MEETING OF THE OIE AD HOC GROUP ON EPIDEMIOLOGY

Paris, 16 – 18 March 2010

The OIE ad hoc Group on Epidemiology was welcomed by Dr Yong Joo Kim from the Scientific and Technical Department, who gave an overview on the main topics and priorities on the agenda. Dr Lea Knopf of the Scientific and Technical Department joined the meeting later and provided information on the topic-specific discussions on the work of the ad hoc Group on Epidemiology at the last meeting of the Scientific Commission held early March 2010.

1. Adoption of the agenda and appointment of a rapporteur

The meeting was chaired by Dr Cristóbal Zepeda and Dr Jeffrey Mariner was designated as rapporteur. The adopted agenda and list of participants are attached as Appendices I and II, respectively.

2. Concept paper on the approach to animal health management at the wildlife and domestic animal interface

The Group reviewed and supported the comments and additional proposals made by the Working Group on Wildlife Diseases on the definition of “wildlife” in the document on “Draft policy for the OIE on the wildlife-domestic animal interface” which had been endorsed by the Scientific Commission. The Group decided to accept the changes suggested by the Working Group on Wildlife Diseases.

3. Compartmentalisation

The Group reviewed the documentation provided on existing examples in the application of compartmentalization. The Group noted that the Scientific Commission would request additional information on the OIE pilot studies on compartmentalisation (in Thailand and Brazil).

In order to assess the provided documentation, the Group developed a generic checklist to assess compartments (Appendix III). The Group felt that the information provided was difficult to assess as it did not follow the format recommended in Chapter 4.4. of the Terrestrial Code and did not contain information on all aspects required. Further, it was not always clear what the proposed objective was. The documentation on African swine fever was a general policy document and was not very specific to compartmentalization. The documentation on ostriches was not disease-specific and did not refer to compartments.

The only documents clearly referring to the establishment of a compartment were those related to classical swine fever and the biosecurity measures checklist. It was not a specific compartmentalization request, but rather standard operating procedures to establish compartments. The level of agreement with the newly developed checklist was assessed. The Group found that the proposed procedure was on the right lines but needed to be further developed as there was not enough detail in some areas and other areas were not covered at all. The results of the assessment are presented in Appendix IV.

In order to be able to assess a compartmentalization proposal, the Group agreed that it would require a specific document on the proposed strategy. Such a document preferably should address all the conditions listed in the checklist mentioned above, rather than present a general policy for the control of the disease, which included amongst other descriptive measures some measures for compartments.
4. Re-discussion on concepts of protection zone and case definition

4.1. Protection zone

Following the new revisions added by the Scientific Commission in March, the Group decided to re-discuss the revised proposal for the establishment of protection zones. The Group considered that the main incentive for establishing protection zones was the preservation of status of the rest of the country or zones within the country in the event of an outbreak within the protection zone. The Group noted the following points:

• It is unclear why a country would wish to establish a protection zone between two free areas, for example, between free areas with and without vaccination. The key point was to have an effective separation between the zones and their relevant animal populations.

• With respect to article 4.3.4.5 of the Terrestrial Code, the Group did not agree with the addition of the words “depending on the epidemiological situation”. Firstly, it was not clear who would determine the epidemiological situation; and secondly, a free zone should not lose its status unless it had an outbreak. The inclusion of the proposed wording would create a disincentive for the establishment of protection zones.

• Regarding article 4.3.4.2., the addition of the wording “or unknown” seemed superfluous since unknown was a subset of “different”.

• The addition of article 4.3.4.6. removed the principal incentive for the establishment of a protection zone as any outbreak would imply the loss of status until a containment zone is established. If article 4.3.4.6. was adopted there was no need to notify the OIE on the establishment of a protection zone as it would not provide any advantage in regards to trade.

• Article 4.3.4.12, as presently worded, contradicted the additional wording introduced by the Scientific Commission in article 4.3.4.6. as the new wording implied the loss of status of the country or zone in the event of an outbreak within the protection zone.

Considering the above and the requirements for a protection zone, in particular those described in article 4.3.4.8., the Group agreed to propose that article 4.3.4.6 be deleted and a requirement be introduced to notify the OIE on the establishment of a protection zone. In article 4.3.4.12, “and zones” should be added after the word “country”.

