



Checklist on the Practical Application of Compartmentalisation

Introduction

Compartmentalisation is a procedure to establish subpopulations of distinct health status based on management and biosecurity factors. The animals within the compartment should be contained in one or more establishments under a common biosecurity management system to preserve a distinct status with respect to a specific disease or diseases within the territory of a Member Country.

While zoning applies to animal subpopulations defined primarily on a geographical basis, compartmentalisation applies to animal subpopulations defined primarily by management and husbandry practices related to biosecurity. In practice, spatial considerations and good management play important roles in the application of both concepts.

The recommendations for compartments in the *Terrestrial Code* cannot be applied in all situations. The effective implementation of the concept of compartmentalisation depends, amongst others, on the epidemiology of the disease, country factors, environmental factors, the biosecurity measures which may be applicable, the health status of animals in adjacent areas, surveillance and the relationship between the public and private sectors. Compartmentalisation may be particularly applicable in intensive production systems which are vertically integrated.

Oversight of the compartment should be the responsibility of the Veterinary Authority. For the purposes of this checklist, compliance by OIE Member Countries with Chapter 1.1. on notification of diseases and epidemiological information and Chapter 3.1 on Veterinary Services is an essential prerequisite.

The establishment of a compartment is a preventive measure, serving both to guarantee the health status of an animal subpopulation and to avoid interruptions to trade in animals and animal products. It is preferable to establish a compartment at a time when the country or zone is free from the disease(s) for which the compartment is being created.

The recognition of compartments is the result of a bilateral agreement between the Veterinary Authorities of countries involved, and is intended to include the specific conditions for continuation of trade even in the event of changes in the health status in the country or zone.

This checklist complements the *Terrestrial Code*. It is provided to assist the Veterinary Authority of Member Countries and the private sectors concerned with compartments to interpret and comply with the relevant OIE standards in each specific context.

In addition to the requirements of Chapters 4.3. and 4.4. on compartmentalisation, the relevant requirements in the following chapters of the *Terrestrial Code* should be complied with:

- Chapter 1.4 on Animal Health Surveillance and, when relevant, Chapter 1.5 on Surveillance for Arthropod Vectors of Animal Disease;
- Chapters 3.1 on Veterinary Services and 3.2 on the Evaluation of Veterinary Services;
- Chapter 4.1 on General Principles on Identification and Traceability of Live Animals and Chapter 4.2 on Design and Implementation of Identification Systems to Achieve Animal Traceability;
- All relevant disease chapter(s) for which the compartment is intended.

1. Principles for defining a compartment

In defining a compartment, point 4 of Article 4.3.3. and Article 4.4.2. of the *Terrestrial Code* should be fully complied with. The definition of a compartment should include:

- the disease or diseases for which the compartment is intended. While a compartment might be free from several diseases, each disease should be addressed individually in the design of the biosecurity plan;
- a description of the animal subpopulation comprising the compartment including disease and vaccination status, as well as animal identification and traceability in accordance with the *Terrestrial Code*; depending on the sector, this may be done at the herd, flock, lot or individual animal level;
- the establishment(s) and other premises operated by an enterprise which would constitute the compartment, and the common biosecurity management system under which they operate (for example, animal housing facilities, animal transport routes, feed distribution systems, work procedures);
- a description of the functional relationships between components of the compartment, including maps and diagrams, showing their contribution to the epidemiological separation between animals in the compartment and other subpopulations, including:
 - common management or ownership;
 - relationship of the compartment with related functional units, when not included within the compartment (such as feed mills, slaughterhouses and rendering plants);
 - adoption of industry plans that contain biosecurity guidelines e.g. health improvement plans and breed registries
 - identification of personnel with responsibility for key activities, including disease surveillance, contingency planning, and the conduct of internal audits.

2. Separation of a compartment from potential sources of infection

In accordance with Article 4.4.3., the management of a compartment should provide to the Veterinary Authority documented evidence on the following:

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

A description of the spatial factors relating to pathways of disease transmission to ensure that there is adequate physical separation of the animals in the compartment from nearby animal subpopulations of different or unknown health status, including:

- the location, disease and vaccination status, and biosecurity of other epidemiologically relevant populations. Provide a map and distances. Consideration should be given to the distance and physical separation from:
 - flocks or herds with a different health status in close proximity to the compartment, including wildlife and their migratory routes;
 - slaughterhouses, rendering plants or feed mills;
 - markets, fairs, agricultural shows, sporting events, zoos and other points of animal concentration.

