, taking into account practical constraints imposed by different

environments and production systems so that data from the study *population* can be extrapolated to the target *population*.

When selecting *units* from a target *population* to have a representative sample, probability-based sampling, such as a simple random selection, should be used.

Where probability-based sampling is not feasible, non-probability-based methods may be applied and should provide the best practical chance of generating a sample that can be considered as representative of the target *population*.

When the objective of non-probability-based sampling is to maximise the likelihood of detection of the *infection* or *infestation*, this type of sampling may not be representative of the target *population*.

When using non-probability-based sampling, representativeness can only be achieved if *risk* factors are weighted and the weights are supported by relevant scientific evidence capturing the relative differences in *risk* and proportion between the study *population* and the target *population*.

The sampling method used at all stages should be fully documented.

ii) Sample size

In surveys conducted to demonstrate the presence or absence of an *infection* or *infestation* the method used to calculate sample size depends on the size of the *population*, the design of the survey, the expected prevalence and possible clustering, the level of confidence desired of the survey results and the performance of the tests used.

In addition, for surveys designed to estimate a parameter (e.g. prevalence) consideration should be given to the desired precision of the estimate.

iii) Sample selection

- Probability-based sampling methods, such as:
  - simple random selection;
  - cluster sampling;
  - stratified sampling;
  - systematic sampling;
  - risk-based sampling.
- Non-probability-based sampling methods, depending on:
  - convenience;
  - expert choice;
  - quota;
  - *risk*.

3. Risk-based methods

Surveillance activities targeting selected *subpopulations* in which an *infection* or *infestation* is more likely to be introduced or found, or more likely to spread, or cause other consequences and contribute to early detection, freedom claims, disease control activities, and estimation of prevalence. Risk-based methods can be used for both probability-based and non-probability-based sampling methods and data collection. The effect of the selection (i.e. its impact on probability of detection) should be estimated.

Risk-based methods should be based on a *risk assessment* and are useful to optimise the use of *surveillance* resources.

4. Ante-mortem and post-mortem inspections

Inspection of *animals* at *slaughterhouses/abattoirs* may provide valuable *surveillance* data. The sensitivity and specificity of *slaughterhouse/abattoir* inspections for detecting the presence of specified diseases will be influenced by:

a) clinical and pathological signs;

b) the training, experience and number of the inspection staff;

c) the extent to which the *Competent Authority* is involved in the supervision of ante-mortem and post-mortem inspections, including reporting systems;

d) the quality of construction of the *slaughterhouse/abattoir*, speed of the slaughter chain, lighting quality, etc.; and

e) independence of the inspection staff.

Slaughterhouse/abattoir inspections are likely to provide good coverage for particular age groups and geographical areas only. *Slaughterhouse/abattoir surveillance* data may only be representative of a particular *subpopulation*

(e.g. only *animals* of a particular class and age are likely to be slaughtered for human consumption in significant numbers). Such limitations should be recognised when analysing *surveillance* data.

The usefulness of data generated by *slaughterhouse/abattoir* inspections is dependent on effective *animal traceability* that relates *animals* to their *herd* or *flock* or locality of origin.

Post-mortem inspection conducted in locations other than *slaughterhouses/abattoirs* (e.g. rendering plants, hunting places) may also provide valuable *surveillance* data.

5. Surveillance of sentinel units

Surveillance of sentinel *units* involve the identification and regular testing of one or more *animals* of known health or immune status in a specified geographical location to detect the occurrence of *infection* or *infestation*. Sentinel *units* provide the opportunity to target *surveillance* depending on the risk of introduction or re-emergence, likelihood of *infection* or *infestation*, cost and other practical constraints. Sentinel *units* may provide evidence of freedom from, or distribution of, disease, *infection* or *infestation*.

6. Clinical surveillance

Clinical observations of *animals* in the field are an important source of *surveillance* data. The sensitivity and specificity of clinical observations are highly dependent on the criteria used to define a suspected *case*. In order to allow comparison of data, the *case* definition should be standardised. Awareness and training of potential field observers, including *animal* keepers, in the application of the *case* definition and reporting are important. Ideally, both the number of positive observations and the total number of observations should be recorded.

7. Syndromic surveillance

Systematic analysis of health data, including morbidity and mortality rates, production records and other parameters can be used to generate signals that may be indicative of changes in the occurrence of *infection* or *infestation*.

8. Other useful data

a) Data generated by control programmes and health schemes

While focusing on the control or eradication of specific *infections* or *infestations*, control programmes or health schemes can be used to generate data that can contribute to other *surveillance* objectives.

b) Laboratory investigation records

Laboratory investigation records may provide useful data for *surveillance*, in particular for retrospective studies. Multiple sources of data such as national, accredited, university and private sector *laboratories* should be integrated in order to increase the coverage of the *surveillance* system.

Valid analysis of data from different *laboratories* depends on the existence of quality control and quality assurance systems, including standardised diagnostic procedures and standardised methods for data recording and interpretation as well as a mechanism to ensure the traceability of specimens to *herd* or *flock* or locality of origin.

c) Biological specimen banks

Specimen banks consist of stored specimens, gathered through representative sampling or opportunistic collection. Specimen banks may contribute to retrospective studies, including providing support for claims of historical freedom from disease, *infection* or *infestation*, and may allow certain studies to be conducted more quickly and at lower cost than other approaches.

d) Wildlife data

Specimens for *surveillance* from *wildlife* may be available from sources such as hunters and trappers, road-kills, *wild animal meat* markets, sanitary inspection of hunted *animals*, morbidity and mortality observations by the general public, *wildlife* rehabilitation centres, *wildlife* biologists and *wildlife* agency field personnel, farmers and other landholders, naturalists and conservationists. *Wildlife* data such as census data, trends over time, and reproductive success can be used in a manner similar to farm production records for epidemiological purposes.

e) Public health data

For zoonotic diseases public health data may be an indicator of a potential change in the *animal health status*. The *Veterinary Authority* should coordinate with human health authorities and share data for integration into *specific surveillance* systems.

f) Environmental data

Relevant environmental data such as rainfall, temperature, extreme climatic events, presence and abundance of potential *vectors* as described in Chapter 1.5., should also be integrated into the *surveillance* system.

g) Additional supporting data such as:

i) data on the epidemiology of the *infection* or *infestation*, including host *population* distribution;

ii) data on animal movements, including transhumance and natural *wildlife* migrations;

iii) trading patterns for *animals* and animal products;

iv) national animal health regulations, including information on compliance and effectiveness;

v) history of imports of potentially infected material;

vi) *biosecurity* in place; and

vii) the *risk* of introduction of *infection* or *infestation*.

9. Combination and interpretation of surveillance results

Depending on the objective of *surveillance*, the combination of multiple sources of data may provide an indication of the overall sensitivity of the system and may increase the confidence in the results. The methodology used to combine the evidence from multiple data sources should be scientifically valid, and fully documented, including references to published material.

Surveillance information gathered from the same country, *zone* or *compartment* at different times may provide cumulative evidence of *animal health status*. Repeated surveys may be analysed to provide a cumulative level of confidence. However, the combination of data collected over time from multiple sources may be able to achieve an equivalent level of confidence.

Analysis of *surveillance* information gathered intermittently or continuously over time should, where possible, incorporate the time of collection of the information to take the decreased value of older information into account. The sensitivity and specificity of tests used and completeness of data from each source should also be taken into account for the final overall confidence level estimation.

In assessing the efficiency of the *surveillance* system based on multiple sources, the *Veterinary Authority* should consider the relative contribution of each component to the overall sensitivity, while considering the primary objective of each *surveillance* component.

Results from animal health *surveillance* systems are subject to one or more potential biases. When assessing the results, care should be taken to identify potential biases that can inadvertently lead to an over-estimate or an under-estimate of the parameters of interest.

Article 1.4.5.

Early warning systems

An *early warning system* is essential for the timely detection, reporting and communication of occurrence, incursion or emergence of diseases, *infections* or *infestations* and is an integral component of emergency preparedness. It should be under the control of the *Veterinary Authority* and should include the following:

1) appropriate access to, and authority over, the target *animal populations* by the *Veterinary Services*;

2) access to *laboratories* capable of diagnosing and differentiating relevant *infections* or *infestations*;

3) training and awareness programmes for *veterinarians*, *veterinary paraprofessionals*, *animal* owners or keepers and others involved in handling *animals* at the farm or other places where they are kept during their transport or at the *slaughterhouse/abattoir*, for detecting and reporting unusual animal health incidents;

4) a legal obligation by *veterinarians* and other relevant stakeholders to report suspected *cases* or *cases* of *notifiable diseases* or *emerging diseases* to the *Veterinary Authority*, including the description of the findings;

5) epidemiological investigations of suspected *cases* and *cases* conducted by the *Veterinary Services* in order to confirm *cases* and to acquire accurate knowledge of the situation for further action.

All suspected *case* investigations should provide a result, either positive or negative. Criteria should be established in advance for a *case* definition. Confirmation can be made on clinical and post-mortem grounds, epidemiological information, laboratory test results or a combination of these, in accordance with relevant articles of the *Terrestrial Code* or *Terrestrial Manual*;

6) effective systems of communication between the *Veterinary Authority* and relevant stakeholders;

7) a national chain of command.

Article 1.4.6.

Surveillance for freedom from a disease, infection or infestation

1. Demonstration of freedom

A *surveillance* system to demonstrate freedom from a disease, *infection* and *infestation* should meet the following, in addition to the general principles outlined in Article 1.4.3. It should also take into account any prevention measures in place such as *vaccination* in accordance with this chapter and Chapter 4.18.

Freedom implies the absence of *infection* or *infestation* in an animal *population* in the country, *zone* or *compartment*. Scientific methods cannot provide absolute certainty of this absence. Therefore, demonstrating freedom, except for historical freedom, involves providing sufficient evidence to demonstrate to a desired level of confidence that *infection* or *infestation* with a specified pathogenic agent, if present, is present in less than a specified proportion of the *population*.

However, finding evidence of *infection* or *infestation* at any prevalence in the target *population* automatically invalidates any freedom claim unless otherwise stated in the relevant chapters of the *Terrestrial Code*.

It can be difficult to collect sufficient epidemiological data to demonstrate absence of *infection* or *infestation* in *wild animal populations*. In such circumstances, a range of supporting evidence should be used to make this assessment. The consequences of the presence of *infection* or *infestation* in *wildlife* in the same country or *zone* on the status of domestic *animals* should be assessed in each situation, as described in the relevant chapters of the *Terrestrial Code*.

Evidence from probability and non-probability risk-based data collection may increase the sensitivity of the *surveillance*.

