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**Activities of the Specialist Commissions**

# TERRESTRIAL ANIMAL HEALTH STANDARDS COMMISSION

## Proposed amendments to the *Terrestrial Animal Health Code*

*[Technical Working Document]*

World Organisation for Animal Health

# Contents

# I. Introduction

1. Since the 91st General Session in May 2024, the Terrestrial Animal Health Standards Commission (the Code Commission) met twice from 9 to 19 September 2024 and from 4 to 14 February 2025. Among its activities, the Commission progressed work on the development of new and revised texts of the *Terrestrial Animal Health Code* (the *Terrestrial Code*), in accordance with its work programme. Details of the Code Commission's meetings are available on the Delegate's website and the WOAH website.

2. This document provides background information for each of the new and revised texts of the *Terrestrial Code* that will be proposed for adoption at the 92nd General Session in May 2025. When revising these texts, the Code Commission considered comments submitted by Members and by International Organisations that have a Cooperation Agreement with WOAH, recommendations from several *ad hoc* Group reports, as well as subject-matter experts. The Code Commission also worked in cooperation with the Scientific Commission for Animal Diseases (the Scientific Commission), the Biological Standards Commission, the Aquatic Animal Health Standards Commission and WOAH Working Groups.

3. Details of the Code Commission's most recent considerations of comments received on draft texts circulated for comment were provided in the Commission's September 2024 and February 2025 reports. **The Commission encourages Members to refer to these reports for more details on the revised texts to be proposed for adoption**.

4. The revisions to the *Terrestrial Code* presented in **Annexes 5 to 14** will be proposed for adoption at the 92nd General Session. The annex numbers used in this document align with the annex numbers provided in the Code Commission's February 2025 report. Proposed new or revised amendments are shown in the usual manner by 'double underline' and 'strikethrough'. For proposed new chapters, only amendments made since first circulation are shown.

# 1. *Terrestrial Code* texts to be proposed for adoption

## *1.1 User's Guide (Annex 5)*

5. The User's Guide has been revised to provide a more detailed explanation about what is included in a disease-specific chapter, a new point D. 'Name of animal species', including a table to explain the use of common terms (common names) based on scientific names of animal host species used in the *Terrestrial Code*, as well as some amendments to improve readability.

6. The revised text has been circulated four times, the first time was in the September 2023 Code Commission report.

7. The revised User's Guide is presented in **Annex 5** and will be proposed for adoption at the 92nd General Session in May 2025.

## *1.2 Chapter 7.1. 'Introduction to the recommendations for animal welfare' (Annex 7)*

8. Chapter 7.1. has been revised to include the 'five domains' concept and to define the meaning of the terms 'animal-based measures', 'resource-based measures' and 'management-based measures', and to improve readability of the text.

9. The revised text has been circulated four times, the first time was in the September 2023 Code Commission report.

10. The revised Chapter 7.1. 'Introduction to the recommendations for animal welfare' is presented in **Annex 7** and will be proposed for adoption at the 92nd General Session in May 2025.

### *1.3 Chapter 8.13. 'Infestation with Cochliomyia hominivorax (New World screwworm) and Infestation with Chrysomya bezziana (Old World screwworm)' (Annex 8)*

11. The title of this chapter was amended to 'Infestation with *Cochliomyia hominivorax* (New World screwworm) and Infestation with *Chrysomya bezziana* (Old World screwworm)' to align with the provisions of the new Article 8.13.1bis.

12. A new Article 8.13.1bis. 'General provisions' has been developed, including a definition of its occurrence and animal hosts, to provide Members with precise definitions to fulfil their notification obligations.

13. The new article was developed by the Code Commission based on the case definition drafted by subject matter experts that had been reviewed by the Scientific Commission.

14. The revised text has been circulated twice, the first time was in the September 2024 Code Commission report.

15. The revised title and Article 8.13.1bis of Chapter 8.13. 'Infestation with *Cochliomyia hominivorax* (New World screwworm) and Infestation with *Chrysomya bezziana* (Old World screwworm)' is presented in **Annex 8** and will be proposed for adoption at the 92nd General Session in May 2025.

### *1.4 New Chapter 8.Y. 'Infection with Nipah virus' (Annex 9)*

16. A new Chapter 8.Y. has been developed to include a single Article 8.Y.1. 'General provisions', including a definition of its occurrence and animal hosts, to provide Members with precise definitions to fulfil their notification obligations.

17. The new chapter was developed by the Code Commission based on a case definition drafted by subject matter experts that had been reviewed by the Scientific Commission.

18. The revised text has been circulated four times, the first time was in the September 2023 Code Commission report.

19. The new Chapter 8.Y. 'Infection with Nipah virus' is presented in **Annex 9** and will be proposed for adoption at the 92nd General Session in May 2025.

### *1.5 Chapter 11.5. 'Infection with Mycoplasma mycoides subsp. mycoides SC (Contagious bovine pleuropneumonia)' (Annex 10)*

20. Chapter 11.5. was revised to harmonise the provisions for official recognition and maintenance of free status, and endorsement and maintenance of official control programmes with other disease-specific chapters with official recognition of status.

21. The chapter was also revised to align text with the framework for disease-specific chapters. In addition, the new two safe commodities were added to Article 11.5.2. as they assessed to meet the criteria in Chapter 2.2. 'Criteria applied by WOAH for assessing the safety of commodities'.

22. The revised text was drafted by the Code Commission in collaboration with the Scientific Commission.

23. The revised text has been circulated five times, the first time was in the September 2022 Code Commission report.

24. The revised Chapter 11.5. 'Infection with *Mycoplasma mycoides* subsp. *mycoides* SC (Contagious bovine pleuropneumonia)' is presented in **Annex 10** and will be proposed for adoption at the 92nd General Session in May 2025.

### *1.6 New Chapter 11.X. 'Infection with bovine pestiviruses (bovine viral diarrhoea)' (Annex 11)*

25. A new Chapter 11.X. has been developed to include a single Article 11.X.1. 'General provisions', including a definition of its occurrence and animal hosts, to provide Members with precise definitions to fulfil their notification obligations.

26. The new chapter was developed by the Code Commission based on a case definition drafted by subject matter experts that had been reviewed by the Scientific Commission, in collaboration with the Biological Standards Commission.

27. The revised text has been circulated six times, the first time was in the September 2022 Code Commission report.

28. The new Chapter 11.X. 'Infection with pestiviruses (Bovine viral diarrhoea)' is presented in **Annex 11** and will be proposed for adoption at the 92nd General Session in May 2025.

### *1.7 Chapter 12.1. 'Infection with African horse sickness virus' (Annex 12)*

29. Chapter 12.1. was revised to harmonise the provisions for official recognition and maintenance of free status, and endorsement and maintenance of official control programmes with other disease-specific chapters with official recognition of status.

30. The chapter was also revised to align text with the general text in the latest framework of the disease-specific chapters throughout the *Terrestrial Code*. In addition, a new Article 12.1.1bis 'Safe commodities' was added with seven safe commodities that were assessed to meet the criteria in Chapter 2.2. 'Criteria applied by WOAH for assessing the safety of commodities'.

31. The revised chapter was drafted by the Code Commission in collaboration with the Scientific Commission.

32. The revised text has been circulated five times, the first time was in the September 2022 Code Commission report.

33. The revised Chapter 12.1. 'Infection with African horse sickness virus' is presented in **Annex 12** and will be proposed for adoption at the 92nd General Session in May 2025

### *1.8 Chapter 12.3. 'Infection with Trypanosoma equiperdum (Dourine)' (Annex 13)*

34. Chapter 12.3. has undergone a comprehensive revision. An *ad hoc* Group was convened to review Chapter 12.3. to ensure it reflected the latest scientific evidence, including a definition of its occurrence, and relevant provisions (meeting report). The Code Commission considered the recommendations of the *ad hoc* Group and made relevant amendments.

35. Revised text was developed in collaboration with the Scientific Commission, as relevant.

36. The revised text has been circulated three times, the first time in the February 2024 Code Commission report.

37. The revised Chapter 12.3. 'Infection with *Trypanosoma equiperdum* (Dourine)' is presented in **Annex 13** and will be proposed for adoption at the 92nd General Session in May 2025.

### *1.9 Chapter 12.4. 'Infection with eastern equine encephalitis virus (Eastern equine encephalomyelitis) and Infection with western equine encephalitis virus (Western equine encephalomyelitis)' (Annex 14)*

38. Chapter 12.4. has undergone a comprehensive revision. An *ad hoc* Group was convened to revise the current chapter to ensure it reflected the latest scientific evidence (meeting report). The Code Commission considered the recommendations of the *ad hoc* Group and made relevant amendments.

39. The revised text was developed in collaboration with the Scientific Commission, as relevant.

40. The revised text has been circulated twice, the first time was in the September 2024 Code Commission report.

41. The new Chapter 12.4. 'Infection with Eastern equine encephalitis virus (Eastern equine encephalomyelitis) and Infection with Western equine encephalitis virus (Western equine encephalomyelitis)' is presented in **Annex 14** and will be proposed for adoption at the 92nd General Session in May 2025

### *1.10 Articles 1.3.1., 1.3.5. and 1.3.8. of Chapter 1.3. 'Diseases, infections and infestations listed by WOAH' (Annex 6)*

42. Amendments to the following listed diseases in Chapter 1.3. have been proposed to align with the proposed amendments to relevant disease-specific chapters:

In Article 1.3.1.:

- replace 'New World screwworm (*Cochliomyia hominivorax*)' with 'Infestation with *Cochliomyia hominivorax* (New World screwworm)';
- replace 'Old World screwworm (*Chrysomya bezziana*)' with 'Infestation with *Chrysomya bezziana* (Old World screwworm)';
- replace 'Equine encephalomyelitis (Eastern)' with 'Infection with Eastern equine encephalitis virus (Eastern equine encephalomyelitis)';

In Article 1.3.5.:

- replace 'Dourine' with 'Infection with *Trypanosoma equiperdum* (dourine)';
- replace 'Equine encephalomyelitis (Western)' with 'Infection with Western equine encephalitis virus (Western equine encephalomyelitis)';

In Article 1.3.8.:

- replace 'Nipah virus encephalitis' with 'Infection with Nipah virus'.

43. Amendments to the animal category for the following listed diseases have been proposed to align with the proposed amendments to relevant disease-specific chapters:

- move 'Infection with Nipah virus' from Article 1.3.8. (suidae) to Article 1.3.1. (multiple species);
- move 'Infection with Eastern equine encephalitis virus (Eastern equine encephalomyelitis)' from Article 1.3.1. (multiple species) to Article 1.3.5. (equidae).

44. Revised Articles 1.3.1., 1.3.5. and 1.3.8. of Chapter 1.3. 'Diseases, infections and infestations listed by WOAH' is presented in **Annex 6** and will be presented for adoption at the 92nd General Session in May 2025.

# 2. Annexes

Annex 5

## 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* notably 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. These measures may include the establishment and recognition of *animal health status* applied to countries, *zones*, *compartments* or *herds/flocks*.

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 of and trade in ~~animals and animal products~~*commodities*, and in the use of animals.

4) The absence of chapters, articles or recommendations on particular pathogenic agents, surveillance strategies, *animal health status* or trade in *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 the WOAH w~~W~~eb-site and individual chapters may be downloaded from: https://www.woah.org/.

### B. *Terrestrial Code* content

1) Key terms and expressions that are used in more than one chapter ~~in the *Terrestrial Code*~~ and require precise interpretation for the purposes of 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*, while they continue to be the subject of specific work, until they are amended or deleted.

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 the chapters of 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, working equids, and the use of *animals* in research and education.

10) The standards in each of the chapters of Sections 8 to 16, i.e. disease-specific chapters, are designed ~~mainly~~ to ~~prevent the pathogenic agents~~ inform of the occurrence of WOAH *listed diseases*~~, infections or infestations~~ and to prevent the pathogenic agents from being introduced into an *importing country*~~, or~~ from spreading within a country or having harmful consequences, while facilitating safe trade. Some chapters include specific measures to prevent and control the *infections* and *infestations* of global concern. Sections 8 to 16 ~~each~~ relate to the categories of diseases, *infections* and *infestations* of ~~the host species of the pathogenic agent:~~ multiple species~~, or species of~~ Apinae, Aves, Bovinae, Equidae, Leporidae, Caprinae, Suidae and Camelidae respectively. 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.

~~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 measures applicable to each commodity.~~

A disease-specific chapter covers some or all of the following components:

- Chapter title and number;
- An introductory ~~A~~article ~~on general provisions~~, including definitions ~~for~~ the purposes of the *Terrestrial Code* of the disease and the animal hosts, which ~~that~~ play a significant role in the epidemiology of the disease, and definition of its occurrence ('case definition')~~, and the animal hosts that play a significant role in the epidemiology of the disease~~;
- Article on *safe commodities*;
- Articles on provisions for *animal health status* applied to countries, *zones*, *compartments* or *herds/flocks*;
- Articles on recommendations for safe trade of *commodities*;
- Articles on inactivation of the pathogenic agents present in specific *animal products*, materials or fomites; and

- Articles on *surveillance* of the disease.

Not all disease-specific chapters include all these components and some chapters may include only one ~~the first~~ article on the definition of occurrence for the purpose of *notification* to WOAH. Each chapter includes only those provisions considered, at the time of adoption, relevant to address WOAH Members' needs with regards to the specific disease; and that are supported by sound scientific and technical knowledge.

The recommendations in these chapters that are related to *international trade* ~~These standards~~ assume that the pathogenic 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.~~ The *sanitary measures* recommended in the standards take into account the nature of the moved or traded *commodity*, the *animal health status* of the *exporting country*, *zone* or *compartment* of origin, and the *risk* mitigation measures applicable to each *commodity*.

C. Specific issues

1) Notification

Chapter 1.1. describes Member Countries' obligations under Organic Statutes of the Office International des Epizooties. *Listed diseases* 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 a disease, ~~an~~ *infection* or *infestation* in the WOAH List and Chapter 1.3. gives the current list. *Listed ~~D~~diseases* are divided into ~~nine~~ categories based on the animal host~~s 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~~ and may be complemented by specific requirements in the *listed disease*-specific chapters.

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~~are important tools to prevent and~~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 prevention and 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* in poultry, bovine and pig production systems 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~~*Sanitary 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 for inclusion of a ~~used to assess the safety of~~ *commodity*~~ies~~ in the list of *safe commodities* of a disease-specific chapter.

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 *animal health status* of both *exporting* and *importing countries*, and *zones*, *herds/flocks* 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~~ *animal health status* of the country, *zone*, ~~or~~ *compartment* or *herd/flock* 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*.