4.2. Case definition

The Group reviewed also the comments on chapter 1.4 on surveillance in the Terrestrial Code and believed that the term “case description” as proposed by the Scientific Commission should be avoided. Case definition was the accepted term in epidemiology, and changing it would lead to confusion.

A case definition might have different levels of accuracy depending on whether it was based on syndromes, disease specific clinical signs or laboratory confirmed cases. Additionally, a case definition might change depending on the epidemiological situation. For example, confirmation of an initial outbreak in a previously free country or zone might require identification of the agent, while subsequent outbreaks could be defined on the basis of clinical signs to the extent that they were epidemiologically linked. Similarly, a case definition used within a control and eradication programme might need to be modified when approaching the final stages of eradication.

The Group agreed to propose the following wording:

“Case definition – means a set of criteria used to classify an animal as having the characteristics relevant to the surveillance objective. A case definition may also refer to a herd or other relevant epidemiological units.”

5. Follow up on the future ‘Guide for Terrestrial Animal Health Surveillance’

The Group reviewed the proposed chapter 2 of the future Guide and made comments for the ad hoc Group on Editing of a Guide for Terrestrial Animal Health Surveillance, to which the revised chapter containing the Group’s comments would be transferred for their consideration.
6. **Development of Generic Approaches for Disease Control**

The Group decided to discuss this topic in a subsequent meeting. The Group agreed to seek clarification from the Scientific Commission on the scope of this document, namely whether it referred to disease control and eradication procedures exclusively or should cover emergency response in case of a disease incursion. The Group believed that they might be similarities with the global control strategy for foot and mouth disease.

7. **Next meetings of the *ad hoc* Group on Epidemiology**

The Group agreed on the dates for its next meetings: 21 - 23 September and 2 - 4 November 2010.

8. **Adoption of the draft report**

The *ad hoc* Group reviewed and amended the preliminary draft report provided by the rapporteur. The Group agreed that the report captured the discussions and therefore could be adopted without additional circulation to the Group for comments.

.../Appendices
Appendix I

MEETING OF THE OIE AD HOC GROUP ON EPIDEMIOLOGY
Paris, 16 – 18 March 2010

Agenda

1. Adoption of the agenda and appointment of a rapporteur

2. Feed-back on the draft concept paper on the approach to animal health management at the wildlife-domestic animal interface, including additional contributions from the Working Group on Wildlife Diseases

3. Assessment of implementation and functioning of compartmentalisation based on existing, documented compartments and the current OIE standards

4. Re-discussion on concepts of protection zone and case definition

5. Follow up on the future ‘Guide for Terrestrial Animal Health Surveillance’

6. Development of generic approaches for disease control

7. Next meetings of the ad hoc Group on Epidemiology

8. Finalisation and adoption of the draft report
Meeting of the OIE Ad Hoc Group on Epidemiology

Paris, 16 – 18 March 2010

List of participants

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Introduction and objectives

These guidelines are intended to provide a structured framework for the implementation and assessment of compartments within countries or zones, based on the provisions of Chapters 4.3 and 4.4, with the objective to facilitate trade in animals and products of animal origin and as a tool for disease management.

The fundamental requirement for compartmentalisation is the implementation and documentation of management and biosecurity measures to create a functional separation of subpopulations.

In disease-free countries or zones, compartments preferably should be defined prior to the occurrence of a disease outbreak. In the event of an outbreak or in infected countries or zones, compartmentalisation may be used to facilitate trade.

For the purpose of international trade, compartments must be under the responsibility of the Veterinary Authority in the country. For the purposes of these guidelines, compliance by the Members with Chapters 1.1 and 3.1 is an essential prerequisite.

In order to comply with the requirements of chapters 4.3 and 4.4, the following information should be collated. The recognition of compartments is a bilateral agreement between the Veterinary Authorities of the countries involved.

