

AD-12/5/2026-AHC(E-41847)
Government of India
Ministry of Fisheries, Animal Husbandry and Dairying
Department of Animal Husbandry and Dairying

Krishi Bhawan, New Delhi
Dated: 14th August, 2026

OFFICE MEMORANDUM

Sub: Guidelines for establishment of Foot & Mouth Disease (FMD) Free Compartments in India.

The Department is implementing the Livestock Health and Disease Control Programme (LHDCP) for progressive control of FMD through vaccination and surveillance. Substantial progress has been achieved in reducing the incidence of FMD, establishment of FMD-free compartments with vaccination, in accordance with the WOAHP Terrestrial Animal Health Code, provides a science-based mechanism to demonstrate disease freedom within well-defined production systems.

2. The Department, after wide consultations, has developed the Guidelines for establishment of Foot & Mouth Disease (FMD) Free Compartments in India (Copy enclosed) in accordance with the relevant provisions of the WOAHP Terrestrial Animal Health Code. The guideline provide a uniform framework for the establishment, recognition, monitoring and maintenance of FMD-free compartments with vaccination.

3. All States/Union Territories are requested to adopt these Guidelines for establishment of FMD Free compartments. The guidelines may be disseminated to all the prospective establishments for applying to the State Government. Applications received from eligible establishments for recognition as FMD-free compartments with vaccination are requested to be processed in accordance with the enclosed Guidelines.

This issues with the approval of the Competent Authority.

Encl.: Guidelines for establishment of Foot & Mouth Disease (FMD) Free Compartments in India.


(V. Jaya Chandra Bharanu Reddy)
Director (LH)

To:

1. Additional Chief Secretary / Principal Secretaries/Secretaries (Animal Husbandry) of all States/UTs.
2. Deputy Director General, Animal Sciences, ICAR.
3. Executive Director, NDDB
4. Directors of Animal Husbandry & Veterinary Services of all States/UTs.
5. CEO, Livestock Development Board all States/UTs
6. NIC for uploading in the website of the Department.

Copy to:

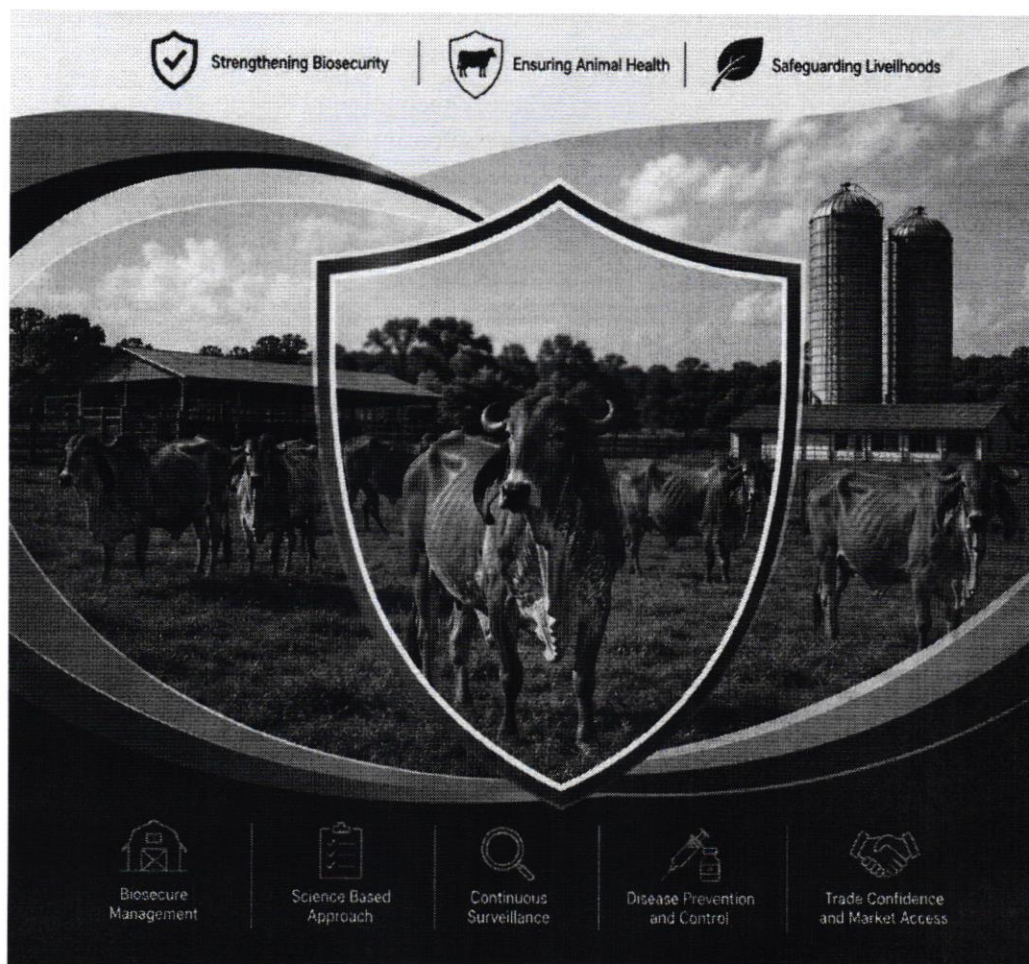
1. Sr. PPS to Secretary, AHD
2. Sr.PPS to AS(LH)/ PPS to AS(C&DD) / PPS to AHC / JS (NLM) / Advisor (AHS)