[…]

D. Name of animal species

In the *Terrestrial Code*, common terms (in bold in the table below) referring to *animals* are based on scientific names as shown below. In each chapter of the *Terrestrial Code*, scientific names of the *animals* are provided when the vernacular names used in the chapter do not include all the species as described in the table below, e.g. 'bovines (*Bos indicus*, *B. taurus*, *B. grunniens*, *Bubalus bubalis* and *Syncerus caffer*)', which in that example does not include *animals* of genus bison, or when the list of *animals* is long, e.g. 'animals of the families *Suidae* and *Cervidae*, the subfamilies *bovinae*, *caprinae* and *antilopinae* of the family *Bovidae*, and *Camelus bactrianus*'.

| Higher level terms | Terms based on Order or Sub-order | Terms based on Family | Terms based on Sub-Family | Terms based on Tribe | Terms based on Genus |
|---|---|---|---|---|---|
| Class 'Insecta' | - | Family 'Apidae' | Sub-Family 'Apinae'<br><br>'**bees**' means animals of Sub-Family 'Apinae' | Including animals of Tribe:<br>• 'Apini' | Including animals of Genus:<br>• 'Apis'<br>'**honey bees**' means animals of Genus Apis. |
| | | | | Including animals of Tribe:<br>• 'Bombini' | Including animals of Genus:<br>• 'Bombus'<br>'**bumble bees**' means animals of Genus Bombus. |
| | | | | Including animals of Tribe:<br>• 'Meliponini'<br>'**stingless bees**' means animals for Tribe 'Meliponini' | - |
| Class 'Aves'<br><br>'**avian**' means animals of class Aves | Order 'Galliformes' | - | - | - | Including animals of Genus:<br>• 'Gallus'<br>• 'Meleagris' etc.<br>'**chicken**' means *Gallus gallus domesticus*.<br>'**turkey**' means *Meleagris gallopavo*. |
| | Order 'Anseriformes' | - | - | - | Including animals of Genus:<br>• 'Anser'<br>• 'Branta'<br>• 'Anas' etc.<br>'**geese**' means animals of Genera Anser and Branta. |

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| | | | | | ‘**ducks**’ means *Anas platyrhynchos*.<br>(‘**domestic ducks**’ means *Anas platyrhynchos domesticus*.) |
| ‘**mammals**’ means animals of Class ‘Mammalia’<br><br>‘**ungulates**’ means animals of Order ‘Artiodactyla’ (even-toed ungulates) and Order ‘Perissodactyla’ (odd-toed ungulates)<br><br>‘**artiodactyls**’ means animals of Order ‘Artiodactyla’ (even-toed ungulates) | ‘**ruminants**’ means animals of Sub-order ‘Ruminantia’ | ‘**bovids**’ means animals of Family ‘Bovidae’ | ‘**bovines**’ means animals of Sub-Family ‘Bovinae’ | - | Including animals of Genus:<br>• ‘Bos’<br>• ‘Bubalus’<br>• ‘Bison’<br>• ‘Syncerus’ etc. |
| | | | ‘**caprines**’ means animals of Sub-Family ‘Caprinae’ | - | Including animals of Genus:<br>• ‘Ovis’<br>• ‘Capra’, etc.<br>‘**sheep**’ means *Ovis aries*.<br>‘**goats**’ means *Capra hircus* (domestic goats) and *Capra aegagrus* (wild goats). |
| | | | Sub-Family ‘Antilopinae’ | - | Including animals of Genus:<br>• ‘Gazella’<br>• ‘Antilope’<br>• ‘Dibatag’, etc. |
| | | ‘**cervids**’ means animals of Family ‘Cervidae’ | Sub-Family ‘Cervinae’ | - | Including animals of Genus:<br>• ‘Cervus’<br>• ‘Dama’, etc. |
| | | | Sub-Family ‘Capreolinae’ | - | Including animals of Genus:<br>• ‘Capreolus’<br>• ‘Odocoileus’<br>• ‘Rangifer’, etc. |
| | Sub-Order ‘Suina’ | ‘**suids**’ means animals of Family ‘Suidae’ | - | - | Including animals of Genus:<br>• ‘Sus’<br>• ‘Phacochoerus’<br>• ‘Hylochoerus’, etc.<br>‘**pigs**’ means *Sus scrofa* (domestic and wild) . |
| | Sub-Order ‘Tylopoda’ | ‘**camelids**’ means animals of Family ‘Camelidae’ | Sub-Family ‘Camelinae’ | - | Including animals of Genus:<br>• ‘Camelus’<br>• ‘Lama’<br>• ‘Vicugna’<br>‘**dromedary camels**’ means *Camelus dromedarius*.<br>‘**bactrian camels**’ means *Camelus bactrianus*.<br>~~‘**alpacas**’ means *Lama guanicoe pacos*.~~ |

| | | | | | |
|---|---|---|---|---|---|
| | | | | | ‘~~**llamas**~~’ means ~~*Lama guanicoe glama*~~.<br>‘**New World camelids**’ means animals of Genus ~~alpacas and~~ Lama~~s~~ (including ‘llamas’, ‘guanacos’ and ‘alpacas’) and Vicugna. |
| | Sub-Order ‘Hippomorpha’ | ‘**equids**’ means animals of Family ‘Equidae’ | ‘**equines**’ means animals of Sub-Family ‘Equinae’ | - | Including animals of only Genus ‘Equus’<br>‘**horses**’ means *Equus ferus caballus*.<br>‘**donkeys**’ means *Equus africanus asinus*.<br>‘**mules**’ means *Equus africanus asinus* (male) × *Equus ferus caballus* (female).<br>‘**hinnies**’ means *Equus ferus caballus* (male) x *Equus africanus asinus* (female).<br>‘**zebras**’ means animals of subgenus Hippotigris. |
| | ‘**lagomorphs**’ means animals of Order ‘Lagomorpha’ | ‘**leporids**’ means animals of Family ‘Leporidae’ | - | - | Including animals of Genus:<br>• ‘Oryctolagus’<br>• ‘Lepus’<br>• ‘Sylvilagus’<br>‘**rabbits**’ means animals of Genus Oryctolagus’.<br>‘**hares**’ means animals of Genus Lepus.<br>‘**European hares**’ means *Lepus europaeus*. |
| | ‘**carnivores**’ means animals of Order ‘Carnivora’ | ‘**canids**’ means animals of Family ‘Canidae’ | Sub-Family ‘Caninae’ | - | Including animals of Genus:<br>• ‘Canis’<br>‘**dogs**’ means *Canis lupus familiaris*. |
| | | ‘**felids**’ means animals of Family ‘Felidae’ | - | - | Including animals of Genus:<br>• ‘Felis’<br>‘**cats**’ means *Felis catus*. |
| | | Family ‘Mustelidae’ | | | Including animals of Genus:<br>• ‘Mustela’<br>‘**ferrets**’ means *Mustela furo*. |
| | ‘**rodents**’ means animals of ~~Family~~ Order ‘Rodentia’ | - | - | - | - |
| | ‘**bats**’ means of animals of Order ‘Chiroptera’ | - | - | - | - |

| | | | | | |
|---|---|---|---|---|---|
| | ‘**non-human primates**’ means animals of Order ‘Primates’ except for humans (Genus ‘Homo’) | - | - | - | - |

~~In each chapter of the *Terrestrial Code*, scientific names of the animals are provided when the vernacular names used in the chapter do not include all the species as described in this table, e.g. ‘bovines (*Bos indicus*, *B. taurus*, *B. grunniens*, *Bubalus bubalis* and *Syncerus caffer*)’, which in that example does not include animals of genus bison, or when the list of animals is very long, e.g. ‘animals of the families *Suidae* and *Cervidae*, the subfamilies *bovinae*, *caprinae* and *antilopinae* of the family *Bovidae*, and *Camelus bactrianus*’.~~

# CHAPTER 1.3.

# DISEASES, INFECTIONS AND INFESTATIONS LISTED BY WOAH

[...]

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 Nipah virus

– 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)

– Infestation with *Chrysomya bezziana* (Old World screwworm)

– Infestation with *Cochliomyia hominivorax* (New World screwworm)

– Japanese encephalitis

– ~~New World screwworm *(Cochliomyia hominivorax)*~~

– ~~Old World screwworm *(Chrysomya bezziana)*~~

– Paratuberculosis

– Tularemia

– West Nile fever.

[…]

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 Eastern equine encephalitis virus (Eastern equine encephalomyelitis)

– 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)

– Infection with *Trypanosoma equiperdum* (dourine)

– Infection with Western equine encephalitis virus (Western equine encephalomyelitis)

– Venezuelan equine encephalomyelitis.

[…]

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.

[…]

# CHAPTER 7.1.

# INTRODUCTION TO THE RECOMMENDATIONS FOR ANIMAL WELFARE

Article 7.1.1.

**General considerations**

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

An *animal* experiences good welfare if the *animal* is healthy, comfortable, well nourished, safe, is not suffering ~~severely or for a long time~~ from ~~avoidable~~ unpleasant states such as *pain*, fear and *distress*, and is able to express behaviours that are important for its physical and mental state. Good *animal welfare* is not only about avoiding negative experiences ~~to~~ for *animals*, but also providing them with opportunities to have positive experiences.

Good *animal welfare* requires disease prevention and appropriate veterinary care, shelter, management and nutrition, a positively stimulating, comfortable and safe environment, humane handling and humane *slaughter* or *killing*. ~~Good animal welfare is not only about avoiding negative experiences to animals, but also providing them with positive experiences.~~ While *animal welfare* refers to the state of the *animal*, the treatment that an *animal* receives is covered by other terms such as animal care, animal husbandry, and humane treatment.

Article 7.1.2.

**Guiding principles for animal welfare**

1) ~~That t~~There is a critical relationship between animal health and *animal welfare*.

2) ~~That~~ While the ~~internationally recognised~~ “five freedoms” (freedom from hunger, thirst and malnutrition; freedom from fear and *distress*; freedom from physical and thermal discomfort; freedom from *pain*, injury and disease; and freedom to express normal patterns of behaviour) provide valuable guidance in *animal welfare*~~.~~, the ‘five domains’ (nutrition, environment, health, ~~behavioural interactions~~ behaviour, and mental state) support the systematic scientific assessment of *animal welfare*.

3) ~~That t~~The ~~internationally recognised~~ “three Rs” (reduction in numbers of *animals*, refinement of experimental methods and replacement of *animals* with non-animal techniques) provide valuable guidance for the use of *animals* in ~~science~~ research and education.

4) ~~That t~~The scientific assessment of *animal welfare* involves diverse elements ~~which~~ that need to be considered together, and ~~that~~ selecting and ~~weighing~~ balancing these elements often involves value-based assumptions which should be made as explicit as possible.

5) ~~That t~~The use of *animals* in agriculture, education and research, and for companionship, recreation~~,~~ work, ~~culture~~ cultural and entertainment purposes, makes a major contribution to the wellbeing of people.

6) ~~That t~~The use of *animals* carries with it an ethical responsibility to ~~ensure~~ optimise the welfare of such *animals* to the greatest extent practicable.

7) ~~That i~~Improvements in ~~farm~~ *animal welfare* in *animal* production systems can ~~often~~ improve productivity and food safety, and ~~hence~~ lead to economic benefits.

8) ~~That t~~The equivalent welfare outcomes based on performance criteria, rather than identical systems based on design criteria, ~~be~~ are the basis for comparison of *animal welfare* standards and recommendations.

Article 7.1.3.

**Scientific basis for recommendations**

~~1) Welfare is a broad term which includes the many elements that contribute to an *anima*l's quality of life, including its physical and mental states those referred to in the "five freedoms" listed above.~~

1)~~2)~~ The systematic scientific assessment of *animal welfare* ~~has progressed rapidly in recent years and~~ forme~~ds~~ the basis of the recommendations of the *Terrestrial Code* for animal welfare. Welfare assessment can be either at a point in time or over a period of time such as a lifetime. There is value in using both the 'five freedoms' and 'five domains' models. The 'five domains' model allows consideration ~~to be given to~~ of both the degree and cumulation of positive and negative experiences over the duration of the animal's life.

2)~~3)~~ Some measures of *animal welfare* involve assessing the degree of impaired functioning associated with injury, disease and malnutrition. Other measures provide information on *animals*' needs and positive or negative affective states ~~such as hunger, pain and fear~~, often by measuring the strength of *animals*' preferences, motivations and aversions. Others assess the physiological~~,~~ and behavioural ~~and immunological~~ changes or effects that *animals* show in response to various challenges.

3)~~4)~~ Such measures can lead to criteria and indicators that help to evaluate how different methods of managing *animals* influence their welfare.

Article 7.1.4.

**Guiding principles for the use of measures to assess animal welfare**

1) ~~the OIE~~ WOAH *animal welfare* standards ~~to be applicable globally, they should~~ emphasise the ~~favourable~~ consequences that any treatment~~s on~~ of *animals* may have on their welfare and ~~they should be applicable globally. outcomes for the *animals*, although, in some circumstances, it~~ may include recommendations on ~~be necessary to recommend~~ specific conditions of the *animals*' environment and management~~. Outcomes are generally measured by assessing the extent to which *animals* experience the "five freedoms" described in Article 7.1.2.~~

2) For each principle listed in Article 7.1.5., the most relevant criteria (or measur~~able~~s), ideally comprising animal-based measures, defined as an evaluation of a response of an *animal* or as an effect on an *animal* used to assess its welfare, should be included in the standard. Any given animal-based measure ~~may~~ should be linked to one or more of these ~~than one~~ principle~~s~~.

3) Recommendations should, whenever possible, define explicit targets or thresholds that should be met for animal-based measures. Such target values should be based on relevant science and experience of experts.

4) In addition to animal-based measures, ~~one may use~~ resource-based measures, defined as an evaluation of a feature of the environment in which the *animal* is kept or to which it is exposed and management-based measures, defined as an evaluation of what the *animal handler* does, and with which management processes or tools, may be used. ~~may be used and~~ The use of any of these three types of measures should be defined on the basis of science and expert experience showing that a welfare outcome is clearly linked to an *animal* as well as to a resource or ~~to~~ a management procedure.

5) ~~Users of the standard Members should select~~ Tthe most ~~appropriate animal-based~~ relevant measures from among those listed in the standards should be selected for ~~their~~ a given ~~farming~~ *animal* production system or environment~~, from among those listed in the standard~~. Welfare ~~O~~outcomes can be measured by an assessment of individuals or *animal* groups, or a representative sample of those, using data from

*establishments*, transport or *slaughterhouses/abattoirs*. *Competent Authorities* should collect all data relevant ~~for the users~~ to set target and threshold values.

6) Whatever the basis of the measure, if welfare outcomes are unsatisfactory, ~~users~~ ~~Members~~ relevant ~~should consider what~~ changes to resources or management ~~are necessary~~ should be applied to improve the welfare outcomes.

Article 7.1.5.

**General principles for ~~the~~ animal welfare ~~of animals~~ in animal ~~livestock~~ production systems**

1) Genetic selection should always take into account the health and welfare of *animals*.

2) *Animals* chosen for introduction into new environments should be suited to the local ~~climate~~ conditions, including their adaptability ~~and able to adapt~~ to local climate, diseases~~,~~ ~~parasites~~ and nutrition.

3) The physical environment, including the substrate (walking surface, resting surface, etc.), should be suited to the animal species and categories (such as type of production or life stage) so as to minimise risk of injury and ~~transmission of~~ disease~~s~~ ~~or parasites~~to *~~animals~~*.

4) The physical environment should allow comfortable ~~resting,~~ and safe resting and ~~comfortable~~ movement including normal postural changes, and the opportunity to perform ~~types of~~ ~~natural~~ normal patterns of behaviours that *animals* are motivated to perform.

5) Social grouping of *animals* should be managed to ~~allow~~ promote positive social behaviour and minimise injury, *distress* and chronic fear.

6) For housed *animals*, air quality, air flow, temperature and humidity should not be ~~aversive~~ detrimental and should support good animal health and welfare ~~and not be aversive~~. ~~Where and when extreme weather conditions occur, a~~*Animals* should not be prevented from using their natural methods of thermo-regulation, especially where and when extreme weather conditions occur.