Principles for defining a compartment

1. Disease for which the compartment is defined. Indicate the etiological agent
2. Description and location of all functional units within the compartment. Provide a map and a chart depicting the relationship and flow of animals, products, equipment, feed, personnel, etc. between units
3. For each unit provide information on the species present.
   o Provide the current number of susceptible animals by species and indicate the maximum capacity for each
   o Are non-susceptible animals allowed in the compartment? If so, provide the current number by species

Separation of the compartment from potential sources of infection

1. Physical or spatial factors that affect the status of biosecurity in a compartment
   a. Describe the disease situation in adjacent areas and in areas posing a risk to the compartment. Indicate the prevalence or the number of cases for at least the last year. Has the epidemiological pattern changed over time?
   b. Is vaccination carried out? Describe the vaccination strategy and coverage
2. Indicate the location, disease status and biosecurity of the nearest epidemiological units or other epidemiologically relevant premises. Provide a map and distances.
   a. Flocks or herds with a different health status in close proximity to the compartment, including wildlife and their migratory routes;
   b. Slaughterhouses, rendering plants or feed mills;
   c. Markets, fairs, agricultural shows, sporting events, zoos and other points of animal concentration.

Appendix III

Guidelines for the implementation of compartmentalisation
2. Infrastructural factors

For each unit of the compartment, provide details on physical separation relevant for the specific disease:
1. fencing or other effective means of physical separation; provide details such as height, material, mesh size, depth, housing;
2. facilities for people entry including access control, changing area and showers;
3. vehicle access including washing and disinfection procedures;
4. control of use and routing of vehicles with access to the compartment;
5. unloading and loading facilities;
6. isolation facilities for introduced animals;
7. facilities for the introduction of material and equipment;
8. infrastructure to store feed and veterinary products;
9. disposal of carcasses, manure and waste;
10. water supply;
11. measures to prevent exposure to living mechanical or biological vectors such as insects, rodents and wild birds;
12. ventilation systems;
13. describe the workflows within the unit;
14. for each unit, provide a diagram covering the above aspects.

3. Biosecurity plan

Describe in detail:
1. potential pathways for introduction and spread into the compartment of the agents for which the compartment was defined, such as
   a. animal movements,
   b. germplasm (sperm, embryos and oocytes)
   c. rodents,
   d. fauna,
   e. aerosols,
   f. arthropods,
   g. vehicles,
   h. people,
   i. biological products,
   j. equipment,
   k. fomites,
   l. feed,
   m. waterways,
   n. drainage and
   o. other pathways.

   Consideration should also be given to the survivability of the agent in the environment and effective disinfection procedures;
2. for each pathway provide a diagram and data used to determine the critical control points
3. measures to mitigate exposure for each critical control point;
4. standard operating procedures including:
   a. implementation, maintenance, monitoring of the measures,
   b. application of corrective actions,
   c. verification of the process,
   d. record keeping;
5. contingency plan in the event of a change in the level of exposure;
6. reporting procedures to the Veterinary Authority;
7. the programme for educating and training workers to ensure that all persons involved are knowledgeable and informed on biosecurity principles and practices;
8. Personnel policies with respect to private ownership of animals and other potential risk activities.
9. Additional documentation:
   a. feed sources;
   b. personnel policies;
c. visitor logbook;
d. vehicle logbook;
e. any other criteria necessary for the evaluation of disease exclusion;
10. time period for which records are available for audit.

4. Traceability system

Describe in detail:
1. method of individual animal identification. Where individual identification may not be feasible, such as with broilers and day-old chicks, the Veterinary Authority should provide sufficient information concerning the assurance of traceability;
2. systems in place for traceability which should at least include recording of date of birth or hatching, date and type of vaccinations, testing and test results, and origin and movements of the animals and germplasm;
3. audit system for traceability. Describe the frequency and procedures including the reporting of results and corrective actions.

Surveillance for the agent or disease

1. Internal surveillance

Describe in detail the following:
1. baseline animal health report indicating the presence or absence of OIE *listed diseases*. (This report should be regularly updated to reflect the current animal health situation of the compartment);
2. historical status of a compartment for the disease(s) for which it was defined. This should be documented and demonstrate compliance with the requirements for freedom in the relevant *Terrestrial Code* chapter;
3. herd or flock production records, including fertility indicators;
4. herd or flock disease records;
5. medication and vaccination records;
6. baseline mortality rates;
7. for the disease for which the compartment is defined:
   a. type of surveillance applied, as described in chapter 1.4 and the relevant disease chapter;
   b. types of test used, interpretation of results;
   c. target population;
   d. sample size;
   e. frequency of testing and clinical inspection;
   f. surveillance results: provide the number of suspect and positive cases;
   g. follow-up of suspect and positive findings;
8. time period for which records are available for audit.