- a description of the relevant environmental factors that may affect exposure to the pathogen(s), including:
 - natural windbreaks, geographic features and other barriers to pathogen spread;
 - existence of factors that may contribute to pathogen spread;
 - expected pathogen survivability in the local environment;
 - climatic and seasonal factors.

b) Infrastructural factors

For each unit of the compartment, provide a detailed description of each infrastructural factor that may affect exposure to the pathogen(s), including buildings and equipment, as listed in the point 2 of Article 4.4.3.:

- housing;
- fencing or other effective means of physical separation; provide details such as height, material, mesh size and depth;
- facilities for people entry including access control, changing area and showers;
- vehicle access including cleaning and disinfection procedures;
- control of use and routing of vehicles with access to the compartment;
- unloading and loading facilities;
- isolation facilities for introduced animals;
- facilities for the introduction of material and equipment;
- facilities to store feed and veterinary products;
- disposal of carcasses, manure and waste;
- water supply;
- measures to prevent exposure to mechanical or living vectors such as insects, rodents and wild birds;
- ventilation systems;
- describe the workflows within the unit;
- dedicated equipment coming into contact with animals as well as procedures for cleaning and disinfection of equipment upon entry to the compartment;
- cleaning and disinfection procedures applied in the establishment
- for each unit, provide a diagram covering the above aspects.

c) Biosecurity plan

The management of the compartment should work with the Veterinary Authority in the development of a biosecurity plan. While these responsibilities should be addressed in full partnership, the final authority for the purposes of disease surveillance and reporting, disease control and veterinary certification for international trade from the compartment lies with the Veterinary Authority.

Article 4.3.3. and Article 4.4.3. should be complied with in the development of a biosecurity plan. A biosecurity plan should address all relevant factors including:

- the partnership(s) between the Veterinary Authority and the relevant enterprise(s) and their respective responsibilities;

- a description of the potential pathways of disease entry into the compartment and critical control points to prevent introduction. Consideration should be given to domestic animal movements, rodents, wild animals, arthropods, aerosols, vehicles, people, biological products, equipment, fomites, feed, waterways and to the survivability of the pathogen in the environment.
- In addition, a description of the procedures in place to regularly review scientific information relating to these pathways and risks should be provided;
- a description of the biosecurity measures adopted at each critical control point to mitigate the risk of introduction of the pathogen via the pathways described above;
- the standard operating procedures (SOPs) for implementation and audit of the biosecurity plan including regular review and updating of the biosecurity measures. In general, the SOPs should describe:
 - implementation, maintenance, monitoring of the measures;
 - application of corrective actions;
 - verification of the process;
 - record keeping and time period for which records are available for audit;
 - procedures for reporting to the Veterinary Authority.

The SOPs should provide specific details covering:

- personnel training:
 - generic hygiene and biosecurity principles and procedures;
 - procedures for maintaining biosecurity;
 - the specific procedures to be followed, such as human and animal movement controls;
- quality assurance schemes (if any) in operation;
- animal movement controls:
 - measures and infrastructure are in place to prevent contact between animals in the compartment and others from outside the compartment;
 - all animals and germplasm introduced into the compartment should be of the same health status of the compartment
 - handling and transport procedures operate in a biosecure manner through the use of either equipment dedicated to the compartment or which has been appropriately cleaned and disinfected;
 - procedures are in place to ensure the appropriate separation between production groups and from newly introduced animals;
- animal health:
 - appropriate breeding and production records are available;
 - morbidity and mortality history is available;
 - details of medications used (including vaccines) and treatment outcomes are available;
 - arrangements for veterinary involvement in animal health, and disease diagnosis and reporting are appropriate;
 - procedures are in place for the identification, handling, storage and disposal of sick and dead animals in a biosecure manner;
- human movement controls:
 - presence of functional boundary fencing, with cleared areas and secure access points, and appropriate signage;
 - procedures are in place, for example through the use of colour-coded clothing and one-way entries, to regulate and monitor the movement of humans within the compartment;

