WORLD ORGANISATION FOR ANIMAL HEALTH
Protecting animals, preserving our future

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REPORT OF THE MEETING

OF THE OIE SCIENTIFIC COMMISSION FOR ANIMAL DISEASES

Paris, 4–8 September 2017

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A meeting of the OIE Scientific Commission for Animal Diseases (the Commission) was held at the OIE.

Dr Monique Eloit, Director General of the OIE, welcomed and thanked the Commission for its continuous support to the OIE activities.

The Director General informed the Commission that the deadline for the call for nomination to establish a list of suitable experts from which the OIE Delegates to the World Assembly would elect the next members of the Specialist Commission was 2 October 2017. She added that in order to enhance the transparency of the election process, guidelines for the evaluation of the applications were being developed in collaboration with the OIE Council. The evaluation committee will include OIE staff and external experts. It will be chaired by Dr Karin Schwabenbauer, past president of the OIE Council.

Dr Eloit mentioned the progress made on the OIE Standards Implementation Observatory. The aim of this initiative was to evaluate how the international standards were being implemented by the Members. Two new staff members were recruited for this purpose.

Dr Eloit made a remark on the recently published procedures for assessing the OIE official status recognition with a vision to increase the transparency and international acceptance of the evaluation process. She indicated that the OIE was working, in collaboration with the World Trade Organization (WTO), to ensure the official status recognition granted by the World Assembly of Delegates to eligible Members was considered as international standards.

Dr Eloit emphasised the important role of the OIE as a scientific international organisation and her commitment to increase the participation of the OIE in international scientific forums. Dr Eloit invited the Commission to provide guidance on how the OIE could increase its participation in scientific activities and enhance the OIE's collaboration with the scientific community. She noted that the OIE hosts the scientific secretariat of the STAR-IDAZ International Research Consortium and that this initiative was opening new avenues for collaboration with the international research community.

Dr Brückner, President of the Commission, commended the collaborative work with WTO to consider the official disease status recognition as international standards. He also welcomed the progress made towards the monitoring of the application of the OIE standards by Members and expressed the interest of the Commission to be regularly updated.

Dr Brückner welcomed the other members of the Commission and acknowledged with appreciation the support received from the OIE to the work of the Scientific Commission. He finally summarised the most critical aspects in the proposed agenda and outlined the priority issues and the work plan for the week.

During the last day of the meeting, the Commission provided Dr Eloit with an update on the main priorities identified during the 5-day meeting. They included the follow-up on the progress made by some Members with a suspended official disease status and the ongoing collaborative work with Terrestrial Animal Health Standards Commission (Code Commission) aimed at developing new concepts for the implementation of zoning to assist Members in preventing the incursion of infections.

1. Adoption of the agenda and appointment of rapporteur

The draft agenda was adopted by the Commission. The meeting was chaired by Dr Gideon Brückner and the OIE secretariat acted as rapporteur. The agenda and list of participants are attached as Annexes 1 and 2 respectively.

2. Feedback from the 85th OIE General Session

The President briefly outlined the most important outcomes emanating from the 85th General Session related to the work of the Commission.

3. *Terrestrial Animal Health Code*

3.1. Member Country comments received for SCAD consideration

The Commission reviewed the science-related comments made by the Members on the *Terrestrial Code* chapters that were received after the February 2017 Specialist Commission meetings.

a) Glossary

The Commission reviewed the Member comments received on the amended definition of protection zone.

It agreed with a Member proposal to replace the word "adjacent" with "neighbouring". However, it noted that the definition should be referred to country or zone.

The Commission disagreed with a Member comment and clarified that a protection zone was not by definition a free zone but could be considered free from the disease if established within a free zone for that disease. It pointed out that the term "biosecurity", as defined in the *Terrestrial Code* Glossary, was more appropriate than the term "biocontainment" as suggested by a Member.

The amended definition addressing Member comments was forwarded to the Code Commission for its consideration.

b) Chapter 4.3. Zoning and compartmentalisation

The Commission addressed the Members comments received on the amended chapter that was circulated after the Specialist Commissions meetings in February 2017.

The Commission reiterated the needs to provide Members with preventive tools that would allow emergency, preventive and temporary zoning in response to an increased disease threat, while avoiding unjustified trade barriers. The Commission tried to accommodate this concept with the existing concepts in the *Terrestrial Code*. After extensive discussion, the Commission concluded that the containment zone concept would accommodate it better than the protection zone concept as currently defined. However, the Commission was not entirely satisfied of the proposal and requested that the development of a third concept ("temporary preventive zone" as proposed in September 2016) be considered by the Code Commission to address Members' needs.

In the situation of establishment of a zone to manage a disease threat, the Commission stressed the importance of implementation of control measures including movement control of animals and the integrity of the border(s) between the zone and the rest of the country or zone. As there would have been no outbreaks in this situation, the free status of the areas outside the zone would not be suspended.

The Commission also discussed about the proposal from a Member concerning the scenario of establishing more than one containment zone that would not be epidemiologically linked. The Commission acknowledged that it was not always possible to identify the epidemiological link between outbreaks, and that some epidemiologically linked outbreaks could be very far from each other. The Commission discussed the reasons and criteria for establishing a containment zone and noted that the practical management and maintenance of the containment zone should be considered. The Commission concluded that, under certain circumstances, it may be possible to have more than one containment zone with epidemiological link (e.g. in case an infected product is transported a long distance and causes a new outbreak). Nonetheless, the Commission recognised that applicant Members would have the responsibility to scientifically justify their decision. The Commission referred to the report of its February 2017 meeting and emphasised that this issue should be discussed further with the Code Commission.

The detailed rationale for the Commission's proposed amendments is attached as Annex 3.

The amended chapter addressing Member comments was forwarded to the Code Commission for its consideration.

c) Draft Chapter 4.X. Vaccination

The drafting of Chapter 4.X. was initiated in 2015. The Commission reviewed the Member comments on the draft chapter that was circulated for the second time after its February 2017 meeting.

The detailed rationale for the Commission's proposed amendments is attached as Annex 4.

The amended chapter addressing Member comments was forwarded to the Code Commission for its consideration.

d) Draft Chapter 4.Y. Management of outbreaks of listed diseases

The Commission addressed the Member comments received on the amended chapter that was circulated for first time after the Specialist Commissions meetings in February 2017.

The Commission noted that this chapter was considered a horizontal chapter to be included in Section 4 of the *Terrestrial Code*. It was stressed that the provisions of this draft chapter should not contradict the recommendations of the *Terrestrial Code* disease-specific chapters.

The Commission agreed with a Member that the scope of recommendation of this draft chapter should not be limited to those diseases included in the OIE list. Thus, the title of the draft chapter should be amended to cover all animal diseases, i.e. Management of outbreaks of animal diseases.

The Commission strongly agreed with some Members on the need to dedicate sufficient resources to improve preparedness by capacity development and training, to ensure the correct management of animal disease outbreaks according to the recommendations of this draft chapter.

The detailed rationale for the Commission proposed amendments is attached as Annex 5.

The amended chapter addressing Member comments was forwarded to the Code Commission for its consideration.

e) Chapter 8.8. Infection with foot and mouth disease virus

The Commission addressed the Members comments on the amended chapter that included new concepts related to FMD control proposed by the Specialist Commissions with the support of the *ad hoc* Group that was convened in June 2016. These new concepts included i) a broader concept of *containment zone,* ii) *compartmentalisation* with vaccination, iii) implementation of emergency preventive vaccination in response to an increased risk of FMDV incursion and iv) risk assessment of virus transmission by vaccinated animals.

The detailed rationale for the Commission proposed amendments is attached as Annex 6.

The amended chapter addressing Members comments was forwarded to the Code Commission for its consideration.

f) Article 8.16.2. Infection with rinderpest virus

The Commission addressed the Member comments received after the modification proposed on the rinderpest virus-containing material included in Article 8.16.2. of the *Terrestrial Code.*

The detailed rationale for the Commission's proposed amendments is attached as Annex 7.

The amended chapter addressing Member comments was forwarded to the Code Commission for its consideration.

g) Chapter 15.2. Infection with classical swine fever virus

The Commission addressed the Members comments received on the revised version of the chapter that was circulated for first time after the February 2017 Specialist Commissions meetings.

With regard to the Member comment on the category of pigs to be considered for the purpose of this chapter and particularly for recognition of freedom from CSF, the Commission reiterated its explanation provided on several occasions at previous meetings and made reference to its reports of (September 2013 and September 2016 report of the Code Commission).

For the purpose of international trade, captive wild pigs should be considered similarly than domestic pigs in terms of risk assessment and management. The risk posed by captive wild pigs is comparable to the risk posed by domestic pigs which, by definition, are under human control and supervision, could have contact with domestic pigs and their meat is more widely traded.

The detailed rationale for the Commission's proposed amendments is attached as Annex 8.

The amended chapter addressing Members comments was forwarded to the Code Commission for its consideration.

h) Chapter 11.9. Infection with lumpy skin disease virus

The Commission addressed a specific comment made at 85th General Session in relation to the case definition for lumpy skin disease (LSD). The Commission noted that it was not possible to differentiate vaccine-induced antibodies from those elicited by natural infection. The Commission confirmed that the presence of antibodies in a bovine or a water buffalo that showed clinical signs consistent with LSD, or epidemiologically linked to a suspected or confirmed case, should be considered as a case of LSD. The Commission also noted that the presence of antibodies does not necessarily correlate with protection.

The Commission opinion was forwarded to the Code Commission for its consideration.

i) Chapter 12.10. Infection with *Burkholderia mallei* (Glanders)

A revised version of Chapter 12.10. had been circulated for comments several times since September 2014.

During its February 2017 meeting, the Commission decided to seek external expert opinion to address some of the Member comments. The Commission acknowledged with thanks the support received by the two experts from the OIE Glanders Reference Laboratories.

The Commission also noted the ongoing work to amend the *Terrestrial Manual* Chapter on glanders and referred to the Biological Standards Commission some of the concerns expressed by the Members with regard to the diagnostic tests.

The Commission emphasised that including specific provisions for glanders surveillance in the chapter was a request made by several Members. The Commission disagreed with a Member that proposed deleting all the surveillance draft articles. The Commission stressed that the purpose of the surveillance articles was to provide specific guidance for glanders surveillance and should complement the requirements of the *Terrestrial Code* Chapter 1.4. on animal health surveillance.

The detailed rationale for the Commission's proposed amendments is attached as Annex 9.

The amended chapter addressing Member comments was forwarded to the Code Commission for its consideration.

j) Chapter 8.3. Infection with bluetongue virus

The Commission addressed the Member comments received on the amended chapter that was circulated after the Specialist Commissions' February 2017 meetings. The Commission also sought external expert opinion to respond to some of the Member comments.

The Commission noted new relevant scientific evidence became available since the adoption of the chapter[1]. It recommended the chapter be reviewed to ensure consistency with other chapters of the *Terrestrial Code (AHS and EHD)*, especially Articles 8.3.6., 8.3.7., and 8.3.8, and to consider the latest available scientific evidence (i.e. over-winter ability of certain vectors).

The Commission agreed with a Member comment on the need to provide recommendations for the declaration of a seasonal vector free period. The Commission was of the opinion that, should this list of criteria be developed, it may be better placed in the *Terrestrial Code* Chapter 1.5 on surveillance for arthropod vectors of animal diseases.

The detailed rationale for the Commission's proposed amendments is attached as Annex 10.

The amended chapter addressing Member comments was forwarded to the Code Commission for its consideration.

3.2. Other considerations

a) Update on Member comments on status recognition/endorsement of control programmes questionnaires in Chapter 1.6.

Revised questionnaires for the official recognition of disease status and for the endorsement of national official control programmes were circulated to Members in February 2017. The proposed revisions primarily aimed at reviewing the scientific relevance of each questionnaire and harmonising the questionnaires between the different diseases.

The Commission reviewed Members comments on the revised questionnaires.

The detailed rationale for the Commission's proposed amendments is attached as Annex 11.

The amended questionnaires addressing Members comments were forwarded to the Code Commission for its consideration.

b) Chapter 5.8. International Transfer and laboratory containment of animal pathogens

An *ad hoc* Group was held from 17 to 19 July 2017 on transport of biological materials. The Group identified the need to update the *Terrestrial Animal Health Code* Chapter 5.8 entitled "International transfer and laboratory containment of animal pathogens", especially with respect to the international requirements for transfer of animal pathogens due to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and the Nagoya Protocol.

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1 http://onlinelibrary.wiley.com/doi/10.2903/j.efsa.2017.4698/epdf.

The Commission indicated that the report should be forwarded to the Code Commission, as it was related to international trade.

4. *Ad hoc* and Working Groups

4.1. Meeting reports for endorsement

a) *Ad hoc* Group on theileriosis: 8-10 February 2017

The Commission reviewed the report of the *ad hoc* Group responsible for amending the *Terrestrial Code* Chapter 11.10. on theileriosis.

The Commission noted the extensive additions suggested by the *ad hoc* Group and agreed the new draft chapter should be presented as a clean document for ease the revision of Members.

The Commission endorsed the amended chapter and the *ad hoc* Group report.

The amended chapter and the *ad hoc* Group report were forwarded to the Code Commission for further consideration.

The endorsed *ad hoc* Group report is attached as Annex 12.

b) *Ad hoc* Group on alternatives for surveillance for demonstration of freedom from FMD and recovery periods: 14-16 June 2017

The Commission considered the report of the *ad hoc* Group on alternatives for surveillance for demonstration of freedom from FMD and recovery periods, as well as an option document linking the conclusion of the *ad hoc* Group meeting and its impact on the FMD Chapter of the *Terrestrial Code* prepared by the OIE Status Department together with the Chair of the *ad hoc* Group. This option document presented the pros and cons of the different options related to: i) the provisions on the waiting time requirements; ii) the provisions for the level of confidence; and iii) the method to be used for the assessment of the level of the confidence. The Commission proposed to consult the opinion of the *ad hoc* Group on the evaluation of FMD status, as it has abundant experience evaluating applications to achieve official freedom from FMD and would be applying the requirements and utilising such methods in the evaluation process, should these methods be adopted by OIE Members.

The endorsed *ad hoc* Group report is attached as Annex 13.

c) *Ad hoc* Group on surveillance: 19-21 June 2017

The Commission reviewed the report of the *ad hoc* Group responsible for amending Chapter 1.4. of the *Terrestrial Code* on animal health surveillance.

The Commission noted the extensive structural changes suggested by the *ad hoc* Group and agreed the new draft chapter should be presented as a clean document for ease of the revision of Members.

With regard the definition of the term "infestation", the Commission agreed with the *ad hoc* Group on the difficulties, in some cases, to distinguish between infection and infestation. The Commission agreed with the proposed modification of the definition of infection in the Glossary to encompass infestation as well as infection.

The Commission also concurred with the proposal made by the *ad hoc* Group to amend the definition of "epidemiological unit" included in the Glossary. The proposed modification would clarify that, in some cases, an epidemiological unit be comprised of only a single animal (*e.g.* wildlife, establishment with only one animal).

The Commission was of the opinion that the term "disaggregated data" (point 2j of Article 1.4.3.) may not be sufficiently clear, and decided to refer to raw data instead. It was also noted that the data collection and management should aim at obtaining and maintaining raw data when possible, but the quality of the summary statistic included in the database should also be considered.

The Commission took note of the proposal to consider syndromic surveillance in Article 1.4.4. and added a reference to the possibilities that software may offer to the prospect of extraction of syndromic data for aggregation and analysis.

With regard to risk-based methods, the Commission noted that the effect on sample selection (i.e. its impact on probability of detection) should be estimated when extrapolating risk-based data to the study population.

The Commission agreed with the *ad hoc* Group that the morale and motivation of the staff could influence the sensitivity and specificity of slaughterhouse/abattoir inspection. However, it was considered not relevant to include such criteria in this section as it would also impact on any other surveillance activity. However, the Commission stressed the importance of the independence of the inspection staff during the surveillance activities.

With regard to the definition of "sentinel unit" in point 7 of Article 1.4.4., the Commission decided to remove the word "sites" to improve clarity.

The Commission noted that that the section concerning sample selection proposed by the *ad hoc* Group in Article 1.4.5. point 1, would be better placed as new point iii) of Article 1.4.5. since it is relates to the sampling and not to the types of survey.

The Commission agreed on the proposed modification of the current Glossary of the *Terrestrial Code* definition of "early detection system" which would become "early warning system": "means a system for the timely detection, identification and reporting of an incursion or emergence of diseases/infections in a country, zone or compartment".

The amended chapter and the *ad hoc* Group report were forwarded to the Code Commission for further consideration.

The endorsed *ad hoc* Group report is attached as Annex 14.

d) *Ad hoc* Group on biological threat reduction in relation to specific methodologies for veterinary services, pertaining to the investigation of suspicious biological events

The Commission was informed about the work of the OIE *ad hoc* group on Biological Threat Reduction in relation to Specific Methodologies for Veterinary Services, pertaining to the Investigation of Suspicious Biological Events.

The *ad hoc* Group was convened by the Director General following a recommendation of the 1st OIE Global Conference on Biological Threat Reduction. The *ad hoc* Group was tasked with the development of guidelines for the identification of biological events of deliberate origin or suspected to be of deliberate origin and how to investigate such events.

The draft guidelines would be discussed during the 2nd OIE Global Conference on Biological Threat Reduction, in Canada from 31 October to 2 November 2017. Feedback from these discussions as well as other insights gained during the conference will be considered during the second meeting of the *ad hoc* Group planned on 28 to 30 November 2017.

The Commission was informed that the guidelines would be finalised by February 2018.

The Commission commended the OIE leadership in this topic and requested to be informed on the outcomes of the Global Conference and progress on guidelines during its upcoming February 2018 meeting.

The endorsed *ad hoc* Group report is attached as Annex 15

e) *Ad hoc* Group on antimicrobial resistance: 29 -31 August 2017

The Commission considered the *ad hoc* Group report. The Commission was informed that the meeting was organised in two sections, one section dealing with the OIE database on the use of antimicrobial agents in animals and a second section on the update of *Terrestrial Code* chapters 6.7. on harmonisation of national antimicrobial resistance surveillance and monitoring programmes and 6.8. on monitoring of the quantities and usage patterns of antimicrobial agents used in food-producing animals.

The Commission reviewed the replies of the Group to the OIE Member Country comments on Chapter 6.7. of the *Terrestrial Code* and agreed on them.

With regard to Chapter 6.8., in response to the OIE Member Country comments, the Group proposed to clarify the definitions of "Therapeutic use" and "Growth promotion" in section 10 of the report and, in parallel, developed an illustration to provide precision and clarity. The Commission reviewed the replies of the Group to the OIE Member Country comments on Chapters 6.8. of the *Terrestrial Code* and agreed on them.

The Commission noted that the Group would address, at its next meeting in January 2018, the update of the OIE List of antimicrobial agents of veterinary importance.

The amended chapters 6.7 and 6.8 and the *ad hoc* Group report were forwarded to the Code Commission for further consideration.

The endorsed *ad hoc* Group report is attached as Annex 16.

4.2. Planned *ad hoc* Groups and confirmation of proposed agendas

The Commission took note of the dates of the *ad hoc* Group and Working Group meetings scheduled to be held before the next Commission meeting in February 2018, as listed below. It was informed that the *ad hoc* Group on the evaluation of CBPP status, initially planned in September 2017, was cancelled because no application was received for the official recognition of Members' CBPP free status. The Commission reviewed and agreed with the proposed agenda of the Working Group on Wildlife.

- *Ad hoc* Group on the evaluation of AHS status: 17–19 October 2017
- *Ad hoc* Group on the evaluation of BSE risk status: 24–26 October 2017
- *Ad hoc* Group on the evaluation of FMD status: 6–9 November 2017
- *Ad hoc* Group on the evaluation of CSF status: 21–23 November 2017
- *Ad hoc Group* on biological threat reduction in relation to specific methodologies for veterinary services, pertaining to the investigation of suspicious biological events: 28-30 November 2017
- *Ad hoc* Group on the evaluation of PPR status: 6–8 December 2017
- *Ad hoc* Group on Rabies: 21-23 November 2017
- Working Group on Wildlife: 12–15 December 2017
- *Ad hoc* Group on Tsetse transmitted trypanosomiases (tentatively 6-8 March 2018)

5. Official disease status

5.1. Expert missions to Member Countries requested by the Commission

a) State of play and prioritisation

The Commission reviewed and prioritised the missions for official recognition and for maintenance of disease status to be performed. The prioritisation of the list of missions would be finalised after consultation with the Director General of the OIE.

b) Follow-up of past missions

The Commission considered the action plans and progress reports of the countries that hosted an OIE expert mission in the past six months since the last meeting of the Commission in February 2017. The Commission appreciated the ongoing efforts by countries to follow-up with the recommendations of the mission.

- *Romania (CSF)*

  Following the CSF mission conducted in May 2017 to assess compliance of the country with the *Terrestrial Code*, Romania provided the OIE with an action plan to ensure the implementation of the recommendations. While reviewing the action plan submitted by Romania, the Commission raised a concern on the level of biosecurity in the backyard holdings, considering the recent outbreaks of African swine fever in domestic pigs. The Commission suggested adding and broadening the recommendations of the previous mission to include strengthening the biosecurity in the backyard holdings as it is a crucial requirement for the prevention and early detection of CSF.

- *Kazakhstan (FMD)*

  Following the FMD mission conducted in May 2017 to assess compliance of the southern zones with the *Terrestrial Code*, Kazakhstan provided the OIE with an action plan to ensure the implementation of the recommendations. The Commission considered the action plan, as well as comments received from the mission team on this action plan. The Commission suggested that the action plan be slightly amended to describe in more details the activities to be conducted and the linked responsibilities.

- *Madagascar (FMD)*

  Following the FMD mission conducted in April 2017 to assess compliance with the requirements of the *Terrestrial Code* for maintenance of the recognised FMD free status, Madagascar provided the OIE with an action plan to ensure the implementation of the recommendations. The Commission considered the action plan, as well as comments received from the mission team on this action plan. The Commission suggested that the action plan be slightly amended and budgeted to ease the careful consideration of the priorities.

- *Myanmar (PPR)*

  The Commission was briefly updated on the main outcomes of a recent OIE mission that took place from 21 to 27 August 2017 in Myanmar regarding its PPR status. The Commission decided to make its recommendations upon receipt of the final mission report from the mission team.