पशुपालन एवं डेयरी विभाग, भारत सरकार

Department of Animal Husbandry and Dairying
Government of India

GUIDELINES FOR ESTABLISHMENT OF FOOT AND MOUTH DISEASE (FMD) FREE COMPARTMENTS IN INDIA



**Department of Animal Husbandry & Dairying
Ministry of Fisheries Animal Husbandry & Dairying
Government of India**

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Guidelines for Establishment of Foot and Mouth Disease (FMD) Free Compartments in India

1. Introduction

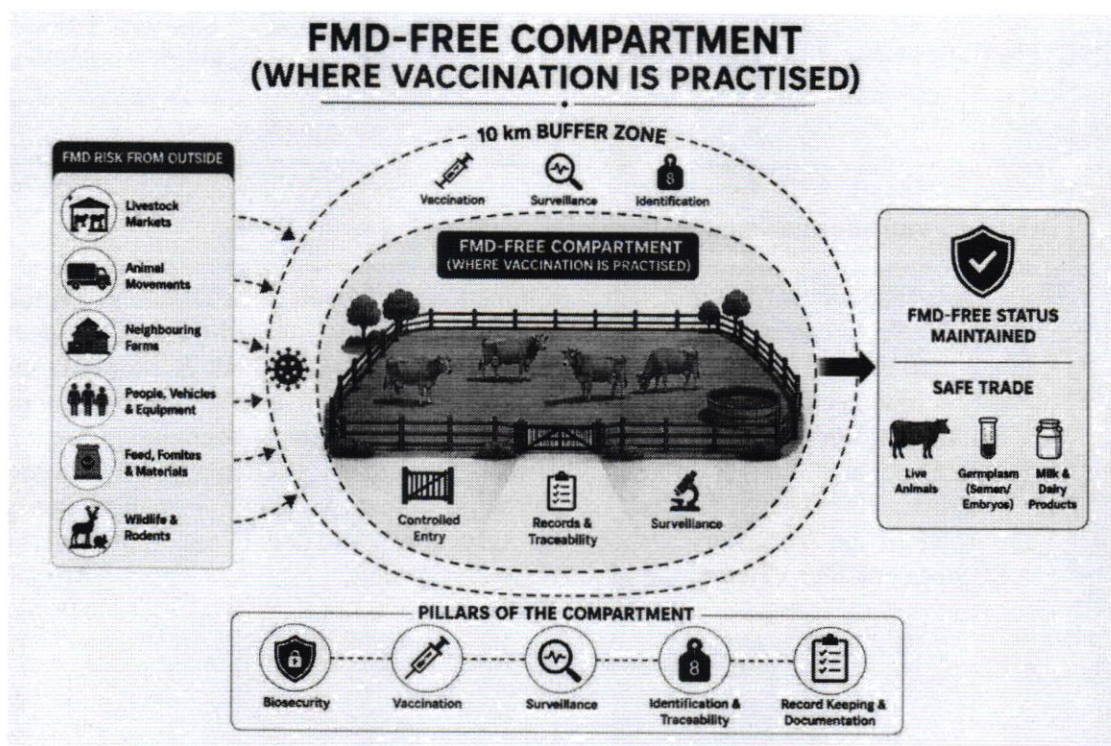
Foot and Mouth Disease (FMD) is a highly contagious transboundary animal disease affecting cloven-hoofed animals and significantly impacts livestock productivity and international trade. India is implementing a nationwide FMD Control Programme through its Universal mass vaccination since 2019 and the FMD Control Programme of India has been endorsed by the World Organisation for Animal Health (WOAH) since 2015. Further India also submits dossier every year to WOAH for annual reconfirmation of endorsement of FMD Control Programme. Current vaccination program is significantly reducing the disease prevalence, however, achieving nationwide FMD-free status may take time.

As per WOAH Terrestrial Animal Health Code, a compartment (usually a particular farm/ establishment) free from FMD where vaccination is practised can be established even in countries or zones where the disease is present, provided strict surveillance, vaccination, biosecurity, and traceability systems are implemented.