2. Requirements to declare a country or a zone free from an infection or infestation

a) Prerequisites, unless otherwise specified in the relevant chapters of the *Terrestrial Code*:

   i) the *infection* or *infestation* has been a *notifiable disease*;

   ii) an *early warning system* has been in place for all relevant species;

   iii) measures to prevent the introduction of the *infection* or *infestation* have been in place: in particular, the importations or movements of *commodities* into the country or *zone* have been carried out in accordance with the relevant chapters of the *Terrestrial Code*;

   iv) the *infection* or *infestation* is not known to be established in *wildlife* within the country or *zone*.

b) Historical freedom

   Unless otherwise specified in the relevant chapter of the *Terrestrial Code*, a country or *zone* may be considered free without formally applying a pathogen-specific *surveillance* programme when:

   i) for at least the past 10 years:

      – no *vaccination* against the disease has been carried out;

      – the prerequisites listed in point a) are complied with;

   ii) the pathogenic agent is likely to produce identifiable clinical or pathological signs in susceptible *animals*;

   iii) for at least 25 years there has been no occurrence of *infection* or *infestation*.

c) Where historical freedom cannot be demonstrated:

   i) A pathogen-specific *surveillance* programme has been applied as described in this chapter and in the relevant chapter of the *Terrestrial Code*, and has not detected any occurrence of the *infection* or *infestation*.

   ii) The prerequisites listed in point a) have been complied with for at least as long as the pathogen-specific *surveillance* has been in place.

3. Requirements to declare a compartment free from infection or infestation

a) A pathogen-specific *surveillance* programme has been applied as described in this chapter and in the relevant chapter of the *Terrestrial Code*, and has not detected any occurrence of the *infection* or *infestation*.

b) The prerequisites listed in points 2 a) i) to 2 a) iii) have been complied with for at least as long as the pathogen-specific *surveillance* has been in place.

4. Recommendations for the maintenance of freedom from a disease, infection or infestation

Unless otherwise specified in the relevant chapter of the *Terrestrial Code*, a country or *zone* that has achieved freedom in accordance with the provisions of the *Terrestrial Code* may maintain its free status provided that:

a) the *infection* or *infestation* is a *notifiable disease*;

b) an *early warning system* is in place for all relevant species;

c) measures to prevent the introduction of the *infection* or *infestation* are in place;

d) *surveillance* adapted to the likelihood of occurrence of *infection* or *infestation* is carried out. *Specific surveillance* may not need to be carried out if supported by a *risk assessment* addressing all identified pathways for introduction of the pathogenic agent and provided the pathogenic agent is likely to produce identifiable clinical or pathological signs in susceptible *animals*;

e) the *infection* or *infestation* is not known to be established in *wildlife*.

Article 1.4.7.

Surveillance in support of disease control programmes

Surveillance is an important component in disease control programmes and can be used to determine the distribution and occurrence of *infection* or *infestation* or of other relevant health-related events. It can be used to assess progress and aid in decision-making in the control or eradication of selected *infections* or *infestations*.

Surveillance used to assess progress in control or eradication of selected *infections* or *infestations* should be designed to collect data about a number of variables such as:

1) prevalence or incidence of *infection* or *infestation*;
2) morbidity and mortality;
3) frequency of *risk* factors and their quantification;
4) frequency distribution of results of the laboratory tests;
5) post-vaccination monitoring results;
6) frequency distribution of *infection* or *infestation* in *wildlife*.

The spatial and temporal distribution of these variables and other data such as *wildlife*, public health and environmental data as described in point 8 of Article 1.4.4. can be useful in the assessment of disease control programmes.

NB: FIRST ADOPTED IN 2005; MOST RECENT UPDATE ADOPTED IN 2021.

CHAPTER 1.5.

SURVEILLANCE FOR ARTHROPOD VECTORS OF ANIMAL DISEASES

Article 1.5.1.

Introduction

Vector-borne diseases are of increasing importance economically and to human and animal health.

Environmental (including climate change), sociological and economical changes may affect the distribution and impact of these diseases.

Improved understanding of the distribution and population dynamics of the *vectors* is a key element for assessing and managing the *risks* associated with *vector*-borne animal and zoonotic diseases.

The *Terrestrial Code* contains recommendations for the *surveillance* of several *vector*-borne diseases and general recommendations for animal health *surveillance*.

The need has arisen to complement these general recommendations on *surveillance* with advice on the *surveillance* for *vectors* themselves. This chapter only addresses *surveillance* for arthropod *vectors*.

For the purpose of trade, it should be noted that there is no conclusive relationship between the presence of *vectors* and the disease status of a country/*zone*, and also that the apparent absence of *vectors* does not by itself confirm *vector*-free status.

A decision tree for *vector surveillance* is presented in Figure 1.

Article 1.5.2.

Objectives

The objective of these recommendations is to provide methods for:

1) gathering up-to-date information on the spatial and temporal distribution and abundance of *vectors* of the arthropod-borne *listed diseases* and *emerging diseases*;
2) monitoring changes in the spatial and temporal distribution and abundance of these *vectors*;
3) collecting relevant data to inform *risk assessment* (including *vector* competency) and *risk management* of these *vector*-borne diseases;
4) detecting the presence of specific *vectors* or confirming their absence;
5) understanding pathways of entry for *vectors* and *vector*-borne pathogenic agents.

Article 1.5.3.

Sampling methodology

1. Sampling plan
   a) The objective of the *surveillance* programme should be determined and stated before planning begins.
   b) Available historical data on the *vector* or the disease for the country or *zone* should be collated and assessed.
   c) The sampling plan should consider the following:
      i) the biology and ecology of the *vectors*,
      ii) the presence, distribution and abundance of the *vectors*' host animal populations,

iii) the environmental, climatic, ecological and topographic conditions of relevance to *vector* ecology,

iv) the need for a *risk assessment* to indicate the areas at highest *risk* of introduction of a *vector* that is unlikely to be present.

d) Sampling should be aimed at:

i) establishing *vector* presence or confirming *vector* absence in the country or *zone*,

ii) describing the distribution of the *vectors* within the country or *zone*,

iii) providing additional information on *vector* density and spatial/temporal variability (both over the short and the long-term),

iv) early detection of *vectors* or *vector*-borne pathogenic agents in areas with *risks* of entry and establishment.

e) The sampling plan should be designed to provide appropriate estimates of the indicators listed above. Consideration should be given to the following:

i) The recommended general approach to sampling is via a three-stage hierarchy:

– stratification based on ecological criteria (where possible), and *risk assessment* for *vector* introduction,

– subdivision of strata into spatial sampling units, and

– establishment of actual sampling sites within selected spatial sampling units.

ii) If adequate entomological, epidemiological and historical data and/or expert opinion exists, the sampling plan may be refined or targeted by defining strata which are as homogeneous as possible with respect to the following known or suspected *risk*-factors, as appropriate for the country or *zone*:

– domestic or wild populations of host *animals* preferred by the *vector*,

– *vector* habitat suitability,

– climatic patterns (including seasonal),

– areas endemically and/or epidemically affected by the diseases of concern,

– areas of known *vector* occurrences,

– fringe *zones* around areas of known *vector* occurrences or other high *risks* areas for *vector* introduction, such as ports,

– areas in which the diseases or *vectors* of concern have not been reported currently or historically,

– each stratum (or the whole country or *zone*, if not stratified) should be divided into spatial sampling units in accordance with standard methodologies such as a grid system,

– the number and size of the spatial sampling units should be defined to provide appropriate estimates of the indicators listed above,

– the number and location of actual sampling sites within each spatial sampling unit also should be defined to provide appropriate estimates of the indicators listed above,

– different levels of sampling intensity (spatial sampling unit size, number of units sampled, number of sites sampled within units, and sampling frequency) may be applied to different strata into which the country or *zone* has been divided. For example, more intensive sampling might be carried out in strata where *vector* presence seems most likely, based on biological or statistical criteria.

2. Sampling methods

Many sampling methods have been developed for the capture of *vector* arthropods, and these differ in accordance with the disease/*vector* system under consideration.

a) The collection methods used should be adapted as required to ensure reasonable confidence of collecting the *vectors* of concern.

b) Collection methods should obtain the various developmental stages (such as eggs, larvae, nymphs, adults) and adult age categories, as appropriate to the species in question and the objectives of the *surveillance*. For example, if a *vector* is not believed to be present, collection methods should target the developmental stages most likely to be introduced, or that are most readily detected. If the *vector* is present, life stages required to estimate population survival rates and population dynamics in relation to disease transmission should be collected.

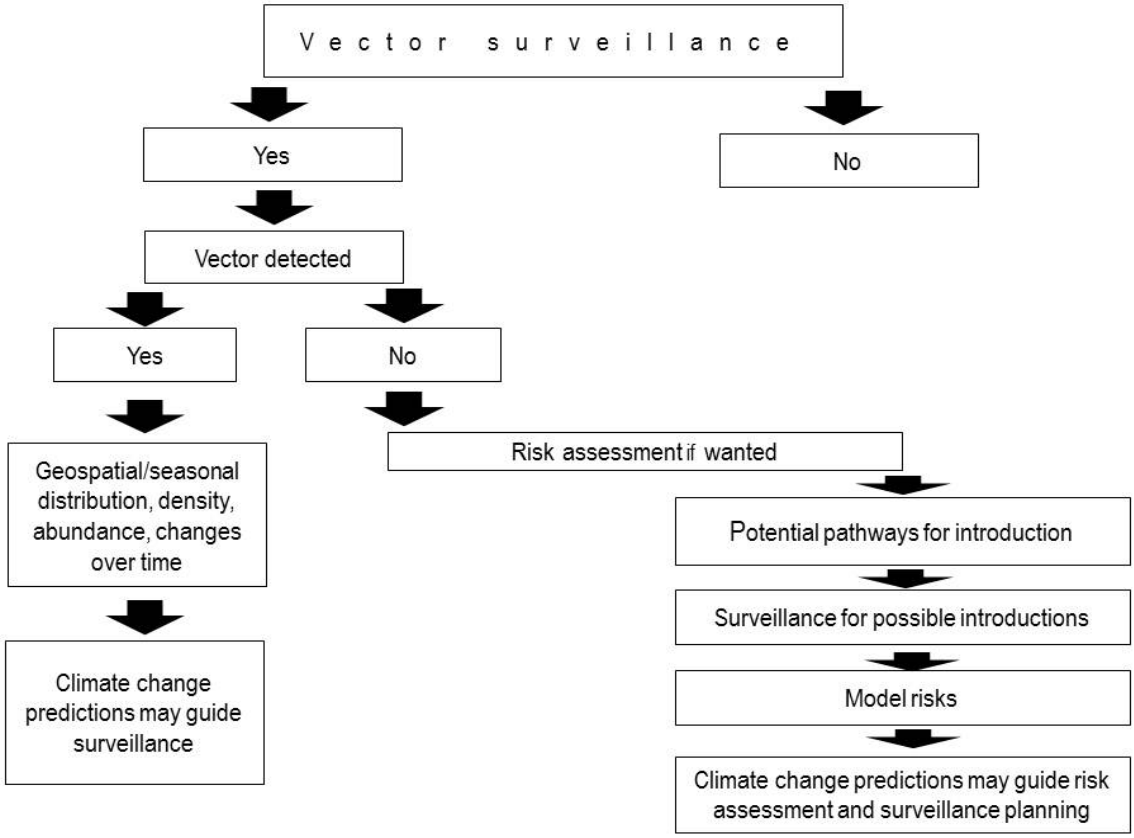
c) Different collection methods may be required to obtain samples from a single *vector* species, depending on the life stage or place of capture (such as from the environment or from the host *animals*). The collection method should be appropriate to the species and life stage of interest.