5.2. Specific update on official disease status

a) Follow-up of some countries having an endorsed official control programme

- *Venezuela (FMD)*

  The Commission considered the action plan and progress report submitted by Venezuela following the recommendations made by the OIE mission that took place in Venezuela from 30 January to 3 February 2017. The Commission appreciated the efforts of Venezuela in taking initiatives to react upon the recommendations made by the mission, however the Commission identified some gaps with regard to FMD control and therefore concluded that Venezuela did not provide sufficient evidence that it still fulfils the requirements for a country with an endorsed official national control programme for FMD, as defined in Article 8.8.39. of the *Terrestrial Code*. As a consequence, the endorsement of the official control programme was withdrawn with effect from 8 September 2017.

b) Update on situation of countries/zones with official status

The Commission had a physical meeting with a delegation from a country that presented recent changes to its FMD situation. The Commission commended the transparency in the prompt and regular notifications to the OIE as well as its strong commitment and efforts in the improvement of animal health in the region.

5.3. Disease status recognition procedure

a) Update on the Standard Operating Procedures for official status recognition and internal protocols

The Commission commended the OIE on the successful finalisation of the Standard Operating Procedures (SOPs) and internal protocols for official status recognition to improve the transparency and credibility at all steps from the initial official recognition of status to its continuous maintenance over time. The updated SOPs are available on the OIE website and the OIE Delegates' website.

b) Selection of status for comprehensive review of 2017 annual reconfirmations

The Commission selected the list of Member Countries' 2017 annual reconfirmations for comprehensive review during the Commission's upcoming meeting in February 2018. The selection was based on a set of criteria described in the SOPs. The Commission will review a total of 44 annual reconfirmations during its February 2018 meeting.

c) Update on the procedures for self-declaration

The Commission was informed of the progress made by the OIE Status Department on the Procedures for submission of a self-declaration of disease freedom to the OIE; these procedures are to guide Members wishing to self-declare their countries, a zone or a compartment within their territory free from any disease, except those for which the OIE has put in place a specific procedure for official recognition of disease status. The Commission welcomed the procedures and made comments to improve clarity.

5.4. Standards related to official status recognition

a) Harmonisation of the requirements for disease free status recognition and maintenance of the disease-specific Chapters

The Commission reviewed the documents prepared by the OIE Status Department on the harmonisation and update of the requirements for recognition and maintenance of status and the endorsement of official control programmes. The Commission decided to complete this comprehensive review by electronic means and to finalise its recommendations on the proposals during its meeting in February 2018.

b) Considerations on the official recognition of BSE risk status

Following the sharing of the scientific and technical document assessing the current risk associated with BSE, the OIE international standards for BSE in the *Terrestrial Code* and the link with the OIE official recognition of BSE risk status, the Commission considered Members comments received through interventions at the last General Session in May 2017 as well as afterwards up to the current meeting of the Commission. The Commission took note that the majority of Members did not support the discontinuation of the OIE official recognition of risk status for BSE at this time, but requested the revision of the OIE standards on BSE as a priority and a first step into the discussion. The Commission acknowledged that an *ad hoc* Group dedicated to the revision of the BSE Chapter was already envisioned and forwarded relevant comments to be considered by the *ad hoc* Group.

6. FMD and PPR control strategies

6.1. Foot and Mouth Disease: Global Control Strategy

The Commission was briefly updated on the latest activities conducted in the framework of the Global FMD Control Strategy and under the umbrella of the Global Framework for the progressive control of Transboundary Animal Diseases (GF-TADs). Three regional roadmap meetings were to be conducted in September (2nd Roadmap meeting in Southern Africa and 1st Epidemiology and Laboratory Network meeting West Eurasia) and in October 2017 (4th FMD roadmap meeting in Middle East). The Commission took note that the Middle East meeting would be a joint FMD and PPR roadmaps meeting.

Finally the Commission was informed about the work implemented by the GF-TADs FMD Working Group, in particular the development of a strategy document and of a 2-year action plan, that were recently endorsed by the OIE and FAO management with minor changes. This action plan will help to structure and organise the activities related to the implementation of the Global Strategy.

6.2. Peste des Petits Ruminants: Global Control and Eradication Strategy

The Commission was updated on the current status of the PPR Global Control and Eradication Strategy (PPR-GCES). The Commission was informed that the PPR Advisory Committee was established on 29 June 2017, with a view to providing strategic guidance for the PPR Global Eradication Programme (PPR-GEP) and ensuring effective oversight. For 2017, the Committee will focus its work on identifying possible technical challenges to be addressed for the successful implementation of PPR-GEP and on developing a specific activity plan for itself. The Commission also noted that the launch of the PPR Global Research and Expertise Network (PPR-GREN) was envisaged for the 3rd week of April 2018 in Vienna.

The Commission was informed of the regions where PPR roadmap meetings took place in 2017 and were planned for the upcoming months. The Commission took also note that a PPR workshop would be organised in Mongolia jointly by the OIE and FAO tentatively in November 2017, to review and assess the outcomes of ongoing activities implemented to respond to PPR outbreaks in livestock and wildlife. Finally the Commission was informed of the progress achieved with the Action Plan developed by the OIE to support the PPR-GEP.

7. OIE Collaborating Centres

7.1. Risk analysis and modelling Collaborating Centre application (RVC-APHA)

Following its review, the Commission recommended acceptance of the following application for OIE Collaborating Centre: OIE Collaborating Centre for Risk analysis and modelling

The Royal Veterinary College (RVC)
Royal College Street, London NW1 0TU (UK)
Tel.: (+44-207) 468.50.00; E-mail: principal@rvc.ac.uk; Website: http://www.rvc.ac.uk
Contact Point: Prof. Stuart Reid

Animal and Plant Health Agency (APHA)
Woodham Lane, New Haw, Addlestone, Surrey KT15 3NB, (UK)
Tel.: (+44-208) 026.95.19; E-mail: chris.hadkiss@apha.gsi.gov.uk;
Website: https://www.gov.uk/government/organisations/animal-and-plant-health-agency
Contact Point: Mr Chris Hadkiss.

The Collaborating Centre will be asked to provide a statement confirming their commitment to providing their current activities and services to OIE Member Countries in accordance with their official designation should they achieve OIE Collaborating Centre status.

8. Liaison with other Commissions and Departments

8.1. Terrestrial Animal Health Standards Commission

a) Tsetse transmitted trypanosomiases

The Commission took note of the request sent to the OIE Director General by the African Union on the need to develop a *Terrestrial Code* Chapter on tsetse transmitted trypanosomiases.

The Commission agreed with the OIE proposal to convene this *ad hoc* Group under the responsibility of the Commission. The Commission would support the OIE in drafting the terms of reference for the *ad hoc* Group and in identifying the relevant experts.

The drafting of this chapter would be included in the Commission's work programme and it was requested that the Code Commission also include it in its working programme.

b) Ongoing work to update Chapter 10.4. on infection with avian influenza viruses

The Commission noted with appreciation the discussion paper, prepared by the OIE on the need to update the OIE chapter on avian influenza at the request of the Members during the 85th General Session.

The Commission welcomed the OIE Director General's decision to convene an *ad hoc* Group to undertake a thorough revision of Chapter 10.4. The *ad hoc* Group would be responsible for providing independent analysis and advice on avian influenza to Specialist Commissions in order to provide Members with appropriate guidance to enable Member Countries to engage in safe trade and carrying out effective risk management using the existing tools to monitor, control and eradicate the disease, as well as actively notifying outbreaks.

The Commission agreed with the terms of reference proposed for the *ad hoc* Group which would include the evaluation of the current epidemiological situation and trade implications, the revision of control measures such as the use of zoning and compartmentalisation for managing the disease and the impact of a newly developed vector-vaccine on trade.

The Commission considered its participation relevant, as well as the participation of Biological Standards Commission. It suggested inviting a member of the Working Group on Wildlife, the ostrich industry and a representative from the OFFLU.

8.2. Biological Standards Commission

a) Use of cattle tongue epithelium in the production of FMD vaccine

The Biological Standards Commission requested the Commission's opinion on the use of cattle tongue epithelium in the production of FMD vaccine epithelium cells as text on this method is currently included in the *Terrestrial Manual* chapter.

Vaccine manufacturing requires that strict quality control measures be followed. Certifying the purity of source materials when producing FMD vaccine using cattle tongue epithelium may present a significant challenge[2]. The Commission felt that FMD vaccine manufactures using epithelium cells should prove that the cells comply with the same quality control requirements as alternative source materials, e.g. cell lines.

In addition, the use of epithelium cells could lead to increased levels of non-structural proteins (NSP) in vaccinated animals impairing the FMD surveillance in a vaccinated population.

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[2] S.J. Barteling (2002) Development and performance of inactivated vaccines against foot and mouth disease. *Rev. Sci. Tech. Off. int. Epiz.*, **21** (3), 577-588

9. Conferences, workshops, meetings, missions

9.1. 2nd Regional Workshop on Swine Disease Control in Asia. Beijing, PR China, 27-29 June 2017

The Commission took note of the report and recommendations of the 2nd Regional Workshop on Swine Disease Control in Asia.

The Commission acknowledges that porcine epidemic diarrhoea was considered a priority disease in the region and the meeting's request to reassess if the disease fulfilled the listing criteria of the *Terrestrial Code* Chapter 1.2.

The Commission noted that no new evidence was available since the disease was last assessed against the listing criteria. The Commission invited Members from the region to provide new scientific evidence to support the inclusion of the disease in the OIE list.

10. Disease control specific issues

10.1. Update Schmallenberg factsheet

Following the decision of the Commission at the last meeting in February 2017, the Commission was informed that the Schmallenberg factsheet was updated by an online expert group, and that the new updated version is available on the OIE website[3].

The Commission acknowledged the contribution of the experts and noted that the information of the factsheet should be regularly updated as new scientific evidence become available.

10.2. Invasive Wasp (*Vespa velutina*) in Europe

The Commission reviewed a paper on *Vespa velutina nigrithorax* that was prepared by the OIE Reference Laboratory in France for bee diseases. The aim of this paper was to provide a scientific review and assessment of *Vespa velutina nigrithorax* against the OIE criteria for listing a disease, infection or infestation in reply to a request from the Commission made at its last meeting in February 2017. The Commission proposed, based on this paper, that the Code Commission consider the inclusion of *Vespa velutina nigrithorax* in the OIE List of diseases, similarly to what was done with *Aethina tumida* (Small Hive beetle).

10.3. Vaccination of animals of high conservation value

The Commission postponed the discussion on this issue to the next meeting in February.

10.4. PPR outbreak in the Saiga antelope population of Mongolia

The Commission took note of the paper on *Saiga Mass Mortality Event in Mongolia* and thanked the Working Group on Wildlife for drafting this summary.

10.5. Risk of semen in the transmission of ASFv

The Commission took note of the letter to be published in the OIE bulletin on the risk of semen in the transmission of ASFV. It agreed with the author that given the emergence of this disease over the last decade, it was clear that further work would be needed to clarify risk posed by semen in the transmission of the disease.

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3 http://www.oie.int/fileadmin/Home/eng/Our_scientific_expertise/docs/pdf/A_Schmallenberg_virus.pdf

11. For the Commission information

11.1. Update on rinderpest

a) Communication campaign for rinderpest

Following the launch of the first stage of the communications campaign, during the 85th General Session, the Commission was informed that the OIE is developing the second stage of rinderpest communication campaign, that will be concluded and published before March 2018.

b) Rinderpest annual reporting for country and rinderpest holding facilities

The Commission was also informed that the OIE was continuously following up on the status of rinderpest virus containing materials being held at country level and in FAO-OIE approved facilities (RHF). The status of the project for developing a virus tracking system for RHF and an improved country reporting system was on track for delivery of the system by April 2018.

c) The Global Rinderpest Action Plan (GRAP) and the Operational Framework for the Rinderpest Vaccine Reserve (OF-RVR)

The Commission was provided with an update on the status of GRAP and RVR. The first drafts of both documents were presented to stakeholders at the International Advocacy Meeting on Maintaining Global Freedom from Rinderpest held on 14-16 June 2017 in Kathmandu, Nepal. The second draft was reviewed at the 11th meeting of the FAO-OIE rinderpest joint advisory committee (JAC) on 27-28 June 2017 in Rome. A third draft was scheduled to be tested through simulation exercises organised by FAO in Kenya, on 21-23 November 2017, and India, in December 2017.

d) Application and re-evaluation of rinderpest holding facilities (RHF)

The Commission was reminded that the designation period for the current RHFs would end in May 2018, as described in Resolution No. 25 (83GS). As such, the facilities would be re-evaluated to maintain their status. As agreed with the JAC, the process for re-evaluation would be a document-based exercise using a form and where warranted may entail an on-site inspection. Three applications were still outstanding as the required documentation had not been received for review before considering undertaking an inspection.

e) Research involving rinderpest virus

Progress made at the Pirbright Institute and CIRAD in their respective Sequence and Destroy projects was reported to the Commission. Both projects would be completed by May and April 2018 respectively.

The concerns raised by the JAC with regard to the critical lack of a non-infectious diagnosis test for rinderpest in the OIE *Terrestrial Manual* that could be performed outside of Reference Laboratories for rinderpest and RHFs were transmitted to the Commission. Proposals made by the RHFs for developing a non-infectious control for real time RT-PCR had been submitted, or would be submitted and would subsequently be reviewed by the JAC at their next meeting.

11.2. Project “Capacity building and surveillance for Ebola Virus Disease (EVD)” (EBO-SURSY)

The Commission was informed that the OIE was tasked with implementation of the project “Capacity building and surveillance for Ebola Virus Disease (EVD)” - EBO-SURSY. This five-year project was launched on 15 January 2017 and aimed to strengthen national and regional early detection systems in wildlife in West and Central Africa (10 countries of focus) using a One Health multi-sectoral approach to better detect, differentiate and prevent future EVD outbreaks or outbreaks of other emerging zoonotic pathogens. To achieve its objectives the project would focus on three main areas:

1. Building institutional and One Health capacity through teaching and training;

2. Contribute to increasing the communities' awareness of zoonotic diseases;
3. Reinforcing zoonotic disease surveillance protocols through field investigations and improved diagnostic assays;

To implement the project, the OIE is collaborating with three organizations: the Centre de Coopération International en Recherche Agronomique pour le Développement (CIRAD), the Institut de Recherche pour le Développement (IRD) and the Institut Pasteur and its International Network (RIIP). The Governance of the Project would be supported by an Advisory Committee and a Programme Committee.

The Commission was informed that the baseline data collection had been initiated. The Terms of Reference for the Project Advisory and the Programme Committees have been approved. The formal agreements with partners were in the final stage of signature. A webpage would be available on the OIE Africa website by the end of September.

12. Programme and priorities

The Commission updated the working programme for the year, identified the priorities and scheduled the dates for the various *ad hoc* Group meetings which would be accessible to Member Countries on the OIE website.

The updated working programme is attached at Annex 17.

13. Adoption of the report

The Commission agreed to circulate the draft report electronically for comments before adoption.

14. Date of next meeting

The next meeting of the Commission is scheduled for 12-16 of February 2018.

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…/Annexes

Annex 1

REPORT OF THE MEETING

OF THE OIE SCIENTIFIC COMMISSION FOR ANIMAL DISEASES

Paris, 4–8 September 2017

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Agenda

1. Adoption of the agenda and appointment of rapporteur

2. Feedback from the 85th General Session

3. *Terrestrial Animal Health Code*

3.1. Member Country comments received for SCAD consideration

a) Glossary
b) Chapter 4.3. Zoning and compartmentalisation
c) Draft Chapter 4.X. Vaccination
d) Draft Chapter 4.Y. Management of outbreaks of listed diseases
e) Chapter 8.8. Infection with foot and mouth disease virus
f) Article 8.16.2. Infection with rinderpest virus
g) Chapter 15.2. Infection with classical swine fever virus
h) Chapter 11.9. Infection with lumpy skin disease virus
i) Chapter 12.10. Infection with *Burkholderia mallei* (Glanders)
j) Chapter 8.3. Infection with bluetongue virus

3.2. Other considerations

a) Update on Member comments on status recognition/endorsement of control programmes questionnaires in Chapter 1.6.
b) Chapter 5.8. International Transfer and laboratory containment of animal pathogens

4. *Ad hoc* and Working Groups

4.1. Meeting reports for endorsement

a) *Ad hoc* Group on theileriosis: 8-10 February 2017
b) *Ad hoc* Group on alternatives for surveillance for demonstration of freedom from FMD and recovery periods: 14-16 June 2017
c) *Ad hoc* Group on surveillance: 19-21 June 2017
d) *Ad hoc* Group on biological threat reduction in relation to specific methodologies for veterinary services, pertaining to the investigation of suspicious biological events
e) *Ad hoc* Group on antimicrobial resistance: 29 -31 August 2017

4.2. Planned *ad hoc* Groups and confirmation of proposed agendas.

5. Official disease status

5.1. Expert missions to Member Countries requested by the Commission

a) State of play and prioritisation
b) Follow-up of past missions

5.2. Specific update on official disease status

a) Follow-up of some countries having an endorsed official control programme
b) Update on situation of countries/zones with official status

5.3. Disease status recognition procedure

a) Update on the Standard Operating Procedures for official status recognition and internal protocols
b) Selection of status for comprehensive review of 2017 annual reconfirmations
c) Update on the procedures for self-declaration

5.4. Standards related to official status recognition

a) Harmonisation of the requirements for disease free status recognition and maintenance of the disease-specific Chapters
b) Considerations on the official recognition of BSE risk status

6. FMD and PPR control strategies

6.1. Foot and Mouth Disease. Global Control Strategy

6.2. Peste des Petits Ruminants. Global Control and Eradication Strategy

7. OIE Collaborating Centres

7.1. Risk analysis and modelling Collaborating Centre application (RVC-APHA)

8. Liaison with other Commissions and Departments

8.1. Terrestrial Animal Health Standards Commission

a) Tsetse transmitted trypanosomiases
b) Ongoing work to update Chapter 10.4. on infection with avian influenza viruses

8.2. Biological Standards Commission

a) Use of cattle tongue epithelium in the production of FMD vaccine

9. Conferences, workshops, meetings, missions

9.1. 2nd Regional Workshop on Swine Disease Control in Asia. Beijing, PR China, 27-29 June 2017

10. Disease control specific issues

10.1. Update Schmallenberg factsheet

10.2. Invasive Wasp (*Vespa velutina*) in Europe,

10.3. Vaccination of animals of high conservation value

10.4. PPR outbreak in the Saiga antelope population of Mongolia

10.5. Risk of semen in the transmission of ASFv

11. For the Commission information

11.1. Update on rinderpest

11.2. Project "Capacity building and surveillance for Ebola Virus Disease (EVD)" (EBO-SURSY)

12. Programme and priorities

13. Adoption of the report

14. Date of next meeting

Annex 2

REPORT OF THE MEETING

OF THE OIE SCIENTIFIC COMMISSION FOR ANIMAL DISEASES

Paris, 4–8 September 2017

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Rationale for the amendments to:

Chapter 4.3. ZONING AND COMPARTMENTALISATION
provided by the Scientific Commission for Animal Diseases

Article 4.3.2. General considerations

The Commission discussed whether or not issuing a movement certificate by the Veterinary Services should be required in all circumstances. It concluded that the control of the movement should be the responsibility of the Veterinary Services and it should be carried out according to the national rules. It concluded that certification may not always be necessary.

Article 4.3.3. Principles for defining and establishing a zone or compartment

In response to a Member comment on systematic links between animal identification and compulsory movement control, the Commission reminded that individual animal identification was not necessarily compulsory and that the requirement for including movement control was already adequately considered in the text.

Article 4.3.4. Free zone

The Commission concurred with a Member that vector surveillance should be part of the surveillance activities in the case of vector-borne disease. In fact, the demonstration of absence of the competent vector could be considered as supporting evidence regarding the absence of the transmission of the disease. It referred to the Code Commission the decision to amend the article as suggested, depending on whether or not the term 'pathogen-specific surveillance' also encompasses vector surveillance and in particular pathogen surveillance in vectors.

Article 4.3.5. Infected zone

The Commission noted that the bullet points under this article were mainly repeating the definition, differentiating whether the zone where the disease had not yet been eradicated and where the disease had been reintroduced. Should there be a need to maintain the bullet points, the Commission recommended adding third bullet to cover the case where the disease was not reported, but that all the requirements for freedom (e.g. surveillance) were not met.

Article 4.3.6. Protection zone

The Commission discussed the proposal from a Member that a protection zone be defined as a separate zone, where the measures applied within the protection zone would not comply with the free status. The Commission clarified that a protection zone could be established either within or outside free country or zone; detection of an outbreak in the protection zone that was outside the free zone would not impact the status of free zone. In the case of establishing a specific zone in response to a disease threat, the Commission considered that the protection zone concept would not be appropriate and proposed to i) delete the paragraph, and ii) address this aspect under the Article 4.3.7. by extending the concept of a containment zone. Please refer to the report of the Code Commission (September 2017) for the details of further discussion on this item.

Article 4.3.7. Containment zone

The Commission proposed to delete the term "infected zone" as it was already included in the definition of a containment zone in the Glossary.

The Commission discussed a Member comment on the reason why two incubation periods were needed to establish a containment zone that comprised an infected zone where outbreaks may continue to occur, and a protection zone where no outbreaks had occurred (Point b). To comply with this requirement, the Member should provide evidence substantiating that the disease will not further spread to the protection zone or the rest of the country or zone, despite outbreaks that may continue to occur considering the likely source that triggered the creation of the containment zone. Thus, two incubation periods would be needed to ensure that the measures implemented are effective (i.e. movement control between the zone where outbreaks continue to occur and the protection zone).

For this reason, the Commission did not support a proposal to have exceptions and shorter requirements for the application of a containment zone in the disease-specific chapters.

In addition, the Commission pointed out that more clarity was needed to define how the start of the two incubation periods should be calculated both in Article 4.3.7.a) and 4.3.7.b). It clarified that in Article 4.3.7 a) the incubation periods should be calculated starting either from the disposal of the last animal killed or when all the control measures described in the article were fully implemented, whichever occurred last. For what concerns Article 4.3.7.b), the start of the two incubation periods would be considered from the moment when all the measures described in the article were duly implemented.

Annex 4

Rationale for the amendments to:

Chapter 4.X. ON VACCINATION
provided by the Scientific Commission for Animal Diseases

Article 4.X.2. Definitions

In response to of a Member comment on including a start and an end-date to the definition of "emergency vaccination", the Commission pointed out that, although a clear timeline for vaccination was advisable, it might not always be possible to define an end-date for emergency vaccination. Provisions for the timeline of the action were already provided in Article 4.X.7.

In response to a request made by a Member to include the definition of vaccination campaign, the Commission referred to the discussion of the *ad hoc* Group on vaccination (November 2015). It was agreed that the term "vaccination campaign" would not need to be defined. "Vaccination campaign" should be considered part of a vaccination programme.