7) *Animals* should have access to sufficient *feed* and water, suited to the *animals*' age and needs, to maintain normal health, behaviour and performance ~~productivity~~ and to prevent severe or prolonged hunger and~~,~~ thirst, malnutrition and ~~or~~ dehydration.

8) Diseases ~~and parasites~~ should be prevented and controlled as much as possible through good management practices, preventative health measures and *biosecurity*. *Animals* with serious health problems should be isolated and treated promptly or killed humanely if treatment is not feasible or recovery is unlikely.

9) Alternatives to painful procedures should be used. Where painful procedures cannot be avoided, the ~~resulting~~ *pain* should be managed to the extent that available methods allow.

10) The handling of *animals* should foster a positive relationship between humans and *animals* and should not cause injury, panic, lasting fear or ~~avoidable stress~~ distress.

11) Owners and *animal handlers* should have sufficient ~~training.~~ skills and knowledge through appropriate training or experience to ensure that *animals* are treated in accordance with these principles.

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Annex 8

# CHAPTER 8.13.

# ~~INFESTATION WITH CHRYSOMYA BEZZIANA~~ (OLD WORLD SCREWWORM) AND ~~NEW WORLD SCREWWORM (~~INFESTATION WITH COCHLIOMYIA HOMINIVORAX (NEW WORLD SCREWWORM) AND INFESTATION WITH CHRYSOMYA BEZZIANA (OLD WORLD SCREWWORM)~~AND OLD WORLD SCREWWORM (CHRYSOMYA BEZZIANA)~~

Article 8.13.1.bis

**General provisions**

New World screwworm and Old World screwworm are obligate parasites which can infest a wide variety of mammals, including humans, and birds.

For the purposes of the *Terrestrial Code*, New World screwworm is defined as an *infestation* of mammals and birds (hereafter 'animal hosts') with *Cochliomyia hominivorax*, and Old World screwworm is defined as an *infestation* of animal hosts with *Chrysomya bezziana*.

The occurrence of *infestation* with *Cochliomyia hominivorax* or *infestation* with *Chrysomya bezziana* is defined by the following: *Cochliomyia hominivorax* or *Chrysomya bezziana* has been observed and identified as such in a sample from an animal host.

Standards for diagnosis and information on the epidemiology are described in the *Terrestrial Manual*.

[…]

Annex 9

# CHAPTER 8.Y.

# INFECTION WITH NIPAH VIRUS

Article 8.Y.1.

**General provisions**

Nipah virus can infect a wide range of species, including fruit bats (reservoir) and humans, but only domestic pigs and horses are considered to play a significant role in the epidemiology of the disease in ~~the~~ domestic animals and humans~~population~~.

For the purposes of the *Terrestrial Code*, *infection* with Nipah virus is defined as an *infection* of domestic pigs and horses ~~and pigs~~ (hereafter '~~susceptible~~ animal hosts') with Nipah virus.

The following defines the occurrence of *infection* with Nipah virus:

1) Nipah virus has been isolated and identified as such in a sample from an animal host~~susceptible animal~~; or

2) antigen or nucleic acid specific to Nipah virus has been detected in a sample from an animal host~~susceptible animal~~ showing clinical signs or pathological lesions consistent with *infection* with Nipah virus, epidemiologically linked to a confirmed or suspected *case*, or giving cause for suspicion of previous association or contact with Nipah virus; or

3) seroconversion specific to Nipah virus~~, which is not the consequence of *vaccination*,~~ has been detected in an animal host~~susceptible animal~~; or

4) antibodies specific to Nipah virus ~~, which are not the consequence of *vaccination*,~~ have been detected in a sample from an animal host~~susceptible animal~~ epidemiologically linked to a confirmed or suspected *case*, or giving cause for suspicion of previous association or contact with Nipah virus.

Standards for diagnosis ~~and vaccines, as well as~~ and information on the epidemiology~~,~~ are described in the *Terrestrial Manual*.

# CHAPTER 11.5.

# INFECTION WITH *MYCOPLASMA MYCOIDES* SUBSP. *MYCOIDES* ~~SC~~ (CONTAGIOUS BOVINE PLEUROPNEUMONIA)

Article 11.5.1.

**General provisions**

~~1) For the purposes of this chapter, susceptible *animals* means domestic bovines (*Bos indicus*, *B. taurus*, *B. grunniens* and *Bubalus bubalis*).~~

1~~21~~) For the purposes of the *Terrestrial Code*, ~~the *incubation period* for~~ contagious bovine pleuropneumonia (CBPP) ~~shall be six months.~~

~~For the purpose of this chapter,~~ is defined as an ~~*animal*~~ *infection*~~ed~~ of ~~susceptible animals~~ bovines (*Bos indicus*, *B. taurus*, *B. grunniens* and *Bubalus bubalis*) with *Mycoplasma mycoides* subspecies *mycoides* ~~SC~~ (*Mmm* ~~SC~~)~~, and freedom from CBPP means freedom from *Mmm* SC *infection*.~~

~~For the purpose of this chapter, susceptible *animals* include bovids (*Bos indicus*, *B. taurus* and *B. grunniens*) and water buffaloes (*Bubalus bubalis*)~~

2~~3~~) ~~For the purposes of *international trade* t~~This chapter deals not only with the occurrence of clinical signs caused by *Mmm*~~SC~~, but also with the presence of *infection* with *Mmm*~~SC~~ in the absence of clinical signs.

3~~4~~) The following defines the occurrence of *infection* with *Mmm*~~SC~~ ~~*infection*~~:

~~1~~a) *Mmm*~~SC~~ has been isolated and identified as such in ~~from an *animal*, embryos, oocytes or semen~~ a sample from a ~~susceptible animal~~ bovine~~; or~~; or

~~2~~b) ~~*Mmm* deoxyribo~~nucleic acid specific to *Mmm* has been detected in a sample from a ~~susceptible animal~~ bovine showing pathological lesions consistent with an *infection* with *Mmm*~~SC~~, ~~and~~ or epidemiologically link~~s~~ed to a confirmed *case*~~.~~; or

c) antibodies specific to *Mmm*~~SC~~ ~~antigens,~~ which are not the consequence of *vaccination*, have been detected in a sample from a ~~susceptible animal~~ bovine showing pathological lesions consistent with an *infection* with *Mmm*, ~~and~~ or epidemiologically link~~s~~ed to a confirmed *case* ~~or *Mmm*SC deoxyribonucleic acid have been identified in one or more animals showing pathological lesions consistent with *infection* with *Mmm*SC with or without clinical signs, and epidemiological links to a confirmed *outbreak* of CBPP in susceptible *animals*~~.

4~~5~~) For ~~T~~the purposes of the *Terrestrial Code*, the *incubation period* shall be six months.

~~When authorising import or transit of the *commodities* listed in this chapter, with the exception of those listed in Article 11.5.2., *Veterinary Authorities* should require the conditions prescribed in this chapter relevant to the CBPP status of the domestic bovids and water buffalo population of the *exporting country*, *zone* or *compartment*.~~

5~~6~~) Standards for diagnosis ~~diagnostic tests~~ and vaccines, as well as information on the epidemiology, are described in the *Terrestrial Manual*.

Article 11.5.2.

**Safe commodities**

When authorising the importation or transit of the following *commodities*, *Veterinary Authorities* should not require any CBPP-related conditions, regardless of the ~~CBPP~~ *animal health status* of ~~the domestic bovids~~ bovine ~~and water buffalo population of~~ the *exporting country*, *zone* or *compartment*:

1) *milk* and *milk products*;

2) hides and skins;

3) *meat* and *meat products* (excluding lung);

4) *protein meal*;

5) rendered fat.

Article 11.5.3.

**Country or zone free from CBPP ~~free country or zone~~**

A country or *zone* may be considered free from CBPP when the relevant provisions in point 2 of Article 1.4.6. have been complied with, and when within the proposed free country or *zone* for at least the past 24 months:

1) there has been no *case* of *infection* with *Mmm*;

2) the *Veterinary Authority* has current knowledge of, and authority over, all *herds* of ~~susceptible animals~~ bovines;

3) appropriate *surveillance* has been implemented in accordance with:

   a) point 2 b) of Article 1.4.6. where historical freedom can be demonstrated; or

   b) Articles 11.5.13. and 11.5.14. where historical freedom cannot be demonstrated;

4) measures to prevent the introduction of the *infection* have been in place: in particular, the importations or movements of bovine *commodities* into the country or *zone* have been carried out in accordance with this chapter ~~and~~or other relevant chapters of the *Terrestrial Code,* including Chapter 2.1. 'Import risk analysis*'*;

5) no *vaccination* or treatment against CBPP has been carried out;

6) no animal vaccinated or treated against CBPP ~~have~~ has been introduced ~~since the cessation of *vaccination*~~.

~~To qualify for inclusion in the existing list of CBPP free countries and *zones*, a Member Country should:~~

~~1) have a record of regular and prompt animal disease reporting;~~

~~2) send a declaration to WOAH stating that:~~

   ~~a) there has been no *outbreak* of CBPP during the past 24 months;~~

   ~~b) no evidence of CBPP *infection* has been found during the past 24 months;~~

   ~~c) no *vaccination* against CBPP has been carried out during the past 24 months,and supply documented evidence that *surveillance* for CBPP in accordance with this chapter is in operation and that regulatory measures for the prevention and control of CBPP have been implemented;~~

~~3) not have imported since the cessation of *vaccination* any animals vaccinated against CBPP.~~

The country or *zone* will be included in the list of countries or *zones* free from CBPP in accordance with Chapter 1.6. ~~only after the submitted evidence has been accepted by WOAH~~.

Retention on the list requires annual reconfirmation of compliance with all points above and the ~~relevant~~ provisions under point 4 of Article 1.4.6. ~~that the information in points 2 *a)*, 2 *b)*, 2 *c)* and 3 above be re-submitted annually and~~ Documented evidence should be resubmitted annually for points 1 to 4 above. Any changes in the epidemiological situation or other significant events should be ~~reported~~ notified to WOAH in accordance with ~~the requirements in~~ Chapter 1.1.

Article 11.5.~~4~~6.

**Compartment free from CBPP ~~free compartment~~**

~~The bilateral recognition of a CBPP free *compartment* should follow the principles laid down in this chapter and in Chapters 4.3. and 4.4.~~

A *compartment* free from CBPP can be established in any country or *zone*. In defining such a *compartment* the principles of Chapters 4.4. and 4.5. should be followed. ~~Susceptible animals~~ Bovines in the *compartment* should be separated from any other ~~susceptible animals~~ bovines by the effective application of a *biosecurity plan*.

A Member Country wishing to establish a *compartment* free from CBPP should:

1) have a record of regular and prompt animal disease reporting and, if not free, have an *official control programme* and a *surveillance* system for CBPP in place in accordance with Articles 11.5.13. and 11.5.14. that allows knowledge of the prevalence, distribution and characteristics of CBPP in the country or *zone*;

2) declare for the free *compartment* that:

   ~~a) there has been no case of CBPP during the past 24 months;~~

   ~~b~~a) no *infection* with *Mmm* has ~~been detected~~ occurred during the past 24 months;

   ~~c~~b) *vaccination* against CBPP is prohibited;

   ~~d~~c) no animal vaccinated or treated against CBPP within the past 24 months is in the *compartment*;

   ~~e~~d) animals, semen and embryos may only enter the *compartment* in accordance with relevant articles in this chapter;

   ~~f~~e) documented evidence shows that *surveillance* in accordance with Articles 11.5.13. and 11.5.14. is in operation;

   ~~g~~f) an *animal identification* and *traceability* system in accordance with Chapters 4.~~1~~2. and 4.~~2~~3. is in place;

3) describe in detail:

   a) the animal *subpopulation* in the *compartment*;

   b) the *biosecurity plan* to mitigate the risks identified by the *surveillance* carried out in accordance with point 1 notably to prevent the aerosol transmission of CBPP.

The *compartment* should be approved by the *Veterinary Authority*.

Article 11.5.5.

**Country ~~of~~ or zone infected with *Mmm* ~~CBPP infected country or zone~~**

A country or *zone* shall be considered as infected with *Mmm* ~~W~~when the ~~requirements for acceptance~~conditions in points 1 to 6 of Article 11.5.3 ~~as a CBPP free country or *zone* free from CBPP~~ are not ~~fulfilled~~met~~, a country or *zone* shall be considered as infected~~.

Article 11.5.5bis.

**Establishment of a containment zone within a country or zone previously free from CBPP**

In the event of *outbreaks* of ~~CBPP~~ *infection* with *Mmm* within a country or *zone* previously free from CBPP, including within a *protection zone*, a *containment zone*, which includes all epidemiologically linked *outbreaks*, ~~can~~ may be established, in accordance with Article 4.4.7., to minimise the impact on the rest of the country or *zone*.

For this to be achieved and for the Member Country to take full advantage of this process, the *Veterinary Authority* should submit as soon as possible to WOAH, in addition to the requirements of Article 4.4.7., ~~in support of the application,~~ documented evidence that:

1) on suspicion, a ~~strict~~ standstill has been imposed on the suspected *establishments*, and ~~in the country or *zone* animal movement control has been imposed and~~ effective controls on the movement of animals and other relevant *commodities* are in place in the country or *zone*;

2) the *infection* has been confirmed and notified in accordance with Chapter 1.1.;

3~~2~~) on confirmation, ~~an~~ the ~~additional~~ standstill and movement ~~of susceptible animals has been imposed~~ controls described in point 1 have been reinforced ~~in the entire *containment zone* and the movement controls described in point 1 have been reinforced~~;

4~~3~~) epidemiological investigations into the likely source of the *outbreaks* have been carried out;

5~~4~~) a *slaughter* policy, with or without the use of emergency *vaccination*, has been applied;

6~~5~~) *surveillance* in accordance with Articles 11.5.13. and 11.5.14. is in place in the *containment zone* and in the rest of the country or *zone*;

7~~6~~) measures that prevent the spread of CBPP to the rest of the country or *zone*, taking into consideration physical and geographical barriers, are in place.

The free status of the areas outside the *containment zone* is suspended while the *containment zone* is being established. The free status of these areas ~~outside the *containment zone*~~ may be reinstated irrespective of the provisions of Article 11.5.4., once the *containment zone* has been approved by WOAH as complying with Article 4.4.7. and points 1 to ~~6~~ 7 above.

In the event of recurrence of *infection* with *Mmm* in the *containment zone*, established in accordance with point 4 a) of Article 4.4.7., the approval of the *containment zone* is withdrawn and the ~~CBPP~~ free status of the whole country or *zone* is suspended until the relevant requirements of Article 11.5.~~4~~6. are fulfilled.

In the event of occurrence of *infection* with *Mmm* in the outer zone of a *containment zone* established in accordance with point 4 b) of Article 4.4.7., the approval of the *containment zone* is withdrawn and the free status of the whole country or *zone* is suspended until the relevant requirements of Article 11.5.46. are fulfilled.

The recovery of the ~~CBPP~~ free status of the *containment zone* should follow the provisions of Article 11.5.~~4~~6.

Article 11.5.64.

**Recovery of free status**

Should an *outbreak* of CBPP occur in a previously free country or *zone*, its status may be recovered when *surveillance* in accordance with Articles 11.5.13. and 11.5.14. has been carried out with negative results, and 12 months after:

1) the *disinfection* of the last affected *establishment*, provided that a *slaughter* policy without *vaccination* has been implemented; or

2) the *disinfection* of the last affected *establishment* and the *slaughter* of all vaccinated animals, provided that a *slaughter* policy with emergency *vaccination* and *slaughter* of vaccinated animals has been implemented.