The collection methods should preserve the *vectors* in a manner suitable for their morphological identification or identification with molecular techniques. Where the purpose of sampling is to detect or isolate pathogenic agents, specific protocols should be followed to ensure the samples are suitable for these assays.

3. Data management, analysis and interpretation

Data management and analytical methodologies should be done in accordance with Chapter 1.4.

Fig. 1. *Decision tree for vector surveillance*



NB: FIRST ADOPTED IN 2009; MOST RECENT UPDATE ADOPTED IN 2010.

CHAPTER 1.6.

PROCEDURES FOR OFFICIAL RECOGNITION OF ANIMAL HEALTH STATUS, ENDORSEMENT OF AN OFFICIAL CONTROL PROGRAMME, AND PUBLICATION OF A SELF-DECLARATION OF ANIMAL HEALTH STATUS, BY WOAH

Article 1.6.1.

Application for official recognition of animal health status and endorsement of an official control programme by WOAH

A Member Country may request:

1) official recognition of *animal health status* by WOAH of:
   a) freedom of a country or *zone* from African horse sickness (AHS);
   b) risk status of a country or *zone* with regard to bovine spongiform encephalopathy (BSE);
   c) freedom of a country or *zone* from classical swine fever (CSF);
   d) freedom of a country or *zone* from contagious bovine pleuropneumonia (CBPP);
   e) freedom of a country or *zone* from foot and mouth disease (FMD), where *vaccination* is either practised or not practised;
   f) freedom of a country or *zone* from peste des petits ruminants (PPR);
2) endorsement by WOAH of:
   a) an *official control programme* for CBPP;
   b) an *official control programme* for FMD;
   c) an *official control programme* for PPR;
   d) an *official control programme* for dog-mediated rabies.

WOAH does not grant official recognition of *animal health status* or endorsement of an *official control programme* for diseases other than those listed under points 1 and 2 above.

The Member Country should present documentation setting out the compliance of their *Veterinary Services* with the provisions of Chapters 1.1., 1.4., 3.2., 3.3. and 4.4. of the *Terrestrial Code*, when relevant, and with the provisions of the relevant disease-specific chapters in the *Terrestrial Code* and the *Terrestrial Manual*.

When requesting official recognition of *animal health status* or endorsement by WOAH of an *official control programme*, the Member Country should follow the Standard Operating Procedures (available on the WOAH website) and submit to WOAH a dossier providing the information requested in the following chapters (as appropriate): 1.7. (for AHS), 1.8. (for BSE), 1.9. (for CSF), 1.10. (for CBPP), 1.11. (for FMD) or 1.12. (for PPR).

The WOAH framework for the official recognition of *animal health status*, the endorsement of *official control programmes*, and their maintenance is described in relevant Resolutions adopted by the World Assembly of Delegates.

The country or the *zone* will be included in the relevant lists of official *animal health status* or endorsed *official control programmes* only after the evidence submitted has been adopted by the World Assembly of Delegates.

When a Member Country requests official recognition of *animal health status* for a *zone*, the geographical boundaries of the proposed *zone* should be clearly defined. When applying for recognition of a free *zone* that is adjacent to another *zone* of the same status, it should be stated whether the new *zone* is being merged or kept separate. If the proposed *zone* remains separate, details should be provided of the control of the movement of relevant *commodities* between the *zones* in accordance with Chapter 4.4.

The overall objective of the WOAH endorsed *official control programmes* is for Member Countries to progressively improve their animal health situation and eventually attain official recognition of *animal health status* or in the case of dog-mediated rabies to make a self-declaration as a free country or *zone*. The *official control programme* should be applicable to the entire country even if certain measures are directed towards defined *zones*.

Article 1.6.2.

Maintenance of official recognition of animal health status and endorsement of an official control programme by WOAH

Retention on the lists of countries and *zones* having an official *animal health status* or of countries having an endorsed *official control programme* requires that the information in relevant chapters be re-submitted annually and that changes in the epidemiological situation or other significant events be notified to WOAH in accordance with the requirements in Chapter 1.1.

Non-compliance with the requirements for the maintenance of *animal health status* results in the suspension of that status. Within 24 months of suspension, except otherwise stated in the disease-specific chapter, a Member Country may apply for the recovery of a previously recognised status, following the provisions of the relevant disease-specific chapter. When the status has not been recovered within the specified period of its suspension, it is withdrawn and the Member Country should reapply following the procedure for the application for official recognition of *animal health status*.

WOAH may withdraw the endorsement of an *official control programme* if there is evidence of:

– non-compliance with the timelines or performance indicators of the programme; or
– significant problems with the quality of the *Veterinary Services* as described in Section 3 of the *Terrestrial Code*; or
– an increase in the *incidence* or distribution of the disease that cannot be addressed by the programme.

Article 1.6.3.

Publication by WOAH of a self-declaration of animal health status by a Member Country

A Member Country may make a self-declaration of freedom of a country, *zone* or *compartment* from a WOAH *listed disease* or another animal disease, *infection* or *infestation*. The Member Country may inform WOAH of the claimed status and request publication by WOAH of the self-declaration to inform WOAH Member Countries.

A Member Country requesting the publication of a self-declaration should follow the Standard Operating Procedure (available on the WOAH website) for submission of a self-declaration of *animal health status* and provide documented information on its compliance with the relevant chapters of the *Terrestrial Code*, including:

– evidence that the *infection* or *infestation* is a *notifiable disease* in the entire country;
– history of absence or eradication of the *infection* or *infestation* in the country, *zone* or *compartment*;
– *surveillance* including an *early warning system* for all relevant species in the country, *zone* or *compartment*;
– measures implemented to maintain freedom in the country, *zone* or *compartment*.

The self-declaration may be published only after all the information provided has been received and administrative and technical screening has been performed by WOAH. Publication does not imply endorsement of the claim of freedom by WOAH and does not reflect the official opinion of WOAH. Responsibility for the accuracy of the information contained in a self-declaration lies entirely with the WOAH Delegate of the Member Country concerned.

Except when otherwise provided for in the *listed disease*-specific chapter, an *outbreak* in a Member Country, a *zone* or a *compartment* having a self-declared free status results in the loss of the self-declared free status. A Member Country wishing to reclaim a lost free status should submit a new self-declaration following the procedure described in this article.

WOAH does not publish self-declarations for *listed diseases* in point 1 of Article 1.6.1.

NB: FIRST ADOPTED IN 2009; MOST RECENT UPDATE ADOPTED IN 2021.

CHAPTER 1.7.

APPLICATION FOR OFFICIAL RECOGNITION BY WOAH OF FREE STATUS FOR AFRICAN HORSE SICKNESS

Article 1.7.1.

Country free from infection with African horse sickness virus

The following information should be provided by WOAH Member Countries to support applications for official recognition of status as a country free from *infection* with African horse sickness (AHS) virus in accordance with Chapter 12.1. of the *Terrestrial Code*.

The dossier provided to WOAH should address concisely all the topics under the headings provided to describe the actual situation in the country and the procedures currently applied, explaining how these comply with the *Terrestrial Code*.

The terminology defined in the WOAH *Terrestrial Code* and *Terrestrial Manual* should be referred to and used in compiling the dossier.

National legislation, regulations and *Veterinary Authority* directives may be referred to and annexed as appropriate in one of the WOAH official languages. Weblinks to supporting documents in one of the official languages of WOAH may also be provided, where they exist.

All annexes should be provided in one of the WOAH official languages.

The Delegate of the Member Country applying for recognition of AHS freedom for a country must demonstrate compliance with the *Terrestrial Code*. That is, the Delegate should submit documentary evidence that the provisions of Article 12.1.2. have been properly implemented and supervised.

In addition, the Delegate of the Member Country must submit a declaration indicating that:

1) there has been no *case* of *infection* with AHS virus for at least the past two years;

2) no routine *vaccination* against AHS has been carried out during the past year;

3) and that any equids imported have been done so in accordance with Chapter 12.1.

In addition, the Delegate of the Member Country applying for recognition of historical freedom must also submit documentary evidence that the provisions in Article 1.4.6. of the *Terrestrial Code* have been properly implemented and supervised.

1. Introduction

   a) Geographical features (rivers, mountain ranges, etc.). Provide a general description of the country and, where relevant, of the region, including physical, geographical and other factors that are relevant to introduction of *infection* and spread of AHS virus, taking into account the countries sharing common borders and other

epidemiologic pathways for the potential introduction of *infection*. Provide maps identifying the features above. Specify whether the application includes any noncontiguous territories.

b) Demographics of domestic equids. Describe the composition of the equine *population* by species (e.g. horses, donkeys, mules, zebras, etc.) within the various sectors.

Equine sectors are defined as equids (including donkeys, mules, hinnies and zebras) used for breeding stock, competition, leisure, exhibition, working (including transport) and production. How are the equine sectors distributed (e.g. density, etc.) throughout the country? Provide tables and maps as appropriate.

c) Equine sectors. Provide a general description of the relative economic importance of the equine sectors in the country. Consider the below-mentioned sector groupings and outline any recent significant changes observed within the sector groupings (attach relevant documents if available):

i) breeding stock equids;

ii) competition horses;

iii) leisure equids;

iv) exhibition equids;

v) working, transport and production equids (including donkeys, mules and hinnies).

d) *Wildlife* demographics. What *captive wild*, *wild* or *feral* equids are present in the country? Provide estimates of *population* sizes and geographic distribution.

2. Veterinary system

a) Legislation. Provide a table (and when available a weblink) listing all relevant veterinary legislation, regulations and *Veterinary Authority* directives in relation to AHS and a brief description of the relevance of each. The table should include, but not be limited to, the legislation on disease control measures and compensation systems.

b) *Veterinary Services*. Describe how the *Veterinary Services* of the country comply with Chapters 1.1., 3.2. and 3.3. of the *Terrestrial Code*. Describe how the *Veterinary Services* supervise, control, enforce and monitor all AHS-related activities. Provide maps, figures and tables wherever possible.

c) Provide information on any PVS evaluation conducted in the country and follow-up steps within the PVS Pathway and highlight the results relevant to AHS and the susceptible species.

d) Provide a description of the involvement and the participation of industry, producers, farmers, including subsistence and small-scale producers, keepers, *veterinary paraprofessionals* including community animal health workers, and other relevant groups in AHS *surveillance* and control. Provide a description of the role and structure of the private veterinary sector, including the number of *veterinarians* and their distribution, in AHS *surveillance* and control. Include a description of continuing education and awareness programmes on AHS at all relevant levels.

e) *Animal identification*, registration, traceability and movement control. Are equids identified (individually or at a group level)? Provide a description of the traceability system, including methods of *animal identification* and *establishment* or *herd* registration, applicable to all equine sectors. How are movements of equids controlled in the country for all equine sectors? Provide evidence of the effectiveness of *animal identification* and movement controls and a table describing the number, species, origin and destination of the animals and their products moved within the country in the past 24 months. Provide information on pastoralism, transhumance and related paths of movement.