Article 4.X.3. Vaccination programmes

The Commission agreed with a Member comment on the importance of liaising with public health authorities in developing vaccination programmes against zoonoses.

The Commission agreed with a Member proposal to replace the word "adjacent" with "neighbouring", as it was discussed in point 3.1.a of this report.

The Commission agreed on the statement made by a Member indicating that vaccination by itself does not prevent the introduction of a pathogenic agent.

The Commission considered a Member opinion with regard to the term "introduction". According to the Member, it should only be used for pathogens but not for diseases, while "emergency" would be more adequate in this context. The Commission was of the opinion that they were two different terms and proposed not to amend the text.

Article 4.X.4. Launching a vaccination programme

The Commission agreed on the proposal from a Member to add a reference to the availability of an animal identification system to differentiate vaccinated and unvaccinated target populations. It was agreed to include this proposal in point 7.

The Commission disagreed with Member comments on the addition of a sentence regarding the need for vaccine to be appropriate and effective. The Commission noted that the safety and efficacy of the vaccine were intrinsic characteristics of an appropriate vaccine. On the other hand, the Commission agreed to separate the provision of vaccine availability and the availability of resources for the implementation of the vaccination in two different points.

Article 4.X.5. Vaccination strategies

The Commission agreed on a proposal made by Member to modify the definition of ring vaccination by deleting the description of how it should be implemented, which was considered too prescriptive.

Article 4.X.6. Choice of vaccine

The Commission considered the proposal from a Member to add a provision on the availability of diagnostics to monitor for vaccine-induced antibodies in the section "Cost and availability". The Commission was of the opinion that whether or not a test is available would not influence the cost and availability of the vaccine, and therefore it should not be included in this section.

The Commission reviewed point b) of Article 4.X.6. to clarify it and referred to the capacity of the vaccine to induce immunity rather than to produce antibodies.

The Commission disagreed with a Member comment suggesting adding references to the thermostability of the vaccine. This characteristic was already covered in Article 4.X.6.

The Commission disagreed with two Member comments to make reference to the age and species of the target population. The Commission considered these characteristics were already requested for the registration of the vaccine and should not be included in the text.

The Commission considered the proposal from a Member to add additional provisions on the side effects of the vaccination. The Commission noted that the risk of vaccine pressure selecting new resistant strains of the disease agent and the risk of vaccination masking future outbreaks were more linked to the vaccination programme rather than to the vaccine characteristics. In addition, it was noted that the reversion to virulence of attenuated strains was already covered in the text. The Commission disagreed with the proposed amendments.

Article 4.X.7. Other critical elements of a vaccination programme

The Commission agreed with a Member comment to add the compensation in case of accidental damage caused by vaccination as part of the legal basis for a vaccination campaign. A proposal was made accordingly.

The Commission disagreed with a Member comment about adding references to vaccine delivery and storage facilities, as it was already included in point a).

The Commission disagreed with a Member request to mention the functionality of the animal identification system when defining the frequency, timing and duration of the vaccination campaigns. The Commission considered that, although desirable, this should not be considered as a prerequisite for a vaccination campaign.

Article 4.X.8. Logistics of vaccination

The Commission considered the proposal from a Member to add further clarification about the use of the word "containers". The Commission proposed to delete the word "containers", since it might be unclear, and only to make reference to "unused vaccine".

The Commission disagreed with a Member proposal to consider the health status of animals when implementing a vaccination campaign, since it might not be feasible. However, it was noted that ensuring the safety and welfare of vaccination teams remains an important consideration for the logistics of the vaccination.

Article 4.X.9. Evaluation and monitoring of a vaccination programme

The Commission disagreed with a Member opinion that monitoring and evaluation should only be considered when implementing systematic vaccination. The Commission emphasised that monitoring and evaluation should also be part of an emergency vaccination strategy.

The Commission disagreed with the Member proposal to refer to "adverse reactions" instead of "side effects". The Commission noted that side effects of the vaccine were considered in Article 4.X.6 point 2c). It was made clear that side effects were broader than only adverse reactions as it also included the transmission of live vaccine strains or reversion of attenuated strains to virulent.

The Commission noted that limiting the impact of the disease encompassed the reduction of clinical signs and disagreed with a Member comment on this regard.

Article 4.X.11. Impact on disease status and management of vaccinated animals

The Commission agreed with a Member comment on the need to provide evidence of absence of cases through documented surveillance. The Commission considered that this requirement was already included in the *Terrestrial Code* Chapter 1.4. and, therefore, it was not necessary to amend the text.

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Annex 5

Rationale for the amendments to:

Chapter 4.Y. ON MANAGEMENT OF OUTBREAKS OF LISTED DISEASES provided by the Scientific Commission for Animal Disease

Article 4.Y.5. General considerations when managing an outbreak

The Commission agreed with a Member comment to include the restriction on movement of people as a measure to minimise the spread of infection.

Article 4.Y.6. Culling and disposal

The Commission agreed with a Member comment on the fact that animals might not always be the greatest source of pathogenic agents. The Commission amended the text accordingly.

The Commission agreed with a Member on the importance of environmental contamination in the spread of infection. However, the Commission noted that this concept was already covered in Article 4.X.8. and proposed not to amend the text.

With regard to the test and culling strategy, the Commission agreed with some Member comments about the need to tailor this strategy to the epidemiology of the disease. It stressed the importance of the sensitivity and specificity of the diagnostic test to correctly implement this strategy. The Commission agreed with the introduction of this concept in the draft chapter but suggested making reference to the characteristic of the test in the introductory article, as it would apply not only to the test and culling strategy but to other strategies as well.

Rationale for the amendments to:

Chapter 8.8. INFECTION WITH FOOT AND MOUTH DISEASE VIRUS
provided by the Scientific Commission for Animal Diseases

Article 8.8.1.

The Commission did not agree with a Member proposal to add the duration of carrier state of all susceptible animals. The Commission reiterated that, for the purpose of the *Terrestrial Code*, the key information was that the only persistently infected species from which transmission of FMDV has been proven is the African buffalo. In response to another Member comment, the Commission provided peer-reviewed publication[1] indicating that FMDV transmission from African buffalo to domestic ruminants was rare and alerted Members that the rare FMDV transmission from African buffalo have led to more publications than the more frequent situations where transmission have not occurred.

The Commission reiterated that FMDV may persist in the pharynx and associated lymph nodes of ruminants for a variable but limited period of time beyond 28 days after infection. The Commission insisted that the carrier status was not lifelong and that, as such, should be considered as limited in time. The Commission also made note that the carrier state does not last much longer than 28 days in the majority of cases.

Article 8.8.2. Country or zone free from FMD where vaccination is not practised

With regard to Members comments related to the provisions for maintenance of FMD free status in the case of an incursion of potentially infected African buffaloes, the Commission stated that these provisions should not be considered as a procedure only but as critical requirements that countries should comply with in order to maintain their officially recognised FMD free status. As such, they should not be moved to Chapter 1.6. but should be part of the FMD Chapter.

The Commission reiterated that the presence of stray African buffalo should not lead to the suspension of an officially recognised FMD free status (except in case of FMDV transmission to the domestic cattle). The current concept of containment zone may not be applicable in this scenario. However, the Commission discussed and proposed a modification of the current concept of the application of the containment zone to accommodate the management of a disease threat (**cf section 3.1.b; Article 4.3.7.**).

In response to a Member comment on the protection zone to be used to preserve the status of a free country or zone from a newly identified likelihood of introduction of FMDV, the Commission discussed to accommodate the request under the concept of the protection zone. After thorough discussion, the Commission concluded it would be more appropriate to adapt and expand the current concept for the application of a containment zone (**cf Section 3.1.b on Article 4.3.7.**).

With regard to the paragraph related to vaccination in zoological collections, the Commission discussed the two following situations: domestic animals being part of the collection or domestic animals staying outside but close to the zoos. The Commission insisted that the zoological collection should be effectively separated from domestic animals. In addition, the Commission considered that surveillance for 12 months should be sufficient for detecting potential carriers. If by the end of the 12-month period the buffalo is proven not to be a carrier, it will not become a carrier at a later stage due to an infection that had occurred prior to the 12-month observation period .The Commission therefore disagreed that surveillance should be carried out for six years as proposed by a Member.

With regard to a Member proposal to relocate the provision on countries or zones wishing to change its status free from FMD where vaccination *is not* practised to a country or zone free from FMD where vaccination *is* practised, the Commission discussed the pros and cons of both options and concluded to leave the provision under Article 8.8.3., but proposed to the Code Commission to number all paragraphs under articles 8.8.2. and 8.8.3. to facilitate referencing.

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[1] Vosloo W. and Thomson Gavin, Natural habitats in which FMD viruses are maintained. Chapter 14, Foot and Mouth Disease Current Perspectives. Edited by Esteban Domingo and Francisco Sobrino CRC Press 2004, Pages 384–410, Print ISBN: 978-0-8493-2951-7, eBook ISBN: 978-1-4200-3796-8

Article 8.8.3. Country or zone free from FMD where vaccination is practised

The Commission agreed with a Member and clarified that the overall objective of the surveillance conducted in a country or zone to declare freedom from FMD with vaccination would be to demonstrate absence of transmission of FMDV during the past 12 months and absence of clinical cases of FMD during the past two years. Furthermore, the Commission amended the time requirements for each provision under Point 3 of the article accordingly. With regard to the points related to vaccination, the time requirement to supply documented evidence was maintained as 12 months. For the regulatory measures for the prevention and early detection of FMD, documented evidence should be provided for the past two years, also in accordance with Point 2 where the country should demonstrate that there has been no clinical case of FMD during the past two years.

In response to a Member comment, the Commission reiterated that based on the epidemiology of FMD in the country, it may be decided to vaccinate only a defined subpopulation (third paragraph of Article 8.8.3.).

The Commission explained that in case of emergency vaccination in response to a FMD threat, the amended concept of a containment zone should be applied (**cf Section 3.1.b. on Article 4.3.7.**), but that countries or zones wishing to change the officially recognised status from free without vaccination to the status free with vaccination should follow the requirements under 8.8.3. Upon official recognition of the status free from FMD where vaccination is practised, if a country fails to provide evidence within six months that it complies with Article 8.8.3., the Commission clarified that the status would be withdrawn and not reverted back to the previous status free from FMD where vaccination is not practised.

The Commission took into consideration Member editorial comments to improve the provisions for a country or zone free from FMD where vaccination is not practised wishing to change its status to a country or zone free from FMD where vaccination is practised.

Articles 8.8.4. and 8.8.4bis. Compartment free from FMD (without and with vaccination)

The Commission reiterated that prior to the adoption of the draft article 8.8.4bis on compartment free from FMD where vaccination is practised, the articles providing recommendations on importation from countries or zones free from FMD with vaccination should include the compartments free from FMD with vaccination, and that those for importation from countries or zones free from FMD without vaccination should specify from compartments free from FMD without vaccination.

With regard to Member comments raising the possible presence of wildlife in the vicinity of the compartment, the Commission underlined that one of the critical elements of risk mitigation is to ensure that FMDV incursion does not occur, which implies that adapted biosecurity measures are maintained and adequate surveillance is in place to detect if incursion has occurred.

The Commission mentioned that establishing a compartment free from FMD with vaccination in a country or zone with the same status was a practise used by countries to ensure the continuity of trade from the compartment via bilateral trade agreements, in case of an outbreak in the country or zone. Indeed, compartments should have additional biosecurity measures to ensure its safety and integrity, and are established for the purpose of bilateral trade. The Commission underlined that a compartment free from FMD where vaccination is practised cannot be established in a country or zone free from FMD where vaccination is not practised. A country wishing to do so should instead follow a zoning approach.

Regarding Member comments about the difference in the time period requirement of 12 months versus 2 years (for country or zone free from FMD where vaccination is practised), the Commission made note that 12 months should be sufficient for a compartment, as additional biosecurity and risk mitigation measures are required.

The Commission reiterated its position of keeping 8.8.4bis. given that stricter provisions for surveillance and biosecurity measures would be in place to ensure early detection of infection and absence of undetected infection. The establishment of such compartments would support bilateral trade agreements and allow access to regional/international markets.

Article 8.8.6. Establishment of a containment zone within a country or zone free from FMD

Considering the proposed expanded concept of a containment zone to manage a disease threat elaborated under Article 4.3.7., the Commission amended Article 8.8.6. deleting the points repeating the provisions of article 4.3.7. and adding FMD-specific requirements to accommodate the expanded concept of a containment zone.

Article 8.8.7. Recovery of free status

The Commission mentioned that the reduction of the recovery period was extensively discussed and explained in previous *ad hoc* Group and Commission reports, and reiterated that the recovery period could be reduced to three months following the provisions under Point 1c) of Article 8.8.7. The Commission also made reference to an *ad hoc* Group that met in June 2017 and that was dedicated to discuss the alternatives for surveillance for demonstration of freedom from FMD in order to further explore the possibilities to reduce the recovery periods after an outbreak (**cf Section 4.1.b)**. The Commission concluded that the revision of the requirements for recovery of free status will be finalised once these possibilities have been extensively explored.

Article 8.8.11. Importation from FMD free countries or zone with vaccination

With regard to a Member concern on the unreliability of a single virological test and NSP serological test at the level of an individual animal, the Commission agreed and explained that this was the reason why **both** virological **and** serological tests were required in Points 3 and 4.

Considering that the animals are required to be kept since birth or for at least the past three months in a country, zone or compartment free from FMD where vaccination is practised and 14 days is a reasonable time to obtain results after sampling prior to shipment, the Commission addressed a Member comment by providing the timing of the tests to be performed in Points 3 and 4.

Articles 8.8.13. and 8.8.14. Importation from FMD countries or zones without vaccination

In response to a Member comment, the Commission agreed to merge the two articles on provisions for fresh and frozen semen allowing the possibility for the use of frozen semen earlier than 30 days if the animals were kept under the same conditions as for fresh semen.

Article 8.8.22. Recommendations for importation from countries or zones infected with FMDV, where an official control programme exists

The Commission confirmed that the drop of pH in the carcass of pigs is not sufficient to inactive the virus (S. Farez & R.S. Morley (1997)[2], G. MONIN (2003)[3] and this was the reason why draft article 8.8.22bis. was introduced.

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[2] Farez S., Morely R.S. (1997). Potential animal health hazards of pork and pork products. *Rev. sci. tech. Off. int. Epiz.*, **16** (1) 65-78.

[3] Moning G. (2003). Abattage des porcs et qualités des carcasses et des viandes. *INRA Prod. Anim.*, **16** (4), 251-262

Rationale for the amendments to:

Article 8.16.2. INFECTION WITH RINDERPEST VIRUS
provided by the Scientific Commission for Animal Disease

Point 1)

The Commission agreed with a Member comment that pointed out that the term "pathological material", as defined in the Glossary of the *Terrestrial Code*, included "tissue and sera", and therefore it was not necessary to specify in this article.

In response to a Member comment, the Commission agreed to clarify the term "diagnostic material [...] encoding live virus". After consultation with an external expert, it was decided not to use the word "encoding" but to refer to "Diagnostic material containing live virus".

Regarding the deletion of the wording "full length genomic material including virus RNA and cDNA copies of virus RNA", proposed by a Member, the Commission highlighted the fact that technology is advancing rapidly and that may have an impact on the efforts for sequestration and destruction of rinderpest virus. The Commission reiterated its position expressed in February 2017 and decided that any rinderpest virus genomic material may pose a risk and, therefore, should be maintained within the definition of rinderpest virus-containing material provided in this chapter.

The Commission disagreed on the proposal from a Member to add the word "specimen", since the notion of specimen is already included in the definition of diagnostic material.

Point 2)

The Commission concurred with the fact that plasmids were not recombinant viruses, and that the use of the word "other" might be misleading. Hence, the word "others" was removed.

The Commission agreed that temperatures higher than 56°C would also inactivate sera.

Point 3)

The Commission confirmed that any sequence of rinderpest virus should be considered as a component of rinderpest virus, even in the case of a recombinant rinderpest sequence. The purpose of this provision was to implement a total ban of any form of vaccination against rinderpest. The Commission noted the definition of "vaccine" in the *Terrestrial Manual* glossary and made a proposal accordingly.

Annex 8

Rationale for the amendments to:

Chapter 15.2. Infection with classical swine fever virus
provided by the Scientific Commission for Animal Diseases

Article 15.2.3. Country or zone free from CSF

The Commission took note of a Member comment on the validated method to differentiate between infected from vaccinated pigs. The Commission was aware of the ongoing work on the *Terrestrial Manual* Chapter on CSF and agreed to consult the Biological Standards Commission on the timing for the adoption of the Chapters in parallel.

With regard to a Member comment on the incubation period, the Commission clarified that the incubation period is 14 days whereas the infective period (where in the case of chronic infection) could last for up to 3 months.

Article 15.2.4. Compartment free from CSF

The Commission did not support a proposal of opening the possibility of a CSF free compartment for wild and feral pigs. By definition wild and feral pigs cannot be managed in a compartment, they would be captive wild or domestic. For the purpose of the chapter, as well as to be compatible with Chapter 15.1. on African swine fever, the distinction is made between domestic and captive wild pigs and wild and feral pigs. In terms of declaring freedom from CSF, the chapter considers only domestic pigs and captive wild pigs. It would also be very unlikely to have CSF in the domestic and captive wild pigs, and freedom from CSF only in wild and feral pigs. The Commission reported the discussion on whether the Code should describe provisions for two distinct CSF free status: CSF freedom in domestic and captive wild pigs and CSF freedom in all pigs (domestic, captive wild, wild and feral pigs) to its next meeting in February 2018.

Article 15.2.6. Recovery of free status

The Commission concurred with a Member that the terminology should be harmonised with Article 8.8.7. (recovery of FMD free status) as it improves clarity on the timing. The Commission noted that this clarification should be applied to other chapters where relevant.

In response to another Member comment, the Commission considered that the proposed risk mitigation measure was not sufficient to move live animals from an infected area to a free area.

Articles 15.2.9. and 15.2.15.

In response the Members proposals and comments on the recommendations for importation of wild and feral pigs and their fresh meat, the Commission decided to delete these articles. Such importations would not be covered by the *Terrestrial Code*, but should be agreed between countries on a bilateral basis (cf report of the ASF *ad hoc* Group meeting, April 2014). This harmonised approach was in accordance with the ASF Chapter that was adopted at the 85th General Session in May 2017.

Article 15.2.31. Surveillance for CSFV in wild and feral pigs

The Commission agreed with Members comments to include hunted pigs as part of the serological and virological testing for surveillance for CSFV in wild and feral pigs.

Rationale for the amendments to:

Chapter 12.10 INFECTION WITH *BURKHOLDERIA MALLEI* (GLANDERS)
provided by the Scientific Commission for Animal Diseases

Article 12.10.1. General provisions

The Commission concurred with a Member suggestion to include goats among the list of susceptible animals for the purpose of the *Terrestrial Code* and to indicate that the infection in human was a rare event but might be fatal.

Article 12.10.2. Country or zone free from infection with *B. mallei*

The Commission took note of a Member request to include a minimum period for which the disease should be notifiable. For consistency with other *Terrestrial Code* chapters, it was decided not to include references to a minimum time for notification.

The Commission discussed the minimum period that a country needs to demonstrate no evidence of infection with *B. mallei* to be considered free. For the purpose of the *Terrestrial Code*, glanders has an incubation period of 6 months. For consistency with other *Terrestrial Code* chapters, the Commission agreed with some Members to require 12 months (two incubation periods) before a country could self-declare free from infection with *B. mallei*.

The Commission disagreed with a Member comment about deleting the references to the conditions for the importation of germplasm as a requirement for freedom, since it is not considered a safe commodity.

Article 12.10.3. Recovery of free status

The Commission disagreed with a Member proposal to replace the term “standstill” with the term “prohibition” as standstill is a common terminology used throughout the *Terrestrial Code*.

The Commission agreed with a Member to require at least 12 months of surveillance to demonstrate absence of infection. This would also be consistent with the requirements of Article 12.10.2. The Commission also agreed to delete the word “increased" referred to surveillance.

Article 12.10.4. Recommendations for importation of equids from countries or zones free from infection with *B. mallei*

The Commission took into account that the period for seroconversion for the detection of antibodies against *B. mallei* ranges from 7 to 21 days, and agreed on the proposal from some Members to indicate that the test should be conducted after being kept for at least 30 days in the free country.

Article 12.10.5. Recommendations for importation of equids from countries or zones considered not free from infection with *B. mallei*.

Taking into consideration the period of seroconversion, the Commission agreed on a proposal from a Member to request two paired samples for testing, collected 21 to 30 days apart.

Article 12.10.6. Recommendations for the importation of equine semen

There were contradicting Member comments concerning the need to strengthen requirements for semen testing and clinical examination. The OIE experts confirmed that, while semen may be safe, the risk of contamination during the collection process would be very high if the donor animal was infected[1]. The Commission agreed on a proposal from a Member to strengthen the requirements for establishing freedom of the donor stallion from inapparent infection. The article was amended considering that donors from an infected country should satisfy the same requirements as for Article 12.10.5.

The same rationale was proposed for the Article 12.10.7. Recommendations for the importation of *in vivo* derived equine embryos.

Article 12.10.8. General Principles of surveillance

The Commission agreed with Member comments to replace the word "susceptible population" with "equids", considering that for the purpose of the *Terrestrial Code*, a case is defined as *B. mallei* infection in equids. Thus, the surveillance programme should primarily target these animals.

The Commission disagreed with a Member comment to remove the requirement of linking with OIE Reference Laboratory for the confirmation of the diagnosis. Considering that around 1% of the serological tests may show inconclusive results, in the majority of the occasions, a confirmation by a Reference Laboratory may be required. The Commission agreed that animal identification and registration were desirable but they should not be a requirement.

The Commission agreed on a Member proposal to clarify that the documentation of the details of suspected cases should also include control measures, such as destruction of infected animals and disinfection of affected premises.

The Commission disagreed with a Member comment to add further clarification about the definition of high-risk groups, as it was already defined in the text.

Article 12.10.9. Surveillance strategies

The Commission agreed with a Member comment to use the term "herd" instead of "epidemiological unit" throughout the chapter.

The Commission agreed with a Member comment to specify that the positivity is referring to serology. The text was amended accordingly.

The Commission agreed with a Member comment that it was not necessary to refer to bacteriological surveillance in point 2 as the section covers the testing of dead equids.