The establishment of FMD-free compartments in India would:

- improve international trade of animal products.
- increase productivity in breeding and dairy operations.
- complement the National FMD Control Programme.

The compartmentalisation approach, recognized under the WOAH Terrestrial Animal Health Code, enables the establishment of subpopulations with a distinct animal health status based on biosecurity and management practices.

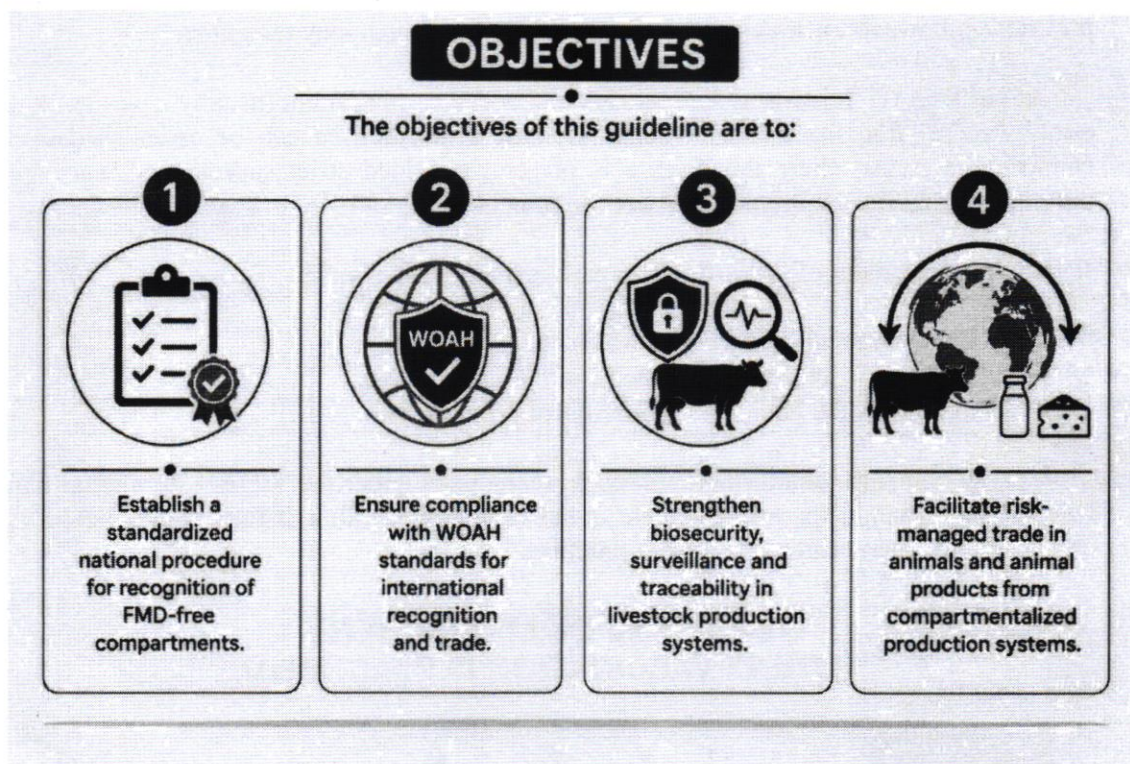


These guidelines provide a standard framework for establishment, approval, monitoring and continues maintenance of FMD-free compartments.

2. Objective

The objectives of this guidelines are to:

1. Establish a standardized national procedure for recognition of FMD-free compartments.
2. Ensure compliance with WOAHA standards for international recognition and trade.
3. Strengthen biosecurity, surveillance and traceability in livestock production systems.
4. Facilitate risk-managed trade in animals and animal products from compartmentalized production systems.



3. Legal and International Framework

- A. **Legal** - The Prevention and Control of Infectious and Contagious Diseases in Animals Act, 2009 is a central legislation in place to provide legal support for the management and eradication of livestock and poultry diseases, including Foot & Mouth Disease, across India. According to the provisions of this Act, if a livestock owner or any other individual, whether from the government or private sector, becomes aware of an outbreak of an infectious disease in livestock, they are obligated to promptly inform the veterinary dispensary, hospital, or veterinary aid center. This information then gets relayed to the Veterinary Officer and subsequently to the Director of Veterinary Services or Chief Veterinarian of the respective State.

The State Animal Husbandry Director is responsible for sending a monthly report to the Department of Animal Husbandry & Dairying (DAHD), Government of India. This data is compiled into a monthly Animal Disease Surveillance Report, and communicated to the World Organisation for Animal Health (WOAH) in the form of immediate notifications and six-monthly reports.