- procedures are in place for regulating visitor access (including veterinarians, contractors, maintenance personnel, animal handlers, feed delivery personnel, and their equipment) to premises in the compartment, for example through the use of a visitor logbook, restrictions on prior contact with animals of susceptible species outside the compartment, the use of disinfectant footbaths at all entries, and procedures for hand-washing and the provision of clean clothing and footwear for visitors who may come into contact with animals in the compartment;
- procedures are in place for ensuring that different groups of animals within the compartment are handled in a biosecure manner, for example segregating animals under suspicion of health problems;
- restrictions are in place regarding employee contact with susceptible animals outside the compartment, for example: employees should not be permitted to own other epidemiologically relevant animals, and should have had no contact with animals of lesser or unknown health status, for a period relevant for the defined disease, prior to entering the compartment;
- controls over vehicles:
 - procedures are in place for regulating visitor vehicle access to the premises;
 - procedures are in place for regulating the activities of work vehicles relevant to the compartment (such as feed delivery, animal delivery and pickup, bedding delivery and removal, and maintenance vehicles). Those operating solely within the compartment should be subject to regular cleaning and disinfection and those with access to premises outside the compartment should be subject to full cleaning and disinfection immediately prior to entering the compartment;
- security of feed and water sources:
 - the water supply is known to be free from contamination with relevant pathogens or is appropriately treated;
 - procedures are in place to demonstrate that all feed is produced in a manner that is free from contamination with relevant pathogens. If any feed is sourced from outside the compartment, that feed supply is known to be free from contamination with relevant pathogens through the use of approved and audited suppliers and production methods;
 - the feed transport and storage facilities operate in a biosecure manner, for example, through the use of either dedicated equipment or equipment which is cleaned and disinfected before being used for feed destined for use in the compartment.

Contingency Plan:

- As part of the Biosecurity Plan, a comprehensive Contingency Plan should be developed based on a scientific risk analysis. The Contingency Plan should identify potential emergency situations and changes in the levels of risk in a country or zone. For each risk scenario, specific measures, such as extra biosecurity, surveillance and laboratory support, should be defined. The Contingency Plan should also consider combined strategies of compartmentalisation and zoning. The goal of the Contingency Plan is to ensure that, should a risk scenario come to pass, the health status of the compartment will not be compromised. The Contingency Plan should also identify the roles and responsibilities to be played by the management and by the Veterinary Authorities under each of the risk scenarios identified.

The Veterinary Authority should:

- provide updated epidemiological data for the disease(s) in the country or zone where the compartments are established;
- where possible and relevant to the biosecurity plan, implement additional awareness programmes to ensure disease notification by all those involved in the livestock production sector including animal owners, private veterinary practitioners, handlers, transporters, butchers and processors among others;

d) Traceability system

The Veterinary Authority should ensure that an effective animal identification and traceability system is in place. Depending on the animal species and type of production, identification and registration may be done at the group or individual animal level. Describe in detail:

- the method of individual animal identification. Where individual identification is not be feasible, such as with broilers and day-old chicks, the Veterinary Authority should provide sufficient information concerning the assurance of traceability;
- the 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;
- the audit system for traceability. Describe the frequency and procedures including the reporting of results and corrective actions.

3. Surveillance for the agent or disease

The Veterinary Authority, working in close collaboration with the management of the compartment, should ensure that:

- the necessary surveillance at the national level, the means to implement it and the procedures for the investigation and reporting of disease suspicion or incidents are in place.
- a good knowledge and understanding of the relevant disease within and outside the compartment, including in wild animals if appropriate is available.
- surveillance should be conducted in accordance with Chapters 1.4. on Animal Health Surveillance and 1.5. on Surveillance for Arthropod Vectors of Animal Diseases as well as the disease specific recommendations on surveillance in the *Terrestrial Code*.

Essential components include:

a) Internal surveillance

A description should be provided of:

- the documented baseline health status of the subpopulation before the compartment was established, indicating the dates of last disease occurrence (if any), the number of outbreaks and the methods of disease control that were applied;
- the procedures for the early detection of disease in the event that the disease enters the compartment; for example, through the detection of specific clinical signs, routine testing, monitoring of parameters such as increased morbidity or mortality, reduced feed or water consumption, changes in behaviour and reduced production;
- the procedures for investigation of a suspect case, including reporting and subsequent management;
- the documented records of suspect and confirmed cases;
- the medication and vaccination records.