The Commission agreed with a Member comment to delete the words "to reach an acceptable level of confidence" as they did not clarify the requirement. The Commission also noted that identification and registration were already addressed in horizontal chapters of the *Terrestrial Code*, therefore, the addition was considered not necessary.

The Commission agreed with a Member on the fact that malleinisation had a low sensitivity (Naureen *et al.*, 2007) and may interfere with the results of other tests (such as CFT) (Hagebock *et al.*, 1993; Niranjan *et al.*, 2014). The text was amended to address this shortcoming and to make references to the welfare implication of the test.

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[1] Khan *et al.* (2012). Glanders in Animals: A review on epidemiology, clinical presentation, diagnosis, and countermeasures. *Transboundary and Emerging Disease*, **60** (3): 204-220

Rationale for the amendments to:

Chapter 8.3. INFECTION WITH BLUETONGUE VIRUS
provided by the Scientific Commission for Animal Diseases

Article 8.3.1. General provisions

The Commission discussed a Member proposal to limit the case definition of point 3 to only "virulent revertant or reassortant BTV live vaccine strain". The Commission disagreed on the proposal since the demonstration of transmission of a virus from vaccinated animals should be considered by itself as a factor of virulence. The presence of a virus in an unvaccinated animal should be considered an infection, whether or not the virus reverted to virulence or reassorted.

Article 8.3.6. Recommendations for importation from countries or zones free from bluetongue

With regard to a minimum residency period, the Commission took note of an inconsistency between this article and Article 8.3.7. and 8.3.8. The Commission decided that a minimum of 7 days residency period was needed to mitigate the risk that may occur in case of rapid transit of animals between countries. This period would also leave sufficient time to verify the import certification, to conduct an appropriate inspection, and to issue export certification. The Commission clarified that the vaccination should be against all the serotypes present in the population of the exporting country and, if relevant, in the source population as they may be different (i.e. transit animals). The provisions of point 5 were re-ordered to follow chronological order.

Similar modifications were done in Articles 8.3.7., and 8.3.8.

Article 8.3.7. Recommendations for importation from zones seasonally free from bluetongue

The Commission clarified that the vaccination should be implemented according the manufacturer instructions. The Commission disagreed with a Member comment about replacing the requirement of vaccination with the vaccination course.

The Commission harmonised point 5 with the provisions of Article 8.3.6. and 8.3.8.

Article 8.3.8. Recommendations for importation from countries or zones infected with BTV

The Commission acknowledged the comment from one Member and amended both point 5 and point 6 to be harmonised with the requirements of Article 8.3.6. and 8.3.7.

The Commission noted a Member comment that suggested requiring a protective level of antibodies as an indication of effective immunity against bluetongue virus is desirable. The Commission was not aware of any scientific evidence of a validated method to define what a protective level of antibodies would be for bluetongue.

Article 8.3.9. Recommendations for importation from countries or zones free or zones seasonally free from bluetongue

The Commission agreed on the proposal of a Member to add an option for a vaccinated donor in the next revision of the chapter. This provision should also be considered for Article 8.3.10 and 8.3.11 and 8.3.12

Article 8.3.12. Recommendations for importation from countries or zones infected with BTV

The Commission agreed on the proposal of a Member to add a provision for importation of *in vivo* derived embryos from a vaccinated donor. Nevertheless, if applied to a vaccinated donor, former point d) of this article may apply.

Article 8.3.16. Surveillance strategies

The Commission disagreed with a Member proposal to require all of the 5 strategies described in the article for surveillance. It would be up to the Member to decide the most adequate strategy based on the epidemiological circumstances.

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Rationale for the amendments to:

QUESTIONNAIRES ON OFFICIAL STATUS RECOGNITION AND ENDORSEMENT OF CONTROL PROGRAMMES - CHAPTER 1.6. provided by the Scientific Commission for Animal Diseases

General considerations applying to several questionnaires for disease status and for the three questionnaires for official control programme

The Commission amended the introduction to emphasise that for the official recognition of disease freedom based on historical basis, documented evidence demonstrating compliance with the provision of point 1 of Article 1.4.6. of the *Terrestrial Code* should be provided by applicant countries.

2. Veterinary System

The Commission reiterated that the performance of the country's veterinary services is a keystone for achieving and maintaining a disease free status or for successfully implementing a national disease control programme. The Commission therefore pointed out that the OIE Performance of Veterinary Services (PVS) evaluation reports, while not compulsory, could support the evaluation of applications for official recognition of disease free status and for the endorsement of national control programmes by further documenting compliance with relevant horizontal chapters, in particular Chapters 3.1 and 3.2.

The Commission agreed with a Member comment that measures to prevent disease introduction are critical for achieving and maintaining a free status, especially when the proposed free country or zone borders an infected country or zone; the implementation of such measures should be supervised, enforced and monitored. The Commission proposed that for the requirements for supervision, enforcement and monitoring be extended to all activities related to the specific disease and accommodated the comment under Point 2 "Veterinary System" of the questionnaires.

4. [disease] diagnosis

In response to a Member comment on laboratory diagnosis, the Commission advised that oversight was included in the comprehensive quality management systems.

5. [disease] Surveillance

The Commission concurred with a Member regarding the importance of proper oversight of surveillance programmes by the Veterinary Services.

The Commission disagreed with a Member proposal that applicant countries should provide details on the qualifications of the personnel involved in FMD surveillance as it is not the mandate of the OIE to evaluate the qualifications of veterinarians or other personnel at an individual level. However, this would be considered in a broader sense when assessing Section 2. on Veterinary Systems, as well as, when relevant, in the PVS evaluation reports in support of the evaluation of applications.

6. [disease] Prevention

The Commission agreed with a Member that management of detected non-compliant animals and products should be established and documented when applying for official status or endorsement of control programmes.

With regard to the proposal from a Member for the qualifications and training of the personnel responsible for signing certificates to be documented, the Commission advised that this is under the responsibility of the Veterinary Services and was covered by horizontal chapters in the *Terrestrial Code*.

The Commission clarified that veterinary medicinal product was defined in the Glossary of the *Terrestrial Code* and proposed to delete from all questionnaires the examples that are provided inconsistently (i.e. biologics, vaccines).

Article 1.6.5. Questionnaire on bovine spongiform encephalopathy

In general, while noting that Chapter 11.4. on BSE is scheduled to undergo a comprehensive review and update, the Commission acknowledged that the questionnaires needed updating according to the current requirements to clarify and better guide the Members in preparing their applications for official recognition of BSE risk status.

With regard to a Member comment that the BSE questionnaire should be included in Chapter 11.4. of the *Terrestrial Code*, the Commission stressed that, as for other diseases, the questionnaire provides structured guidance for applicant countries to compile all necessary documented evidence to substantiate compliance with the requirements for official recognition of a free status or risk status. Questionnaires are not international standards per se, but complement the disease specific chapters to further support Members in their applications. The Commission therefore concluded that the questionnaires should not be included in disease-specific chapters, but should be maintained in Section 1 of the *Terrestrial Code*.

Regarding BSE compartments, the Commission acknowledged that provisions for establishing compartments with a controlled or negligible BSE risk status were included in Chapter 11.4. on BSE but may not be feasible in practice. The Commission noted that this would be further considered by the *ad hoc* Group responsible for revising Chapter 11.4. of the *Terrestrial Code*.

With regard to a Member proposal to provide information on the breed, number and age of imports, and slaughter age, the Commission noted that such data was not necessary for assessing the risk of entry of the BSE agent; in addition, the collection of such detailed data may not be practical. Therefore the Commission did not support the inclusion of such an additional request in the questionnaire.

The Commission noted the Member comment that dismissal of risk from meat-and-bone meal or greaves of ruminant origin beyond eight years would be irrational considering that there had been classical BSE cases beyond this time frame. This comment was duly noted to be taken into consideration during the future revision of Chapter 11.4. of the *Terrestrial Code*.

The Commission did not support a Member comment that the results of the investigations be provided only for clinical suspects under Section 3 on BSE surveillance and monitoring systems. In accordance with he current Chapter 11.4., BSE surveillance should not be limited to clinical suspects, which represents one of the four surveillance streams.

In response to a request to ask for the year of birth of all BSE cases, the Commission mentioned that the most recent year of birth of the classical BSE cases would be sufficient for assessing the BSE risk status.

The Commission reminded that progeny of BSE cases were not considered as presenting a risk, and requirements toward them were removed from Chapter 11.4. of the *Terrestrial Code*. The questionnaire was aligned accordingly.

Article 1.6.8. Questionnaires on African horse sickness (AHS)

In order to provide further guidance to applicant countries, the equine sectors for which demographics should be described were listed. In addition, for clarity and consistency through the questionnaire, the wording “equine productions systems” was replaced by “equine sectors” in various sections of the questionnaire.

Article 1.6.10. Questionnaire on classical swine fever (CSF)

The Commission reiterated that the captive wild pig industry was clearly of relevance for CSF free status in accordance with Chapter 15.2. of the *Terrestrial Code*.

Considering that it is not possible to differentiate swill containing animal products and swill not containing such products, feeding of all swill should be regulated to prevent CSF [also relevant for Articles 1.6.6. and 1.6.11.]

Article 1.6.11. Questionnaire on endorsement of official control programme for FMD

The Commission noted that according to Point 6.b.iv) of Article 8.8.39. of the *Terrestrial Code*, the use of a vaccine compliant with the *Terrestrial Manual* was not mandatory for the endorsement of a FMD control programme. However, information should be provided on the vaccine used and the envisioned timeline for the use of a vaccine compliant with the *Terrestrial Manual.*

Annex 12

Original: English
February 2017

REPORT OF THE OIE *AD HOC* GROUP ON THEILERIOSIS

Paris, 8-10 February 2017

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A meeting of the OIE *ad hoc* Group on theileriosis (hereafter referred to as the Group) was held at the OIE Headquarters in Paris from 8 to 10 February 2017.

1. Welcome, adoption of the agenda, appointment of chairperson and rapporteur

Dr Monique Eloit, Director General of the OIE, welcomed the Group. She stated that the Group's technical expertise would allow the OIE Specialist Commissions to propose to the OIE Member Countries an update of the *Terrestrial Animal Health Code* (*Terrestrial Code*) chapter on theileriosis.

Dr Eloit introduced Dr Gideon Brückner, President of the Scientific Commission for Animal Disease (hereafter the Scientific Commission), and Dr Stuart MacDiarmid, Vice-President of the Terrestrial Animal Health Standards Commission (hereafter the Code Commission), representing their respective commissions.

Dr Eloit thanked the experts for presenting the current global theileriosis situation to OIE technical staff. She indicated that it was the OIE's desire to offer continuous professional development to its staff to better understand the epidemiology and the context of relevant diseases or other topics of interest to OIE Member Countries.

Dr Gregorio Torres, Chargé de mission of the Sciences and New Technologies Department, reminded the experts that they had been selected based on their scientific expertise and that they were not representing their own countries or institutions. Prior to the meeting all experts signed a confidentiality agreement and a declaration of interests. Dr Torres emphasised that the discussions captured in the report would be attributed to the Group and not to the individual expert.

The representatives of the Specialist Commissions reminded the Group that the purpose of the *Terrestrial Code* was to set out standards for the improvement of terrestrial animal health and welfare and for safe international trade in terrestrial animals and their products. The amendments in the current chapter would be reviewed by the Specialist Commissions and then circulated for Member Countries' comments before being proposed for adoption by the World Assembly of OIE Delegates. The Group adopted the proposed agenda.

The meeting was chaired by Dr Frans Van Gool, and Dr Phil Toye acted as rapporteur with the support of the OIE Secretariat.

The Agenda and List of Participants are presented as Appendices I and II, respectively.

2. Update on the current theileriosis situation in the world, including emerging *Theileria* spp. and disease control tools

The experts from South Africa, Kenya, and Italy and the Vice-President of the Code Commission provided updated information on the current global theileriosis situation. The experts discussed the situation, including epidemiology and impact, with special consideration to emerging *Theileria* spp., and on the occurrence of *Theileria orientalis* in Autralasia. Diagnostic methods and available measures of control were also considered.

3. Update *Terrestrial Code* Chapter 11.12 theileriosis

Article 11.12.1. General provisions

The Group discussed the need to expand the range of host species covered in the Chapter. The possibility of adding *Theileria* species that infect horses (*T. equi*) was discussed. Nevertheless, *T. equi* is already covered by another *Terrestrial Code* Chapter (12.7 – Equine Piroplasmosis). Since several differences in measures of control, epidemiology and trade implications exist, there was agreement that *T. equi* should be excluded from Chapter 11.12. The Group finally agreed that small ruminant theileriosis should be covered by this same chapter, since the provisions for bovine and small ruminant theileriosis would be mostly equivalent.

The Group reviewed the list of susceptible species and acknowledged that, while camels and some wild ruminants could be infected with *Theileria* spp., they are currently not considered to play a significant role in the epidemiology of the disease as related to trade. Thus, the Group decided to include only cattle, water buffalo, sheep and goats in the case definition. The title of the chapter was amended accordingly.

The Group reviewed whether any newly emerged or identified pathogenic strains or species of *Theileria* should be included in the case definition, and made reference to the listing criteria in the *Terrestrial Code* Chapter 1.2. The Group agreed that, for cattle and water buffaloes, *T. annulata*, *T. parva*, and some strains of *T. orientalis* satisfy the criteria 1, 2, 3 and 4b of Chapter 1.2. of the *Terrestrial Code*. The Group agreed that different strains exist for *Theileria* spp. Nonetheless, for *T. orientalis*, only *T. orientalis* Ikeda and *T. orientalis* Chitose strains match the listing criteria stated.

For small ruminants, it was agreed that only *T. lestoquardi*, *T. luwenshuni*, and *T. uilenbergi* satisfy the listing criteria 1, 2, 3 and 4b of Chapter 1.2. of the *Terrestrial Code*.

The Group emphasised that theileriosis should be considered as a tick-borne disease, while acknowledging that mechanical transmission may occur in the case of *T. orientalis*[1].

The Group noted that the incubation period for theileriosis could vary depending on factors such as *Theileria* species, host species, infective dose, and immunological status and usually range between 8 and 25 days[2] [3] but longer incubation periods were also described. The Group decided that, for the purpose of the *Terrestrial Code*, 35 days' incubation period should apply.

When identifying or confirming cases of theileriosis, the Group considered that results from a single assay type would not be sufficient, and thus epidemiological context should always be considered.

Article 11.12.2. Safe commodities

The Group discussed whether or not skins, hides, wool and fibre from an infected animal presents a risk when imported into a free country. These, if untreated, could still contain infected ticks. Thus, skins, hides, wool, and fibre should not be considered as safe commodities and dedicated articles were drafted accordingly.

The Group agreed to add the following to the list of safe commodities: meat, casings, milk and milk products, gelatine and collagen, bone, tallow, semen and embryos, hooves and horns.

Article 11.12.3. and 11.12.4. Country or zone free from theileriosis in cattle, water buffalo and in sheep and goats

The Group discussed the possibility of according free status to a country or zone depending on the affected species. The Group agreed that free status could be recognised separately for cattle and water buffalo theileriosis and for sheep and goat theileriosis.

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1 Hammer J.F., Jenkins C., Bogema D. & Emery D. (2016) Mechanical transfer of *Theileria orientalis*: possible roles of biting arthropods, colostrum and husbandry practices in disease transmission. *Parasites & Vectors*, **9**(1): 34.

2 Jenkins C. & Bogema D.R. (2016) Factors associated with seroconversion to the major piroplasm surface protein of the bovine haemoparasite *Theileria orientalis*. Parasites & Vectors, **9**:106

3 Jarrett W.F.H., Crighton, G.W. and Pirie H.M. (1969). *Theileria parva*: Kinetics of Replication. *Experimental Parasitology*, **24**, 9-15.

The Group agreed that free status should not be limited to a country and that the epidemiology of the disease allows free zones within countries to be established.

The Group agreed on the possibility of countries or zones to be recognised as historically free from theileriosis, and that Article 1.4.6. would apply.

The Group noted that ticks do not survive more than two years. This waiting period would be sufficient to declare a country free from theileriosis.

The Group emphasised that, in case ticks are not present in a country or zone, the introduction of an infected, test positive or vaccinated animal would not imply losing the free status.

In contrast to what is needed for other diseases transmitted by vectors that could travel over long distances (e.g. culicoides), the Group agreed that no special provisions for surveillance zones would be necessary.

The Group discussed the possibility of drafting a specific article on recovery of free status, and agreed that the implementation of eradication measures (such as stamping out) were not practical. The Group decided not to draft specific provisions for recovery of the free status.

Article 11.12.6. Recommendations for importation from countries or zones not free from theileriosis

The Group recognised that, since carrier status is common in vaccinated animals, these could still pose a risk of disease transmission. Vaccination was not considered as an appropriate risk mitigation measure for international trade.

The Group reached general agreement that importations of animals from non-free countries are safe provided that animals are isolated in *Theileria*-free establishment for a period at least equal to the incubation time, and that appropriate acaricide treatment is undertaken to ensure that no ticks are carried into the establishment and that ticks are not present on the animals at shipment. It was agreed that three days is the minimum time of protection of registered acaricides.

The Group discussed the feasibility of ensuring the absence of ticks in an establishment, and agreed that it would not be possible to ensure it. For this reason, it was decided to limit the requirements to the absence of the disease in the establishment for the previous two years and during the isolation period.

While acknowledging the limitations, in terms of sensitivity and specificity, of the diagnostic tests recommended in the *Terrestrial Manual*, the Group recommended that all animals should be tested with both serological and agent detection tests when importing animals from infected countries.

The Group agreed on the need for both an antibody and agent detection tests, since not all carriers show antibodies and not all infections result in carrier status.

The Group proposed that, to ensure that already infected animals are not introduced into the establishment, a serological test and an agent detection test would be needed at the time of entering the establishment.

The Group noted that 28 days might be needed for seroconversion and for agent detection in blood[4]. To ensure that animals that entered the establishment in the prepatent period are identified, an antibody test and an agent detection test would be needed 5 days before shipment.

The Group discussed the possibility of considering special provisions for newborn animals with maternal antibodies, and agreed that no special provisions should be mentioned in this article.

[4] Katende J., Morzaria S., Toye P., Skilton R., Nene V., Nkonge C. & Musoke A. (1998) An enzyme-linked immunosorbent assay for detection of *Theileria parva* antibodies in cattle using a recombinant polymorphic immunodominant molecule. *Parasitol. Res.*, **84**: 408-41

Article 11.12.7. Recommendations for importation of skins and hides from cattle, water buffaloes, sheep, and goats from countries or zones not free from theileriosis

The Group discussed the mitigation measures that would ensure safe trade in skins and hides of cattle, buffaloes, sheep and goats. The Group agreed that, after death of the animal, the majority of ticks will leave the animals. However, the Group agreed that, if untreated, skins and hides could still contain infected ticks. General procedures, as normally applied in the processing of skins and hides, would be sufficient to ensure that no live ticks will be present on them, making trade safe. Other provisions, such as freezing these commodities at -20°C for at least 48h, would also ensure safe trade, and is currently applied for trophies by some Member Countries.

Article 11.12.8. Recommendations for importation of wool and fibre from sheep and goats from countries or zones not free from theileriosis

The Group discussed the mitigation measures that would ensure safe trade in wool and fibre from sheep and goats. The Group agreed that standard industrial procedures for treating wool (industrial washing and industrial scouring) would be adequate to ensure that no live ticks will be present in the wool and fibre. The storage of these commodities for periods of time at different temperatures, as it is applied for other diseases (e.g. FMD) was discussed but considered not sufficient. The exposure of wool and fibre to -20° for at least 48h, as it was proposed for skins and hides, was considered effective but not practical.

Article 11.12.9. Recommendations for importation of trophies derived from wildlife from countries or zones not free from theileriosis

The Group discussed the risk posed by the trade of trophies from susceptible wildlife species, and agreed that processing should be undertaken to ensure that no ticks are present on these commodities, as to ensure free trade.

Surveillance

The Group discussed whether there is a need for including specific provisions for surveillance, and agreed that there was no need for dedicated Articles, as the *Terrestrial Code* Chapter 1.4 *Animal health surveillance* and Chapter 1.5 *Surveillance for arthropod vectors of animal diseases* were sufficient.

4. Identify knowledge gaps and priorities on theileriosis

The Group identified potential aspects that can influence disease control and risk mitigation strategies. In particular, it was considered necessary to gain better understanding of:

- Diagnostic tests
    - Robust diagnostic specie-specific tests, in particular serological methods,
    - Encourage Member Countries laboratories to participate in proficiency test for diagnostics.
- Vaccines
    - Promote research for simple to produce and safer vaccines,
    - Developing transmission blocking vaccines, as developed for malaria or *Babesia*,
    - Vaccines which induce sterile immunity to minimise or eliminate the risk of vaccinated animals becoming carriers.
- Treatment (Chemotherapy)
    - Development of safer drugs for the treatment and prophylaxis of theileriosis, without creating carrier animals,
    - Development of safer acaricidal drugs,
    - Address the issue of resistance in both acaricides and treatment drugs.

- Gain better understanding of the epidemiology of *T. orientalis.*
- Gain better understanding of the epidemiology for small ruminants theileriosis.

The Group agreed on the need to update the Chapter 2.4.15. of the *Terrestrial Manual*, based on the previous discussion and on the fact that case definition for theileriosis now includes a larger number of Theileria or pathogenic Theileria species.

5. Any other issue

The Group shared the draft chapter and draft report with Prof Hong Yin (who was invited but could not attend), and considered his comments when drafting the amended chapter.

6. Finalisation and adoption of the draft report

The Group reviewed and finalised the draft report provided by the rapporteurs.

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…/Appendices

Appendix I

REPORT OF THE OIE *AD HOC* GROUP ON THEILERIOSIS

Paris, 8-10 February 2017

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Agenda

1. Adoption of the agenda, appointment of chairperson and rapporteur
2. Update on the current global situation of *Theileria* spp.
    - Current global situation. Epidemiology and impact, with special consideration to emerging *Theileria* spp.
    - The occurrence of *Theileria orientalis* in New Zealand
    - Diagnostic methods
    - Measures of control
3. Update of the *Terrestrial Animal Health Code* Chapter 11.12 on Theileriosisis
4. Identify knowledge gaps and priorities on theileriosis
5. Any other issue
6. Adoption of the report

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Appendix II

REPORT OF THE OIE *AD HOC* GROUP ON THEILERIOSIS

Paris, 8-10 February 2017

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Annex 13

Original: English
June 2017

MEETING OF THE OIE AD HOC GROUP ON
ALTERNATIVES FOR SURVEILLANCE FOR DEMONSTRATION OF FREEDOM
FROM FOOT AND MOUTH DISEASE (FMD) AND RECOVERY PERIODS

Paris, 14-16 June 2017

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A meeting of the OIE *ad hoc* Group on alternatives for surveillance for demonstration of freedom from foot and mouth disease (FMD) and recovery periods (hereafter the Group) was held at the OIE Headquarters from 14 to 16 June 2017.