~~When a CBPP *outbreak* occurs in a CBPP free country or *zone*, one of the following waiting periods is required to regain the status of CBPP free country or *zone*:~~

~~1) 12 months after the last *case* where a *stamping-out* policy and serological *surveillance* and strict movement control are applied in accordance with this chapter;~~

~~2) if *vaccination* was used, 12 months after the *slaughter* of the last vaccinated *animal*.~~

~~1) 12 months after the *slaughter* of the last *case* where a *slaughter* policy, without emergency *vaccination*, and *surveillance* are applied in accordance with Articles 11.5.13. and 11.5.14.; or~~

~~2) 12 months after the *slaughter* of the last *case* and of all vaccinated animals, whichever occurred last, where a *slaughter* policy, emergency *vaccination* and *surveillance* in accordance with Articles 11.5.13. and 11.5.14. are applied.~~

The country or *zone* will regain the status of CBPP free country or *zone* only after the submitted evidence, based on the provisions of Chapter 1.10., has been accepted by WOAH.

Where a ~~*stamping-out*~~ *slaughter* policy is not practised, the above waiting periods do~~es~~ not apply but Article 11.5.3. applies.

Article 11.5.7.

**Recommendations for importation of ~~susceptible animals~~ bovines from ~~CBPP free~~ countries~~,~~ ~~or~~ zones~~,~~ or compartments free from CBPP ~~free compartments~~**

~~For domestic bovids and water buffaloes~~

*Veterinary Authorities* should require the presentation of an *international veterinary certificate* attesting that the animals:

1) showed no clinical sign of CBPP on the day of shipment;

2) were kept in a CBPP free country, *zone* or *compartment* since birth or for at least the past six months.

Article 11.5.8.

**Recommendations for importation of ~~susceptible animals~~ bovines from ~~CBPP infected~~ countries or zones infected with *Mmm* for immediate slaughter**

~~For domestic bovids and water buffaloes for slaughter~~

*Veterinary Authorities* should require the presentation of an *international veterinary certificate* attesting that the animals:

1) showed no clinical sign of CBPP on the day of shipment;

2) originate from an *establishment* in which *surveillance* in accordance with Articles 11.5.13. and 11.5.14. demonstrates that ~~where~~ no *case* of CBPP ~~had~~ has occurred ~~was officially reported for~~ during the past six months; and

3) are transported ~~directly~~ under the supervision of the *Veterinary Authority* in a *vehicle/vessel*, which was subjected to *disinfection* before loading, directly from the *establishment* of origin to the ~~*slaughterhouse/abattoir*~~ *place of shipment*~~in sealed *vehicles*~~ without coming into contact with other ~~susceptible animals~~ bovines.

Article 11.5.9.

**Recommendations for importation of bovine semen from ~~CBPP free~~ countries~~,~~ ~~or~~ zones~~,~~ or compartments free from CBPP ~~free compartments~~**

~~For bovine semen~~

*Veterinary Authorities* should require the presentation of an *international veterinary certificate* attesting that:

1) the donor animals:

   a) showed no clinical sign of CBPP on the day of collection of the semen;

   b) were kept in a CBPP free country, *zone* or *compartment* since birth or for at least the past six months;

2) the semen was collected, processed and stored in accordance with Chapters 4.6. and 4.7.

Article 11.5.10.

**Recommendations for importation of bovine semen from ~~CBPP infected~~ countries or zones infected with *Mmm***

~~For bovine semen~~

*Veterinary Authorities* should require the presentation of an *international veterinary certificate* attesting that:

1) the donor animals:

   a) were kept since birth, or for the past six months, in an *establishment* in which *surveillance* in accordance with Articles 11.5.13. and 11.5.14. demonstrates that no *case* of *infection* with *Mmm* has occurred during that period;

   ~~a~~b) showed no clinical sign of CBPP on the day of collection of the semen;

   ~~b~~c) were subjected to ~~the complement fixation~~ a serological test for CBPP with negative results, on two occasions, with an interval of not less than 21 days and not more than 30 days between ~~each~~ samplings~~tests~~, the second sampling~~test~~ being performed within 14 days prior to collection;

   ~~c~~d) were isolated from other ~~domestic bovids and water buffaloes~~ ~~susceptible animals~~ bovines that did not meet the same health requirements from the day of the first ~~the complement fixation~~ sampling for serological testing ~~test until collection~~;

   ~~d) were kept since birth, or for the past six months, in an *establishment* in which *surveillance* in accordance with Articles 11.5.13. and 11.5.14. demonstrates that where no case of CBPP was reported had occurred during that period. , and that the *establishment* was not situated in a CBPP infected *zone*;~~

   e) AND EITHER:

      i) have not been vaccinated against CBPP;

OR

ii) were vaccinated ~~using a vaccine complying with the standards described in the *Terrestrial Manual*~~ not more than four months prior to collection; in this case, the condition laid down in point (~~b~~c) above is not required;

2) the semen:

a) was collected, processed and stored in accordance with Chapters 4.~~5~~6. and 4.~~6~~7.;

b) was subjected to a test for the ~~identification~~ detection of the agent.

Article 11.5.11.

**Recommendations for importation of *in vivo* derived or *in vitro* produced oocytes or embryos of ~~susceptible animals~~ bovines from ~~CBPP free~~ countries~~,~~ ~~or~~ zones~~,~~ or compartments free from CBPP ~~free compartments~~**

~~For *in vivo* derived or *in vitro* produced oocytes or embryos of domestic bovids and water buffaloes~~

*Veterinary Authorities* should require the presentation of an *international veterinary certificate* attesting that:

1) the donor animals:

a) showed no clinical sign of CBPP on the day of collection of the oocytes or embryos;

b) were kept in a ~~CBPP free~~ country, *zone* or *compartment* free from CBPP since birth or for at least the past six months;

2) the oocytes were fertilised with semen meeting the conditions of Articles 11.5.9. or 11.5.10.;

3) the oocytes or embryos were collected, processed and stored in accordance with Chapters 4.8., 4.9. and 4.10., as relevant.

Article 11.5.12.

**Recommendations for importation of *in vivo* derived or *in vitro* produced oocytes or embryos of ~~susceptible animals~~ bovines from ~~CBPP infected~~ countries or zones infected with *Mmm***

~~For *in vivo* derived or *in vitro* produced oocytes or embryos of domestic bovids and water buffaloes~~

*Veterinary Authorities* should require the presentation of an *international veterinary certificate* attesting that:

1) the donor animals:

a) were kept since birth, or for the past six months, in an *establishment* in which *surveillance* in accordance with Articles 11.5.13. and 11.5.14. demonstrates that no *case* of *infection* with *Mmm* has occurred during that period;

~~a~~b) showed no clinical sign of CBPP on the day of collection of the oocytes or embryos ~~or oocytes~~;

~~b~~c) were subjected to ~~the complement fixation~~ a serological test for CBPP with negative results, on two occasions, with an interval of not less than 21 days and not more than 30 days between ~~each~~ samplings~~tests~~, the second sampling~~test~~ being performed within 14 days prior to collection;

~~c~~d) were isolated from other ~~domestic bovids and water buffaloes~~ bovines that did not meet the same health requirements from the day of the first ~~the complement fixation~~ sampling for serological testing ~~test~~ until collection;

~~d) were kept since birth, or for the past six months, in an *establishment* in which *surveillance* in accordance with Articles 11.5.13. and 11.5.14. demonstrates that where no *case* of CBPP was~~

~~reported had occurred during that period, and that the *establishment* was not situated in a CBPP infected *zone*;~~

e) AND EITHER:

i) have not been vaccinated against CBPP;

OR

ii) were vaccinated ~~using a vaccine complying with the standards described in the *Terrestrial Manual*~~ not more than four months prior to collection; in this case, the condition laid down in point (~~b~~c) above is not required;

2) the oocytes were fertilised with semen meeting the conditions of Articles 11.5.9. ~~and~~ or 11.5.10.;

3) the oocytes or embryos were collected, processed and stored in accordance with Chapters 4.8., 4.9. and 4.10., as relevant.

Article 11.5.13.

**~~Introduction to surveillance~~ General principles of surveillance**

*Surveillance* aims at identifying *infection* in bovines. Articles 11.5.13. ~~to~~ and 11.5.~~17~~14. define the principles and provide a guide for the *surveillance* of CBPP in accordance with Chapter 1.4. notably point ~~2(h)~~ 3 of Article 1.4.3. concerning quality assurance. They are applicable to Member Countries seeking establishment ~~of freedom from CBPP. Guidance is provided for Member Countries seeking reestablishment~~, maintenance or recovery of freedom from CBPP ~~for~~ at the ~~entire~~ country, ~~or for a *zone*, following an *outbreak*~~ or *compartment* level or seeking endorsement by WOAH of their *official control programme* for CBPP, in accordance with Article 11.5.13. ~~*Surveillance* aims at identifying *infection* in bovines susceptible species as indicated in Article 11.5.1.~~

1. Early detection

A *surveillance* system for early detection should be in place in accordance with Chapter 1.4. under the responsibility of the *Veterinary Authority.*

2. Demonstration of freedom

The impact and epidemiology of CBPP differ widely in different regions of the world and therefore it is impossible to provide specific recommendations for all situations. *Surveillance* strategies employed for demonstrating freedom from CBPP at an acceptable level of confidence should be adapted to the local situation. It is incumbent upon the applicant Member Country to submit a dossier to WOAH in support of its application that not only explains the epidemiology of CBPP in the region concerned but also demonstrates how all the risk factors are managed. This should include provision of science ~~scientifically~~ based supporting data. Therefore, ~~T~~there is ~~therefore~~ considerable latitude available to Member Countries to provide a well-reasoned argument to prove that the absence of ~~CBPP~~ *infection* with *Mmm* is assured at an acceptable level of confidence.

*Surveillance* for CBPP should be in the form of a continuing programme designed to establish that the whole territory or part of it is free from CBPP ~~*infection*~~.

A Member Country wishing to substantiate freedom from CBPP should demonstrate absence of *infection* with *Mmm* in bovines.

~~Article 11.5.14.~~

~~General conditions and methods for surveillance~~

3. WOAH endorsed official control programme

*Surveillance* strategies employed in support of a WOAH endorsed *official control programme* should demonstrate evidence of the effectiveness of any control strategy used and of the ability to rapidly detect all *outbreaks* of *infection* with *Mmm* ~~CBPP~~.

Considerable latitude exists for Member Countries to design and implement *surveillance* to establish that the whole country or a *zone* is free from CBPP and to understand the epidemiology of CBPP as part of the *official control programme*.

The Member Country should submit an application ~~dossier~~ to WOAH ~~in~~ supported by a dossier ~~of its application~~ that explains the epidemiology of CBPP in the region concerned and demonstrates how all the risk factors are identified and managed. This should include provision of ~~scientifically~~ science-based supporting data.

The entire investigative process should be documented within the *surveillance* programme. All the epidemiological information should be substantiated, and the results should be collated in the final report.

~~The entire investigative process should be documented within the *surveillance* system in accordance with Chapter 1.4. should be under the responsibility of the Veterinary Authority. A procedure should be in place for the rapid collection and transport of samples from suspect cases of CBPP to a laboratory for CBPP diagnoses.~~

~~2) The CBPP *surveillance* programme should:~~

~~a) include an early warning system throughout the production, marketing and processing chain for reporting suspicious cases. Farmers and workers (such as community animal health workers) who have day-to-day contact with livestock, *meat* inspectors as well as *laboratory* diagnosticians, should report promptly any suspicion of CBPP. They should be integrated directly or indirectly (e.g. through private *veterinarians* or *veterinary para-professionals*) into the *surveillance* system. All suspect cases of CBPP should be investigated immediately. Where suspicion cannot be resolved by the epidemiological and clinical investigation, samples should be taken and submitted to a *laboratory*. This requires that sampling kits information should be substantiated, and other equipment are available for those responsible for *surveillance*. Personnel responsible for *surveillance* should be able to call for assistance from a team with expertise in CBPP diagnosis and control;~~

~~b) implement, when relevant, regular and frequent clinical inspection and testing of high-risk groups of *animals*, such as those adjacent to a CBPP infected country or *zone* (for example, areas of transhumant production systems);~~

~~c) take into consideration additional factors such as animal movement, different production systems, geographical and socio-economic factors that may influence the risk of *disease* occurrence.~~

~~An effective *surveillance* system will periodically identify suspicious cases that require follow-up and investigation to confirm or exclude that the cause of the condition is CBPP. The rate at which such suspicious cases are likely to occur will differ between epidemiological situations and cannot therefore be predicted reliably. Applications for freedom from CBPP *infection* should, in consequence, provide details of the occurrence of suspicious cases and how they were investigated and dealt with. This should include the results of *laboratory* testing and the control measures to which the *animals* concerned were subjected during the investigation (quarantine, movement stand-still orders, etc.). should be collated in the final report.~~

~~Article 11.5.15.~~

4. Surveillance strategies

~~1.~~ ~~Introduction~~

~~The target population for *surveillance* aimed at identifying *disease* and *infection* should cover all the susceptible species (*Bos taurus*, *B. indicus*, *B. grunniens* and *Bubalusbubalis*) within the country or *zone*.~~

~~Given the limitations of the diagnostic tools available,~~ tThe interpretation of serological *surveillance* results should be at the *herd* level rather than at the individual animal level.

Randomised *surveillance* may not be the preferred approach given the epidemiology of the disease (usually uneven distribution and potential for occult foci of *infection* in small populations) and the limited sensitivity and specificity of currently available tests. ~~Targeted~~ Risk-based *surveillance* (e.g. based on the increased likelihood of *infection* in particular localities or species, focusing on *slaughter* findings, and active clinical *surveillance*) may be the most appropriate strategy. The applicant Member Country should justify the *surveillance* strategy chosen as adequate to detect the presence of ~~CBPP~~ *infection* with *Mmm* in accordance with Chapter 1.4. ~~and the epidemiological situation.~~

~~Targeted~~ Risk-based *surveillance* may involve testing of the entire target subpopulation or a sample from it. In the latter case the sampling strategy should incorporate an epidemiologically appropriate design prevalence. The sample size selected for testing should be large enough to detect *infection* if it were to occur at a predetermined minimum rate. The sample size and expected disease prevalence determine the level of confidence in the results of the survey. The applicant Member Country should justify the choice of design prevalence and confidence level based on the objectives of *surveillance* and the epidemiological situation, in accordance with Chapter 1.4. Selection of the design prevalence in particular should be clearly based on the prevailing or historical epidemiological situation.

Regular and frequent clinical inspection and testing of high-risk groups of *animals*, such as those adjacent to a country or *zone* infected with *Mmm* (for example, areas of transhumant production systems), should be implemented when relevant,

Additional factors such as animal movement, different production systems, geographical and socio-economic factors that may influence the risk of disease introduction and occurrence should be taken into consideration.

Irrespective of the survey design selected, the sensitivity and specificity of the diagnostic tests employed are key factors in the design, sample size determination and interpretation of the results obtained. ~~Ideally, the sensitivity and specificity of the tests used should be validated.~~

5. Follow-up of suspected cases and interpretation of results

An effective *surveillance* system will identify suspected *cases* that require immediate follow-up and investigation to confirm or exclude that the cause of the condition is an *infection* with *Mmm*. Samples should be taken and submitted for diagnostic testing, unless the suspected *case* can be confirmed or ruled out by epidemiological and clinical investigation. Details of the occurrence of suspected *cases* and how they were investigated and dealt with should be documented. This should include the results of diagnostic testing and the measures applied to the animals concerned during the investigation.