For the disease for which the compartment is defined, the following information should be provided:

- type of surveillance applied, as described in Chapters 1.4. and 1.5., and the relevant disease chapter;
- types of test used, interpretation of results;
- target population;
- sample size;
- frequency of testing and clinical inspection;

- surveillance results: provide the number of suspect and positive cases;
- follow-up of suspect and positive findings;

The management of the compartment should report accurately and without delay to the Veterinary Authority on disease suspicion or incidents occurring in the compartment.

b) External surveillance

Describe in detail the following:

- type of surveillance applied as described in Chapter 1.4; including passive and targeted surveillance;
- 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;
- types of test used, interpretation of results;
- sample size;
- frequency of testing and clinical inspections;
- surveillance results: provide the number of suspect and positive cases;
- follow-up of suspect and positive findings;

4. Diagnostic capabilities and procedures

The Veterinary Authority should support surveillance through the testing of samples at laboratories operating in accordance with the OIE *Manual of Diagnostic Tests and Vaccines for Terrestrial Animals*. Each laboratory that conducts testing should have in place systematic procedures for rapid reporting of results to the Veterinary Authority. Where appropriate, results should be confirmed by an OIE Reference Laboratory. The Veterinary Authority should provide:

- a list of the officially designated laboratories used for testing and confirming results;
- for each laboratory, the capacity of the laboratory to comply with the surveillance requirements;
- the type of tests applied for the defined disease;
- the volume of samples that can be handled for each test;
- the procedures and methods to ensure quality control;
- the procedures for general reporting of test results and rapid reporting of positive results.

5. Emergency response and notification

In case of a suspicion of occurrence of a disease for which the compartment is defined, the management of the compartment should immediately notify the Veterinary Authority. If confirmed, the Veterinary Authority should immediately revoke the status of the compartment and should notify importing countries following the provisions of Article 5.3.7.

The management of the compartment should notify the Veterinary Authority of the occurrence, above the baseline level as identified in Article 4.4.4., of any OIE listed disease for the animal species of interest according to Article 1.2.3 and initiate a review of the biosecurity plan to determine if there is a breach in biosecurity. If a significant breach in biosecurity is detected, the status of the compartment should be suspended.

The Veterinary Authority should describe the procedures and measures applied:

- in the event of suspected or confirmed occurrence of disease for which the compartment was defined;
- in the event of a breach in biosecurity regardless of the suspicion of disease;
- in the event of a change of the disease situation of the surrounding area.

6. Supervision and control of a compartment

The responsibilities of the Veterinary Authority regarding the infrastructure supporting the compartment (which needs to be in place before the compartment is established) include:

- to develop and apply the necessary legislative base for the establishment, recognition and supervision of compartments;
- to develop effective partnerships with the management of the compartment and to gain a good knowledge and understanding of the structure and operations of the various livestock sectors (production and non-production);
- to ensure that systems are in place to provide credible official certification of the health status of the compartment, and commodities that may be traded from it;
- to devise and publicise, in partnership with industry, generic criteria and model biosecurity plans applicable to compartmentalisation;
- to regularly review scientific data and re-assess the risk factors, to ensure that the SOPs continue to be appropriate to the situation;
- to develop and implement audit and review procedures to ensure that the agreed SOPs are being implemented.

The Veterinary Authority should provide details on:

- procedures for the approval of compartments
- procedures for suspension, revocation and reinstatement of compartments
- communication of compartment approval, suspension or revocation to trading partners
- auditing authority
 - accreditation of auditors
 - training of personnel
- procedures for carrying out audits
- frequency of audits
- reports of audits and follow-up action

The management of the compartment should be responsible for:

- developing effective and credible partnerships with the Veterinary Authority;
- implementing the biosecurity plan and compile the relevant documentation for audit;
- immediately notifying the Veterinary Authority of any significant change which might affect the health status of the compartment;
- immediately notifying the Veterinary Authority of any suspect cases of the disease for which the compartment was defined and any changes in the baseline animal health status.
- immediately notifying the Veterinary Authority of any breach in biosecurity measures according to the biosecurity plan.

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