1. Opening

On behalf of Dr Monique Eloit, Director General of the OIE, Dr Matthew Stone, the OIE Deputy Director General for International Standards and Science, welcomed and thanked the Group for its commitment and its extensive support towards the OIE in fulfilling the mandates given by Member Countries. He extended his appreciation to the institutions that kindly allowed the experts to participate in the meeting.

Dr Stone highlighted that the OIE 6th Strategic Plan underpinned the importance of maintaining scientific excellence as the foundation of the OIE international standards setting procedure to preserve international credibility. Furthermore, he mentioned the OIE's work strategy to attract and engage the relevant expertise from Member Countries and to increase the pool of renowned experts to be part of this important process.

Dr Stone reminded the experts that they had been selected based on their scientific expertise and thanked them for having signed the form for undertaking of confidentiality, as well as for having declared any potential conflict of interest. He mentioned that should any members of the Group feel a possible conflict of interest that could influence their opinion, they should state so and withdraw from discussions on that subject matter.

Dr Stone mentioned that Chapter 8.8. of the *Terrestrial Animal Health Code* (*Terrestrial Code*) on FMD is a complex chapter that has been subject to recent revisions and noted the challenges in establishing a simple methodology to demonstrate freedom from FMD through identifying and combining applicable alternative tools that would fit to all scenarios and that could allow flexibility in the post-outbreak recovery periods. He encouraged the experts to first focus on drafting surveillance requirements for the recovery of a previously recognised FMD free status and to explore the possibilities of a shorter waiting period for future incorporation in Chapter 8.8. as well as consider the implementation for other diseases and the relevance of inclusion of this approach in the horizontal chapter on Animal health surveillance (Chapter 1.4.).

Dr Laure Weber-Vintzel, Head of the Status Department, informed the Group that the OIE Status Department has started a project on the identification of associated factors related to the suspensions and recoveries of FMD- free status during the last 20 years since its first official recognition in 1996.This project would include an analysis of measures linked to the recovery periods in order to reveal any possible trends as well as to identify possible factors that could reduce the waiting periods. The analysis would be based on the information collected by the OIE World Animal Health Information System (WAHIS) through the immediate notifications of important epidemiological events submitted by Member Countries and on the information provided in Member Countries' dossiers when applying for the recovery of their suspended status.

The OIE and the Group welcomed Drs Katharina Stärk, Sarah Welby and Abdulnaci Bulut as new members participating in an OIE *ad hoc* Group for the first time.

2. Adoption of the agenda and appointment of chairperson and rapporteur

The Group was chaired by Dr Cristóbal Zepeda Sein. Dr Tom Smylie acted as rapporteur, with the support of the OIE Secretariat. The Group endorsed the proposed agenda.

The agenda and list of participants are attached as Appendices I and II, respectively.

3. Introduction, assumptions and general considerations

The Group first reviewed the terms of reference provided to the Group in order to establish its work programme and direction for this meeting. The Group agreed that:

- its discussion would focus on situations in which emergency vaccination is applied and the vaccinated animals are not removed from the population;
- its discussion would be based on the assumption that stamping out in accordance with Article 8.8.7. Point 1.c) of the *Terrestrial Code* and emergency vaccination using high potency vaccination in compliance with Chapter 2.1.8. Section C of the OIE *Manual of Diagnostic Tests and Vaccines for Terrestrial Animals (Terrestrial Manual)* are performed;
- even with the current recovery period (6 months), demonstrating the absence of infection in vaccinated populations as described in Article 8.8.7. Point 1.c) through census or sample surveys cannot be done with absolute certainty, due to the limitations of the available diagnostic tests;
- the objective of surveillance in vaccinated populations should be to demonstrate the absence of transmission of FMDV;
- evidence of freedom based on the demonstration of absence of infection in an unvaccinated population and demonstration of absence of transmission of FMDV in a vaccinated population is adequate to regain a FMD free status without vaccination;
- with the exception of African buffalo, carriers do not play an epidemiologically significant role in FMDV transmission (cf Article 8.8.1. Point 6 of the *Terrestrial Code*);
- in a well-managed emergency vaccination programme, the expected prevalence of vaccinated herds with carriers and the number of carriers within those herds is likely to be very low[1].

4. Review of the different surveillance system components

To explore alternatives for surveillance for demonstration of freedom from FMD after emergency vaccination, the Group discussed the definition and aim of different surveillance system components and considered the factors contributing to their sensitivity and specificity.

While the Group focused mostly on sensitivity as this is most pertinent to the demonstration of freedom, it was noted that specificity should also be considered, to estimate the occurrence of false-positive results for which appropriate follow-up should be performed. The review of each surveillance system component is summarised in **Table 1**.

[1] Arnold ME, Paton DJ, Ryan E, Cox SJ, Wilesmith JW. Modelling studies to estimate the prevalence of foot-and-mouth disease carriers after reactive vaccination. Proc. R. Soc. B, 2008; 275, 107–115. doi:10.1098/rspb.2007.1154

Table 1. Aim of the different surveillance system components:

Type of surveillance	**Definition**	**Objective**	**Contributing factors to sensitivity**	**Contributing factors to specificity**
Passive clinical	Reporting of clinical signs to the veterinary authority	Detection of clinical disease	Species, production systems, vaccination status of animals, awareness/compliance of producers, reporting system	Occurrence of other conditions with similar clinical signs
Enhanced passive clinical	Encouraging reporting of clinical signs to the veterinary authority through methods to enhance awareness and reporting	Same as above	Improve the frequency and timeliness of detection and reporting of clinical disease	Same as above
Active clinical	Active search for clinical cases under the supervision of the veterinary authority following the requirements of Article 1.4.4. of the *Terrestrial Code*	Same as above	Systematic clinical inspections, targeted approach if applicable	Same as above
Serological	Detection of antibodies resulting from infection or vaccination at animal or herd level	Detection of structural protein (SP) or non-structural protein (NSP) antibodies at animal or herd level	Sensitivity of diagnostic test; survey design (prevalence; sample size), time since infection, quality of samples	Specificity of diagnostic test, follow up procedures to confirm positive results, vaccine purity
Virological	Detection of virus, viral antigen or viral ribonucleic acid specific to FMDV (virus isolation, PCR, antigen detection ELISA)	Demonstrate the presence of FMDV or evidence of current or past FMDV infection	Quality of samples, test method, time from infection, intermittent shedding in case of oesophagopharyngeal fluids	Quality of samples
Abattoir	Detection of signs or lesions compatible with FMD either at ante- or post-mortem inspection	Detection of suspect FMD cases either at ante- or post-mortem inspection	Speed of slaughter chain, type and intensity of inspection, species and virus type, competency of inspector	Frequency of lesions due to other reasons
Enhanced abattoir	Intensified detection of signs or lesions compatible with FMD either at ante- or post-mortem inspection	Intensified detection of suspect FMD cases either at ante- or post-mortem inspection	Intensified ante- or post-mortem inspections specifically targeted to FMD	Same as above
Syndromic	Detection of indirect indicators leading to suspicion of FMD	Monitoring of production, performance data and other indicators to trigger disease investigation	Availability and quality of data, establishment of baselines for triggering investigation	Availability and quality of data, establishment of baselines for triggering investigation, other conditions with similar syndromes

The Group noted that **syndromic surveillance**[2] typically consists of a combination of statistical methods applied to data routinely collected for other purposes with the intention to detect unspecific signals indicative of an unusual event such as a disease outbreak. Detection of a signal requires follow-up investigations to verify whether a signal is associated with a relevant disease event. The Group concluded that this surveillance approach would offer little benefits in the context of regaining FMD free status because of the indirect nature of evidence, the technological requirements (i.e. ongoing electronic data collection), the complexity of the analytical approach as well as the substantial time delay between signal detection and confirmation of an outbreak. Furthermore, it is likely to be substantially outperformed by clinical surveillance. If already in place, syndromic surveillance could contribute to the confidence of demonstrating freedom.

The Group also discussed the role of **participatory surveillance** in demonstrating freedom from FMD. The Group considered that participatory surveillance is not a surveillance system component *per se* but rather a way of increasing stakeholder engagement in surveillance activities and therefore concluded that its contribution in the recovery of a previously recognised free status is limited.

5. Application of different surveillance system components and additional tools in vaccinated and unvaccinated populations

The Group considered the application of the different surveillance system components identified in Table 1 in vaccinated (cf **Table 2**) and unvaccinated (cf **Table 3**) populations and estimated their performance at herd level and their contribution to the overall confidence of freedom from FMD. The assessment of performance of the difference surveillance system components was conducted under the assumption that serological surveillance activities begin 30 days after the last vaccination or last case, whichever occurs later, in accordance with Article 8.8.42.of the *Terrestrial Code*.

Table 2. Performance of the different surveillance system components in a vaccinated population

Type of surveillance	**Sensitivity of surveillance at herd level**	**Specificity of surveillance at herd level**	**Contribution to demonstrating freedom**
Passive clinical	**Low** because clinical signs are less likely in vaccinated animals	**Low** because other diseases can show similar clinical signs	**Low** (both the negative and positive predictive values would be low)
Enhanced passive clinical	**Same as above**	**Same as above**	**Higher than above**
Active clinical	**Same as above**	**Same as above**	**Higher than above**
Serological	**High**	**High** (given that the false positive reactors are followed up in accordance with Article 8.8.40.)	**High** but not sufficient on its own
Virological	**Depends on the test method, sample size**: PCR=High (serum) Virus isolation=Low Antigen detection ELISA=Low	**High**	**High** as part of follow-up of serological results

[2] Dórea FC, Sanchez J, Revie CW. Veterinary syndromic surveillance: Current initiatives and potential for development. *Preventive Veterinary Medicine*, Volume 101, Issues 1–2, 1 August 2011, Pages 1-17. doi.org/10.1016/j.prevetmed.2011.05.004

Type of surveillance	Sensitivity of surveillance at herd level	Specificity of surveillance at herd level	Contribution to demonstrating freedom
Abattoir	**Low** i) Most likely animals with clinical signs will not be sent for slaughter ii) Subclinically infected animals will not show pathological lesions iii) Ability to trace back the origin of the animals iv) Number of animals coming from each herd to be slaughtered	**High** depending on the frequency of lesions due to other causes	**Low**
Enhanced abattoir	**Higher than above**	**Same as above**	**Higher than above**

Table 3. Performance of the different surveillance system components in an unvaccinated population

Type of surveillance	Sensitivity of surveillance at herd level	Specificity of surveillance at herd level	Contribution to demonstrating freedom
Passive clinical	**High** Clinical signs will be readily apparent with the exception of sheep and goats	**Low** because other diseases can show similar clinical signs	**High** except in sheep and goats; dependent on number of suspect cases reported and overall effectiveness of the suspect reporting system
Enhanced passive clinical	**Same as above**	**Same as above**	**Higher than above**
Active clinical	**Same as above**	**Same as above**	**Higher than above**
Serological	**High**	**High** (very low proportion of reactors would be expected)	**High**
Virological	**High** Not likely to be used as a front-line test; May not be practical/cost-effective	**High**	**Moderate** (as serology is considered more efficient) High for bulk milk tank testing and air filtration system sampling[3] (area of on-going research)
Abattoir	**Low** i) Most likely animals with clinical signs will not be sent for slaughter ii) Subclinically infected animals will not show pathological lesions iii) Ability to trace back the origin of the animals iv) Number of animals from each herd Better for sheep and goats as clinically infected animals may be difficult to detect at the herd of origin	**High** depending on the frequency of lesions due to other causes	**Moderate**
Enhanced abattoir	**Higher than above**	**Same as above**	**Higher than above**

[3] Nelson N, Paton DJ, Gubbins S, Colenutt C, Brown E, Hodgson S, Gonzales JL. Predicting the Ability of Preclinical Diagnosis To Improve Control of Farm-to-Farm Foot-and-Mouth Disease Transmission in Cattle. *J. Clin. Microbiol*.2017; doi:10.1128/JCM.00179-17

To recover a previously FMD free status, the Group emphasised that the surveillance system should achieve a high level of confidence in the absence of infection in unvaccinated populations and the absence of transmission of FMDV in vaccinated populations, taking into account the information provided through the combination of different surveillance system components as listed in Table 1. Member Countries should assess the overall performance of the combined system by considering the contribution of the different surveillance system components, individually and over time, to the demonstration of freedom.

The Group considered that quantitative methods such as scenario trees[4] may be useful to estimate the overall confidence in disease freedom, if carried out properly. However, the availability of data and expertise may be a limiting factor in some situations. For this purpose, qualitative or semi-quantitative methods could also be considered.

In addition to the combination of these surveillance system components, the Group considered **post-vaccination monitoring**[5] as an important tool contributing to the demonstration of freedom from FMD. Taking into account that virus transmission is unlikely to occur in effectively immunised populations, estimating the proportion of immune animals in a vaccinated population would increase the confidence in substantiating absence of FMDV transmission.

6. Considerations regarding the concept of risk-based surveillance

A short presentation on the experience gained from the implementation of a risk-based surveillance programme in Thrace region was shared with the Group. The project started in 2013 and was led and coordinated by the European Commission for the control of FMD (EuFMD), to provide confidence in FMD freedom and to improve capacity for early detection in the high risk areas in the common borders of Bulgaria, Greece and Turkey. The statistical target of the project was to achieve a 95% level of confidence in disease freedom for all countries but with different design prevalence for each of them. The surveillance activities consisted of serological and clinical surveillance in targeted species at farm and abattoir level on a 3-month surveillance cycle. The confidence of freedom from FMD in the region was estimated by analysing the collected data by output-based methods[6]. It was highlighted that the model is based on the approach that multiple activities of different sensitivity can be combined and that it could build confidence in disease freedom over time, which means the more evidence is available, the more confidence in the probability of disease freedom is gained.

The Group considered the potential to use risk-based approaches for demonstrating freedom in vaccinated populations. It concluded that in order to make surveillance more efficient, stratification of the population based on risk factors relevant to FMD exposure can be considered. These factors could include, but not limited to: i) proximity to known infected herds, ii) region/establishment with numerous movement of animals, iii) known epidemiological links to infected herds and iv) species, production systems and herd size.

7. Surveillance requirements and other measures for the recovery of a previously recognised FMD free status and the possibility of a shorter waiting period

The Group discussed approaches to increase the level of confidence in demonstrating freedom from FMD and identified additional surveillance system components and measures to be applied. These are summarised in Table 4.

Member Countries would have flexibility in the application of different surveillance system components provided that a high level of confidence can be achieved. The period of recovery of status would be dependent on the time required to achieve the stated level of confidence.

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4 Martin PAJ, Cameron AR, Greiner M. Demonstrating freedom from disease using multiple complex data sources 1: A new methodology based on scenario trees. *Preventive Veterinary Medicine* 79.2007; 71–97

5 Ferrari G, Paton DJ, Duffy SJ, Bartels CJ, Knight-Jones TJD, Metwally S, Münstermann S. OIE-FAO Foot and mouth disease post-vaccination monitoring guidelines.2016

6 Cameron AR. The consequences of risk-based surveillance: Developing output-based standards for surveillance to demonstrate freedom from disease. *Prev Vet Med.* 2012 Aug 1;105(4):280-6. doi: 10.1016/j.prevetmed.2012.01.009.

Table 4. Requirements for a possible shorter recovery period

Status of animal population	**Current *Terrestrial Code* requirements Article 8.8.7. Point 1.c)**	**Objective**	**Additional measures**	**Benefit**
Vaccinated population in the control area*	Demonstration of absence of infection through serological surveillance in vaccinated population in accordance with Articles 8.8.40. to 8.8.42.	Demonstration of absence of virus transmission through serological surveillance in vaccinated population in accordance with Articles 8.8.40. to 8.8.42.	- Assessment of immunity of the vaccinated population in accordance with Article 8.8.40. Point 6 - Active clinical surveillance	- Population immunity above a defined threshold will increase the confidence of the absence of virus transmission - Increase detection of clinical cases
Unvaccinated population in control area*	Demonstration of absence of infection in the sub-population through serological surveillance in accordance with Articles 8.8.40. to 8.8.42.		- Enhanced abattoir surveillance - Active clinical surveillance	Increase detection of clinical cases
Remaining area where vaccination is not applied	Demonstration of absence of infection in the area through serological surveillance in accordance with Articles 8.8.40. to 8.8.42.		- Enhanced passive surveillance - If already in place, syndromic surveillance could contribute to the confidence of demonstrating freedom	Increase detection of clinical cases

*control area: area designated by the Veterinary Authority in response to the occurrence of FMD outbreaks, in order to control and prevent its spread to uninfected areas. These measures may include, but are not limited to, vaccination, movement control and an intensified degree of surveillance. The control area could be comprised of two separate areas where movement control is in place and in which measures of different intensity are conducted.

The Group made note that surveillance in vaccinated populations would involve the detection and identification of herds with reactors that could be indicative of exposure to FMDV, keeping in mind that reactors to NSP can also include previously infected and recovered, false-positives and potential carriers and the follow-up of reactors should be consistent with Article 8.8.42. of the *Terrestrial Code*.

The Group suggested that, should there be a need for an objective method of assessment of the surveillance information in Member Countries' dossiers for FMD free status, the use of a quantitative approach, such as a scenario tree model, for the analysis and evaluation of surveillance system components could be considered.

8. Conclusions and consideration for other diseases and relevance of inclusion in Chapter 1.4.

Recovery of status, where emergency vaccination not followed by the slaughtering of all vaccinated animals is used, should depend on demonstrating the absence of infection in the unvaccinated population and the absence of transmission of FMDV in the vaccinated population.

Article 8.8.7. Point 1.c) of the *Terrestrial Code* does not currently include the concept of demonstration of absence of FMDV transmission. The Group recommended modifying the surveillance objective, for recovery of FMD free status in country or zone where vaccination is not practised, to reflect the surveillance objectives above.

In order to reduce the time of recovery, the Group concluded that the implementation of additional surveillance and other measures as described in Section 7 of this report should be applied and suggested that this be added as appropriate in the *Terrestrial Code*.

The Group briefly discussed the applicability of the above-mentioned conclusions regarding countries having a FMD free status where vaccination is practised facing an outbreak and had applied emergency vaccination. However, the Group considered that there are additional factors that should be discussed prior to further application.

Although the Group did not discuss the implementation of this approach for other diseases, it agreed that in principle, the assessment of the contribution of different surveillance system components to estimate the overall confidence in claiming freedom could be applied to other diseases; several examples already exist in published scientific literature[7].

9. Adoption of the report

The Group reviewed the draft report provided by the rapporteur and agreed to circulate the draft report electronically for comments before the final adoption. Upon circulation, the Group agreed that the report captured the discussions.

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…/Appendices

[7] Welby S, Van Schaik G, Veldhuis A, Brouwer-Middelesch H, Peroz C, Santman-Berends IM, Fourichon C, Wever P, Van der Stede Y. Effectiveness and Cost Efficiency of Different Surveillance Components for Proving Freedom and Early Detection of Disease: Bluetongue Serotype 8 in Cattle as Case Study for Belgium, France and the Netherlands. *Transboundary and Emerging Diseases*. 2016; doi:10.1111/tbed.12564

Appendix I

MEETING OF THE OIE AD HOC GROUP ON
ALTERNATIVES FOR SURVEILLANCE FOR DEMONSTRATION OF FREEDOM
FROM FOOT AND MOUTH DISEASE (FMD) AND RECOVERY PERIODS
Paris, 14-16 June 2017

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Agenda

1. Opening
2. Adoption of the agenda and appointment of chairperson and rapporteur
3. Introduction, assumptions and general considerations
4. Review of the different surveillance system components:
   - passive clinical surveillance
   - enhanced passive clinical surveillance
   - active clinical surveillance
   - serological surveillance
   - virological surveillance
   - abattoir surveillance
   - enhanced abattoir surveillance
   - syndromic surveillance
   - participatory surveillance
5. Application of different surveillance system components and additional tools in vaccinated and unvaccinated populations
6. Considerations regarding the concept of risk-based surveillance
7. Surveillance requirements and other measures for the recovery of a previously recognised FMD free status and the possibility of a shorter waiting period
8. Conclusions and consideration for other diseases and relevance of inclusion in Chapter 1.4.
9. Adoption of report

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Appendix II

MEETING OF THE OIE AD HOC GROUP ON ALTERNATIVES FOR SURVEILLANCE FOR DEMONSTRATION OF FREEDOM FROM FOOT AND MOUTH DISEASE (FMD) AND RECOVERY PERIODS

Paris, 14-16 June 2017

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Annex 14

Original: English
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MEETING OF THE OIE *AD HOC* GROUP ON SURVEILLANCE

Paris, 19 – 21 June 2017

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A meeting of the OIE *ad hoc* Group on surveillance (hereafter the Group) was held at the OIE Headquarters from 19 to 21 June 2017.

1. Opening

On behalf of Dr Monique Eloit, Director General of the OIE, Dr Matthew Stone, the OIE Deputy Director General for International Standards and Science, welcomed and thanked the Group for its commitment to revise a cornerstone chapter of the *Terrestrial Animal Health Code* (*Terrestrial Code*). Chapter 1.4. on Animal health surveillance. The chapter is critical for Member Countries to assess the animal disease situation, to monitor the progress of disease control programmes and subsequently to substantiate self-declarations of disease freedom or meet the requirements for the official recognition of disease freedom by the OIE. Revising this chapter and providing more structured, detailed and consistent guidance for animal health surveillance would therefore be greatly beneficial to the OIE and its Member Countries.

In 2016, the Terrestrial Animal Health Standards Commission (Code Commission) undertook the review of Chapter 1.4. and a revised chapter was circulated to Member Countries for comments. Member Countries made significant comments and indicated the need to further revise the chapter. The OIE Director General decided to convene the *ad hoc* Group to further review the chapter and to address these comments.

Dr Stone extended his thanks to Dr Bonbon, President of the Terrestrial Animal Health Standards Commission and Dr Brückner, President of the Scientific Commission for Animal Diseases, for participating in the Group. He acknowledged that their guidance was especially valuable considering that revisions made in Chapter 1.4. might also have an impact on the disease-specific chapters of the *Terrestrial Code.*

Dr Stone reminded the experts that they were not representing their own countries or institutions in the Group and that they are required to declare any actual or potential conflict of interest and respect the confidentiality of the process.