~~Irrespective of t~~The surveillance ~~system employed,the~~ design should anticipate the occurrence of false positive *laboratory* results ~~reactions~~. If the characteristics of the testing system are known, the rate at which these false positives are likely to occur can be calculated in advance. There should be an effective procedure for following-up positives to ~~ultimately~~ determine, with a high level of confidence, whether or not they are indicative of *infection* ~~or not~~. This should involve ~~follow-up with~~ supplementary tests~~, clinical~~ and follow-up investigation ~~and post-mortem examination in~~ to collect diagnostic material from the original ~~sampling~~ *epidemiological unit* ~~as well as~~ and *herds* which may be epidemiologically linked to it.

*Laboratory* results should be examined in the context of the epidemiological situation.

Article 11.5.14.

**Methods of surveillance**

1. Clinical surveillance

Clinical *surveillance* aims at detecting clinical signs of CBPP in a *herd* by ~~close~~ a thorough physical examination of ~~susceptible *animals*~~ bovines. Clinical inspection is an important component of CBPP *surveillance* contributing to reaching the desired level of confidence of detection of disease if a sufficiently large number of ~~clinically susceptible *animals*~~ bovines ~~is~~ are examined.

~~Clinical *surveillance* and *laboratory* testing should always be applied in series to clarify the status of CBPP suspects detected by either of these complementary diagnostic approaches. *Laboratory* testing and post-mortem examination may contribute to confirm clinical suspicion, while clinical *surveillance* may contribute to confirmation of positive serology. Any sampling unit within which suspicious *animals* are detected should be classified as infected until contrary evidence is produced.~~

~~3~~2. Pathological surveillance

Systematic pathological *surveillance* for CBPP is the most effective approach and should be conducted at ~~*slaughterhouses/abattoirs* and other~~ *slaughter* ~~facilities~~. Suspect pathological findings should be confirmed by agent identification. Training courses for *slaughter* personnel and *meat* inspectors are highly recommended.

~~4.~~ ~~Serological~~ 3. Laboratory testing

Serological *surveillance* is not the preferred strategy for CBPP. However, in the framework of epidemiological investigations, serological testing may be used.

The limitations of available serological tests for CBPP make the interpretation of results difficult and useful only at the *herd* level. Positive findings should be followed up by clinical and pathological investigations and agent identification.

Clustering of seropositive reactions should be expected in CBPP ~~*infections*~~ and is usually accompanied by clinical signs. As clustering may signal field strain *infection*, the investigation of all instances should be incorporated into the *surveillance* strategy.

Following the identification of a CBPP infected *herd*, contact *herds* should be tested serologically. Repeated testing may be necessary to reach an acceptable level of confidence in *herd* classification.

~~5. Agent surveillance~~

Agent *surveillance* should be conducted to ~~follow up and~~ confirm or exclude *infection* with *Mmm*. ~~suspect *cases*. Isolates should be typed to confirm *Mmm*SC.~~

~~Article 11.5.16.~~

~~**Countries or zones applying for recognition of freedom from CBPP**~~

~~In addition to the general conditions described in this chapter, a Member Country applying for recognition of CBPP freedom for the country or a *zone* should provide evidence for the existence of an effective *surveillance* programme. The strategy and design of the *surveillance* programme depend on the prevailing epidemiological circumstances and should be planned and implemented in accordance with general conditions and methods in this chapter, to demonstrate absence of CBPP *infection*, during the preceding 24 months in susceptible populations. This requires the support of a national or other *laboratory* able to undertake identification of CBPP *infection*.~~

~~Article 11.5.17.~~

~~**Countries or zones re-applying for recognition of freedom from CBPP following an outbreak**~~

~~In addition to the general conditions described in this chapter, a Member Country re-applying for recognition of country or *zone* freedom from CBPP should show evidence of an active *surveillance* programme for CBPP, following the recommendations of this chapter.~~

~~Two strategies are recognised by WOAH in a programme to eradicate CBPP *infection* following an *outbreak*:~~

~~1) *slaughter* of all clinically affected and in-contact susceptible animals;~~

~~2) *vaccination* used without subsequent *slaughter* of vaccinated animals.~~

~~The time periods before which an application can be made for re-instatement of freedom from CBPP depends on which of these alternatives is followed. The time periods are prescribed in Article 11.5.4.~~

Article 11.5.15~~18~~.

**WOAH endorsed official control programme for CBPP**

~~The overall objective of a WOAH endorsed *official control programme* for CBPP is for Member Countries to progressively improve their situation and eventually attain CBPP free status. The *official control programme* should be applicable to the entire country even if certain measures are directed towards defined subpopulations.~~

A Member Country~~ies~~ may, on a voluntary basis, apply for endorsement of ~~their~~ its *official control programme* for CBPP in accordance with Chapter 1.6., when ~~they have~~ it has implemented measures in accordance with this article.

For an *official control programme* for CBPP to be endorsed by WOAH, the Member Country should provide a detailed *official control programme* for the control and eventual eradication of CBPP in the country or *zone*. This document should address and provide documented evidence on the following:

1) epidemiology:

   a) the detailed epidemiological situation of CBPP in the country, highlighting the current knowledge and gaps;

   b) the main production systems and movement patterns of ~~susceptible animals~~ bovines and their products within and into the country and, where applicable, the specific *zone*;

2) surveillance and diagnostic capabilities:

   a) CBPP *surveillance* in place, in accordance with Chapter 1.4. and Articles 11.5.13. and 11.5.14.;

   b) diagnostic capability and procedures, including regular submission of samples to a laboratory that performs diagnostic testing and further characterisation of strains in accordance with the *Terrestrial Manual* including procedures to isolate and identify *Mmm*;

3) vaccination (if practised as part of the *official control programme* for CBPP):

   a) *vaccination* is in accordance with Chapter 4.18. and compulsory in the target *population*;

   b) detailed information on *vaccination* campaigns, in particular:

      i) the strategy that is adopted for the *vaccination* campaign;

      ii) target *populations* for *vaccination*;

      iii) target geographical area for *vaccination*;

      iv) monitoring of *vaccination* coverage, including serological monitoring of population immunity;

      v) the strategy to identify vaccinated animals;

      vi) technical specification of the vaccines used and description of the vaccine licensing procedures in place;

      vii) use of vaccines fully compliant with the standards and methods described in the *Terrestrial Manual*;

      viii) the proposed strategy and work plan including the timeline for transition to the cessation of *vaccination*;

4) the measures implemented to prevent the introduction of the pathogenic agent and to ensure the rapid detection of all CBPP *outbreak*s;

5) an emergency preparedness plan and an emergency response plan to be implemented in case of CBPP *outbreaks*;

6) work plan and timelines of the *official control programme*;

7) performance indicators for assessing the effectiveness of the control measures to be implemented;

8) monitoring, evaluation and review of the *official control programme* to demonstrate the effectiveness of the strategies.

~~1) have a record of regular and prompt animal disease reporting in accordance with the requirements in Chapter 1.1.;~~

~~2) submit documented evidence of the capacity of *Veterinary Services* to control CBPP; this evidence can be provided by countries following the WOAH PVS Pathway;~~

~~3) submit a detailed plan of the programme to control and eventually eradicate CBPP in the country or *zone* including:~~

~~a) the timeline;~~

~~b) the performance indicators for assessing the efficacy of the control measures to be implemented;~~

~~c) submit documentation indicating that the *official control programme* for CBPP has been implemented and is applicable to the entire territory;~~

~~4) submit a dossier on the epidemiology of CBPP in the country describing the following:~~

~~a) the general epidemiology in the country highlighting the current knowledge and gaps;~~

~~b) the measures to prevent introduction of *infection*, the rapid detection of, and response to, all CBPP *outbreaks* in order to reduce the incidence of CBPP *outbreaks* and to eliminate CBPP in at least one *zone* in the country;~~

~~c) the main livestock production systems and movement patterns of CBPP susceptible animals and their products within and into the country;~~

~~5) submit evidence that CBPP *surveillance* is in place,~~

~~a) taking into account provisions in Chapter 1.4. and the provisions on *surveillance* of this chapter;~~

~~b) have diagnostic capability and procedures, including regular submission of samples to a *laboratory* that carries out diagnosis and further characterisation of strains in accordance with the *Terrestrial Manual* including procedures to isolate and identify *M. mycoides* subsp. *mycoides* SC as opposed to *M. mycoides* subsp. *mycoides* LC;~~

~~6) where *vaccination* is practised as a part of the *official control programme* for CBPP, provide:~~

~~a) evidence (such as copies of legislation) that *vaccination* of selected populations is compulsory;~~

~~b) detailed information on *vaccination* campaigns, in particular on:~~

~~i) target populations for *vaccination*;~~

~~ii) monitoring of *vaccination* coverage;~~

~~iii) technical specification of the vaccines used and description of the licensing procedures in place;~~

~~iv) the proposed timeline and strategy for the cessation of *vaccination*;~~

~~7) provide an emergency preparedness and contingency response plan to be implemented in case of CBPP *outbreaks*.~~

~~The Member Country's *official control programme* for CBPP will be included in the list of programmes endorsed by WOAH only after the submitted evidence has been accepted by WOAH.~~

The country will be included in the list of countries having a WOAH endorsed *official control programme* for CBPP in accordance with Chapter 1.6.

Retention on the list requires an annual update on the progress of the *official control programme* and information on significant changes concerning the points above. ~~Changes in the epidemiological situation and other significant events should be reported to WOAH in accordance with the requirements in Chapter 1.1.~~

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

- ~~non-compliance with the timelines or performance indicators of the programme; or~~
- ~~significant problems with the performance of the *Veterinary Services*; or~~
- ~~an increase in the incidence of CBPP that cannot be addressed by the programme.~~

# CHAPTER 11.X.

# INFECTION WITH BOVINE PESTIVIRUSES (BOVINE VIRAL DIARRHOEA)

Article 11.X.1.

**General provisions**

For the purposes of the *Terrestrial Code*, bovine viral diarrhoea is defined as an *infection* of bovines (*Bos taurus*, *B. indicus* and *Bubalus bubalis*) ~~(herafter 'susceptible animals')~~ with bovine viral diarrhoea virus type 1 (~~pestivirus A,~~ *Pestivirus bovis*), type 2 (~~pestivirus B,~~ *Pestivirus tauri*), ~~and~~ or type 3 (~~pestivirus H,~~ *Pestivirus brazilense*) (here~~in~~after 'bovine pestiviruses').

The following defines the occurrence of *infection* with bovine pestiviruses:

1) A bovine pestivirus, excluding vaccine strains, has been isolated and identified as such in a sample from a ~~susceptible animal~~ bovine; or

2) antigen or ~~ribo~~nucleic acid specific to a bovine pestivirus, excluding vaccine strains, has been detected in a sample from a ~~susceptible animal~~ bovine.

Standards for diagnosis ~~diagnostic tests~~ and vaccines, as well as information on the epidemiology, are described in the *Terrestrial Manual*.

# CHAPTER 12.1.

# INFECTION WITH AFRICAN HORSE SICKNESS VIRUS

Article 12.1.1.

**General provisions**

For the purposes of the *Terrestrial Code*, African horse sickness (AHS) is defined as an *infection* of equids with African horse sickness virus (AHSV).

The following defines the occurrence of an *infection* with AHSV:

1) AHSV has been isolated and identified as such in a sample from an equid ~~or a product derived from that equid~~; or

2) ~~antigen or ribo~~nucleic acid specific to AHSV has been ~~identified~~ detected in a sample~~s~~ from an equid showing clinical signs or pathological lesions consistent with AHS, or epidemiologically linked to a confirmed or suspected ~~or confirmed~~ *case*; or

3) ~~serological evidence of active *infection* with AHSV by detection of~~ seroconversion ~~due to recent exposure to with production of antibodies against structural or nonstructural proteins of AHSV~~, ~~that are~~ which is not ~~a~~ the consequence of *vaccination*, ~~have~~ has been ~~identified~~ detected in ~~a paired samples from~~ an equid ~~that either~~ show~~s~~ing clinical signs or pathological lesions consistent with AHS, or ~~is~~ epidemiologically linked to a confirmed or suspected ~~or confirmed~~ *case.*

For the purposes of the *Terrestrial Code*, the *infective period* for AHS is 40 days~~, for domestic horses. Although critical information is lacking for some species, this chapter applies to all Equidae.~~.

~~All countries or *zones* adjacent to a country or *zone* not having free status should determine their AHSV status from an ongoing *surveillance* programme. Throughout the chapter, *surveillance* is in all cases understood as being conducted as described in Articles 12.1.11. to 12.1.13.~~

Standards for diagnosis ~~diagnostic tests~~ and vaccines, as well as information on the epidemiology, are described in the *Terrestrial Manual*.

Article 12.1.1bis.

**Safe commodities**

When authorising the importation or transit of the following *commodities*, *Veterinary Authorities* should not require any AHS-related conditions regardless of the *animal health status* of the *exporting country* or *zone*:

1) *milk* and *milk products*;

2) *meat* and *meat products*;

3) hides and skins;

4) hooves;

5) gelatine and collagen;

~~6) sterile filtered horse serum;~~

~~7~~6) *protein meal*;

~~8~~7) rendered fat.

Article 12.1.2.

**~~AHS free c~~Country or zone free from AHS**

~~1)~~ A country or *zone* may be considered free from AHS when the relevant provisions in point 2 a) of Article 1.4.6. have been complied with, and when within the ~~proposed free~~ country or *zone*: ~~*infection* with AHSV is notifiable in the whole country, systematic *vaccination* is prohibited, importation of equids and their semen, oocytes or embryos are carried out in accordance with this chapter, and either:~~

1) for at least the past 24 months:

a) the *Veterinary Authority* has current knowledge of, and authority over, all domestic and *captive wild* equids in the country or *zone*;

b) the *Veterinary Authority* has current knowledge of the distribution, habitat and indication of disease occurrence through passive *surveillance* of *wild* and *feral* equids in the country or *zone*;

c) ~~either:~~

~~i)~~ there has been no *case* of *infection* with AHSV ~~and the country or *zone* is not adjacent to an infected country or *zone*; or~~

~~ii) a *surveillance* programme has demonstrated no evidence of *Culicoides* in accordance with Chapter 1.5.~~;

d) appropriate *surveillance* has been implemented in accordance with:

i) point 2 b) of Article 1.4.6. where historical freedom can be demonstrated; or

ii) Articles 12.1.11. to 12.1.13. where historical freedom cannot be demonstrated; ~~or~~

~~iii) Chapter 1.5. where a *surveillance* programme has demonstrated no evidence of *Culicoides*.~~

e) if adjacent to an infected country or *zone*, includes an area in which *surveillance* is conducted in accordance with Articles 12.1.11. to 12.1.13.;

f) measures to prevent the introduction of the *infection* have been in place: in particular, the importations or movements of *commodities* into the country or *zone* have been carried out in accordance with this chapter or ~~and~~ other relevant chapters of the *Terrestrial Code*, including Chapter 2.1. 'Import risk analysis';

2) no systematic *vaccination* against AHS has been carried out for at least the past 12 months.