Describe the *risk management* strategy for uncontrolled movements of susceptible species (e.g. seasonal migration).

Describe the actions available under national legislation. Provide information on illegal movements detected in the past 24 months and the action taken.

f) Leisure, exhibition and competition movements of equids. How are movements of these types of equids controlled in the country? Provide information on systems including any use of registration. Provide information on any events that include international movements of equids.

g) Describe the market systems for the sale of, or transfer of ownership of, equids in the country, including where the international movement of equids occurs.

3. AHS eradication

a) History. If *infection* has never occurred in the country, or has not occurred within the past 25 years, state explicitly whether or not the country is applying for recognition of historical freedom according to Article 1.4.6. of the *Terrestrial Code*.

If *infection* has occurred in the country within the past 25 years, provide a description of the AHS history in the country, with emphasis on recent years. If applicable, provide tables and maps showing the date of first detection, the sources and routes of introduction of *infection*, the temporal and spatial distribution (number and location of *outbreaks* per year), the susceptible species involved, and the date of last *case* or *eradication* in the country.

b) Strategy. Describe how AHS was controlled and eradicated (e.g. isolation of *cases*, *stamping-out policy*, zoning, movement control, protection of equids against *vectors*). Provide the time frame for *eradication*. Describe and justify the corrective actions that have been implemented to prevent future *outbreaks* of AHS in response to any past incursions of AHS virus.

c) Vaccines and *vaccination*. Briefly answer the following:

i) Is there any legislation that prohibits *vaccination*? If so:

– Provide the date when *vaccination* was formally prohibited;

– Provide information on cases of detection of illegal *vaccination* during the reporting period and actions taken in response to the detection.

ii) Was *vaccination* ever used in the country? If so:

– Provide the date when the last *vaccination* was carried out;

– What type of vaccine was used?

– What species were vaccinated?

– How were vaccinated animals identified?

– What was the fate of those animals?

iii) In addition, if *vaccination* was applied during the past 24 months, provide a description and justification of the *vaccination* strategy and programme, including the following:

– the vaccine strains;

– the species vaccinated;

– identification of vaccinated animals;

– the way in which the *vaccination* of animals was certified or reported and the records maintained;

– evidence that the vaccine used complies with Chapter 3.5.1. of the *Terrestrial Manual*.

d) Provide a description of the legislation, organisation and implementation of the *eradication* campaign. Outline the legislation applicable to the *eradication* and how the campaign was organised at different levels. Indicate if detailed operational guidelines exist and give a brief summary.

4. AHS diagnosis

Provide documentary evidence that the relevant provisions of Chapters 1.1.2., 1.1.3. and 3.5.1. of the *Terrestrial Manual* are applied. The following points should be addressed:

a) Is AHS *laboratory* diagnosis carried out in the country? If so, provide an overview of the AHS-approved *laboratories* in the country, including the following:

i) How the work is shared between different *laboratories*, logistics for shipment of samples, the follow-up procedures and the time frame for reporting results;

ii) Details of test capability and the types of tests undertaken and their performance for their applied use (specificity and sensitivity per type of test). Provide details of the number of AHS tests performed in the past 24 months in national *laboratories* and in *laboratories* in other countries, if relevant;

iii) Procedures for quality assurance and for the official accreditation of *laboratories*. Give details of formal internal quality management systems, e.g. Good Laboratory Practice, ISO, etc. that exist in, or are planned for, the *laboratory* system;

iv) Provide details of performance in inter-*laboratory* validation tests (ring trials), including the most recent results and, if applicable, the corrective measures applied;

v) Provide details of the handling of live pathogenic agent, including a description of the biosecurity and biosafety measures applied;

vi) Provide a table identifying the tests carried out by each of the *laboratories* where they are performed, the quality accreditation and biosecurity standards followed and the proficiency tests carried out.

b) If AHS *laboratory* diagnosis is not carried out in the country, provide the names of the *laboratories* in other countries providing the service as well as the arrangements in place, including logistics for shipment of samples and the time frame for reporting results.

5. AHS surveillance

Provide documentary evidence that *surveillance* for AHS in the country complies with Articles 12.1.11. to 12.1.13. of the *Terrestrial Code*, and Chapter 3.5.1. of the *Terrestrial Manual*. The following information should be included:

a) What are the criteria for raising a suspicion of AHS? What is the procedure to notify (by whom and to whom) and what incentives are there for reporting and what penalties are involved for failure to report?

b) Describe how clinical *surveillance* is conducted, including which equine sectors are included in clinical *surveillance*, such as *establishments*, markets, fairs, *slaughterhouses/abattoirs*, check points, etc.

Provide a summary table indicating, for the past 24 months, the number of suspected *cases*, the number of samples tested for AHS, species, type of sample, testing methods and results (including differential diagnosis). Provide an indication of the timelines of the response including completion of testing to confirm or exclude AHS. Provide details of follow-up actions taken on all suspicious and positive results.

c) Other *surveillance*. Is *surveillance* undertaken as described in Article 12.1.13., specifically:

i) Serological *surveillance*.

ii) Virological *surveillance* including genome or antigen detection.

iii) Sentinel animals.

iv) *Vector surveillance*.

If so, provide detailed information on the target population, design prevalence, confidence level, sample size, stratification, sampling methods and diagnostic tests used in accordance with Articles 12.1.11. and 12.1.13. of the *Terrestrial Code*. How frequently are they conducted? Which equine species are included? Are *wildlife* species included? If not, explain the rationale.

Provide a summary table and maps indicating detailed results for at least the past 24 months. Provide details of follow-up actions taken on all suspicious and positive results and how these findings are acted upon. Provide criteria for selection of *populations* for targeted surveillance and numbers of equids examined and samples tested in diagnostic *laboratories*. Provide details of the methods selected and applied for monitoring the performance of the *surveillance* programme including indicators.

d) Provide information on risks in the different equine sectors, and provide evidence that targeted studies are implemented to address gaps (e.g. targeted serological surveys, active *surveillance*, participatory epidemiology studies, *risk assessments*, etc.). Provide evidence of how the knowledge acquired through these activities assisted in more effective implementation of control measures.

e) Provide details of the oversight of *surveillance* programmes by the *Veterinary Services* including training programmes for personnel involved in clinical, serological, virological and other *surveillance*, and the approaches used to increase community involvement in AHS *surveillance* programmes.

6. AHS prevention

Describe the procedures in place to prevent the introduction of AHS into the country, including details of:

a) Coordination with other countries. Describe any relevant factors in neighbouring countries that should be taken into account (e.g. size, distance from the border to affected *herds* or animals, wind currents and possible *vector* spread)? Describe coordination, collaboration and information-sharing activities with other countries in the same region or ecosystem.

If the AHS free country borders an infected country or *zone*, describe the animal health measures implemented to effectively prevent the introduction of the pathogenic agent or *vectors*, taking into consideration the seasonal *vector* conditions and existing physical, geographical and ecological barriers.

Are *protection zones* in place? If so, provide details of the measures that are applied (e.g. *vaccination*, intensified *surveillance*, density control of susceptible species), and provide a geo-referenced map of the *zones*.

b) Describe the measures implemented to effectively prevent the introduction of the pathogenic agent, taking into consideration physical or geographical barriers. Describe the measures implemented to prevent the spread of the pathogenic agent within the country. Provide evidence that measures to reduce transmission of AHS are in place at markets, such as enhancing awareness of AHS transmission mechanisms and human behaviour that can interrupt transmission, and implementation of good *biosecurity*, hygiene and *disinfection* routines at critical points all along the production and marketing networks (typically where animals are being moved and marketed through the country or region).

c) Import control procedures

Provide information on countries, *zones* or *compartments* from which the country authorises the import of susceptible animals or their products into the country. Describe the criteria applied to approve such countries, *zones* or *compartments*, the controls applied to entry of such animals and products, and subsequent internal movement. Describe the import measures (e.g. quarantine) and test procedures required. Advise whether imported animals of susceptible species are required to undergo a quarantine or isolation period and, if so, the duration and location of quarantine. Advise whether import permits and *international veterinary certificates* are required.

Describe any other procedures used for assessing the *risks* posed by import of susceptible animals or their products. Provide summary statistics on imports of susceptible animals and their products for at least the past 24 months, including temporary import and re-entry, specifying countries, *zones* or *compartments* of origin, species and the quantity or volume and eventual destination in the country. Provide information on whether or not *outbreaks* have been related to imports or transboundary movements of domestic equids.

i) Provide a map showing the number and location of all ports, airports and land border crossings. Describe the management structure, staffing levels and resources of the service responsible for import controls and its accountability to the *Veterinary Authority*. Describe the communication systems between the *Veterinary Authority* and the *border posts*, and between *border posts*.

ii) Cite the regulations and describe procedures, type and frequency of checks, and management of noncompliance at the points of entry into the country or their final destination, concerning the import and follow-up of the following:

– equids;

– genetic material (semen, oocytes and embryos of the equine species);

– equine derived (by-)products;

– *veterinary medicinal products*.

7. Control measures and contingency planning

a) List any written guidelines, including contingency plans, available to the *Veterinary Services* for dealing with suspected or confirmed *outbreaks* of AHS. The contingency plan should be attached as an annex in one of the WOAH official languages. If not available, provide a brief summary of what is covered. Provide information on any simulation exercise for AHS that was conducted in the country in the past five years.

b) In the event of a suspected or confirmed AHS *outbreak*:

i) Are quarantine measures imposed on *establishments* with suspected *cases*, pending final diagnosis? What other procedures are followed with respect to suspected *cases* (e.g. standstills)?

ii) Indicate the sampling, dispatch and testing procedures that would be used to identify and confirm presence of the pathogenic agent;

iii) Describe the actions that would be taken to control the disease situation in and around the *establishments* where the *outbreak* is confirmed;

iv) Provide a detailed description of the control or *eradication* procedures (e.g. forward and backward tracing, movement control, *disinfection* of *establishments*, *vehicles* and equipment, including verification methods, *vaccination*, *stamping-out policy*, *vector*-protected stabling, methods of disposal of carcasses and other contaminated products or materials, decontamination, campaigns to promote awareness of farmers) that would be taken. In the case of emergency *vaccination*, indicate the source and type of vaccine and provide details of any vaccine supply scheme and stocks;

v) Describe the criteria and procedures that would be used to confirm that an *outbreak* has been successfully controlled or eradicated, including restocking strategies, use of sentinel animals, serological *surveillance* programmes, etc.;

vi) Give details of any compensation that would be made available to owners, farmers, etc. when animals are slaughtered for disease control or *eradication* purposes and the prescribed timetable for payments;

vii) Describe how control efforts, including *vaccination* and *biosecurity*, would target critical risk control points.