Dr Brückner and Dr Bonbon both mentioned that the Group should not only address Member Countries' comments but also review the entire Chapter 1.4. based on most recent developments in surveillance methodologies. In addition, they informed the Group that an OIE Guide to Terrestrial Animal Health Surveillance was published in 2014[1], therefore there would be no need for providing detailed technical guidance in Chapter 1.4.

2. Adoption of the agenda and appointment of chairperson and rapporteur

The Group was chaired by Dr Zepeda Sein, and Dr Galon acted as rapporteur, with the support of the OIE Secretariat. The Group adopted the proposed agenda.

The terms of reference, agenda and list of participants are presented as Appendices I, II and III, respectively.

[1] http://www.oie.int/for-the-media/press-releases/detail/article/a-new-oie-guide-to-better-surveillance-and-detection-of-health-risks-related-to-animals/

3. Revision of the Terrestrial Code Chapter 1.4. Animal Health Surveillance

The Group considered the Member Countries' comments and addressed them when reviewing Chapter 1.4. The proposed revisions are presented below:

3.1. Article 1.4.1. Introduction and objectives

a) Article 1.4.1. point 1

Current Article 1.4.1. covers surveillance of both diseases and infections. The Group agreed it was also relevant for infestation, as expressed by a number of Member Countries in their comments.

The Group considered the current definitions of infection and infestation provided in the Glossary of the *Terrestrial Code*, as well as the definitions provided in the dictionary of epidemiology of the International Epidemiological Association[2].

According to the definition provided in the Glossary, one characteristic of an infestation compared to an infection is that an infestation is external. The Group proposed to revise the definition of infection in the Glossary to encompass both infection and infestation for the purpose of the *Terrestrial Code*. The Group proposed the following definition of infection: "means the entry or colonisation, and development or multiplication, of a pathogenic agent in or on the body of humans or animals".

If this revised definition was to be adopted by Member Countries, the definition of infestation would be removed from the Glossary and any specific references to infestations would subsequently need to be removed from the relevant *Terrestrial Code* chapters.

This revised definition of infection was used by the Group when further revising Chapter 1.4.

b) Articles 1.4.1. point 1 and 2

The Group improved the structure of the first two points of current Article 1.4.1. by regrouping all general aspects on surveillance in point 1 and focusing point 2 on wildlife.

c) Article 1.4.1. point 3

The Group reviewed the prerequisites to enable a Member Country to provide information for the evaluation of its animal health status. The Group expanded the list of sources of information that may complement surveillance data provided in Article 1.4.1. point 3.b. In addition, the Group stressed that transparency should apply to all activities included in the definition of *surveillance* provided in the Glossary, and therefore simplified Article 1.4.1. point 3.b. by removing the surveillance activities which were listed.

d) Article 1.4.1. point 4

The Group pointed out that the objective of chapter 1.4. was not only to "*provide guidance to the type of outputs that a surveillance system should generate*" as mentioned in current Article 1.4.1. point 4.a. but also, and importantly, to provide guidance on the design of a surveillance system.

3.2. Article 1.4.2. Definitions

The Group reviewed the definitions provided in Article 1.4.2. and proposed minor changes to improve clarity. In particular, the Group clarified that in the context of "probability sampling", units are chosen at random. In addition, the Group amended the definition of "survey" to better reflect its interconnections with surveillance. Furthermore, the Group pointed out that the terminology "test system" was not used elsewhere in Chapter 1.4. and agreed to remove it.

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2 http://irea.ir/files/site1/pages/dictionary.pdf

3.3. Article 1.4.3. Surveillance systems

The current Article 1.4.3. "Principles of surveillance" lists various types of surveillance (Article 1.4.3. point 1) and defines critical elements (Article 1.4.3. point 2). The Group considered that these critical elements were applicable to all types of surveillance and suggested that it would be best to revise the order and to start by describing the components of a surveillance system. The Group revised and renamed Article 1.4.3. accordingly.

The proposed components were listed into three categories:

- Design of surveillance system, which includes the components: populations, temporal validity of surveillance data, case definition, epidemiological unit, clustering, analytical methodologies, and scope of the surveillance system;
- Implementation of surveillance system, which includes the components: testing, and data collection and management;
- Quality assurance.

Within each category, the components were ordered to best reflect the sequence of actions when designing and implementing surveillance.

In addition, the Group suggested amending the definition of some components for clarity. The proposed revisions are listed hereafter following the order of components proposed in the revised Article 1.4.3:

- "populations": the Group provided more precise guidance on the approach to make inferences from the target population when surveillance is conducted only on a sub-populations and specified that such inference should be based on the epidemiology of the disease.

- "time frame": the Group observed that "temporal validity of surveillance data" would capture more accurately the scope of this component and further clarified that temporal validity depends on the epidemiology of the infection as well as on the risks of its introduction and spread.

- "epidemiological unit": the Group considered the definition provided in the Glossary of the *Terrestrial Code* which only refers to a group of animals as epidemiological units. Whilst the Group agreed that, most often, an epidemiological unit consists of a group of animals, it pointed out that, in some circumstances, an epidemiological unit may consist of an individual animal. The Group suggested amending the Glossary's definition of an epidemiological unit to capture this point.

- "clustering": the Group stressed that the correct translation of "cluster" into Spanish should be "conglomerados" and not "concentracion de infeccion" as it is appears in the Spanish version of Chapter 1.4.

- "analytical methodologies": the Group emphasised that the use of sophisticated mathematical or statistical analyses should be considered when justified by the objectives of the surveillance.

- "validation": the Group recommended that it should encompass various limitations and suggested to rename it "scope of the surveillance system". The Group emphasised that the potential limitations should first be taken into consideration when designing a surveillance system and, at a later stage, when analysing the information generated by the system.

- "testing": in order to improve the structure of the description, the Group split the content into two sections, namely sensitivity and specificity, and pooling. The Group also included a reference to Chapter 1.1.6. "*Principles and methods of validation of diagnostic assays for infectious diseases"* of the *Manual of Diagnostic Tests and Vaccines for Terrestrial Animals* (*Terrestrial Manual*), as a recommendation for estimating the sensitivity and specificity of diagnostic assays when this information was not available in the *Terrestrial Manual's* diseases-specific chapter.

- "quality assurance": in order to better reflect the full cycle of quality assurance, the Group added a recommendation for corrective actions to be taken whenever deviations of procedures from those documented were observed during auditing.

3.4. Article 1.4.4. Surveillance methods

The Group noted that types of surveillance were described in the current Article 1.4.4. "*Structured population-based surveys*" and in the current Article 1.4.5. "*Structured non-random surveillance*". The Group questioned the relevance of this distinction and decided to draft new articles on surveillance methods and data sources (draft article 1.4.4.) and on considerations in survey design (draft article 1.4.5.).

The Group developed draft Article 1.4.4. based on information provided in the current Article 1.4.5.

With regard to disease reporting systems, the Group emphasised the need for sharing the information generated by disease reporting systems with all relevant authorities, including the human health sector, when appropriate. In addition, the Group noted that participatory surveillance methods might support disease reporting systems.

The Group agreed that the current Article 1.4.5. point 1.c. "targeted testing and screening" actually addressed risk-based surveillance methods. The Group complemented the provisions on these methods by adding considerations on their purposes and benefits. In addition, the Group pointed out that risk-based methods could be used for either probability or non-probability selection of sampling units and data collection.

With respect to *ante-mortem* and *post-mortem* inspection, the Group noted that the current article stated that their sensitivity and specificity should be predetermined. Since these characteristics might be difficult to determine, the Group considered this point irrelevant and removed it from the revised article. The Group expanded the list of factors which influence the accuracy of *ante-mortem* and *post-mortem* inspections by adding the clinical and pathological signs of the disease as well as the professional independence of the inspection staff. The Group also mentioned that the usefulness of the data generated by *ante-mortem* and *post-mortem* inspections was dependent on effective traceability systems.

Regarding sentinel units, the Group agreed to remove the particular emphasis that was placed on vector-borne diseases, as sentinel units may as well be relevant for other types of diseases or infections.

With respect to clinical observations, the Group stressed that the specificity and sensitivity of clinical observations are highly dependent on the criteria used to define clinical suspects.

The Group described syndromic surveillance and participatory surveillance.

The Group agreed to include a section on "Other data sources" expanding the scope of the existing section on wildlife data and making reference to public health data and environmental data as other additional supporting data that might be relevant for animal health surveillance.

3.5. Article 1.4.5. Considerations in survey design

The Group developed the draft Article 1.4.5. based on the provisions provided in the current Article 1.4.4.

The Group discussed the following terminology: "random sampling" versus "probability sampling" and "non-random sampling" versus "non-probability sampling". The Group concluded that they were synonyms and for the sake of consistency with the definitions provided in Article 1.4.2., as well as for consistency throughout the chapter, the Group agreed to adopt the terminology "probability sampling" and "non-probability sampling".

In the section pertaining to the objective of sampling, the Group specified that the objective of probability sampling is to select a subset of units that is representative of the population of interest whilst the objective of non-probability sampling is to maximise the likelihood of detection of the disease or infection.

With regard to the section on sample size, the Group pointed out that the parameters to be taken into account to define a sample size depended on the purpose of the study and listed the parameters to be taken in account for each purpose.

3.6. Article 1.4.6. Surveillance to demonstrate freedom from disease or infection

The Group acknowledged that provisions of Article 1.4.6. were critical for the OIE mandate since they apply to the official recognition of disease free status and self-declaration of disease freedom.

a) Article 1.4.6. point 1. Demonstration of freedom

This point was based on the requirements of the current Article 1.4.6. point 5 without any substantial changes.

b) Article 1.4.6. point 2. Requirements to declare a country or a zone free from a disease or infection

This point was revised based on the current Article 1.4.6. point 1.

For the sake of clarity, the Group agreed to remove most of the general preconditions listed under "premises" at the beginning of the current Article 1.4.6. point 1 as they were considered either generalities or already addressed. However, the Group stressed that the precondition "*the disease agents to which these provisions apply are likely to produce identifiable clinical signs in susceptible animals*" was critical for the demonstration of a free status on historical grounds, considering the absence of specific surveillance.

The Group agreed with the path to demonstrate freedom based on historical grounds defined in the current Article 1.4.6. point 1.a. If a disease or infection has never occurred or has been eradicated for at least 25 years and the disease agent is likely to produce identifiable signs, historical freedom can be demonstrated in the absence of pathogen-specific surveillance, provided a range of requirements (pertaining to disease notification, early detection, prevention of disease introduction, etc.) are fulfilled for at least 10 years.

The Group discussed the path to demonstrate freedom if historical freedom cannot be achieved, with respect to the recommendations defined in the current Article 1.4.6. point 1.b. stating that in the absence of pathogen-specific surveillance requirements in the *Terrestrial Code*, the same range of requirements as for historical freedom should be fulfilled for at least 10 years. The Group agreed that these requirements were indeed critical to substantiate freedom from disease. However the Group observed that some flexibility should be allowed to determine the most appropriate period during which these requirements should have been fulfilled before freedom can be declared.

Importantly, the Group emphasised that all provisions described in revised Article 1.4.6.point 2. were applicable unless otherwise specified in the disease-specific chapters of the *Terrestrial Code.* In addition, the Group stressed that the provisions for the demonstration of freedom were applicable to all relevant susceptible species as defined in the disease-specific chapter of the *Terrestrial Code*.

The Group emphasised that for the establishment of free compartments, specific surveillance should be carried out as recommended in Chapters 4.3. and 4.4. of the *Terrestrial Code.*

c) Article 1.4.6. point 3. Recommendations for the maintenance of freedom from disease or infection

This article was based on a revision of the requirements of the current Article 1.4.6. point 2. recommending the discontinuation of pathogen-specific surveillance while maintaining a disease or infection free status. The Group recommended broadening the scope of this article to define the provisions for the maintenance of a disease free status over time.

The Group specified that in order to substantiate the maintenance of a disease free status over time, risk-based surveillance should be implemented. If an appropriate risk assessment demonstrated that the risks of introduction along all of the identified pathways for introduction were negligible, pathogen-specific surveillance may not be necessary.

In addition, the Group clarified that an early detection system as well as measures to prevent the introduction of the pathogen should be maintained in all relevant susceptible species.

The Group suggested removing point 3 on self-declaration of freedom from disease or infection and point 4 of the current Article 1.4.6. on international recognition of disease or infection free status as they were not directly related to surveillance but to the procedure. The Group recommended including these points in Chapter 1.6. of the *Terrestrial Code* on procedures for self-declaration and for official recognition by the OIE.

3.7. Article 1.4.7. Surveillance considerations in support of disease control programmes

This current Article 1.4.7. on surveillance for distribution and occurrence of infection was revised and renamed. The Group stressed that surveillance was an important component of all disease control programmes.

The Group pointed out that the list of variables that may be collected in the context of surveillance conducted in support of disease control programmes listed in draft Article 1.4.7. was not intended to be exhaustive.

The Group noted that measurable variables should primarily be considered to assess the progress in disease control or eradication and pointed out that the temporal and spatial distribution of these variables should be considered when assessing the surveillance results.

Amongst the list of variables, the Group replaced "frequency distribution of antibody titres" by the "frequency distribution of results of the laboratory tests", since not only antibody titres but other laboratory techniques might be relevant for some disease or infections. In addition, the Group modified "proportion of immunised animals after a vaccination campaign" by including a reference to post-vaccination monitoring, since OIE/FAO guidelines for performing post-vaccination monitoring were recently developed for the use of Member Countries[3].

3.8. Draft Article 1.4.8. Early warning systems

To support Member Countries willing to develop early warning systems, the Group drafted a new article, based on the definition of an early detection system provided in the Glossary of the *Terrestrial Code.*

The Group recommended the use of the term "early warning system" over "early detection system" for consistency with the terminology used by other international organisations.

The Group emphasised that an early warning system was an essential component of surveillance and emergency preparedness.

The Group reviewed the list of characteristics of an early warning system, clarified the description of some characteristics, and expanded the list of characteristics by adding awareness programmes and effective systems of communication.

The Group recommended revising the definition of an early detection system in the Glossary and removing the list of characteristics from the definition whilst retaining the list in the revised chapter. The Group proposed a definition for early warning system. The proposed definition is as follows:

- 'Early warning system': "means a system for the timely detection, identification of and reporting of an incursion or emergence of diseases/infections in a country, zone or compartment.

3.9. Draft Article 1.4.9. Combination and interpretation of surveillance results

The Group drafted this article based on the current Articles 1.4.5. point 4. and 1.4.3. point 2.i. The Group emphasised that a combined interpretation of surveillance results may provide an indication of the overall sensitivity and confidence of the surveillance system. In addition, the Group stressed that potential biases should be taken into consideration when assessing the results of a surveillance system.

3 OIE/FAO Foot and Mouth Disease Vaccination and Post-Vaccination Monitoring Guidelines.

4. Adoption of the report

The Group reviewed and amended the draft report provided by the rapporteur and agreed to circulate the draft report electronically for comments before the final adoption. The Group agreed that the report captured the discussions.

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…/Appendices

Appendix I

MEETING OF THE OIE *AD HOC* GROUP ON SURVEILLANCE

Paris, 19-21 June 2017

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Terms of reference

The OIE *Terrestrial Animal Health Code* (*Terrestrial Code*) Chapter 1.4. Animal Health Surveillance was last updated in 2012. The purpose of this chapter is to provide guidance to the type of outputs that a surveillance system should generate and to provide recommendations to assess the quality of a given surveillance system.

In February 2016, the Terrestrial Animal Health Standards Commission reviewed Chapter 1.4. for consistency both within the chapter and with the remainder of the *Terrestrial Code*. The Chapter was circulated for Member Countries comment after the Specialist Commission meetings of February 2016**.**

A significant number of Member Countries indicated the need to further review some of the concepts currently included in the chapter. Considering the impact of the chapter on all disease-specific chapters, in particular on those diseases for which the OIE officially recognises disease free status, the Specialist Commissions suggested to the OIE Director General to convey a dedicated *ad hoc* Group to review the chapter and to address Member Countries' comments.

1. Address Member Countries' comments received after the February 2016 Specialist Commission meetings.

2. Review the current chapter and amend it according to the latest scientific knowledge taking into consideration the impact on the disease-specific *Terrestrial Code* chapters.

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Appendix II

MEETING OF THE OIE *AD HOC* GROUP ON SURVEILLANCE

Paris, 19-21 June 2017

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Agenda

1. Opening
2. Adoption of the agenda and appointment of chairperson and rapporteur
3. Revision of the Terrestrial Code Chapter 1.4. Animal Health Surveillance
4. Adoption of the report

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Appendix III

MEETING OF THE OIE *AD HOC* GROUP ON SURVEILLANCE

Paris, 19-21 June 2017

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List of participants

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Annex 15

Original: English
July 2017

REPORT OF THE MEETING OF THE OIE *AD HOC* GROUP ON BIOLOGICAL THREAT REDUCTION IN RELATION TO SPECIFIC METHODOLOGIES FOR VETERINARY SERVICES, PERTAINING TO THE INVESTIGATION OF SUPSPICIOUS BIOLOGICAL EVENTS

Paris, 4 – 6 July 2017

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The first meeting of the *ad hoc* Group on Biological Threat Reduction in Relation to Specific Methodologies for Veterinary Services, Pertaining to the Investigation of Suspicious Biological Events (hereafter the Group) was held at the OIE Headquarters from 4 to 6 July 2017.

1. Opening

On behalf of Dr Monique Eloit, Director General of the OIE, Dr Matthew Stone, the OIE Deputy Director General for International Standards and Science, welcomed and thanked the Group for its commitment and the extensive support towards the OIE mandate. Dr Stone provided context on OIE biothreat reduction strategy and its place within OIE's sixth strategic plan (2016 – 2020), as well as his previous experience in addressing biological threats within the Government of New Zealand.

Dr. Jef Hammond could not attend in person but joined the group by phone for several hours each day.

2. Appointment of chairperson and rapporteur

Dr Gary Vroedingewey was appointed Chair and let the Group through a roundtable introduction. Dr Mariana Marrana acted as rapporteur.

The terms of reference, agenda and the list of participants are provided as Appendices I, II and III respectively.

3. Adoption of the agenda

The agenda was reviewed and adopted without modifications.

4. Terms of Reference (ToR)

The ToR were presented by the Chair. Dr Vroedingewey highlighted the challenges that the Group would face when issuing recommendations and it was commented that the response to a natural or intentional outbreak would only be the same in the initial phase of the investigation. Namely, the Guidelines would have to consider the diversity of capabilities and priorities of National Veterinary Services of all OIE Members. The Group would have to provide guidance on the minimum requirements but also include aspirational targets of good practices. The Guidelines will be aligned with the existing published frameworks, including the OIE Biothreat Reduction Strategy. It was agreed that the document would reference pertinent publications when necessary to keep it concise and succinct.

5. Discussion

5.1. Breakout groups

The Group was divided by the Chair into three working groups to address point 2 of the ToR. The first working group addressed 2a. *Criteria for the identification of suspicious biological events that warrant further investigation*, while the second group worked on 2b. *Defining technical differences or additional skills and capabilities required for investigating outbreaks that are proven or suspected to be of non-natural origin*. A third group discussed the legal aspects of identification and investigation of suspicious biological events.

5.2. Terms and definitions

Dr Christine Uhlenhaut led a discussion on terminology, stating that several terms which are used by different sectors have very distinct and differing meanings depending on the context (e.g. surveillance, case, agent). The FBI Criminal Epidemiological Investigation Glossary gives several examples which should also be considered in the Guidelines. Dr Uhlenhaut mentioned that the OIE *Terrestrial Code* Glossary has several of the necessary definitions for the purpose of the Guidelines. Further relevant definitions can be found in the OIE Manual Glossary. However, other definitions could be added if needed. It was pointed out that different organisations use distinct definitions for the same word, such as *threat* under OIE and WHO definitions. *Hazard* will be defined as per the OIE Glossary.

There was extensive discussion on the definition of *threat* in the context of these Guidelines, to whether it would include intentional actions or any potential and hypothetic events with a negative impact. It was mentioned that *chain of custody* would have to be defined in the document and that the definition of *biosecurity* in the OIE *Terrestrial Code* Glossary would have to be broadened. The definition of *biothreat* presented in the OIE Biological Threat Reduction Strategy[1] was criticised for not including potential events that are still a hypothesis.

5.3. Criteria for distinction

Point 2c. of the ToR, Defining criteria to positively distinguish between naturally occurring, accidentally or intentionally caused outbreaks, including identifying potential limitations, was discussed by the group. After issuing considerations about what would characterise a suspicious event (abnormal happening compared to usual pattern) and what a deliberate even implies (link to human factors and intent to cause harm), the Group agreed that without admission from or attribution to a known source, there is no possible "positive distinction" that can be done prior to an investigation and that would dictate its course differently.

5.4. Modified agents

The group discussed how to adapt an investigation to address modified agents as per item 2d. of the ToR. To address this subject it is important to consider whether the heads of the investigation had or not previous knowledge of the agent's properties. Then, with regards to the investigation procedures, there were two approaches– on the one hand, a progressive sequence of risk assessments was suggested. This type of assessment takes into consideration the findings of the previous ones to adapt control and mitigation measures. On the other hand, it was mentioned that, depending on the situation, it might be advisable to assume the highest level of risk and decreasing protection measures after the risk assessment indicates it would be safe to do so. However, not all countries would be able to initiate a response by deploying all the required materials and expertise that a "high risk" investigation would require.

[1] the accidental or deliberate release of a pathogen or toxin into a susceptible population

5.5. Competencies of Veterinary Services (VS) when preparing and responding to suspicious biological events

a) Training and education

The Group deemed that a liaison should be named either within the VS or another relevant body to be responsible for managing the preparation, response and recovery from a suspicious biological event. In addition, education and training needs were discussed. It was pointed out that this type of competency should be included in the veterinary curriculum in general and that further training should be provided to specific personnel working in the NSV and in relevant laboratories. These trainings should encompass the steps to take in an investigation, collection of samples and Personal Protective Equipment (PPE). It was also mentioned that simulation exercises, whether on the field or as table top exercises would be important to maintain capabilities. Furthermore, the OIE National Focal Points should benefit from this type of training in the context of OIE Laboratory National Focal Point seminars, as well as the heads of VS in other opportunities –awareness and training at the leadership levels is crucial for a successful outcome.

b) Communications

The Group discussed the importance of communication skills in a crisis situation. It should be clear for all the parties involved who is allowed to report what information, when it happens and through which channels. OIE *Terrestrial Code* chapter 3.3. and OIE Communications Handbook were identified as reference material to develop this section of the Guidelines.