~~a) historical freedom as described in Chapter 1.4. has demonstrated no evidence of AHSV in the country or *zone*; or~~

~~b) the country or *zone* has not reported any *case* of AHS for at least two years and is not adjacent to an infected country or *zone*; or~~

~~c) a *surveillance* programme has demonstrated no evidence of AHSV in the country or *zone* for at least two years; or~~

d) the country or *zone* has not reported any *case* of AHS for at least 40 days and a *surveillance* programme has demonstrated no evidence of *Culicoides* for at least two years in the country or *zone*.

2) An AHS free country or *zone* which is adjacent to an infected country or *zone* should include a *zone* in which *surveillance* is conducted in accordance with Articles 12.1.11. to 12.1.13., as relevant.

3) An AHS free country or *zone* will not lose its free status through the importation of seropositive or vaccinated equids and their semen, oocytes or embryos from infected countries or *zones*, provided these imports are carried out in accordance with this chapter.

4) To qualify for inclusion in the list of AHS free countries or *zones*, a Member Country should:

a) have a record of regular and prompt animal disease reporting;

b) send a declaration to the OIE stating:

i) the section under point 1) on which the application is based;

ii) no routine *vaccination* against AHS has been carried out during the past year in the country or *zone*;

iii) equids are imported in accordance with this chapter;

c) supply documented evidence that:

i) *surveillance* in accordance with Articles 12.1.11. to 12.1.13. is applied, unless historically free in accordance with Article 1.4.6.;

ii) regulatory measures for the early detection, prevention and control of *infection* with AHSV have been implemented.

5) The Member Country will be included in the list only after the submitted evidence has been accepted by the OIE.

The country or *zone* will be included in the list of countries or *zones* free from AHS in accordance with Chapter 1.6.

Retention on the list requires annual reconfirmation of compliance with all points above and relevant provisions under point 4 of Article 1.4.6. that the information in points 4 b) ii) and iii) and 4 c) above be annually re-submitted and Documented evidence should be resubmitted annually for point 1 above. Any changes in the epidemiological situation or other significant events should be reported notified to WOAH in accordance with the requirements in Chapter 1.1., and in particular, formally state that:

a) there has been no *outbreak* of AHS during the past year in the country or *zone*;

b) no evidence of *infection* with AHSV has been found during the past year in the country or *zone*.

Article 12.1.3.

**AHS infected c**C**ountry or zone infected with AHSV**

A country or *zone* shall be considered as infected with AHSV For the purposes of this chapter, an AHS infected country or *zone* is one that does not fulfil when the requirements for acceptance as a country or *zone* free from AHS conditions in points 1 and 2 of Article 12.1.2 are not fulfilled met to qualify as AHS free.

Article 12.1.4.

**Establishment of a containment zone within a ~~an AHS free~~ country or zone previously free from AHS**

In the event of ~~limited~~ *outbreaks* of AHS within a~~n AHS free~~ country or *zone* previously free from AHS, including within a *protection zone*, a ~~single~~ *containment zone*, which includes all epidemiologically linked *outbreaks*, ~~can~~ may be established, in accordance with Article 4.4.7., ~~for the purpose of~~ to minimise~~ing~~ the impact on the ~~entire~~ rest of the country or *zone*. ~~Such a *zone* should include all *cases* and can be established within a *protection zone*.~~

For this to be achieved and for the Member Country to take full advantage of this process, the *Veterinary Authority* should ~~provide~~ submit as soon as possible to WOAH, in addition to the requirements of Article 4.4.7., ~~in support of the application,~~ documented evidence that:

1) the *outbreaks* have been contained ~~are limited~~ based on the following factors:

   a) ~~immediately on suspicion, a rapid response has been implemented, including *notification* reporting, standstill of movements of equids and effective controls of the movements of equine *commodities* has been made~~on suspicion, a standstill has been imposed on the suspected *establishments* and effective controls on the movement of equids~~animals~~ and other equid-related *commodities* are in place in the country or *zone*;

   b) the *infection* has been confirmed and notified in accordance with Chapter 1.1.;

   c~~b~~) ~~standstill of movements of equids has been imposed, and effective controls on the movement of equids and their products specified in this chapter are in place~~on confirmation, the standstill and movement controls described in point ~~1~~(a) have been reinforced;

   ~~c) epidemiological investigation (trace-back, trace-forward) has been completed;~~

   c~~d) the *infection* has been confirmed and notified in accordance with Chapter 1.1~~;

   d~~e~~) epidemiological investigations ~~on~~ into the likely source of the *outbreak* have been carried out;

   ~~f) all *cases* have been shown to be epidemiologically linked;~~

   e~~g~~) no new *cases* have been found in the *containment zone* within a minimum of two *infective periods* as defined in Article 12.1.1.;

~~2) the equids within the *containment zone* are clearly identifiable as belonging to the *containment zone*;~~

2) increased passive and targeted *surveillance* in accordance with Articles 12.1.11. to 12.1.13. in the rest of the country or *zone* has not detected any evidence of *infection*;

3) ~~animal health~~measures are in place to effectively prevent the spread of AHS ~~AHSV *infection*~~ to the rest of the country or *zone*, taking into consideration the establishment of a *protection zone* within the *containment zone*, the seasonal *vector* conditions and existing physical, geographical and ecological barriers;

4) ongoing *surveillance* in accordance with Articles 12.1.11. to 12.1.13. is in place in the *containment zone*.

~~The free status of the areas outside the *containment zone* is suspended while the *containment zone* is being established in accordance with points 1) to 5) above.~~The free status of the areas ~~of~~ outside the *containment zone* is suspended while the *containment zone* is being established. The free status of these areas ~~outside the *containment zone*~~ may be reinstated irrespective of Article 12.1.5. once the *containment zone* has been approved ~~is recognised~~ by ~~the~~ WOAH as complying with points 1 to 4 above.

In the event of the recurrence of ~~AHSV~~ *infection* with AHSV in the *containment zone*, established in accordance with point 4 a) of Article 4.4.7., the approval of the *containment zone* is withdrawn and the ~~AHS~~ free status of the whole country or *zone* is suspended until the relevant requirements of Article 12.1.5. are fulfilled.

In the event of occurrence of *infection* with AHSV in the outer zone of a *containment zone* established in accordance with point 4 b) of Article 4.4.7., the approval of the *containment zone* is withdrawn and the free status of the whole country or *zone* is suspended until the relevant requirements of Article 12.1.5. are fulfilled.

The recovery of the ~~AHS~~ free status of the *containment zone* should follow Article 12.1.5.

Article 12.1.5.

**Recovery of free status**

~~To regain free status when an AHS *outbreak* occurs in a country or *zone* previously free, Article 12.1.2. applies, irrespective of whether emergency *vaccination* has been applied or not.~~

Should an *outbreak* of AHS occur in a previously free country or *zone*, its status may be recovered in accordance with Article 12.1.2., irrespective of whether emergency *vaccination* has been applied or not.

The AHS free status of the country or *zone* will be reinstated only after the submitted evidence has been accepted by ~~the~~ WOAH.

Article 12.1.6.

**Recommendations for importation of equids from AHS free countries or zones**

~~For equids~~

*Veterinary Authorities* should require the presentation of an *international veterinary certificate* attesting that the animals:

1) showed no clinical sign of AHS on the day of shipment;

2) have not been vaccinated against AHS within the last 40 days;

3) were kept in an AHS free country or *zone* since birth or for at least 40 days prior to shipment;

4) either:

   a) did not transit through an infected *zone* during transportation to the *place of shipment*; or

   b) were protected from *Culicoides* attacks at all times when transiting through an infected *zone*.

Article 12.1.7.

**Recommendations for importation of equids from AHS infected countries or zones**

~~For equids~~

*Veterinary Authorities* should require the presentation of an *international veterinary certificate* attesting that the animals:

1) showed no clinical sign of AHS on the day of shipment;

2) have not been vaccinated against AHS within the last 40 days;

3) were held in isolation in a *vector*-protected *establishment*:

a) for a period of at least 28 days and a serological test to detect antibodies against ~~the~~ AHSV ~~group~~, was carried out with a negative result on a blood sample collected at least 28 days after introduction into the *vector*-protected *establishment*; or

b) for a period of at least 40 days and serological tests to detect antibodies against AHSV were carried out with no significant increase in antibody titre on blood samples collected on two occasions, with an interval of not less than 21 days, the first sample being collected at least 7 days after introduction into the *vector*-protected *establishment*; or

c) for a period of at least 14 days and a~~n agent identification~~ test for the ~~identification~~ detection of the agent was carried out with a negative result on a blood sample collected not less than 14 days after introduction into the *vector*-protected *establishment*; or

d) for a period of at least 40 days and were vaccinated, at least 40 days before shipment, against all serotypes whose presence in the source population has been demonstrated through a *surveillance* programme in accordance with Articles 12.1.12. and 12.1.13., and were identified in the accompanying certification as having been vaccinated;

4) were protected from *Culicoides* attacks at all times during transportation (including transportation to and at the *place of shipment*).

Article 12.1.8.

**Recommendations for the importation of equine semen**

*Veterinary Authorities* of *importing countries* should require the presentation of an *international veterinary certificate* attesting that the donor animals:

1) showed no clinical sign of AHS on the day of collection of the semen and for the following 40 days;

2) had not been ~~immunised~~ vaccinated against AHS with a live attenuated vaccine within 40 days prior to the day of collection;

3) were either:

a) kept in an AHS free country or *zone* for at least 40 days before commencement of, and during collection of the semen; or

b) kept in an AHS free *vector*-protected *artificial insemination centre* throughout the collection period, and subjected to either:

i) a serological test to detect antibodies against ~~the~~ AHSV ~~group~~, carried out with a negative result on a blood sample collected at least 28 days and not more than 90 days after the last collection of semen; or

ii) ~~agent identification~~ tests for the ~~identification~~ detection of the agent, carried out with negative results on blood samples collected at commencement and conclusion of, and at least every seven days, during semen collection for this consignment.

Article 12.1.9.

**Recommendations for the importation of *in vivo* derived equine oocytes or embryos**

*Veterinary Authorities* of *importing countries* should require the presentation of an *international veterinary certificate* attesting that:

1) the donor animals:

   a) showed no clinical sign of AHS on the day of collection of the oocytes or embryos and for the following 40 days;

   b) had not been ~~immunised~~ vaccinated against AHS with a live attenuated vaccine within 40 days prior to the day of collection;

   c) were either:

      i) kept in an AHS free country or *zone* for at least 40 days before commencement of, and during collection of the oocytes or embryos, or

      ii) kept in an AHS free *vector*-protected *collection centre* throughout the collection period, and subjected to either:

         – a serological test to detect antibodies against ~~the~~ AHSV ~~group~~ carried out with a negative result on a blood sample collected at least 28 days and not more than 90 days after the last collection of oocytes or embryos; or

         – ~~agent identification~~ tests for the ~~identification~~ detection of the agent carried out with negative results on blood samples collected at commencement and conclusion of, and at least every seven days during oocytes or embryos collection for this consignment;

2) the embryos were collected, processed and stored in accordance with Chapters 4.8. and 4.10., as relevant;

3) the semen used to fertilise the oocytes complies ~~at least~~ with the requirements in Article 12.1.8.

Article 12.1.10.

**Protecting animals from *Culicoides* attacks**

1. Vector-protected establishment or facility

   The *establishment* or facility should be approved by the *Veterinary Authority* and the means of protection should at least comprise the following:

   a) appropriate physical barriers at entry and exit points, for example a double-door entry-exit system;

   b) *vector* screening of openings of the *establishment* or facility ~~building~~ ~~are *vector* screened~~ with mesh of appropriate gauge impregnated regularly with an approved insecticide in accordance with the instructions of the manufacturer;

   c) *vector surveillance* and control within and around the *establishment* or facility~~building~~;

   d) measures to limit or eliminate breeding sites for *vectors* in the vicinity of the *establishment* or facility;

   e) a ~~S~~standard ~~O~~operating ~~P~~procedure, including a description of back-up and alarm systems, for operation of the *establishment* or facility and transport of equids to the place of *loading*.

2. During transportation

   When equids are transport~~inged~~ ~~equids~~ through AHS infected countries or *zones*, *Veterinary Authorities* should require that they are ~~strategies to~~ protect~~ed~~ ~~animals~~ from *Culicoides* attacks ~~during transport~~, taking into account the local ecology of the *vector*.

   a) Transport by ~~road~~ land

Potential *risk management* strategies include a combination of:

i) treating animals with chemical repellents prior to and during transportation, in sanitiz~~z~~sed *vehicles* treated with appropriate residual contact insecticide;

ii) *loading*, transporting and *unloading* animals at times of low *vector* activity (i.e. bright sunshine and low temperature);

iii) ensuring *vehicles* do not stop en route during dawn or dusk, or overnight, unless the *animals* are held behind insect-proof netting;

iv) darkening the interior of the *vehicle*, for example by covering the roof or sides of *vehicles* with shade cloth;

v) surveillance for *vectors* at common stopping and offloading points to gain information on seasonal variations;

vi) using historical, ongoing or modelling information on AHS to identify low-~~–~~risk ports and transport routes.

b) Transport by air

Prior to *loading* the equids, the crates, *containers* or jet stalls are sprayed with an insecticide approved for the control of *Culicoides* species in the country of dispatch.

Crates, *containers* or jet stalls in which equids are being transported and the cargo hold of the aircraft should be sprayed with an approved insecticide when the doors have been closed and prior to take off. All possible insect harbourage should be treated. The insecticide sprayers ~~containers~~ should be retained for inspection on arrival.

In addition, during any stopover in countries or *zones* ~~not free from~~ infected with AHSV, prior to the opening of any aircraft door and until all doors are closed, netting of appropriate gauge impregnated with an approved insecticide should be placed over all crates, *containers* or jet stalls.

Article 12.1.11.

**Introduction to surveillance**

Articles 12.1.11. to 12.1.13. define the principles and provide guidance on *surveillance* for AHS, complementary to Chapter 1.4. and, for *vectors*, complementary to Chapter 1.5.

AHS is a *vector*-borne *infection* transmitted by ~~a limited number of~~ some species of *Culicoides* ~~insects~~. ~~Unlike the related bluetongue virus, AHSV is so far geographically restricted to sub-Saharan Africa with periodic excursions into North Africa, southwest Europe, the Middle East and adjacent regions of Asia.~~ An important component of AHSV epidemiology is vectorial capacity which provides a measure of disease *risk* that incorporates *vector* competence, abundance, seasonal incidence, biting rates, survival rates and the extrinsic *incubation period*. ~~However, methods and tools for measuring some of these *vector* factors remain to be developed, particularly in a field context.~~

~~According to this chapter, a~~A Member Country demonstrating freedom from *infection* with AHSV for the entire country or a *zone* should provide evidence for the existence of an effective *surveillance* programme. The strategy and design of the *surveillance* programme will depend on the prevailing epidemiological circumstances and should be planned and implemented in accordance with general conditions and methods described in this chapter. This requires the support of a *laboratory* able to undertake identification of *infection* with AHSV through ~~the virus detection~~ tests for the detection of the agent and antibody detection tests.

Susceptible *captive wild*, *feral* and *wild* equine populations should be included in the *surveillance* programme.

The purpose of *surveillance* is to determine ~~if~~ whether a country or *zone* is free from AHS. *Surveillance* deals not only with the occurrence of clinical signs caused by AHSV, but also with evidence of *infection* with AHSV in the absence of clinical signs.

Article 12.1.12.

**General conditions and methods for surveillance**

1) A *surveillance* system should be under the responsibility of the *Veterinary Authority*. In particular the following should be in place:

   a) a formal and ongoing system for detecting and investigating *outbreaks* of disease;

   b) a procedure for the rapid collection and transport of samples from suspected *cases* of AHS to a *laboratory* for diagnosis;

   c) a system for recording, managing and analysing diagnostic, epidemiological and *surveillance* data.