8. Recovery of free status

Member Countries applying for recognition of recovery of free status for a country should comply with the provisions of Article 12.1.5. of the *Terrestrial Code* and provide detailed information as specified in Sections 3 a), 3 b), 3 c) and 6 of this questionnaire. Information in relation to other sections need only be supplied if relevant.

Article 1.7.2.

Zone free from infection with African horse sickness virus

The following information should be provided by WOAH Member Countries to support applications for official recognition of status as a *zone* free from *infection* with African horse sickness virus in accordance with Chapter 12.1. of the *Terrestrial Code*.

The dossier provided to WOAH should address concisely all the topics under the headings provided to describe the actual situation in the country and the procedures currently applied, explaining how these comply with the *Terrestrial Code*.

The terminology defined in the WOAH *Terrestrial Code* and *Terrestrial Manual* should be referred to and used in compiling the dossier.

National legislation, regulations and *Veterinary Authority* directives may be referred to and annexed as appropriate in one of the WOAH official languages. Weblinks to supporting documents in one of the official languages of WOAH may also be provided, where they exist.

All annexes should be provided in one of the WOAH official languages.

The Delegate of the Member Country applying for recognition of AHS freedom for a *zone* must demonstrate compliance with the *Terrestrial Code*. That is, the Delegate should submit documentary evidence that the provisions of Article 12.1.2. have been properly implemented and supervised.

In addition, the Delegate of the Member Country must submit a declaration indicating that:

1) there has been no *case* of *infection* with AHS virus for at least the past two years in the *zone*;
2) no routine *vaccination* against AHS has been carried out during the past year in the *zone*;
3) and that any equids imported into the *zone* have been done so in accordance with Chapter 12.1.

In addition, the Delegate of the Member Country applying for recognition of historical freedom must also submit documentary evidence that the provisions in Article 1.4.6. of the *Terrestrial Code* have been properly implemented and supervised.

1. Introduction

a) Geographical features (rivers, mountain ranges, etc.). Provide a general description of the country and the *zone*, and where relevant of the region, including physical, geographical and other factors that are relevant to introduction of *infection* and spread of AHS virus, taking into account the countries or *zones* sharing common borders and other epidemiologic pathways for the potential introduction of *infection*.

   The boundaries of the *zone* must be clearly defined, including a *protection zone* if applied. Provide maps identifying the features above, including a digitalised, geo-referenced map with a precise text description of the geographical boundaries of the *zone*.

b) Demographics of domestic equids. Describe the composition of the equine *population* by species (e.g. horses, donkeys, mules, zebras, etc.) within the various sectors in the country and the *zone*.

   Equine sectors are defined as equids (including donkeys, mules, hinnies and zebras) used for breeding stock, competition, leisure, exhibition, working (including transport) and production. How are the equine sectors distributed (e.g. density, etc.) throughout the country and the *zone*? Provide tables and maps as appropriate.

c) Equine sectors. Provide a general description of the relative economic importance of the equine sectors in the country and the *zone*. Consider the below-mentioned sector groupings and outline any recent significant changes observed within the sector groupings (attach relevant documents if available):

   i) breeding stock equids;
   ii) competition horses;
   iii) leisure equids;
   iv) exhibition equids;
   v) working, transport and production equids (including donkeys, mules and hinnies).

d) *Wildlife* demographics. What *captive wild*, *wild* or *feral* equids are present in the country and the *zone*? Provide estimates of *population* sizes and geographic distribution.

2. Veterinary system

a) Legislation. Provide a table (and when available a weblink) listing all relevant veterinary legislation, regulations and *Veterinary Authority* directives in relation to AHS and a brief description of the relevance of each. The table should include, but not be limited to, the legislation on disease control measures and compensation systems.

b) *Veterinary Services*. Describe how the *Veterinary Services* of the country comply with Chapters 1.1., 3.2. and 3.3. of the *Terrestrial Code*. Describe how the *Veterinary Services* supervise, control, enforce and monitor all AHS-related activities. Provide maps, figures and tables wherever possible.

c) Provide information on any PVS evaluation conducted in the country and follow-up steps within the PVS Pathway and highlight the results relevant to AHS and the susceptible species.

d) Provide a description of the involvement and the participation of industry, producers, farmers, including subsistence and small-scale producers, keepers, *veterinary paraprofessionals* including community animal health workers, and other relevant groups in AHS *surveillance* and control. Provide a description of the role and structure of the private veterinary sector, including the number of *veterinarians* and their distribution, in AHS *surveillance* and control. Include a description of continuing education and awareness programmes on AHS at all relevant levels.

e) *Animal identification*, registration, traceability and movement control. Are equids identified (individually or at a group level)? Provide a description of the traceability system, including methods of *animal identification* and *establishment* or *herd* registration, applicable to all equine sectors. How are movements of equids controlled in and between *zones* of the same or different status for all equine sectors? Provide evidence of the effectiveness of *animal identification* and movement controls and a table describing the number, species, origin and destination of the animals and their products moved within the country in the past 24 months. Provide information on pastoralism, transhumance and related paths of movement.

Describe the *risk management* strategy for uncontrolled movements of susceptible species (e.g. seasonal migration).

Describe the actions available under national legislation. Provide information on illegal movements detected in the past 24 months and the action taken.

f) Leisure, exhibition and competition movements of equids. How are movements of these types of equids controlled in the country and the *zones*? Provide information on systems including any use of registration. Provide information on any events that include international movements of equids.

g) Describe the market systems for the sale of, or transfer of ownership of, equids in the country and the *zones*, including where the international movement of equids occurs.

3. AHS eradication

a) History. If *infection* has never occurred in the country, or has not occurred within the past 25 years, state explicitly whether or not the *zone* is applying for recognition of historical freedom according to Article 1.4.6. of the *Terrestrial Code*.

If *infection* has occurred in the *zone* within the past 25 years, provide a description of the AHS history in the country and *zone*, with emphasis on recent years. If applicable, provide tables and maps showing the date of first detection, the sources and routes of introduction of *infection*, the temporal and spatial distribution (number and location of *outbreaks* per year), the susceptible species involved, and the date of last *case* or *eradication* in the *zone*.

b) Strategy. Describe how AHS was controlled and eradicated in the *zone* (e.g. isolation of *cases*, *stamping-out policy*, zoning, movement control, protection of equids against *vectors*). Provide the time frame for *eradication*. Describe and justify the corrective actions that have been implemented to prevent future *outbreaks* of AHS in response to any past incursions of AHS virus.

c) Vaccines and *vaccination*. Briefly answer the following:

i) Is there any legislation that prohibits *vaccination*? If so:

– Provide the date when *vaccination* was formally prohibited;

– Provide information on cases of detection of illegal *vaccination* during the reporting period and actions taken in response to the detection.

ii) Was *vaccination* ever used in the country? If so:

– Provide the date when the last *vaccination* was carried out;

– What type of vaccine was used in the *zone* and the rest of the country?

– What species were vaccinated?

– How were vaccinated animals identified?

– What was the fate of those animals?

iii) In addition, if *vaccination* was applied during the past 24 months, provide a description and justification of the *vaccination* strategy and programme, including the following:

- the vaccine strains;
- the species vaccinated;
- identification of vaccinated animals;
- the way in which the *vaccination* of animals was certified or reported and the records maintained;
- evidence that the vaccine used complies with Chapter 3.5.1. of the *Terrestrial Manual*.

d) Provide a description of the legislation, organisation and implementation of the *eradication* campaign. Outline the legislation applicable to the *eradication* and how the campaign was organised at different levels. Indicate if detailed operational guidelines exist and give a brief summary.

4. AHS diagnosis

Provide documentary evidence that the relevant provisions of Chapters 1.1.2., 1.1.3. and 3.5.1. of the *Terrestrial Manual* are applied. The following points should be addressed:

a) Is AHS *laboratory* diagnosis carried out in the country? If so, provide an overview of the AHS-approved *laboratories* in the country. Indicate the *laboratories* where samples originating from the *zone* are diagnosed. Address the following points:

i) How the work is shared between different *laboratories*, logistics for shipment of samples, the follow-up procedures and the time frame for reporting results;

ii) Details of test capability and the types of tests undertaken and their performance for their applied use (specificity and sensitivity per type of test). Provide details of the number of AHS tests performed in the past 24 months in national *laboratories* and in *laboratories* in other countries, if relevant;

iii) Procedures for quality assurance and for the official accreditation of *laboratories*. Give details of formal internal quality management systems, e.g. Good Laboratory Practice, ISO, etc. that exist in, or are planned for, the *laboratory* system;

iv) Provide details of performance in inter-*laboratory* validation tests (ring tests), including the most recent results and, if applicable, the corrective measures applied;

v) Provide details of the handling of live pathogenic agent, including a description of the biosecurity and biosafety measures applied;

vi) Provide a table identifying the tests carried out by each of the *laboratories* where they are performed, the quality accreditation and biosecurity standards followed and the proficiency tests carried out.

b) If AHS *laboratory* diagnosis is not carried out in the country, provide the names of the *laboratories* in other countries providing the service as well as the arrangements in place, including logistics for shipment of samples and the time frame for reporting results.

5. AHS surveillance

Provide documentary evidence that *surveillance* for AHS in the *zone* complies with Articles 12.1.11. to 12.1.13. of the *Terrestrial Code*, and Chapter 3.5.1. of the *Terrestrial Manual*. The following information should be included:

a) What are the criteria for raising a suspicion of AHS? What is the procedure to notify (by whom and to whom) and what incentives are there for reporting and what penalties are involved for failure to report?

b) Describe how clinical *surveillance* is conducted, including which equine sectors are included in clinical *surveillance*, such as *establishments*, markets, fairs, *slaughterhouses/abattoirs*, check points, etc.

Provide a summary table indicating, for the past 24 months, the number of suspected *cases*, the number of samples tested for AHS, species, type of sample, testing methods and results (including differential diagnosis). Provide an indication of the timelines of the response including completion of testing to confirm or exclude AHS. Provide details of follow-up actions taken on all suspicious and positive results.

c) Other *surveillance*. Is *surveillance* undertaken as described in Article 12.1.13., specifically:

i) Serological *surveillance*.

ii) Virological *surveillance* including genome or antigen detection.

iii) Sentinel animals.

iv) *Vector surveillance*.