The challenges in the field of communications were pointed out. In case of a suspicious event, a joint communication strategy, between VS, Public Health Agencies and Law Enforcement Agencies, needs to be quickly established. Pre-fabricated text blocks that could be used for timely information of the general public were discussed. These template messages can be adapted to many situations and disseminated via social media as an effective way to have media conveying the right message to the public.

c) Financial considerations

The Group discussed the financial considerations that should be in place when drafting a preparedness plan to investigate a suspicious event. Deployment of human resources, logistics, overtime expenses, surge in number of samples, rise in security measures, storage, etc. were some of the points mentioned. It was deemed that VS should have enough funds allocated to deal with surge events or consider ways to raise these funds quickly in case of an emergency.

d) Partnerships and stakeholders

It was pointed out that pre-engagement with partner agencies, organisations or countries should be done before the event; also, such partnerships should have roles, responsibilities and short and long term goals clearly defined through Memorandums of Understanding and Standard Operating Procedures.

A list of relevant stakeholders in the context of biological threat reduction was compiled. It included a broad range of individuals, from farmers, livestock producers, retail and food chain suppliers, trade organisations, transporters, laboratories, veterinarians and veterinary paraprofessionals as well as national, regional and international agencies and organisations, namely law enforcement agencies. It was mentioned that the countries' INTERPOL National Central Bureau should be immediately contacted upon a suspicious event.

5.6. Operational Considerations

There was an engaged discussion about sample collection and other field investigation procedures. The Group recommended that a sample analysis plan has to be developed in advance and tailored to the event. It was deemed that the Guidelines should include general recommendations in terms of sampling, while remaining concise and referring to other reference publications when necessary. Also, considerations pertaining to chain of custody and cold chain management should be included. Recommendations towards the inclusion of environmental samples, material negative control samples and samples from non-affected species, as well as documentation (interviews, videos, maps), should also be issued.

The importance of pre-event planning was highlighted. The VS should conduct a risk assessment, draft a plan and use it in trainings to respond to a suspicious event. All the reporting should be done though pre-defined formal chains of authority and shared with appropriate entities in the pre-established timeframes. The lessons learned from exercises and from real events should be compiled in a report and made available to relevant stakeholders.

The Group expressed concern with regards to surge capacity in national laboratories and veterinary services. It was pointed out that planning for continued operations should be done in advance, including recommendations on how to deal with multilayer events (animal health, public health, cyber-attack, etc.) and how to address logistics of personnel and material when relocating the investigation to remote locations.

5.7. Future Challenges

The Group discussed emerging technologies and their use for detecting suspicious events and to perform general and targeted surveillance, the 'dual use' aspect, the use of technology or material to do harm, was also mentioned. The pros and cons of using drones for targeted surveillance and transport of materials were mentioned. Also, some considerations about biosensors were made, with respect to different types of sensors – motion detection, temperature assessment, food intake, etc.

6. Table of Contents

The Group established a tentative Table of Contents for the Guidelines. Each section was reviewed in a roundtable discussion and inputs were done for each point. The inputs were reviewed by Dr Uhlenhaut against the ToR and further revised by the Chair. The Group will provide additional contributions electronically before the next meeting.

7. Review of the draft guidelines

In the morning of the last day, the Chair presented the skeleton of the document comprising the inputs gathered from the group on the previous afternoon. The participants were once again divided into breakout groups to address designated sections of the document and further develop them.

8. Liaison

The Group agreed to reach out to other OIE *ad hoc* groups for cooperation on the scope of the creation of the Guidelines. Namely, *ad hoc* groups on Biobanking, Transport of Biological Materials and Veterinary Legislation were identified as potential targets for cooperation. If additional groups are identified by the OIE staff as potentially relevant for the purpose of creating the Guidelines, liaison is encouraged.

9. Adoption of the draft report and scheduling of the next meeting

The Group reviewed and amended the draft report provided by the rapporteur. The Group agreed that the report reflected the discussions.

The next meeting was tentatively scheduled to either 28-30 November 2017 or 9 – 11 January 2018.

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…/Appendices

Appendix I

MEETING OF THE OIE *AD HOC* GROUP
ON BIOLOGICAL THREAT REDUCTION IN RELATION TO SPECIFIC METHODOLOGIES
FOR VETERINARY SERVICES, PERTAINING TO THE INVESTIGATION
OF SUPSPICIOUS BIOLOGICAL EVENTS

Paris, 4 – 6 July 2017

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Terms of Reference

Background:

The OIE supports its Member Countries and helps them strengthen and improve the structure of their national animal health systems. The OIE also collects, analyses, and makes available the latest scientific information on prevention and control of animal diseases. This includes information on response to disease outbreaks.

The response to an outbreak will be the same, regardless of the origin, be it natural, accidental or deliberate. However, determining if the outbreak was of natural or deliberate origin requires a different mindset and additional skills. In the event of a deliberate release of a pathogen it would then also become important to attribute the release to someone or to a group, first and foremost to prevent further events but of course also to allow prosecution. Therefore, all parts of the investigation including analysis of evidence have to be done in a way that holds up in a court of law. To date there are no overarching recommendations for the identification and investigation of suspicious biological events related to animal health. In order to address this gap, also in line with recommendations from the first OIE Global Conference on Biological Threat Reduction in 2015, the OIE decided to convene an *ad hoc* Group in relation to Specific Methodologies for Veterinary Services, pertaining to the Investigation of Suspicious Biological Events.

I. Terms of Reference

The *ad hoc* Group will be asked to:

1. Review existing guidance documents which pertain to this topic, among these are the OIE Glossary, the EU CBRNE Glossary, Appendices III, IV, V, IV, V, VII, IX, and A of the United Nations General's Mechanism for the Investigation of Alleged Use of Chemical or Biological Weapons, the World Health Organization's (WHO) Laboratory biosafety manual, WHO Guidance Document on Responsible Life Science Research for Global Health Security, the Laboratory Biorisk Management Standard of the European Commission for Standardization, the International Criminal Police Commission (INTERPOL) INTERPOL bioterrorism incident pre-planning & response guide, the Emergencies ToolKit published by Infection Prevention and Control Canada, the Criminal Investigation Handbook published by the Food and Drug Administration and the United States Department for Agriculture, the Joint Criminal and Epidemiological Investigations Handbook published by the US Federal Bureau of Investigation and the Centers for Disease Control and Prevention, as well as Chapters 1.1.1 to 1.1.7 of the *OIE Manual of Diagnostic Tests and Vaccines for Terrestrial Animals*.

2. To develop a holistic and comprehensive methodology for Veterinary Services for the identification and investigation of suspicious biological events affecting terrestrial animals, which may include:

    a) Criteria for the identification of suspicious biological events that warrant further investigation.

    b) Defining technical differences or additional skills and capabilities required for investigating outbreaks that are proven or suspected to be of non-natural origin, including but not limited to: strategic consideration of leadership in such an investigation, responsibilities and liabilities; interview and observational skills.

c) Defining criteria to positively distinguish between naturally occurring, accidentally or intentionally caused outbreaks, including identifying potential limitations.

d) To develop recommendations for adapted risk assessment in order to account for potentially enhanced properties of weaponized or otherwise altered biological agents that could entail increased harm.

e) To identify further issues that require in-depth review and propose, to the DG, the composition and terms of reference for groups of experts convened specifically to study such issues, and if necessary, to participate in the work of these groups.

II. Ground Rules

- Open Source Material ONLY
- Chatham House Rule applies: Participants are free to use the information received, but neither the identity nor the affiliation of the speaker(s), nor that of any other participant, may be revealed.

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Appendix II

MEETING OF THE OIE *AD HOC* GROUP
ON BIOLOGICAL THREAT REDUCTION IN RELATION TO SPECIFIC METHODOLOGIES
FOR VETERINARY SERVICES, PERTAINING TO THE INVESTIGATION
OF SUPSPICIOUS BIOLOGICAL EVENTS

Paris, 4 – 6 July 2017

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Agenda

1. Opening

2. Appointment of chairperson and rapporteur

3. Adoption of the agenda

4. Terms of Reference (ToR)

5. Discussion

5.1. Breakout groups
5.2. Terms and definitions
5.3. Criteria for distinction
5.4. Modified agents
5.5. Competencies of Veterinary Services (VS) when preparing and responding to suspicious biological events
5.6. Operational Considerations
5.7. Future Challenges

6. Table of Contents

7. Review of the draft guidelines

8. Liaison

9. Adoption of the draft report and scheduling of the next meeting

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Appendix III

MEETING OF THE OIE *AD HOC* GROUP
ON BIOLOGICAL THREAT REDUCTION IN RELATION TO SPECIFIC METHODOLOGIES
FOR VETERINARY SERVICES, PERTAINING TO THE INVESTIGATION
OF SUPSPICIOUS BIOLOGICAL EVENTS

Paris, 4 – 6 July 2017

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Annex 16

Original: English
August 2017

REPORT OF THE MEETING OF THE OIE *AD HOC* GROUP ON ANTIMICROBIAL RESISTANCE

Paris, 29-31 August 2017

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1. Opening

The OIE *ad hoc* Group on Antimicrobial Resistance (hereafter referred to as 'the Group') met from 29 to 31 August 2017 at the OIE Headquarters in Paris, France.

Dr Elisabeth Erlacher-Vindel welcomed the participants and thanked them for their continued dedication to the Group, which has contributed greatly to the success of the OIE's work on antimicrobial resistance (AMR). She informed the Group of the main OIE's ongoing activities, including the enforcement of the AMR team by two more staff members in the Science and New Technologies Department to work on AMR to start in the autumn of 2017.

Dr Matthew Stone, Deputy Director General, thanked the participants for their continued support and participation in the Group, highlighting the value of the round table for intelligence gathering and for collaboration. He addressed the large amount of work being done on antimicrobial resistance across organisations and sectors, with a high political impact. Dr Stone noted the resulting coordination challenge to maximise the effect of work on AMR, and highlighted the work of the FAO[1] / OIE / WHO[2] Tripartite towards harmonisation. He informed that within the United Nation Interagency Coordination Group on Antimicrobial Resistance (IACG), a mapping exercise of all the activities of the Tripartite, other United Nation agencies, as well as public, private and academic sectors working on AMR is underway, which will support development of the IACG work-plan to address gaps. The next IACG meeting will be in October 2017 at the OIE Headquarters. A stakeholder engagement session with livestock sectors of national agencies is planned at this IACG meeting to highlight the work currently undertaken in the livestock sector on AMR. He also mentioned the OIE's upcoming discussion to add a specific AMR indicator to the OIE Performance of Veterinary Services (PVS) framework, for which some members of the Group will provide expertise.

Dr Stone discussed the significance of the Group's planned work on updating Chapter 6.7 and 6.8 of the *Terrestrial Animal Health Code* (*Terrestrial Code*) and the *List of Antimicrobial Agents of Veterinary Importance*, as these facilitate harmonisation between Member Countries. He stressed the importance of the Group's contribution to the Global Database on the Use of Antimicrobial Agents in Animals, and the continued need to support Member Countries in providing accurate and comparable data. Dr Stone indicated the OIE's desire for increased transparency, and asked the Group to develop a forward looking strategy for reporting the results of this data collection.

Dr Stone mentioned the development of a Tripartite communication team on AMR. The resulting communication materials will be used for Antibiotic Awareness Week in November 2017, and will primarily address Low and Middle Income Member Countries.

1. FAO: Food and Agriculture Organization of the United Nations
2. WHO: World Health Organization

2. Adoption of the agenda and appointment of the chairperson and rapporteur

The adopted Agenda and List of Participants are presented in Appendices I and II of this report, respectively.

The Group elected Dr Herbert Schneider as the chair, and Drs Chris Teale and Carolee Carson as rapporteurs.

3. Roundtable from the participants on any new issues of interest for the Group

The members of the Group shared updates from their regions and respective organisations regarding activities on antimicrobial use and antimicrobial resistance, including a presentation on the recent report of the Joint Interagency Antimicrobial Consumption and Resistance Analysis European Union Expert Working Group (JIACRA) and on the United States Food and Drug Administration's proposed method for adjusting data on antimicrobials sold or distributed for use in food-producing animals, using a biomass denominator.

4. Overview of the results second phase of the collection of data on the use of antimicrobial agent in animals in animals

Dr Delfy Góchez presented an overview of the results of the second phase of data collected from OIE Member Countries on antimicrobial agents intended for use in animals. She reported that 146 Member Countries responded for this second phase, which increased from 130 in the first phase. The sources of data reported were similar to the first phase. There was also an increase in Member Countries providing quantitative data (107 in the second phase from 89 in the first), as well as 13 Member Countries choose a higher Reporting Option. Member Countries providing only baseline information noted barriers to providing quantitative data, such as a lack of a regulatory framework, lack of cooperation between national sectors and private sectors, lack of tools and human resources, or insufficient regulatory enforcement.

Overall, the global data collection system is improving and several indicators of progress have been identified. The exercise of data submission has also informed improvements to data collection. At the end of 2017, the 5th cycle of Focal Point trainings for Veterinary Products will be launched, starting in Africa. This will be a useful venue to raise challenges and discuss the barriers identified in this second phase of data collection.

The Group noted that currently, the main reference for the data collection protocol lies within the OIE *Terrestrial and Aquatic Animal Health Codes*, but there are important details for data collection included in the global database guidance document, questionnaire, and related Annex. The Group recommended that this information could be additionally published on the website to provide enhanced visibility of this material (e.g., on the OIE website).

5. Presentation and agreement of the proposed denominator

Dr Margot Raicek presented a proposed methodology for calculation of the animal biomass for use as a provisional denominator in analysis of quantitative data reported on antimicrobial agents. The animal biomass was calculated for countries providing quantitative data for 2014 and 2015, as these were the years with the highest response rates from both phases of data collection.

A denominator was calculated for cattle, swine, poultry, small ruminants, equidae, rabbits, cervidae, camelidae and farmed fish, using primarily WAHIS (OIE World Animal Health Information System) census data, with FAOSTAT (FAO statistics) as a secondary source where data was unavailable in WAHIS. The methodology took into account the live weights of animals at time of slaughter calculated from FAOSTAT slaughter data. The methodology was developed using this globally available data using Eurostat data as a reference for Europe, where more detailed census data by production class is currently available.

The methodology for each species included some data derived models of animal sizes and expected cycles of reproduction in short-lived species. There is a need to obtain country sub-regional animal weights and reproduction cycles through Member Country information and future development of WAHIS. It was also discussed that WAHIS will collect census data with more detailed information by production class in the future, based on suggestions provided by the Group.

Taking note of the Group's decision to use live weight at time of slaughter, the proposed methodology was compared with other published biomass denominator methodologies. A primary difference noted among methodologies was use of live weights at time of slaughter versus the use of estimated weights at times of treatment. The results of this analysis confirmed that the use of live weights at time of slaughter is appropriate. The Group recommended that the OIE make note of this comparison in its report of the second phase of data collection.

The Group discussed including cats and dogs in the analysis and decided to not include these animal populations at this time given sporadic data available on these species. It may be possible in the future to report an analysis of companion animal data from the countries able to provide these data.

The Group agreed to the approach for the provisional denominator as presented and agreed it should be refined as new or more precise information becomes available. The Group agreed that taking a slightly different approach for each animal species is necessary at this point in time, as well as application of different sources of data to the denominator to address discrepancies in international data sources. The Group suggested the decision-making behind the chosen data sources be documented generally in the report.

The Group also recommended that additional information and details could be available in supplementary materials.

Drs Raicek and Góchez presented a preliminary analysis of the antimicrobial quantities reported adjusted for animal biomass for 2014 and 2015. This preliminary analysis identified some anomalies in reported data, highlighting the challenges of Member Countries in reporting the amount of antimicrobials intended for use in animals (e.g. double counting of data when multiple data sources were reported). OIE will continue to engage with Member Countries to clarify and improve the accuracy of the data reporting.

6. Discussion on the report presenting the results for the second phase of the OIE collection of data on the use of antimicrobial agents in animals

The OIE proposed a structure which was similar to the first phase of reporting from the global database.

For the global analysis of quantitative data adjusted by animal biomass, the Group decided that 2014 should be the focus for the global analysis. The analysis of data from 2015 is still ongoing, and may be used in the next report.

The Group suggested the title of the overall report change from the word 'use', which to some countries implies having farm-level data. The Group recommended using previously agreed upon wording 'quantities of antimicrobials intended for use in animals'.

The Group recommended that the global analysis describe variability and ranges of reporting in the data reported.

The Group also recommended that when the data allows for it, that data could be reported by antimicrobial class.

The table of contents for the upcoming report was approved and can be found in Appendix III.

7. Questionnaire for the third phase of the OIE collection of data on the use of antimicrobial agents in animals to be sent to Member Countries

Based on challenges identified by the OIE during the analysis of the second phase of data reporting, an alteration to question 11 of the questionnaire was proposed, as well as the addition of a few follow up questions. The challenge the amendment attempted to address was that within the current template, some Member Countries could not accurately describe their regulations on antimicrobial growth promoters and their use in animals.

The Group recommended the following changes to this section of the questionnaire:

Q11: Are antimicrobial agents used for growth promotion purposes in animals in your country? (Yes, no, unknown).

Q12: Does your country have legislation/regulations on the use of antimicrobial as growth promoters in animals? (Yes – legislation/regulation exists, no – legislation/regulation does not exist).

Q13: If your country has legislation/regulation for antimicrobial growth promotion, could you please indicate the appropriate case that applies to you country? (All antimicrobial agents banned for use as growth promoters, some antimicrobial agents banned for use as growth promoters, antimicrobial growth promoters are authorised for use).

Q14. Provide a list of authorised antimicrobial growth promoters, if any.

8. Future development and perspectives including sharing of results

8.1. Suggested list of species to be included in WAHIS and WAHIS+

Drs Lina Awada and Neo Mapitse informed the Group on the current status of updating WAHIS. They indicated that the current version of WAHIS will be in place for the next two years, after which WAHIS+, a new platform, will be implemented. The Group was requested to further advise on the short and long-term changes in animal population data that will be requested in these platforms based on the needs for the denominator, and taking into account the new capacity of WAHIS+ platform for collecting data sub-categories and free text boxes.

Based on the list previously agreed by the Group in January 2017, a few amendments were discussed for addition to the current WAHIS platform from knowledge gained during development of the denominator. Particular attention was paid to grouping animals by production class and by expected average weight, to facilitate calculation of an accurate denominator. The Group noted that there may be many utilities of this information, aside from uses for reporting quantities of antimicrobial agents intended for use in animals, such as for epidemiological and disease impact analysis. The agreed upon suggestions for updates to the current WAHIS platform can be found in Appendix IV.

For the next platform WAHIS+ that will be initiated in two years, the Group recommended inclusion of several more animal production classes, as well as sub-categories and free text boxes where Member Countries would be able to provide greater detail if possible. The initiation of WAHIS+ will also allow for information to be collected on country-specific estimated weights and cycle factors, which will support future refinement of the biomass denominator calculation. The agreed upon list of suggested animal population data to be collected for WAHIS+ can be found in Appendix V.

The Group emphasised the importance of the terminology of these production classes in order to avoid confusion or double counting in the data collection. The Group provided descriptions for the animal groups suggested to support WAHIS in development of their data collection guidance, which are included in parentheses in the proposed lists.

8.2. Recommendations for future reporting of data on the use of antibiotics in animals

The Group acknowledged the need to routinely re-evaluate next steps for reporting, including suggestions for data improvements, methodology refinements, and the validation process for Member Country data. The Group acknowledged that the OIE and Member Countries will gain experience working with the data, enhance understanding of the data sources, and will refine the methodological approach over time. This will improve the accuracy of the information that can be reported.

The Group recommended the following next steps for reporting:

- maximise Member Country participation;
- increase the accuracy of the numerator, the denominator, and refining the methodology for estimating both based on experience and increased level of detail reported in the future;
- provide the global analysis yearly and periodically refine the provisional denominator as appropriate based on experience and Member Country comments;
- reporting by animal species as Member Country data collection capacity improves;
- develop a process for Member Countries to validate their data, for both the numerator and denominator;
- analysis of quantitative trends over time, which as the data improve in reliability and robustness, will increase in accuracy.

The Group acknowledged that there are often external requests to the OIE to release confidential country information. Given the need to improve the data, the data sources, and the methodological approach, the Group does not believe it is currently advisable to release these data, but suggested that the OIE encourage the Member Countries to publish their own data when they are confident in their results.

The Group acknowledges that should in the future, reporting be done at the national level, the OIE would need to develop a process for Member Countries to review and concur on the data to be published.

9. Review comments from the OIE Member Countries on the proposed updated version of the Chapter 6.7. on "Harmonisation of national antimicrobial resistance surveillance and monitoring programmes"

The Group reviewed the further comments received from Member Countries on Chapter 6.7 of the *Terrestrial Code*.

The Group noted that Member Countries had different priorities for the range and location of samples which might be included in antimicrobial resistance surveillance and monitoring programmes. The comments received from Member Countries reflected this and were not always in agreement in relation to the emphasis which different Member Countries considered appropriate.

In relation to a request to remove animal feed and environment (and a separate request to remove animal feed) from the scope of surveillance and monitoring programmes, the Group considered that there is a need to assess sources of resistance entering the animal population and noted opposing comments, considered at the previous meeting of the Group, requesting that animal feed should be given increased prominence. The Group recommended retaining animal feed and environment and that monitoring of antimicrobial resistance in bacteria in animal feed and the environment should be considered according to national priorities. Feed is one of a number of possible sources of resistant bacteria and the purpose of the chapter is not to provide a comprehensive list of sources which might be monitored, but to provide an indication of those types of monitoring which might be performed appropriate to the national situation. Animal feed and the environment have been suggested as sources of AMR and are also mentioned in Codex Alimentarius Guideline CAC/GL 77- 2011 (Guidelines for risk analysis of foodborne antimicrobial resistance) and in Chapter 6.7 of the *Terrestrial Code*.

Based on a Member Country comment, the Group agreed to add "trends" to the description of surveillance and monitoring in the preamble to the chapter.

Although the Group agreed to retain animal feed and environment, they also revised the text of the General aspects Article (6.7.3.1) to reflect monitoring and surveillance priorities. The priority areas for monitoring and surveillance were considered to be animals, food and humans, while animal feed and environment could be included according to national priorities.