2) In a free country or *zone*, the *surveillance* programme for AHS should include an *early warning system* for reporting suspected *cases*. Persons who have regular contact with equids, as well as diagnosticians, should report promptly any suspicion of AHS to the *Veterinary Authority*. An effective *surveillance* system will periodically identify suspected *cases* that require follow-up and investigation to confirm or exclude that the cause of the condition is AHS. The rate at which such suspected *cases* are likely to occur will differ ~~between~~ among epidemiological situations and cannot therefore be predicted reliably. All suspected *cases* of AHS should be investigated immediately and samples should be taken and submitted to a *laboratory*. This requires that sampling kits and other equipment be available to those responsible for *surveillance*.

3) In a free country or *zone* ~~bordering~~ adjacent to an infected country or *zone*, *surveillance* ~~based upon~~ taking into account geography, climate, history of *infection* and other relevant factors should be carried out over an appropriate distance of at least 100 kilometres from the border with the infected country or *zone*; a lesser distance could be acceptable if there are relevant ecological or geographical features likely to interrupt the transmission of AHSV.

4) In an AHS infected country or *zone*, random or targeted serological and virological *surveillance*, appropriate to the epidemiological situation, should be conducted in accordance with Chapter 1.4.

Article 12.1.13.

**Surveillance strategies**

The target population for *surveillance* aimed at identification of disease or *infection* should cover equids within the country or *zone*. ~~Active and p~~Passive *surveillance* for *infection* with AHSV should be ongoing in all countries, ~~.~~ while active ~~S~~*surveillance* should be ongoing in countries not having a free status or having identified specific risks of introduction. *Surveillance* should be composed of random or targeted approaches using virological, serological and clinical methods appropriate to the epidemiological situation.

A Member Country should justify the *surveillance* strategy chosen as appropriate to detect the presence of *infection* with AHSV in accordance with Chapter 1.4. and the prevailing epidemiological situation. It may, for example, be appropriate to target clinical *surveillance* ~~at particular~~ towards those species most likely to exhibit clinical signs (e.g. horses). Similarly, virological and serological testing may be targeted ~~to~~ towards species that rarely show clinical signs (e.g. donkeys).

In vaccinated populations serological and virological *surveillance* is necessary to detect the AHSV types circulating to ensure that all circulating types are included in the *vaccination* programme.

Serological or virological *surveillance* is also needed to detect subclinical *infections* in free countries or *zones* adjacent to countries or *zones* in which live attenuated AHS vaccines are used.

For random surveys, the design of the sampling strategy should incorporate epidemiologically appropriate design prevalence. The sample size selected for testing should be large enough to detect *infection* if it were to occur at a predetermined minimum rate. The sample size, expected prevalence and diagnostic sensitivity of the tests determine the level of confidence in the results of the survey. The Member Country should justify the choice of design prevalence and confidence level based on the objectives of *surveillance* and the epidemiological situation, in accordance with Chapter 1.4. Selection of the design prevalence~~, in particular,~~ should be based on the prevailing or historical epidemiological situation.

Irrespective of the survey approach selected, the sensitivity and specificity of the diagnostic tests employed are key factors in the design, sample size determination and interpretation of the results obtained. Ideally, the sensitivity and specificity of the tests used should be validated for the *vaccination* or *infection* history and the different species in the target population.

Irrespective of the testing system employed, *surveillance* system design should anticipate the occurrence of false positive reactions. If the characteristics of the testing system are known, the rate at which these false positives are likely to occur can be calculated in advance. There should be an effective procedure for following up positives to ultimately determine with a high level of confidence, whether they are indicative of *infection* or not. This should involve both supplementary tests and follow-up investigation to collect diagnostic material from the original sampling unit as well as those which may be epidemiologically linked to it.

The principles for *surveillance* for disease or *infection* are technically well defined. *Surveillance* programmes to prove the absence of AHSV *infection* or transmission, should be carefully designed to avoid producing results that are insufficiently reliable to be accepted by WOAH for official recognition of status. The design of any *surveillance* programme, therefore, requires inputs from professionals competent and experienced in this field.

1. Clinical surveillance

   Clinical *surveillance* aims at the detection of clinical signs of AHS in equids particularly during a newly introduced *infection*. In horses, clinical signs may include pyrexia, oedema, hyperaemia of mucous membranes and dyspnoea.

   Suspected *cases* detected by clinical *surveillance* should always be confirmed by *laboratory* testing.

2. Serological surveillance

   Serological *surveillance* of equine populations is an important tool to confirm absence of AHSV transmission in a country or *zone*. The species tested should reflect the local epidemiology of *infection* with AHSV, and the equine species available. *Surveillance* plans should include consideration of species that display clinical signs less commonly, such as donkeys or zebras. Management variables that may reduce the likelihood of *infection*, such as the use of insecticides and animal housing, should be taken into account when selecting equids to be included in the *surveillance* system.

   Samples should be examined for antibodies against AHSV. Positive AHSV antibody tests results can have four possible causes:

   a) natural *infection* with AHSV;

   b) *vaccination* against AHS;

   c) maternal antibodies;

   d) lack of specificity of the test.

Sera collected for other purposes may be used for AHSV *surveillance*. However, the principles of survey design described in these recommendations and the requirements for a statistically valid survey for the presence of *infection* with AHSV should not be compromised.

The results of random or targeted serological surveys are important in providing reliable evidence that no *infection* with AHSV is present in a country or *zone*. It is, therefore, essential that the survey is thoroughly documented. It is critical to interpret the results in light of the movement history of the animals being sampled.

Serological *surveillance* in a free *zone* should target those areas that are at highest risk of AHSV transmission, based on the results of previous *surveillance* and other information. This will usually be towards the boundaries of the free *zone*. In view of the epidemiology of AHSV, either random or targeted sampling is suitable to select *herds* or animals for testing.

~~Serological *surveillance* in a free country or *zone* should be carried out over an appropriate distance from the border with an infected country or *zone*, based upon geography, climate, history of *infection* and other relevant factors. The *surveillance* should be carried out over a distance of at least 100 kilometres from the border with that country or *zone*, but a lesser distance could be acceptable if there are relevant ecological or geographical features likely to interrupt the transmission of AHSV. An AHS free country or *zone* may be protected from an adjacent infected country or *zone* by a *protection zone*.~~

Serological *surveillance* ~~in infected *zones*~~ will ~~identify changes in~~ support the definition of the boundaries~~y~~ of ~~the~~ an *infected zone*, and can also be used to identify the AHSV types circulating. In view of the epidemiology of *infection* with AHSV, either random or targeted sampling is suitable.

3. Virological surveillance

Isolation and genetic analysis of AHSV from a proportion of infected animals is beneficial in terms of providing information on serotype and genetic characteristics of the viruses concerned.

Virological *surveillance* can be conducted:

a) to identify virus transmission in ~~at~~ at-risk populations;

b) to confirm clinically suspected *cases*;

c) to follow up positive serological results;

d) to better characterise the genotype of circulating virus in a country or *zone*.

4. Sentinel animals

Sentinel animal~~s~~ programmes are a form of targeted *surveillance* with a prospective study design. They comprise groups of unexposed equids that have not been vaccinated and are managed at fixed locations and observed and tested regularly to detect new *infections* with AHSV.

The primary purpose of a sentinel ~~equid~~ animal programme is to detect *infections* with AHSV occurring at a particular place, for instance sentinel groups may be located on the boundaries of infected *zones* to detect changes in distribution of AHSV. In addition, sentinel ~~equid~~ animal programmes allow the timing and dynamics of *infections* to be observed.

A sentinel ~~equid~~ animal programme should use animals of known source and history of exposure, control management variables such as use of insecticides and animal housing (depending on the epidemiology of AHSV in the area under consideration), and be flexible in its design in terms of sampling frequency and choice of tests.

Care is necessary in choosing the sites for the sentinel groups. The aim is to maximise the chance of detecting AHSV activity at the geographical location for which the sentinel site acts as a sampling point.

The effect of secondary factors that may influence events at each location, such as climate, may also be analysed. To avoid confounding factors sentinel groups should comprise animals selected to be of similar age and susceptibility to *infection* with AHSV. The only feature distinguishing groups of sentinels should be their geographical location. Sera from sentinel animal programmes should be stored methodically in a serum bank to allow retrospective studies to be conducted in the event of new serotypes being isolated.

The frequency of sampling should reflect the equine species used and the reason for choosing the sampling site. In endemic areas virus isolation will allow monitoring of the serotypes and genotypes of AHSV circulating during each time period. The borders between infected and non-infected areas can be defined by serological detection of *infection*. Monthly sampling intervals are frequently used. Sentinels in declared free *zones* add to confidence that *infections* with AHSV are not occurring unobserved. Here sampling prior to and after the possible period of transmission is sufficient.

Definitive information on AHSV circulating in a country or *zone* is provided by isolation and identification of the viruses. If virus isolation is required, sentinels should be sampled at sufficiently frequent intervals to ensure that some samples are collected during the period of viraemia.

5. Vector surveillance

AHSV is transmitted between equids ~~ne hosts~~ by species of *Culicoides* which vary across the world. It is therefore important to be able to identify potential *vector* species accurately although many such species are closely related and difficult to differentiate with certainty.

*Vector surveillance* is aimed at demonstrating the absence of *vectors* or defining high, medium and low-risk areas and local details of seasonality by determining the various species present in an area, and their respective seasonal occurrence ~~,~~ and abundance. *Vector surveillance* has particular relevance to potential areas of spread. Long term *surveillance* can also be used to assess the effectiveness of *vector* abatement measures or to confirm continued absence of *vectors*.

The most effective way of gathering this information should take account of the biology and behavioural characteristics of the local *vector* species of *Culicoides* and may include the use of Onderstepoort-type light traps or similar, operated from dusk to dawn in locations adjacent to equids.

*Vector surveillance* should be based on scientific sampling techniques. The choice of the number and types of traps to be used in *vector surveillance* and the frequency of their use should take into account the biology and ecology of the target vector species and the size and ecological characteristics of the area to be surveyed.

The operation of *vector surveillance* sites at the same locations as sentinel animals is advisable.

The use of a *vector surveillance* system to detect the presence of circulating viruses is not recommended as a routine procedure ~~as~~ because the typically low *vector infection* rates mean that such detections can be rare. Animal-based *surveillance* strategies are preferred to detect virus transmission.

# CHAPTER 12.3.

# INFECTION WITH *TRYPANOSOMA EQUIPERDUM* (DOURINE)

Article 12.3.1.

**General provisions**

Dourine is a disease of equids caused by *Trypanosoma equiperdum* of the subgenus *Trypanozoon* mainly transmitted directly from animal to animal during coitus. It may also be transmitted vertically and iatrogenically. Dourine may manifest in acute, chronic or clinically inapparent forms.

After a transient blood multiplication, *T. equiperdum* invades various tissues, especially genital organs ~~and may also invade the nervous system~~.

For the purposes of the *Terrestrial Code*, dourine is defined as an *infection* of domestic and *captive wild* horses, donkeys, mules and hinnies (hereafter 'animal hosts') ~~*wild* equids~~ with *T. equiperdum*.

The following defines the occurrence of *infection* with *Trypanosoma equiperdum*:

1) Trypanosomes with *Trypanozoon* morphology have been observed in a sample from an animal host ~~domestic and *captive wild* equids~~ showing clinical signs consistent with dourine and linked to a suspected *case* of *infection* with *T. equiperdum* or found in an area where surra is not known to occur; or

2) trypanosomes with *Trypanozoon* morphology have been observed in a sample from an animal host ~~domestic and *captive wild* equids~~ epidemiologically linked to a confirmed *case* of *infection* with *T. equiperdum*; or

3) nucleic acid specific to *Trypanozoon* has been detected in a sample from an animal host ~~equid~~ epidemiologically linked to a confirmed *case* of *infection* with *T. equiperdum*; or

4) antibodies have been detected in a sample from an animal host ~~domestic and *captive wild* equids~~ epidemiologically linked to a confirmed *case* of *infection* with *T. equiperdum*.

For the purposes of the *Terrestrial Code,* the ~~*incubation period* of *infection* with *T. equiperdum* shall be six months~~ 90 days. ~~*I*~~*i*nfective *period* of *infection* with *T. equiperdum* shall be lifelong.

For the purposes of this chapter, a temporary importation of horses refers to the introduction of horses into a country or *zone*, for a defined period of time, not exceeding 90 days, during which the *risk* of transmission of the *infection* is mitigated through specific measures under the supervision of the *Veterinary Authority.* Temporarily imported horses are re-exported at the end of this period. The duration of the temporary importation period and the destination after this period, as well as the conditions required to leave the country or *zone,* should be defined in advance.

Standards for diagnosis and information on the epidemiology are described in the *Terrestrial Manual*.

Article 12.3.2.

**Safe commodities**

When authorising the import or transit of the following *commodities*, *Veterinary Authorities* should not require dourine-related conditions regardless of the *animal health status* of the *exporting country* or *zone*:

1) pasteurised *milk* and pasteurised *milk products*;

2) hair~~, wool and fibre~~;

3) gelatine and collagen;

4) hooves;

5) *meat* from animals that have been slaughtered in a *slaughterhouse/abattoir* and have been subjected to ante- and post-mortem inspections with favourable results;

6) *meat products*;

7) hides and skins (except raw);

8) embryos or oocytes collected, processed, and stored in accordance with Chapters 4.8. to 4.10.;

9) *protein meal*;

10) rendered fat.

Article 12.3.3.

**Country or zone free from dourine**

1. Qualification

A country or *zone* may be considered free from ~~*infection* with *T. equiperdum*~~ dourine when:

a) ~~the~~ *infection* with *T. equiperdum* is notifiable in the entire country for at least the past two years;

b) appropriate *biosecurity* and *sanitary measures* to prevent the introduction of the *infection* have been in place for at least the past two years; in particular, the importations or movements of ~~equids~~ animal hosts and other *commodities* into the country or *zone* have been carried out in accordance with this chapter and other relevant chapters of the *Terrestrial Code*;

c) and either:

i) the country or *zone* is historically free as described ~~relevant provisions~~ in point 2)b) of Article 1.4.6.~~ have been complied with~~; or

ii) for at least the past two years, ~~there has been no *case* in the country or *zone* and~~ *specific surveillance* in accordance with Articles 12.3.11. to 12.3.14. has been in place in the entire country or *zone* and there has been no *case* in the country or *zone*.

2. Maintenance of free status

In order to maintain its free status, a country or *zone* should:

a) comply with points 1 and 2 above; and

b) conduct *surveillance* in accordance with Articles 12.3.11. to 12.3.13.

Article 12.3.4.

**Compartment free from dourine**

The establishment and bilateral recognition of a *compartment* free from ~~*infection* with *T. equiperdum*~~ dourine should follow the provisions laid down in this chapter and in Chapters 4.4. and 4.5.

Article 12.3.5.

**Recovery of free status**

Should a *case* of *infection* with *T. equiperdum* occur in a previously free country or *zone*, its status may be recovered after the following:

1) all infected ~~equids~~ animal hosts have been either isolated and slaughtered, or killed and appropriately disposed of;

2) ~~equids~~ animal hosts which have been in contact with infected ~~equids~~ animal hosts were tested and all positive ~~equids~~ animal hosts were isolated and slaughtered, or killed and appropriately disposed of; and,

3) for six months after the last *case* was slaughtered or killed:

   a) the ~~equids~~ animal hosts in contact have undergone monthly repeated serological and agent detection tests with negative results in both tests;

   b) *surveillance* in accordance with Articles 12.3.11. to 12.3.14. has been carried out with negative results;

   c) appropriate *biosecurity* has been in place.