2. External surveillance

Describe in detail the following:
1. type of surveillance applied as described in chapter 1.4; including passive and targeted surveillance;
2. relevant risk factors, in particular concerning the epidemiological units in close proximity to the compartment and those in areas posing a risk to the compartment;
3. types of test used, interpretation of results;
4. sample size;
5. frequency of testing and clinical inspections;
6. surveillance results: provide the number of suspect and positive cases;
7. follow-up of suspect and positive findings;
8. time period for which records are available for audit.
Diagnostic capabilities and procedures

1. List the officially designated laboratories used for testing and confirming results
2. For each laboratory indicate the capacity of the laboratory to comply with the surveillance requirements
   a. the type of tests applied for the disease
   b. the volume of samples that can be handled for each test
3. Procedures and methods to ensure quality control
4. Procedures for general reporting of test results and rapid reporting of positive results

Emergency response and notification

1. Describe the procedures applied:
   a. in the event of suspected or confirmed occurrence of disease for which the compartment was defined;
   b. in the event of a breach in biosecurity regardless of the suspicion of disease;
   c. in the event of a change of the disease situation of the surrounding area.

Supervision and control of a compartment

1. The Veterinary Authority should provide details on:
   a. auditing authority
      i. accreditation of auditors
      ii. training of personnel
   b. procedures for the approval of compartments
   c. procedures for carrying out audits
   d. frequency of audits
   e. reports of audits and follow-up action
   f. procedures for suspension, reinstatement or revocation of compartments
   g. communication of compartment approval, suspension or revocation to trading partners
Appendix IV

Assessment of classical swine fever compartments
(see comments in bold within the text boxes)

Principles for defining a compartment

1. Disease for which the compartment is defined. Indicate the etiological agent. Yes
2. Description and location of all functional units within the compartment. Provide a map and a chart depicting the relationship and flow of animals, products, equipment, feed, personnel, etc. between units. No, The details are not considered in the SOP
3. For each unit provide information on the species present.
   a. Provide the current number of susceptible animals by species and indicate the maximum capacity for each
   b. Are non-susceptible animals allowed in the compartment? If so, provide the current number by species
      No, The details are not considered in the SOP

The SOP considers each holding wanting to export a possible compartment

Separation of the compartment from potential sources of infection

1. Physical or spatial factors that affect the status of biosecurity in a compartment

   1. Describe the disease situation in adjacent areas and in areas posing a risk to the compartment. Not covered
      a. Indicate the prevalence or the number of cases for at least the last year. Has the epidemiological pattern changed over time?
      b. Is vaccination carried out? Describe the vaccination strategy and coverage

   2. Indicate the location, disease status and biosecurity of the nearest epidemiological units or other epidemiologically relevant premises. Provide a map and distances. Not covered

   3. Consideration should be given to the distance and physical separation from:
      a. Flocks or herds with a different health status in close proximity to the compartment, including wildlife and their migratory routes;
      b. Slaughterhouses, rendering plants or feed mills;
      c. Markets, fairs, agricultural shows, sporting events, zoos and other points of animal concentration.

5. Infrastructural factors

   For each unit of the compartment, provide details on physical separation relevant for the specific disease:
   1. Fencing or other effective means of physical separation; provide details such as height, material, mesh size, depth, housing; Yes
   2. Facilities for people entry including access control, changing area and showers; Yes
   3. Vehicle access including washing and disinfection procedures; Yes
   4. Control of use and routing of vehicles with access to the compartment; No
   5. Unloading and loading facilities; No
   6. Isolation facilities for introduced animals; Yes
   7. Facilities for the introduction of material and equipment; No
   8. Infrastructure to store feed and veterinary products; No
   9. Disposal of carcasses, manure and waste; Yes
   10. Water supply; No
   11. Measures to prevent exposure to living mechanical or biological vectors such as insects, rodents and wild birds; Yes
   12. Ventilation systems; No
   13. Describe the workflows within the unit; No
   14. For each unit, provide a diagram covering the above aspects. No
6. Biosecurity plan

Describe in detail:

1. potential pathways for introduction and spread into the compartment of the agents for which the compartment was defined, such as
   a. rodents,
   b. fauna,
   c. aerosols,
   d. arthropods,
   e. vehicles,
   f. people,
   g. biological products,
   h. equipment,
   i. fomites,
   j. feed,
   k. waterways,
   l. drainage and
   m. other pathways.