If so, provide detailed information on the target population, design prevalence, confidence level, sample size, stratification, sampling methods and diagnostic tests used in accordance with Articles 12.1.11. and 12.1.13. of the *Terrestrial Code*. How frequently are they conducted? Which equine species are included? Are *wildlife* species included? If not, explain the rationale.

Provide a summary table and maps indicating detailed results for at least the past 24 months. Provide details of follow-up actions taken on all suspicious and positive results and how these findings are acted upon. Provide criteria for selection of *populations* for targeted surveillance and numbers of equids examined and samples tested in diagnostic *laboratories*. Provide details of the methods selected and applied for monitoring the performance of the *surveillance* programme including indicators.

d) Provide information on risks in the different equine sectors, and provide evidence that targeted studies are implemented to address gaps (e.g. targeted serological surveys, active *surveillance*, participatory epidemiology studies, *risk assessments*, etc.). Provide evidence of how the knowledge acquired through these activities assisted in more effective implementation of control measures.

e) Provide details of the oversight of *surveillance* programmes by the *Veterinary Services* including training programmes for personnel involved in clinical, serological and virological *surveillance*, and the approaches used to increase community involvement in AHS *surveillance* programmes.

6. AHS prevention

Describe the procedures in place to prevent the introduction of AHS into the country or *zone*, including details of:

a) Coordination with other countries. Describe any relevant factors in neighbouring countries and *zones* that should be taken into account (e.g. size, distance from the border to affected *herds* or animals, wind currents and possible *vector* spread)? Describe coordination, collaboration and information-sharing activities with other countries and *zones* in the same region or ecosystem.

If the AHS free *zone* is established in an AHS infected country or borders an infected country or *zone*, describe the animal health measures implemented to effectively prevent the introduction of the pathogenic agent or *vectors*, taking into consideration the seasonal *vector* conditions and existing physical, geographical and ecological barriers.

Are *protection zones* in place? If so, indicate whether or not the *protection zones* are included in the proposed free *zones*. Provide details of the measures that are applied (e.g. *vaccination*, intensified *surveillance*, density control of susceptible species), and provide a geo-referenced map of the *zones*.

b) Describe the measures implemented to effectively prevent the introduction of the pathogenic agent, taking into consideration physical or geographical barriers. Describe the measures implemented to prevent the spread of the pathogenic agent within the country or *zone*. Provide evidence that measures to reduce transmission of AHS are in place at markets, such as enhancing awareness of AHS transmission mechanisms and human behaviour that can interrupt transmission, and implementation of good *biosecurity*, hygiene and *disinfection* routines at critical points all along the production and marketing networks (typically where animals are being moved and marketed through the country or region).

c) Import control procedures

Provide information on countries, *zones* or *compartments* from which the country authorises the import of susceptible animals or their products into the country or *zone*. Describe the criteria applied to approve such countries, *zones* or *compartments*, the controls applied to entry of such animals and products, and subsequent internal movement. Describe the import measures (e.g. quarantine) and test procedures required. Advise whether imported animals of susceptible species are required to undergo a quarantine or isolation period and, if so, the duration and location of quarantine. Advise whether import permits and *international veterinary certificates* are required.

Describe any other procedures used for assessing the *risks* posed by import of susceptible animals or their products. Provide summary statistics on imports of susceptible animals and their products for at least the past 24 months, including temporary import and re-entry, specifying countries, *zones* or *compartments* of origin, species and the quantity or volume and eventual destination in the country or *zone*. Provide information on whether or not *outbreaks* have been related to imports or transboundary movements of domestic equids.

i) Provide a map showing the number and location of all ports, airports and land border crossings. Describe the management structure, staffing levels and resources of the service responsible for import controls and its accountability to the *Veterinary Authority*. Describe the communication systems between the *Veterinary Authority* and the *border posts*, and between *border posts*.

ii) Cite the regulations and describe procedures, type and frequency of checks, and management of noncompliance at the points of entry into the *zone* or their final destination, concerning the import and follow-up of the following:

- equids;
- genetic material (semen, oocytes and embryos of the equine species);
- equine derived (by-)products;
- *veterinary medicinal products*.

7. Control measures and contingency planning

a) List any written guidelines, including contingency plans, available to the *Veterinary Services* for dealing with suspected or confirmed *outbreaks* of AHS. The contingency plan should be attached as an annex in one of the WOAH official languages. If not available, provide a brief summary of what is covered. Provide information on any simulation exercise for AHS that was conducted in the country in the past five years.

b) In the event of a suspected or confirmed AHS *outbreak*:

i) Are quarantine measures imposed on *establishments* with suspected *cases*, pending final diagnosis? What other procedures are followed with respect to suspected *cases* (e.g. standstills)?

ii) Indicate the sampling, dispatch and testing procedures that would be used to identify and confirm presence of the pathogenic agent;

iii) Describe the actions that would be taken to control the disease situation in and around the *establishments* where the *outbreak* is confirmed;

iv) Provide a detailed description of the control or *eradication* procedures (e.g. forward and backward tracing, movement control, *disinfection* of *establishments*, *vehicles* and equipment, including verification methods, *vaccination*, *stamping-out policy*, *vector*-protected stabling, methods of disposal of carcasses and other contaminated products or materials, decontamination, campaigns to promote awareness of farmers) that would be taken. In the case of emergency *vaccination*, indicate the source and type of vaccine and provide details of any vaccine supply scheme and stocks;

v) Describe the criteria and procedures that would be used to confirm that an *outbreak* has been successfully controlled or eradicated, including restocking strategies, use of sentinel animals, serological *surveillance* programmes, etc.;

vi) Give details of any compensation that would be made available to owners, farmers, etc. when animals are slaughtered for disease control or *eradication* purposes and the prescribed timetable for payments;

vii) Describe how control efforts, including *vaccination* and *biosecurity*, would target critical risk control points.

8. Recovery of free status

Member Countries applying for recognition of recovery of free status for a *zone* should comply with the provisions of Article 12.1.5. of the *Terrestrial Code* and provide detailed information as specified in Sections 3 a), 3 b), 3 c) and 6 of this questionnaire. Information in relation to other sections need only be supplied if relevant.

NB: FIRST ADOPTED IN 2009; MOST RECENT UPDATE ADOPTED IN 2024.

CHAPTER 1.8.

APPLICATION FOR OFFICIAL RECOGNITION BY WOAH OF RISK STATUS FOR BOVINE SPONGIFORM ENCEPHALOPATHY

Article 1.8.1.

General principles

In accordance with Article 11.4.3., the bovine spongiform encephalopathy (BSE) risk of a country or *zone* is determined on the basis of a *risk assessment* that evaluates the risk of the classical BSE agent being recycled within the bovine (*Bos indicus* and *Bos taurus*) population by identifying all potential factors associated with the occurrence of BSE, the ongoing implementation of a *surveillance* programme, and the history of occurrence and management of BSE.

A *case* of BSE is defined in point 3 of Article 11.4.1.

The information specified in Articles 1.8.2. to 1.8.6. should be provided by WOAH Member Countries in support of their application for official recognition of BSE risk status in accordance with Chapter 11.4. of the *Terrestrial Code*. The structure of the dossier should follow guidelines provided in the 'Standard Operating Procedure for official recognition of disease status and for the endorsement of national official control programmes of Member Countries' (available on the WOAH website).

Each element of the core document of the dossier provided to WOAH should be clearly and concisely addressed, with an explanation, where relevant, of how each one complies with the provisions of the *Terrestrial Code* for the BSE risk status for which the Member is applying. The rationale leading to the conclusions reached for each section needs to be clearly explained and, as appropriate, figures, tables and maps should be provided. The core document of the dossier should include the following sections:

– legislation

– veterinary system

– BSE risk assessment

– BSE surveillance

– the history of occurrence and management of BSE in the country or *zone*.

The dossier should indicate the date from which it can be considered that the risk of BSE agents being recycled within the bovine population has been negligible.

The terminology defined in the *Terrestrial Code* and *Terrestrial Manual* should be referred to and used in the dossier. The dossier and all of its annexes should be provided in one of the WOAH official languages.

Article 1.8.2.

Legislation

Provide a table listing all relevant legislation, regulations, *Veterinary Authority* directives, legal instruments, rules, orders, acts, decrees, etc., related to BSE. For each, provide the date of promulgation and implementation as well as a brief description of the relevance to mitigating the risks associated with BSE. The table should include the legislation, regulations and directives referred to in the core document of the dossier. These instruments may be provided as annexes or as weblinks to supporting documents.

Article 1.8.3.

Veterinary system

The quality of the *Veterinary Services* of a Member is important to the establishment and maintenance of confidence in its *international veterinary certificates* by the *Veterinary Services* of other Members (Article 3.2.1.). It also supports an evaluation of the BSE risk status of a country or *zone*.

1) Describe how the *Veterinary Services* of the country comply with the provisions of Chapters 1.1., 3.2. and 3.3.

2) The applicant Member may provide information on any recent (not older than five years) PVS evaluation conducted in the country and follow-up steps within the PVS Pathway, and highlight the results relevant to BSE.

3) Describe how the *Veterinary Services* supervise, control, enforce and monitor all BSE-related activities.

4) Provide a description of the involvement and the participation of industry; bovine breeders, owners and keepers; private *veterinarians*; *veterinary paraprofessionals*; transporters; workers at livestock *markets*, auctions and *slaughterhouses/abattoirs*; and other relevant non-governmental stakeholders in the control of BSE.

5) Describe the official bovine identification, registration, *traceability* and movement control system. Provide evidence of its effectiveness. In the table under Article 1.8.2., provide any legislation, regulation or directives relevant to this topic. Indicate whether there are any industry associations or organisations involved in bovine identification, registration, *traceability* and movement control systems that provide guidance, set standards or provide third party audits; include a description of their role, membership and interaction with the *Veterinary Services* or relevant *Competent Authorities*.

Article 1.8.4.

BSE risk assessment (point 1 of Article 11.4.4.)

1. Entry assessment (point 1 a) of Article 11.4.3.)

As described in Article 11.4.3., an entry assessment evaluates the likelihood that the classical BSE agent has been introduced into the country or *zone* through the importation of *commodities*.

For the purposes of undertaking an entry assessment, the period of interest is the preceding eight years (Articles 11.4.4. and 11.4.5.).

The *commodities* to be considered in the entry assessment are:

– bovines;

– ruminant-derived *protein meal*;

– *feed* (except packaged and labelled pet food) that contains ruminant-derived *protein meal*;

– fertilizers that contain ruminant-derived *protein meal*;

– any other *commodity* that either is or could be contaminated by *commodities* listed in Article 11.4.15.

a) For each *commodity* listed above indicate whether they were imported in the preceding eight years, and, if so, from which countries.