A proposal to include the term "where available" in relation to the analysis of practice records was not supported as the introductory comments to this section contains the term "may include" which already implies that inclusion of this item is optional. In relation to a request to add "caeca", the Group agreed to add caeca as a further example of the type of sample which may be collected (Article 6.7.4.1.b.) The suggestion was adopted to amend the text to indicate that the appropriate sample size required in a sampling programme might be calculated in order to assess trends, prevalence or both. A suggestion to include the prevalence of the target bacterium into sample size considerations was also adopted. The Group did not accept editorial suggestions to amend the title of Table 1, as the proposed changes did not reflect the content of Table 1. The Group agreed to add additional rows to Table 1 to cover lower expected prevalences of 1% and 5%.

In Article 6.7.3.4 which addresses sample sources, consistent with the rationale and revisions to earlier text, the Group re-ordered the list of sample sources in the chapter to reflect those sample sources considered of highest priority. The text covering animal feed was revised to reflect the text adopted in the section covering general aspects.

The Group agreed to revise the text in accordance with comments received to clarify the expected outputs from the sampling of carcasses for bacteria, and subsequent determination of their susceptibility to antimicrobials as described in Table 2. A request to replace "prescribing decisions" with "treatment decisions" was not accepted as the current wording was considered appropriate. The Group accepted a recommendation to add a sentence covering epidemiological outputs.

A comment to add *Salmonella* and *Campylobacter* under the poultry pathogens listed in Table 3 was not supported. Table 3 focuses on animal pathogens; *Salmonella* and *Campylobacter* are already covered under the sections covering zoonotic pathogens elsewhere in the guidance.

The Group considered comments relating to the value of sampling different points along the food chain (farm, slaughterhouse, meat) and also recalled previous comments received mentioning sampling at the slaughterhouse/abattoir, in the paragraph relating to the sites of sampling. The Group proposed revised wording to accommodate all comments received. The Group agreed with comments to remove phage typing and update the text by adding genotypic methods, which are now replacing phage typing.

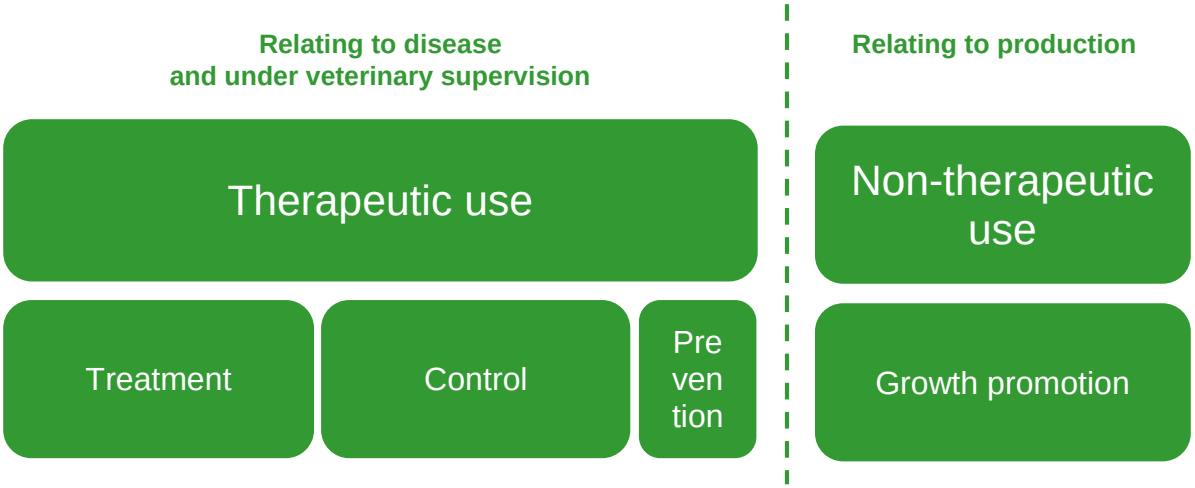
10. Review comments from the OIE Member Countries on the proposed updated version of the Chapter 6.8. on "Monitoring of the quantities and usage patterns of antimicrobial agents used in food-producing animals"

The Group reviewed the comments received on the proposed definitions for possible inclusion in Chapter 6.8 of the *Terrestrial Code*: therapeutic use, preventative use and growth promotion.

The Group considered a proposed definition from a Member Country for medically important antimicrobial drugs which was defined as "antimicrobial drugs that are important for therapeutic use in humans". The Group focused on the potential usefulness of this proposed definition as an addition to the *Terrestrial Code*. At this stage, the Group noted that this term is not currently included or used in the OIE *Codes.* The Group recognised that further sub-division of those antimicrobials used for growth promotion was possible but also noted that the position relating to the importance of individual compounds to human medicine was not fixed but was subject to change. The Group considered the need for and potential value of this term and concluded that the concept, which relates to human health, lies within the remit of WHO and has been covered by WHO.

The Group considered text proposed in relation to the definition of preventative use and accepted most of the proposed changes which improved the clarity. The Group did not accept the proposal to delete "for a limited duration", because among other factors, this was required to ensure differentiation of preventative use from growth promotion. The Group discussed a recommendation under the terms therapeutic use and preventative use to specify the number treated may be "one or more" and decided to revise the text using "individual or group of animals", and agreed to add "defined" to the proposed definition for preventative use for clarity. The Group did not accept a proposal to add the term "order" because this term is not commonly used globally.

The Group reviewed and refined a graphic, illustrating the different categories of use. The graphic was intended to clearly differentiate three types of therapeutic use which should be under veterinary supervision: treatment, control and prevention.



The Group agreed that therapeutic use covered all use relating to disease and also reiterated that such use would occur under veterinary supervision.

The Group considered non-therapeutic use to include production purposes (growth promotion), as well as minor uses (e.g. skeletal marking in fish).

The Group made a minor change to the definition of growth promotion to include "in feed or water" as per a Member Country suggestion.

The conclusions of the Group were in accordance with comments received from Member Countries to adopt two broad categories: therapeutic use (related to disease and under veterinary supervision) and non-therapeutic use (related to production). The Group supported requests from Member Countries for clarity in categorising the different types of use.

The Group noted that the therapeutic use categories of treatment, control and prevention may be used or applied in several contexts. For example they may be utilised in risk management and guidance documents, and also surveillance and research. In relation to practical application of the proposed terminology (e.g., surveillance data collection), the Group noted comments received from a Member Country and agreed that it may be necessary to combine some categories of use in circumstances where data were incomplete.

The Group considered that for the purpose of these definitions, control and metaphylaxis are understood to have the same meaning. Also that prevention, preventative use, and prophylaxis are understood to have the same meaning.

The result of the proposed definitions is set out below:

> **Therapeutic Use**: Administration of an antimicrobial agent to an individual or a group of animal(s) to treat, control or prevent infection or disease. The Veterinary Medicinal Products (VMP) containing antimicrobial agents should only be used on the prescription of a veterinarian or other suitably trained person authorised to prescribe VMP containing antimicrobial agents in accordance with national legislation and under the supervision of a veterinarian.
>
> ***Treatment*** means the administration of an antimicrobial agent to an individual or a group of animals showing clinical signs of an infectious disease.
>
> ***Control*** means the administration of an antimicrobial agent to groups of animals containing sick animals and healthy animals (presumed to be infected), to minimise or resolve clinical signs and to prevent further spread of the disease.

Prevention means the administration of an antimicrobial agent targeted to an individual or a group of healthy animals at risk of developing a specific infection or in a specific situation where disease is likely to occur if the drug is not administered, where administration is provided under the supervision of a veterinarian, using an appropriate dose and for a limited, defined duration. The Veterinary Medicinal Products (VMP) containing antimicrobial agents should only be used on the prescription of a veterinarian or other suitably trained person authorised to prescribe VMP containing antimicrobial agents in accordance with national legislation and under the supervision of a veterinarian.

For the purpose of these definitions, control and metaphylaxis are understood to have the same meaning.

For the purpose of these definitions, prevention is understood to have the same meaning as prophylaxis and preventative use.

Growth promotion: Growth promotion refers to the use of antimicrobial substances in feed or water to increase the rate of weight gain or the efficiency of feed utilization in animals by other than purely nutritional means. The term does NOT apply to the use of antimicrobial agents for the specific purpose of treating, controlling or preventing infectious diseases, even when an incidental growth response may be obtained (This definition is in line with the definition developed by Codex Alimentarius in CAC/RCP 61-2005.)

11. OIE List of antimicrobial agents of veterinary importance

The Group considered the OIE List of antimicrobial agents of veterinary importance. Areas of importance identified for further discussion included growth promoters, ionophores, pleuromutilins, colistin and the recent updated information produced by WHO in relation to medical antimicrobials of importance. The Group agreed that further work was required which should include reviewing and updating the recommendations which are included as part of the List. The Group further agreed that specific recommendations relating to colistin may be considered. The issues of the List will be addressed in the next meeting and any available information will be taken into consideration.

12. Next OIE Global Conference on the use of antimicrobial agents and antimicrobial resistance

It was proposed that the next OIE Global Conference on the Use of Antimicrobial agents and Antimicrobial Resistance should be held in 2018. The Group were asked to form the scientific committee for the meeting. There were no further updates on this item at this stage.

13. Any other business

The Group proposed the following dates for the next meeting: from 22 to 24 January 2018.

14. Adoption of report

The Group adopted the report.

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…/Appendices

Appendix I

MEETING OF THE OIE *AD HOC* GROUP ON ANTIMICROBIAL RESISTANCE

Paris, 29 – 31 August 2017

Agenda

1. **Opening**
2. **Adoption of the agenda and appointment of the chairperson and rapporteur**
3. **Roundtable from the participants on any new issues of interest for the Group**
4. **Overview of the results second phase of the collection of data on the use of antimicrobial agent in animals in animals**
5. **Presentation and agreement of the proposed denominator**
6. **Discussion on the report presenting the results for the second phase of the OIE collection of data on the use of antimicrobial agents in animals**
7. **Questionnaire for the third phase of the OIE collection of data on the use of antimicrobial agents in animals to be sent to Member Countries**
8. **Future development and perspectives including sharing of results**
   - 8.1. Suggested list of species to be included in WAHIS and WAHIS+
   - 8.2. Recommendations for future reporting of data on the use of antibiotics in animals
9. **Review comments from the OIE Member Countries on the proposed updated version of the Chapter 6.7. on "Harmonisation of national antimicrobial resistance surveillance and monitoring programmes"**
10. **Review comments from the OIE Member Countries on the proposed updated version of the Chapter 6.8. on "Monitoring of the quantities and usage patterns of antimicrobial agents used in food-producing animals"**
11. **OIE List of antimicrobial agents of veterinary importance**
12. **Next OIE Global Conference on the use of antimicrobial agents and antimicrobial resistance**
13. **Any other business**
14. **Adoption of report**

Appendix II

MEETING OF THE OIE *AD HOC* GROUP ON ANTIMICROBIAL RESISTANCE

Paris, 29 - 31 August 2017

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Appendix III

REPORT PRESENTING THE RESULTS FOR THE SECOND PHASE OF THE OIE COLLECTION OF DATA ON ANTIMICROBIAL AGENTS INTENDED FOR USE IN ANIMALS

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Proposed table of contents

Appendix IV

List of animal categories or animal species suggested to be included in updated WAHIS (current version)

ANIMAL CATEGORY
Cattle
Adult beef cattle (2+ years) Adult dairy cattle (2+ years) Males and females (1-2 years, including feedlot cattle) Calves (<1 year)
Buffaloes
Cervidae
Pigs
Adult (breeding) pigs Fatteners Piglets (pre-weaning) Backyard pigs
Birds
Broiler chickens Layer chickens Turkeys Other birds Backyard poultry
Small ruminants
Sheep and goats (mixed herds) Adult (breeding) sheep Adult (breeding) goats Lambs (<6 months) Kids (<6 months)
Equidae
Horses Donkeys/Mules/Hinnies
Camelidae
Hares and Rabbits
Rabbits Hares
Cats
Dogs
Fish (farmed)
Molluscs (farmed)
Crustaceans (farmed)
Amphibians (farmed)

Appendix V

List of animal categories or animal species suggested to be included in WAHIS+

ANIMAL CATEGORY
Cattle
Adult cattle, males and females (2+ years) *Adult dairy cattle* *Adult beef cattle* Males and females (1-2 years, including feedlot cattle): cf *Males and females, 1-2 years, dairy cattle* *Males and females, 1-2 years, beef cattle* Calves (<1 year) cf
Buffaloes
Adult buffalo Calves (<1 yr)
Cervidae
Adult cervidae (text box to specify) Calves (<1 yr)
Pigs
Adult (breeding) pigs Fatteners cf Piglets (pre-weaning) cf Backyard pigs
Poultry
Broiler chickens cf Layer chickens cf Turkeys cf Other birds (text box to specify) Backyard poultry
Small ruminants
Sheep and goats (mixed herds) Sheep *Adult (breeding)* *Lambs (<6months)* cf Goats *Adult (breeding)* *Kids (<6months)* cf
Equidae
Horses Donkeys Mules/Hinnies
Camelidae
Camels Llamas Alpacas
Hares and Rabbits
Rabbits Hares

Companion animals
Cats
Dogs
Other companion animals (text box to specify)
Aquaculture
Fish
Molluscs
Crustaceans
Amphibians
Reptiles (farmed)

cf: denotes where collection of a cycle factor would be needed

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WORK PROGRAMME OF THE SCIENTIFIC COMMISSION FOR ANIMAL DISEASES (SEP 2017)

Topics	Progress before Sep 2017 SCAD meeting	Summary of agenda items	SCAD decision Sep 2017	Future action plan	Priority 1 = top priority
Terrestrial Animal Health Code Chapters					
Glossary	Circulated for comments after Feb 2017 meeting	Address Member comments on the amended definitions on protection zone	Revision of the definition	Follow up	1
Ch. 1.4. Animal Health Surveillance	*Ad hoc* Group convened by the OIE	Review draft chapter proposed by the *ad hoc* Group	Endorsed with minor modifications. Forward to TAHSC	Follow up	1
Ch. 1.6. Procedures for self-declaration and official recognition	Questionnaires circulated for Member comments after Feb 2017 meeting	Address Member comments	Proposed amendments and sent to TAHSC.	Follow up. Continue discussion with TAHSC	1
		Review the procedures for self-declaration developed by the Status Dept	Proposed modifications to improve clarity	Finalisation and publication of the procedures on self-declarations on the OIE website	1
Ch. 8.15. Rinderpest	An amended draft Article 8.15.1 was circulated	Address Member comments	Proposed amendments and sent to TAHSC	Follow up	3
Ch 4.3. zoning and compartmentalisation	Circulated for comments after Feb 2017 meeting	Address Member comments. Consideration of multiples containment zone and the use of temporary protection zone in response to a risk	Member comments addressed. Continue the discussion with TAHSC	Follow up. Consider the new concepts for disease-specific chapters e.g. FMD	1
Ch. 8.8. Infection with foot and mouth virus	Circulated for comments after Feb 2017 TAHSC meeting	Address Member comments	Proposed amendments and sent to TAHSC	Follow up the feedback from TAHSC Further elaborate the new concepts under discussion in chapter 4.3., once adopted Harmonisation process (see below)	1

Topics	Progress before Sep 2017 SCAD meeting	Summary of agenda items	SCAD decision Sep 2017	Future action plan	Priority 1 = top priority
Ch 8.X. *Trypanosoma evansi (not including surra)*	NA	NA	NA	Follow up	2
Ch 12.3. Dourine	NA	NA	NA	Follow up	2
CH. 8.13. Infection with rabies virus	*Ad hoc* Group on rabies planned	NA	NA	Participate in the *ad hoc* Group	1
Ch. 11.11. Lumpy skin disease	Adopted during the 85Th GS	Review Member comments received during GS	Proposed amendments and sent to TAHSC	Follow up	1
Ch. 11.4. BSE	Follow up on the discussion after the 85Th GS	Address Member comments received through interventions at the 85th General Session as well as afterwards	*Ad hoc* Group to be convened	Participate in the *ad hoc* Group	1
Ch. 11.12. Theileriosis	*Ad hoc* Group convened	Review draft chapter proposed by the *ad hoc* Group	Report and chapter endorsed and sent to THASC	Follow up	2
Ch. 12.10. Glanders	OIE Glanders experts were consulted	Review Member Country Comments and OIE Experts opinion.	Draft amended chapter forwarded to THASC	Follow up	2
Ch. 15.2. Classical swine fever	Circulated for Member comments after February 2017	Review Member Country Comments	Proposed amendments and sent to TAHSC	-Follow up Consult the Biological Standards Commission on the timing for the validated DIVA method	1
Ch. 4.X Vaccination	Circulated for Member comments after February 2017	Review Member country Comments	Member comment addressed. Draft amended chapter forwarded to THASC	Follow up	1
Ch 8.3 Bluetongue	Circulated for Member Comments after February 2017	Review Member Country Comments	Member comment addressed. Draft amended chapter forwarded to THASC. Suggest full revision	Follow up	2
Ch 4.Y. Management of outbreaks of listed diseases	Circulated for Member Comments after February 2017	Review Member Country Comments	Member comment addressed. Draft amended chapter forwarded to THASC	Follow up	3
Ch. XX. Tsetse transmitted trypanosomiases	Request to develop a Terrestrial Code Chapter was made by Members	Consider the Members' request	Request to the DG to convene an *ad hoc* Group	Participate in the *ad hoc* Group (first half of 2018)	2
Equine disease chapters revision	Request harmonisation by HQ	NA	Na	NA	3

Topics	Progress before Sep 2017 SCAD meeting	Summary of agenda items	SCAD decision Sep 2017	Future action plan	Priority 1 = top priority
Ad hoc Group (AHG) and Working Group on Wildlife					
AHG on Antimicrobial Resistance	*Ad hoc* Group convened	Review the *ad hoc* Group report address Member Comments	Forward report to TAHSC	Follow up	1
AHG on Surveillance	*Ad hoc* Group convened	Review the ad hoc Group report and draft chapter	Report and draft chapter endorsed with minor modifications	Follow up	1
AHG on Theileriosis	*Ad hoc* Group convened	Review the *ad hoc* Group report and draft chapter	Report and draft chapter endorsed with minor modifications	Follow up	2
AHG on alternatives for surveillance for demonstration of FMD freedom	*Ad hoc* Group convened Option paper prepared by HQ	Consider the *Ad hoc* report Consider the opinion paper	Report endorsed Paper considered	Consult the opinion of the *ad hoc* Group on the evaluation of FMD status	2
AHG Group on biological threat reduction	*Ad hoc* Group convened	Consider the *Ad hoc* report	Report endorsed	Follow up the next *ad hoc* Group	2
Working Group on Wildlife	Draft agenda available. Follow up the PPR outbreak in Saiga antelope of Mongolia	Draft agenda considered Update on the PPR outbreak in Saiga antelope of Mongolia considered Consider the paper on "Vaccination of Animals of High Conservation value"	Draft agenda endorsed Updated on the PPR outbreak in Mongolia well received with thanks Postpone to Feb 18 meeting	Follow up To be considered	1 3 3
Official Disease Status Recognition					
Evaluation of Member Country dossiers	NA	NA	NA	For SCAD Feb. meetings	1
Experts missions to Member Countries	Field missions conducted	Reviewed the action plans from three countries for the implementation of the recommendations of the missions Assess the needs and prioritise	Recommended amendments and reconsideration of priorities. Needs assessed and priorities established for other in-country missions	Follow up via six-monthly report to SCAD. Consider the deployment of other missions	1
Follow up of Member Countries with official disease status or with suspended status	Ongoing	Review the situation and progress made in countries under specific scrutiny	Situation in the listed countries revised	Follow up	1
Selection of annual reconfirmations for comprehensive review	2016 annual reconfirmations reviewed and list of countries and zones adopted at GS85	Identify annual reconfirmations for a comprehensive review in February 2018	Countries' disease status for comprehensive SCAD review in Feb. 2018 selected	Comprehensive review of the selected annual reconfirmations in Feb. 2018	1

Topics	Progress before Sep 2017 SCAD meeting	Summary of agenda items	SCAD decision Sep 2017	Future action plan	Priority 1 = top priority
Harmonisation the requirements in the *Terrestrial Code* Chapters for official disease freedom (OIE HQ)	Harmonisation document prepared by OIE HQ	Review the harmonised requirements of the disease-specific Chapters		Follow up	2
Review of Status recognition procedures	Updated Standard Operating Procedures published on the OIE website			- To be updated regularly as needed - Revision of Chapter 1.6.	
Official recognition of BSE risk status	Member comments received	Consider Member comments on the official recognition of BSE risk status	Continue official recognition of BSE risk status; BSE Chapter revision as priority	Follow up in Feb. 2018	2
Identification of PVS Critical Competences relevant for endorsement of official control programme and official status recognition	Progress made by OIE HQ and identification of CC relevant for disease status recognition		Consider the PVS tool during the assessment for the official status recognition	Follow up on the effectiveness	3
Liaison with other Commissions					
TAHSC	Position paper and ToR to update the CH 10.4. on AI	Consider the position paper and ToR	Support the request of an *ad hoc* Group	Participate in the *ad hoc* Group	1
BSC	Request to assess the risk of using cattle tongue epithelium in the production of FMD vaccine	Consider the risk of using of using cattle tongue epithelium in the production of FMD vaccine	Topic discussed and opinion forwarded to BSC	Follow up	1
Global Control/Eradication Strategies					
Global eradication of PPR	Ongoing update	Update of the progress made		Follow up	2
Global control of FMD	Ongoing update	Update of the progress made		Follow up	2
Evaluation of applications for OIE Collaborating Centre status					
Risk analysis and modelling Collaborating Centre	Application received by the OIE	Evaluation application	Recommended the acceptance of the application	Follow up	2
Follow up of conferences, meeting, mission with impact in the OIE mandate					
Updated on events relevant to the SCAD mandate	Ongoing update	Follow up the events relevant to the SCAD mandate		Follow up	2

Topics	Progress before Sep 2017 SCAD meeting	Summary of agenda items	SCAD decision Sep 2017	Future action plan	Priority 1 = top priority
Disease/infection specific issues					
Invasive Wasp (Vespa velutina)	Paper on Vespa velutina nigrithorax was prepared by the OIE Reference Laboratory	Assess Vespa velutina nigrithorax against the listing criteria	Recommending the inclusion in the OIE List	Follow up	2
Chronic wasting disease of cervids	NA	NA	NA	NA	3
Technical fact sheet on Schmallenberg virus	Fact sheet reviewed by electronic Group. Endorsed by SCAD (electronically)	For information	NA	NA	
Replacement of international standard bovine tuberculin	NA	NA	NA	NA	1
Rinderpest eradication	Ongoing activities	Update on the elimination of rinderpest virus material activities	Information received	Follow up	2
Biological threat reduction	Ongoing activities	Update on the activities related to biological threat reduction	Information received	Follow up	2