   **Pathways are only partially considered**
   Consideration should also be given to the survivability of the agent in the environment and effective disinfection procedures;

2. for each pathway provide a diagram and data used to determine the critical control points

3. measures to mitigate exposure for each critical control point; **No**

4. standard operating procedures including: **No, except record keeping**
   a. implementation, maintenance, monitoring of the measures,
   b. application of corrective actions,
   c. verification of the process,
   d. record keeping;

5. contingency plan in the event of a change in the level of exposure; **No**

6. reporting procedures to the Veterinary Authority; **Yes**

7. the programme for educating and training workers to ensure that all persons involved are knowledgeable and informed on biosecurity principles and practices; **Yes**

8. Personnel policies with respect to private ownership of animals and other potential risk activities. **Yes**

9. Additional documentation:
   a. feed sources; **Yes**
   b. personnel policies; **Yes**
   c. visitor logbook; **Yes**
   d. vehicle logbook; **No, but certificate of disinfection**
   e. any other criteria necessary for the evaluation of disease exclusion;

10. time period for which records are available for audit.

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7. Traceability system

Describe in detail:

1. method of individual animal identification. Where individual identification may not be feasible, such as with broilers and day-old chicks, the Veterinary Authority should provide sufficient information concerning the assurance of traceability; **Yes**

2. systems in place for traceability which should at least include recording of date of birth or hatching, origin, date and type of vaccinations, testing and test results, and movements of the animals; **Yes**

3. audit system for traceability. Describe the frequency and procedures including the reporting of results and corrective actions. **No**
## Surveillance for the agent or disease

### Internal surveillance
Describe in detail the following:
1. baseline animal health report indicating the presence or absence of OIE listed diseases. (This report should be regularly updated to reflect the current animal health situation of the compartment); **No**
2. historical status of a compartment for the disease(s) for which it was defined. This should be documented and demonstrate compliance with the requirements for freedom in the relevant Terrestrial Code chapter; **No**
3. herd or flock production records, including fertility indicators; **Yes, partly**
4. herd or flock disease records; **Yes**
5. medication and vaccination records; **Yes**
6. baseline mortality rates; **Yes**
7. for the disease for which the compartment is defined:
   a. type of surveillance applied, as described in chapter 1.4. and the relevant disease chapter;
   b. types of test used, interpretation of results;
   c. target population;
   d. sample size;
   e. frequency of testing and clinical inspection;
   f. surveillance results: provide the number of suspect and positive cases;
   g. follow-up of suspect and positive findings; **Yes, partially**
8. time period for which records are available for audit. **No**

### External surveillance **Not covered**
Describe in detail the following:
1. type of surveillance applied as described in chapter 1.4; including passive and targeted surveillance;
2. relevant risk factors, in particular concerning the epidemiological units in close proximity to the compartment and those in areas posing a risk to the compartment;
3. types of test used, interpretation of results;
4. sample size;
5. frequency of testing and clinical inspections;
6. surveillance results: provide the number of suspect and positive cases;
7. follow-up of suspect and positive findings;
8. time period for which records are available for audit.

## Diagnostic capabilities and procedures

1. List the officially designated laboratories used for testing and confirming results **Yes**
2. For each laboratory indicate the capacity of the laboratory to comply with the surveillance requirements **No**
   a. the type of tests applied for the disease
   b. the volume of samples that can be handled for each test
3. Procedures and methods to ensure quality control **No**
4. Procedures for general reporting of test results and rapid reporting of positive results **Yes**

## Emergency response and notification **Not covered**

1. Describe the procedures applied:
   a. in the event of suspected or confirmed occurrence of disease for which the compartment was defined;
   b. in the event of a breach in biosecurity regardless of the suspicion of disease;
   c. in the event of a change of the disease situation of the surrounding area.
Supervision and control of a compartment

1. The Veterinary Authority should provide details on:
   a. auditing authority. Yes
      i. accreditation of auditors
      No. The details are not considered in the SOP
   b. procedures for the approval of compartments. Yes
   c. procedures for carrying out audits. A useful checklist for inspection is provided, but is not complete
   d. frequency of audits. Yes, monthly
   e. reports of audits (Yes) and follow-up action (No)
   f. procedures for suspension, reinstatement or revocation of compartments. No
   g. communication of compartment approval, suspension or revocation to trading partners No