For each *commodity* listed above describe the import requirements applied by the applicant country or *zone* and how they are related to the BSE risk status of the *exporting country* or *zone* and whether or not they are consistent with, or provide an equivalent level of assurance to, the recommendations laid out in Chapter 11.4. for the importation of such a *commodity*. Where the import requirements are not consistent with the recommendations in Chapter 11.4. but are considered to provide an equivalent level of assurance, provide an explanation outlining the rationale and supporting evidence. In situations where an import requirement does not provide an equivalent level of assurance to the relevant measure in Chapter 11.4., provide an explanation of how this is likely to impact the entry assessment.

Describe the importation process for these *commodities* and how are they controlled, regulated and monitored by the *Competent Authority* with references as appropriate to the relevant legislation in the table under Article 1.8.2. Provide supporting evidence of the importation process including, where relevant, import permits or their equivalent, and examples of *international veterinary certificates* issued by *exporting countries*.

Describe the intended end use of the imported *commodities*, for example: bovines may be imported for breeding or immediate *slaughter*; rendered products may be imported for incorporation into *feed* for

non-ruminant species such as pigs or *poultry*. Provide information on any systems in place to monitor or track imported *commodities* and their results to ensure they are used as intended.

Describe the actions available under national legislation to prevent illegal introduction of the *commodities* considered above and provide information on any illegal introductions detected and the actions taken.

b) Conclusions for the entry assessment

Given the sanitary measures applied (if any), what was the likelihood that, during the preceding eight years, any of the *commodities*, in the form that they were imported, harboured or were contaminated by the classical BSE agent?

Clearly and concisely describe the rationale leading to the conclusions reached.

2. Exposure assessment (point 1 b) of Article 11.4.3.)

As described in Article 11.4.3., an exposure assessment evaluates the likelihood of bovines being exposed to the classical BSE agent either through imported *commodities* or as a result of the presence of classical BSE within the bovine population of the country or *zone*.

For the purposes of undertaking an exposure assessment for the evaluation of BSE status, the period of interest is the preceding eight years (Articles 11.4.4. and 11.4.5.). At its discretion, the applicant Member may provide the information requested for a different period (i.e. longer than eight years for those applying for a negligible risk status, or for the period for which they have the information if applying for a controlled risk status) to indicate the date from which the risk of BSE agents being recycled within the bovine population has been negligible.

As indicated in point 1 b) of Article 11.4.3., the first step in the exposure assessment involves an evaluation of the impact of livestock industry practices on preventing bovines from being fed ruminant-derived *protein meal* and, depending on the outcome of this step, an evaluation of the impact of specific mitigation measures on preventing bovines from being fed ruminant-derived *protein meal*.

a) Livestock industry practices (point 1 b) i) of Article 11.4.3.)

Because oral exposure to contaminated *feed* is the principal route of transmission of BSE, the exposure assessment begins with a detailed description of the bovine population and associated industry practices, with a particular emphasis on: feeding practices; disposal of dead animals and waste from slaughtered animals; rendering; and production, labelling, distribution and storage of *feed* that may lead to bovines being exposed to potentially contaminated *feed*.

The intent of this section is not to describe the implementation and enforcement of measures specifically targeting the exposure of the bovine population to BSE agents (such as a legislated *feed* ban) as they will be considered where relevant in point *b) An evaluation of BSE specific mitigation measures*. The intention here is to evaluate the likelihood and extent of exposure of the bovine population to the classical BSE agent, given the ongoing livestock industry practices in a country or *zone*.

i) Demographics of the bovine population and production and farming systems

Describe the composition of the bovine population and how the bovine industry is structured in the country or *zone* considering the types of production such as dairy, beef rearing and beef finishing, and the farming systems, such as intensive, extensive, semi-intensive, transhumant, pastoral, agropastoral, and mixed-species farming. The description should include the number and size of *herds* in each type of production and farming system.

ii) Feeding practices

For each type of production system, describe the rearing and production practices related to feeding ruminants of various ages, including the types of *feed* and *feed ingredients* (animal or plant based). Where animal-based ingredients are used, describe whether or not they are derived from rendered products of ruminant or non-ruminant origin as well as the respective proportions used.

Provide an indication of the proportion of the national *feed* production prepared commercially (including local mills) or mixed on farm using either imported or domestically produced ingredients.

Describe whether or not fertilisers containing ruminant-derived *protein meal*, composted materials derived from fallen stock (i.e. bovines of any age which were found dead or were killed on a farm, during transportation, at livestock *markets* or auctions, or at a *slaughterhouse/abattoir*), *slaughterhouse/abattoir* waste or animals condemned at ante-mortem inspections or any other materials derived from or that incorporate ruminant proteins are applied to land where bovines graze or where forage is harvested for feeding to bovines. Where such fertilisers are used, provide information on the extent and frequency of use and any risk mitigation measures to prevent accidental ingestion.

Describe, for mixed-species farms that include ruminants, the number and size of such farms and whether or not there are any practices in place to ensure that ruminants are not likely to be fed with *feed*

meant for non-ruminant species or that ruminant *feed* is not likely to be cross-contaminated with *feed* intended for non-ruminants that may contain rendered products of ruminant origin.

iii) Slaughtering and waste management practices

Describe the practices for fallen stock, including bovines euthanised as part of a BSE *surveillance* programme under Article 11.4.20., with particular reference to their transportation, disposal or destruction, including composting, burial, rendering or incineration. In the table under Article 1.8.2., provide any legislation, regulation or directives relevant to this topic.

Describe the places where bovines are slaughtered (for example, on farm, at a *slaughterhouse/abattoir* or *market*) together with the respective proportions and associated ages.

Describe whether or not places where animals are slaughtered are required to be registered or approved by the *Veterinary Services* or relevant *Competent Authority* and if they are subject to official veterinary supervision. In the table under Article 1.8.2., provide any legislation, regulation or directives relevant to this topic.

Describe how animals condemned at ante-mortem inspection and waste declared as unfit for human consumption from slaughtered animals are processed, disposed of or destroyed, including composting, burial, rendering, incineration or other industrial uses such as salvaging and crushing bones for use in animal *feed*. In the table under Article 1.8.2., provide any legislation, regulation or directives relevant to this topic.

iv) Rendering practices

Rendering is a process by which animal material is transformed into products such as *protein meal* that may be used in animal *feed*. It provides a pathway for the introduction of the classical BSE agent into the animal feed chain.

Describe whether or not there are any rendering facilities in the country or *zone*, if they are required to be registered or approved by the *Veterinary Services* or relevant *Competent Authority* and if they are subject to official veterinary control or supervision. In the table under Article 1.8.2., provide any legislation, regulation or directives relevant to this topic.

Using tables as appropriate, for each of the preceding eight years, provide a breakdown of the number of rendering facilities operating, indicating for each facility:

– the source and types of raw materials handled;

– whether or not they receive and process material from a particular species or process mixed materials including those derived from ruminants;

– whether or not ruminant waste is segregated from non-ruminant waste and if so how segregation is maintained to avoid potential cross-contamination of non-ruminant rendered materials during processing, storage and transport of rendered products, for example through dedicated lines, storage bins or silos, transport vehicles or establishments;

– the parameters of the rendering process (time, temperature, pressure, etc.);

– the type and intended end use of the rendered products. If available, provide the amount of rendered products produced annually by type and intended end use;

– if materials derived from imported bovines are managed differently, describe the process.

Indicate if there are any industry associations or organisations involved in the rendering industry that provide guidance, set standards or provide third party audits in relation to Hazard Analysis and Critical Control Points (HACCP) programmes, *good manufacturing practices*, etc. Include a description of their role, membership and interaction with the *Veterinary Services* or relevant *Competent Authorities*.

v) Feed production, labelling, distribution and storage

Where rendered products are used as ingredients in the production of animal *feed* the exposure of bovines to the classical BSE agent may arise as a result of the use of rendered products containing materials of ruminant origin as ingredients in bovine *feed* or as a result of bovine *feed* being cross-contaminated when such products are used in the production of *feed* for other species.

Describe whether facilities producing *feed* for ruminant or non-ruminant livestock as well as for pets are required to be registered or approved by the *Veterinary Services* or relevant *Competent Authority* and if

they are subject to official veterinary control or supervision. In the table under Article 1.8.2., provide any legislation, regulation or directives relevant to this topic.

For each of the preceding eight years, provide a breakdown using tables as appropriate of the number and types of facilities producing *feed*, indicating for each facility:

– whether or not rendered ruminant products, excluding those listed in Article 11.4.2., were used as ingredients in *feed* for ruminants, non-ruminants and pets;

– whether or not each facility was dedicated to manufacturing *feed* for a particular species or manufactured *feed* for multiple species including ruminants.

Where facilities manufactured *feed* for multiple species including ruminants, indicate whether or not there were any practices in place to avoid ruminant feeds from being contaminated with rendered ruminant products during *feed* manufacture, storage and transport.

Indicate if there are any industry associations or organisations involved in *feed* production, distribution and storage that provide guidance, set standards or provide third party audits in relation to HACCP programmes, *good manufacturing practices*, etc. Include a description of their role, membership and interaction with the *Veterinary Services* or relevant *Competent Authorities*.

vi) Conclusions for livestock industry practices

– Given the livestock industry practices described above, is the likelihood that the bovine population has been exposed to the classical BSE agent during the preceding eight years negligible or non-negligible?

– Clearly and concisely describe the rationale leading to the conclusion reached.

– Where the likelihood estimate is negligible, proceed to *Section 4) Risk estimation*.

– Where the likelihood estimate is non-negligible, proceed to *Section b) An evaluation of BSE specific mitigation measures*.

b) An evaluation of BSE-specific risk mitigation measures (point 1 b) ii) of Article 11.4.3.)

For those countries that have reported *cases* of BSE in indigenous bovines, it is apparent that their historic livestock industry practices did not prevent the recycling of the classical BSE agent within their bovine populations. These countries, together with others whose livestock industry practices would have been conducive to recycling, may have implemented specific measures, notably through a legislated *feed* ban, to ensure that the likelihood of recycling would be negligible. To qualify for official recognition of a BSE risk status, these countries need to demonstrate that these measures specifically targeting BSE have been and continue to be effectively implemented and enforced.

i) The nature and scope of a feed ban

Indicate whether there is a ban on feeding ruminants with *protein meal* derived from ruminants.

Where a *feed* ban has been implemented, clearly and concisely describe the date it was introduced, its nature and scope and how it has evolved over time.

In addition, if the *feed* ban has been implemented through national legislation, provide pertinent information in the table under Article 1.8.2. and a summary of any relevant legislation with references as appropriate.

ii) Commodities with the greatest BSE infectivity

Indicate whether any of those *commodities* listed in point 1 of Article 11.4.15. are removed from the carcass at the time of *slaughter* or subsequent fabrication or processing.

If so, also:

– Describe how they are disposed of or destroyed through burial, composting, rendering, alkaline hydrolysis, thermal hydrolysis, gasification, incineration, etc.

– Describe any measures in place that ensure *slaughter* waste declared as unfit for human consumption that is rendered is not contaminated with these *commodities*.