Otherwise, Article 12.3.3. applies.

Article 12.3.6.

**Recommendations for importation of ~~equids~~horses, donkeys, mules and hinnies from countries, zones or compartments free from dourine**

*Veterinary Authorities* should require the presentation of an *international veterinary certificate* attesting that the ~~equids~~animals ~~hosts~~:

1) showed no clinical signs of ~~*infection* with *T. equiperdum*~~ dourine on the day of shipment;

2) were kept since birth or at least ~~six months~~ 90 days prior to shipment in the free country, *zone* or *compartment* of origin or were imported from a free country, *zone* or *compartment*.

Article 12.3.7.

**Recommendations for importation of ~~equids~~ horses, donkeys, mules and hinnies from countries or~~,~~ zones ~~or compartments~~ not free from dourine**

*Veterinary Authorities* should require the presentation of an *international veterinary certificate* attesting that the ~~equids~~animals ~~hosts~~:

1) showed no clinical signs of dourine on the day of shipment;

2) for at least 45 days prior to shipment were not used for breeding (including artificial insemination, semen collection, use as teasers) and did not have any direct or indirect sexual contact with other animal hosts ~~horses~~; and

3) during this period, all ~~equids~~ animals from the same group were subjected to an antibody detection test on samples taken on two occasions, with an interval of 30 days, with negative results.

Article 12.3.8.

**Recommendations for the temporary importation of horses**

When importing on a temporary basis ~~for purposes other than breeding and rearing~~ horses that do not comply with the recommendations in Article 12.3.6. or Article 12.3.7., for purposes other than breeding and rearing, *Veterinary Authorities* should:

1) require:

   a) that the horses be accompanied by a passport in accordance with the model contained in Chapter 5.12. or be individually identified as belonging to a high health status *subpopulation* as defined in Chapter 4.17.;

   b) ~~if not belonging to a high health status *subpopulation,*~~ the presentation of an *international veterinary certificate* attesting that the horses:

      i) showed no clinical sign of *infection* with *T. equiperdum* on the day~~s~~ of shipments;

      ii) ~~if not belonging to a high health status *subpopulation,*~~ if not belonging to a high health status *subpopulation,* were negative in an antibody detection test within 15 days prior to departure from the country of origin;

   c) the duration of the temporary importation period, the destination after this period, and the conditions required to leave the country or *zone* be defined;

2) ensure that during their stay in the country or *zone*, the horses:

   a) are not used for breeding (including artificial insemination, semen collection, use as teasers) and do not have any direct or indirect sexual contact with other animal hosts~~horses~~;

   b) are not subjected to any practice that may represent a risk of transmission of *infection* with *T. equiperdum.*

Article 12.3.9.

**Recommendations for importation of semen from countries, zones or compartments free from dourine**

*Veterinary Authorities* should require the presentation of an *international veterinary certificate* attesting that:

1) the donor males:

   a) showed no clinical signs of *infection* with *T. equiperdum* on the day of collection of the semen;

   b) were kept for the ~~six months~~ 90 days prior to semen collection in a country, *zone* or *compartment* free from dourine;

2) the semen was collected, processed and stored in ~~a *semen collection centre*~~ accordance with Chapter~~s~~ 4.6. ~~and 4.7.~~

Article 12.3.10.

**Recommendations for importation of semen from countries or zones not free from dourine**

*Veterinary Authorities* should require the presentation of an *international veterinary certificate* attesting that:

1) the donor males:

   a) have been kept for at least ~~six months~~ 90 days prior to semen collection in an *establishment* in which *surveillance* in accordance with Articles 12.3.11. to 12.3.14. demonstrates that no *case* of *infection* with *T. equiperdum* had occurred during ~~that period~~ the past six months;

   b) showed no clinical sign~~s~~ of dourine ~~*infection* with *T. equiperdum*~~ during that period;

c) were subjected, before collection, to an antibody detection test on a blood sample taken on two occasions, with an interval of 30 days, with negative results;

2) the semen was collected, processed and stored in ~~a *semen collection centre*~~ accordance with Chapter~~s~~ 4.6. ~~and 4.7.~~

Article 12.3.11.

**Introduction to surveillance**

Articles 12.3.11. to 12.3.14. define the principles and provide guidance on *surveillance* for dourine ~~*infection* with *T. equiperdum*~~, complementary to Chapter 1.4.

The purpose of *surveillance* could be the demonstration of the absence of *infection*, the early detection of *cases*, or the measurement and monitoring of the *prevalence* and distribution of the *infection* with *T. equiperdum* in a country, *zone* or *compartment*.

The most important component of the epidemiology of dourine is sexual transmission, therefore sexually mature ~~equids~~ animal hosts are considered the target population. Notwithstanding, iatrogenic transmission should also be considered.

The impact and epidemiology of dourine widely differ~~s~~ between different regions of the world, and between different type of animal production systems. For instance, considering the presence or absence of other trypanosomes, ~~and t~~Therefore, it is not appropriate to provide specific recommendations for all situations. Member Countries should provide scientific data explaining the epidemiology of the disease in the country or *zone* concerned, such as host susceptibility (e.g. horse, donkey, mule) and co-infections with other *Trypanosom*a spp., and adapt the *surveillance* strategies for defining their status to their local conditions. There is considerable latitude available to Member Countries to justify their status at an acceptable level of confidence.

Article 12.3.12.

**Principles of surveillance for dourine**

The following principles are complementary to Chapter 1.4. and should be applied by Member Countries seeking to achieve and demonstrate freedom from ~~infection~~ dourine as well as being part for *official control programme* in countries where the disease is endemic.

In countries where other *T~~t~~rypanozoon* ~~somes~~ *infections* occur in ~~equids~~animal hosts, the diagnosis of dourine is challenging because the clinical signs are not pathognomonic, and diagnostic methods are not pathogen-species specific. As a consequence it is difficult to perform differential diagnosis between *infection* with *T. equiperdum* and other *Trypanozoon infection*s.

Surveillance for dourine ~~*infection* with *Trypanosoma equiperdum*~~ should encompass not only clinical signs and relevant sampling and testing, but also information on animal husbandry practices and epidemiological context, including sexual contacts, breeding history of the ~~equid~~animal, international and other animal movements, contact patterns, presence of other trypanosomes, and *vectors* (biting flies including tsetse flies). The *Veterinary Services* should implement programmes to raise awareness among farmers, owners, breeders and workers, who have day to day contact with ~~equids~~animals, as well as *veterinarians*, *veterinary paraprofessionals* and diagnosticians. Those persons should observe and report promptly any suspicion of ~~dourine~~ *infection* with *T. equiperdum* to the *Veterinary Services*.

Under the responsibility of the *Veterinary Authority*, Member Countries should have in place a *surveillance* system in accordance with ~~the~~ Chapter 1.4. and, in particular:

– the formal and ongoing system for detecting and investigating *cases* should include all suspicions of *Trypanozoon infection* ~~with Trypanosomes~~;

– the procedure for the rapid collection and transport of samples from suspected *cases* to a *laboratory* for diagnosis should include the relevant types and methods of sampling for ~~dourine~~ *infection* with *T. equiperdum* as described in the *Terrestrial Manual*;

– the *laboratory* is approved for diagnosis of ~~dourine~~ *infection* with *T. equiperdum*.

Special attention is to be made to ~~low susceptible~~ animals ~~that are more resistant~~ such as donkeys, ~~and~~ mules and hinnies that are more resistant and ~~that~~ can act as healthy carriers and ~~a~~ reservoirs of *Trypanosoma equiperdum.*

Article 12.3.13.

**Surveillance for early warning of dourine**

1) An ongoing *surveillance* programme for dourine should be in place and be designed to detect the presence of ~~dourine~~ *infection* with *T. equiperdum* in the country or *zone* in a timely manner.

2) The dourine *surveillance* programme should include the following.

   a) An *early warning system* for reporting suspected animals described in Article 12.3.12., in accordance with Article 1.4.5.

   b) Implementation, as relevant, of regular and frequent clinical inspection of individual ~~equids~~ animal hosts at risk of dourine that could, for instance, include ~~equids~~ animals that were imported from countries not free from dourine.

Article 12.3.14.

**Surveillance for demonstrating freedom from dourine**

1. Requirements for declaring freedom of the entire country, a zone or a compartment from dourine

   Transparency in the application of different methodologies is essential to ensure consistency in decision-making, ease of understanding, fairness and rationality. The assumptions made, the uncertainties, and the effect of these on the interpretation of the results, should be documented.

   The design of the *surveillance* programme will depend on the epidemiological circumstances, and it should be planned and implemented in accordance with this chapter and Article 1.4.6. This requires the availability of demographic data on the ~~equids~~ animal host population and the support of a *laboratory* able to undertake identification of ~~dourine~~ *infection* with *T. equiperdum* through parasite detection and antibody tests.

   Data from different *surveillance* activities can be included to increase the sensitivity of the *surveillance* system. If this is to be done, data from structured (e.g. surveys and active *surveillance*) and non-structured (e.g. passive *surveillance*) sources should be combined.

   The *surveillance* programme should include *surveillance* of different ~~equids~~ animal host subpopulations (e.g. thoroughbred, saddle horses (riding horses), working horses, ponies, donkeys, mules).

   Documentation of freedom from dourine should provide details of the ~~equids~~ animal hosts population, the occurrence of suspected *cases* and how they were investigated and dealt with. This should include the results of *laboratory* testing and the *biosecurity* and control measures to which the animals concerned were subjected during the investigation.

   In order to maintain freedom of an *establishment* within an infected country or *zone* and to demonstrate no *case* of *infection* with *T. equiperdum* has occurred, passive *surveillance* relying on clinical observation alone is insufficient. Depending on the prevailing epidemiological situation and assessed risk for the introduction of *T.equiperdum*, samples should also be collected on a routine basis for parasite detection and antibody tests. There should also be systematic screening of ~~horses~~ animal hosts that are introduced into the *establishment* for the absence of ~~dourine~~ *infection* with *T. equiperdum*.

2. Additional requirements for recovery of free status

   In addition to the general conditions described in this chapter, a Member Country seeking recovery of country or *zone* free status, including a *containment zone* established in accordance with Article 4.4.7.,

should show evidence of an active *surveillance* programme (clinical inspection and serological *surveillance*) to demonstrate absence of ~~dourine~~ *infection* with *T. equiperdum*.

Populations under this *surveillance* programme should include:

1) *establishments* in the proximity of the *outbreak*;

2) *establishments* epidemiologically linked to the *outbreak*;

3) *animals* moved from or used to re-populate affected *establishments*.

CHAPTER 12.4.

# INFECTION WITH EASTERN EQUINE ENCEPHALITIS VIRUS (EASTERN EQUINE ENCEPHALOMYELITIS) AND INFECTION WITH WESTERN EQUINE ENCEPHALITIS VIRUS (WESTERN EQUINE ENCEPHALOMYELITIS)

Article 12.4.1.

**General provisions**

~~Equids are dead-end hosts for e~~Eastern equine encephalomyelitis (EEE) and ~~w~~Western equine encephalomyelitis (WEE) are *vector*-borne diseases of importance to public health transmitted by mosquitoes,*wild* birds constituting the reservoir while equids are dead-end hosts. ~~and t~~Therefore, equids and their products do not present a risk of transmission. However, equids are useful sentinels for the early detection of EEE or WEE to mitigate the animal health and public health risks of these pathogenic agents.

For the purposes of the *Terrestrial Code*, EEE is defined as an *infection* of equids with eastern equine encephalitis virus (EEEV), and WEE is defined as an *infection* of equids with western equine encephalitis virus (WEEV).

The following defines the occurrence of *infection* with EEEV or *infection* with WEEV:

1) EEEV or WEEV has been isolated and identified as such in a sample from an equid; or

2) nucleic acid or antigen specific to EEEV or WEEV has been detected in a sample from an equid showing clinical signs or pathological lesions consistent with EEE or WEE, or epidemiologically linked to a confirmed or suspected *case*, or giving cause for suspicion of previous association with or exposure to ~~contact with~~ EEEV or WEEV; or

3) antibodies specific to EEEV or WEEV, which are not the consequence of *vaccination*, have been detected in a sample from an equid showing clinical signs or pathological lesions consistent with EEE or WEE, or epidemiologically linked to a confirmed or suspected *case*.

Standards for diagnosis and vaccines, as well as information on the epidemiology, are described in the *Terrestrial Manual*.

Article 12.4.2.

**Safe commodities**

When authorising the importation or transit of equids or other equid *commodities*~~their products~~, *Veterinary Authorities* should not require any EEE- or WEE-related conditions regardless of the *animal health status* of the country or *zone* of origin.

Article 12.4.3.

**Surveillance of EEE or WEE**

The objective of *surveillance* of EEE and WEE is for the *Veterinary Authority* to coordinate in a timely manner with public health and other relevant *Competent Authorities* and share information to use the *surveillance* outcomes to prevent animal and human exposure. Although equids are dead-end hosts of EEE and WEE, they act as sentinels for the presence of ~~*infection* with~~ EEEV or WEEV in an area.

*Surveillance* of EEE or WEE should be carried out in accordance with Chapter 1.4. and with the following recommendations.

*Veterinary Authority* should develop *early warning systems* to detect ~~V~~EEE and WEE epidemic events, so as to promote awareness campaigns to sensitise the owners and keepers of equids, the *veterinarians* and the public health authorities of the disease risks. In such situations, *surveillance* should be conducted to define the extent of the epidemic area for the purpose of disease prevention and control.

Clinical *surveillance* to detect clinical signs of *infection* with EEEV or WEEV in equids should be the basis of the *early warning system*. Clinical disease in equids is characterised by fever, anorexia, and severe depression. In severe *cases*, it can progress to neurological signs and death. Clinical *surveillance* targeted at neurological signs in equids can provide reinforced evidence of the occurrence of an epidemic. However, clinical signs are not pathognomonic and suspected *cases* detected by clinical *surveillance* should always be confirmed by laboratory testing, taking into account the epidemiological situation. The rate at which such suspected *cases* are likely to occur can differ between epidemiological situations and cannot, therefore, be predicted reliably.

An epidemic should be suspected when ecological conditions favour the breeding of large numbers of mosquito *vectors* with the concurrent or consequent occurrence of an increased number of equids showing clinical signs or pathological lesions consistent with *infection* with EEEV or WEEV, or reports of infection in humans or *wild* birds. This is especially the case for countries or *zones* where *infection* ~~infected~~ with EEEV or WEEV has occurred, or countries or *zones* adjacent to a country or *zone* in which epidemics have been reported. Ecological conditions can be assessed through sharing and analysis of meteorological data, data on precipitation and water levels, and monitoring of *vector* activity. Although birds are susceptible to EEE and WEE, they often do not exhibit clinical signs and have low mortality rates, therefore *surveillance* of birds is not worthwhile.

Detection of *infection* with EEEV or WEEV in an area is indicative of *vector* activity in this area and is a more sensitive approach to *monitoring* for EEV or WEEV than *vector surveillance*. Findings of EEEV or WEEV in *vectors* is of low sensitivity and, therefore, is not a recommended *surveillance* method.

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