– Describe whether these *commodities* from fallen stock and animals condemned at ante-mortem inspection are excluded from rendering and how this is done.

– Where these *commodities* are not removed from fallen stock, animals condemned at ante-mortem inspection, or *slaughter* waste declared as unfit for human consumption, describe their final disposal, and how it is handled and processed.

– Describe whether or not all these processes and methods are subject to approval and oversight by the *Veterinary Services* or relevant *Competent Authority*.

In addition, if there is specific national legislation concerning the definition, identification, removal and disposal or destruction of those *commodities* listed in point 1 of Article 11.4.15., provide pertinent information in the table under Article 1.8.2. and a summary of any relevant legislation with references as appropriate.

iii) Parameters of the rendering process

Describe whether or not the parameters of the rendering process are prescribed in legislation and if they are consistent with, or provide an equivalent level of assurance to, the procedures for the reduction of BSE infectivity in bovine-derived *protein meal* as described in Article 11.4.19. Provide details of the legislation, if applicable, in the table under Article 1.8.2.

iv) Cross-contamination

Describe the measures in place to prevent cross-contamination during rendering, *feed* production, transport, storage and feeding such as dedicated facilities, lines and equipment, as well as measures to prevent misfeeding, such as the use of warning labels. Provide information as to whether any of these measures are prescribed in legislation and if facilities involved in rendering and *feed* production are required to be registered or approved under the *feed* ban by the *Veterinary Services* or relevant *Competent Authority*.

v) Awareness programme under the scope of the feed ban

Provide information on the existence of any ongoing awareness programmes or other forms of guidance given to all those stakeholders involved in rendering, *feed* production, transport, storage, distribution, sale and feeding under the scope of the *feed* ban. Provide examples of communication materials including publications, brochures and pamphlets.

vi) Monitoring and enforcement of the feed ban

Describe how the *feed* ban, if implemented, has been and continues to be monitored and enforced. Provide information on:

- official oversight from the *Veterinary Authority*, other *Competent Authority* or an *approved* third party;
- training and accreditation programmes for inspectors;
- the planned frequency of inspections and the procedures involved including manuals and inspection forms;
- sampling programmes and *laboratory* testing methods used to check the level of compliance with the *feed* ban and cross-contamination;
- options available to deal with infractions (non-compliance) such as recalls, destruction and monetary penalties.

Provide information on the ongoing results of the official inspection programme for each of the preceding eight years, using tables as appropriate:

- planned *versus* actual delivery inspections at rendering facilities, *feed* mills, farms, etc., with an explanation of any significant variation and how it may have impacted the programme;
- number and type of samples taken during inspections to verify that ruminant *feed* does not contain or is not cross-contaminated with rendered products containing ruminant material (excluding those listed in Article 11.4.2.). Provide information by year, by source (rendering facility, *feed* mill or farm), indicating the *laboratory* test(s) used and the results obtained;
- the types of infractions (non-compliance) that occurred and corrective actions undertaken;
- any infractions (non-compliance) that were likely to have led to bovines being exposed to *feed* contaminated with ruminant material (excluding those listed in Article 11.4.2.) and how they were resolved.

vii) Conclusions for the evaluation of BSE-specific risk mitigation measures

- In evaluating the effectiveness of a *feed* ban, if implemented, for each of the preceding eight years, consideration needs to be given to:
  - the management of *commodities* listed in point 1 of Article 11.4.15., and the associated likelihood that these materials, or other materials cross-contaminated by them, may have entered the animal feed chain;
  - the rendering industry and the associated likelihood that rendered products containing ruminant material may retain BSE infectivity;
  - the *feed* industry and the associated likelihood that *feed* for bovines may contain or has been cross-contaminated with ruminant-derived *protein meal*.
- Given the evaluation of BSE-specific risk mitigation measures and their enforcement as described above, is the likelihood that, during the preceding eight years, the bovine population has been exposed to the classical BSE agent negligible or non-negligible?
- Clearly and concisely describe the rationale leading to the conclusion reached.
- Where the likelihood estimate is negligible, proceed to *Section 4) Risk estimation*.

– Where the likelihood estimate is non-negligible, proceed to *Section 3) Consequence assessment*.

3. Consequence assessment (point 1 c) of Article 11.4.3.)

As described in Article 11.4.3., a consequence assessment evaluates the likelihood of bovines becoming infected following exposure to the classical BSE agent together with the likely extent and duration of any subsequent recycling and amplification.

For the purposes of undertaking a consequence assessment for the evaluation of BSE risk status, the period of interest is the preceding eight years.

Considering that, for all practical purposes, oral exposure to contaminated *feed* is the principal, if not the only, route of transmission of the classical BSE agent, to initiate a cycle of BSE infectivity within a bovine population the following series of events would need to unfold:

– *commodities* listed in point 1 of Article 11.4.15. from an infected animal are included in raw materials that are rendered into ruminant-derived *protein meal*;
– the rendering process does not destroy BSE infectivity;
– the ruminant-derived *protein meal* is incorporated as an ingredient in bovine *feed*, or bovine *feed* is cross-contaminated during *feed* production, distribution and storage, or bovines are incorrectly fed with *feed* intended for non-ruminant species that includes the ruminant-derived *protein meal* as an ingredient;
– one or more animals that ingest contaminated *feed* become infected;
– the infected animal survives long enough to reach the later stages of a protracted incubation period when the levels of the classical BSE agent in those *commodities* listed in point 1 of Article 11.4.15. would begin to rise dramatically;
– *commodities* listed in point 1 of Article 11.4.15. are then included in raw materials that are rendered into ruminant-derived *protein meal*, completing one cycle.

Recycling arises when this cycle is repeated one or more times. Any level of recycling within a given period is sufficient to conclude that the consequences of exposure to contaminated *feed* for that period within the bovine population are non-negligible.

a) Factors to consider when evaluating the likely extent of recycling of the classical BSE agent within a bovine population:

i) Age at exposure

Animals less than 12 months of age are considered to be much more susceptible to *infection* than older animals, which are likely to be increasingly refractory to *infection* as they mature.

ii) Production type

– Calves reared as replacement animals for the breeding herd

Bovines exposed to the classical BSE agent at less than 12 months of age and destined to enter the breeding *herd* are much more likely to become infected and survive long enough to reach the later stages of a protracted incubation period when the levels of the classical BSE agent in those *commodities* listed in point 1 of Article 11.4.15. would begin to rise dramatically. If these materials were rendered and subsequently contaminated bovine *feed*, it is highly likely that some level of recycling would occur.

– Feedlot bovines

Even if bovines reared in a feedlot that were destined to be slaughtered within the next two to six months were to become infected after consuming contaminated *feed*, the likelihood that they would have reached the later stages of a protracted incubation period (when the levels of the classical BSE agent in those *commodities* listed in point 1 of Article 11.4.15. would begin to rise dramatically) would essentially be negligible.

Considering that mature bovines are likely to be much more refractory to *infection* than animals within their first year of life, even if they were to consume contaminated *feed*, it is highly unlikely that those *commodities* listed in point 1 of Article 11.4.15. would pose a threat if they were rendered and subsequently contaminated bovine *feed*.

iii) The impact of livestock industry practices or the implementation of measures under a feed ban

When evaluating the potential for the recycling of the classical BSE agent within the bovine population where an infraction (non-compliance) has occurred that may have led to *feed* being contaminated, it is important to consider the impact of both the livestock industry practices and the ongoing measures under a *feed* ban. Even if an infraction that arose several years ago led to susceptible young animals becoming infected, in evaluating the likelihood of recycling in future years, consideration would need to be given to the effectiveness of the *feed* ban in subsequent years or whether or not any changes to livestock industry practices may have influenced the exposure risk.

b) Conclusions for the consequence assessment

Where the outcome of the evaluation of livestock industry practices or the evaluation of BSE-specific mitigation measures that include the nature and scope of the *feed* ban and its enforcement has concluded that there was a non-negligible likelihood that the bovine population has been exposed to the classical BSE agent, what is the likelihood that they have been recycled within the bovine population during the preceding eight years?

Clearly describe the rationale leading to the conclusions reached.

4. Risk estimation (point 1 d) of Article 11.4.3.)

As described in Article 11.4.3., risk estimation combines the results and the conclusions arising from the entry, exposure and consequence assessments to provide an overall measure of the risk of the classical BSE agent being recycled within the bovine population.

a) Provide a summary of the entry and exposure assessments and the conclusions reached.

b) If applicable, provide a summary of the consequence assessment, and the conclusions reached.

Article 1.8.5.

Surveillance (point 2 of Article 11.4.4.)

Article 11.4.20. describes the criteria that underpin a credible *surveillance* programme, together with an overview of the range and progression of clinical signs that bovines affected by BSE are likely to exhibit.

Requirements under point 2 of Article 11.4.20. are focused on subsets of the bovine population where BSE is more likely to be detected.

The Member applying for recognition of a negligible or a controlled BSE risk status should submit documentary evidence that the provisions of point 3 of Article 11.4.20. have been effectively implemented.

For the purposes of *surveillance*, the period of interest is the preceding eight years (Articles 11.4.4. and 11.4.5.).

1. Awareness and training programmes (point 3 a) of Article 11.4.20.)

Ongoing awareness and training programmes are essential to ensure that all stakeholders are familiar with clinical signs suggestive of BSE (those described in point 1 of Article 11.4.20.) as well as their statutory reporting requirements.

a) Describe the stakeholder groups targeted for BSE awareness and training programmes. Describe the methods used to identify stakeholder groups within the jurisdiction and methods used to identify how, for example, the size and characteristics of the stakeholder group changes over time.

b) Describe the type(s) of awareness and training programmes implemented for specific stakeholder groups. Describe how these programmes are adapted to meet the specific obligations and activities of each stakeholder group involved in caring for livestock, as well as the protocols for sample collection and submission by *veterinarians* and animal health technicians.

c) Provide information on the number of awareness and training activities, the stakeholder groups targeted, the number of individuals reached per activity (if available), and the geographical coverage of these activities.

d) Provide a description including examples of materials used in the awareness programme such as training manuals, supporting documents such as publications in local newspapers and farming magazines, pamphlets and videos (weblinks to supporting documents in one of the WOAH official languages may also be provided, where they exist).

e) Provide details on how the effectiveness of the awareness and training programmes is evaluated.

f) Provide details of any contingency or preparedness plan for BSE.

2. BSE reporting system (point 3 b) of Article 11.4.20.)

a) Describe the BSE reporting system, including the date of implementation of any supporting legislation and associated policies making BSE a *notifiable disease*. Indicate if a definition for a suspicion of BSE' exists. If appropriate, outline relevant legislation in the table under Article 1.8.2.

b) Describe the supportive measures in place for targeting animals that show signs of the clinical spectrum of BSE and for reporting of animals described in points 2 a) to 2 d) of Article 11.4.20., such as incentives, compensations or penalties.