The establishment of compartments shall comply with relevant provisions of the **WOAH Terrestrial Animal Health Code**, namely:

B. FMD Specific Provisions

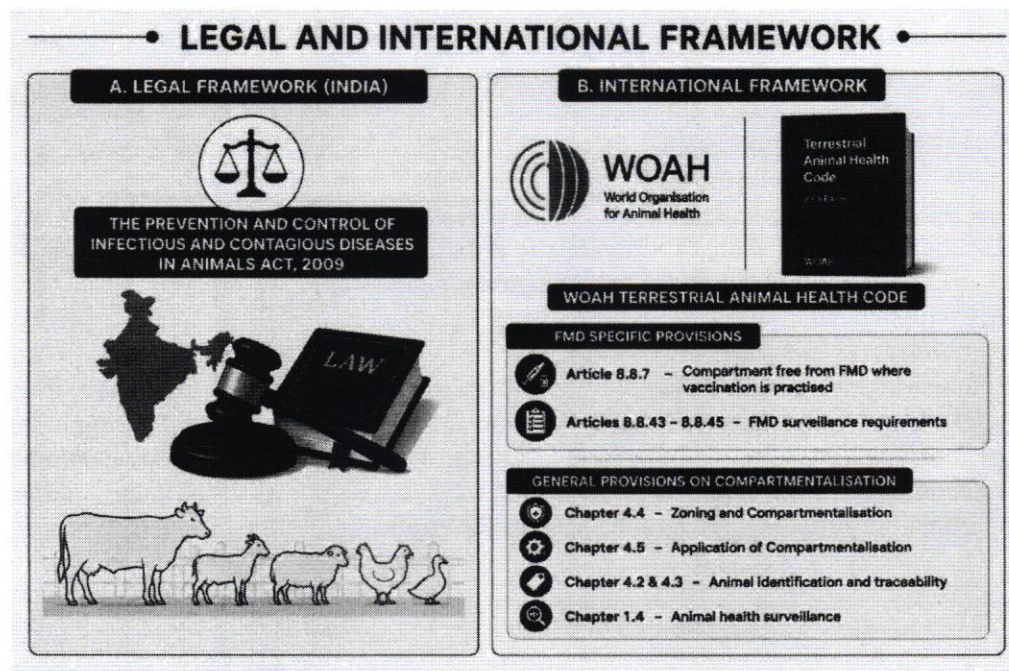
- Article 8.8.7 – Compartment free from FMD where vaccination is practised
- Articles 8.8.43 – 8.8.45 – FMD surveillance requirements

General Provisions on Compartmentalisation

- Chapter 4.4 – Zoning and Compartmentalisation
- Chapter 4.5 – Application of Compartmentalisation
- Chapter 4.2 & 4.3 – Animal identification and traceability
- Chapter 1.4 – Animal health surveillance

According to the WOA code, compartmentalisation is based primarily on management and biosecurity measures that create an epidemiological separation between subpopulations having distinct health status.

The Department of Animal Husbandry & Dairying (DAHD), Govt. India is the final authority for approving, suspending, or revoking compartment status.



4. Criteria for defining a compartment (WOAH TAHC, 2025 Article 8.8.7)

A compartment (**usually a particular establishment/ farm**) free from FMD where vaccination is practised can be established in either a free country or zone where vaccination is practised or in an infected country or zone.

In defining such a compartment, the principles of Chapters 4.4. and 4.5. should be followed. Susceptible animals in the FMD free compartment should be separated from any other animals posing risk by the application of an effective biosecurity plan.

A Member Country wishing to establish a compartment free from FMD where vaccination is practised should:

1. have a record of regular and prompt animal disease reporting and, if not free,
 - (a) have an official control programme and a surveillance system for FMD in place in accordance with Articles 8.8.43. to 8.8.45. that allows knowledge of the prevalence, distribution and characteristics of FMD in the country or zone;
2. declare for the free compartment where vaccination is practised that:
 - (a) no infection or transmission of FMDV has occurred within the establishment/compartment during the past 12 months;
 - (b) compulsory systematic vaccination is carried out using a vaccines approved under the national control programme, with periodic antigenic matching to circulating strains as guided by ICAR-NIFMD, vaccine that complies with the standards described in the Terrestrial Manual. The vaccination coverage and population immunity are closely monitored;
 - (c) animals, semen, embryos and animal products may only enter the compartment in accordance with relevant articles in this chapter;
 - (d) documented evidence shows that regular clinical, serological and virological surveillance in accordance with Articles 8.8.43. to 8.8.45. is in operation, so as to detect infection or transmission at an early stage with a high level of confidence
 - (e) An animal identification and traceability system in accordance with Chapters 4.2. and 4.3. is in place i.e registration under Bharat Pashudhan.
3. describe in detail:
 - (a) the animal subpopulation in the compartment;
 - (b) the biosecurity plan to mitigate the risks identified by the surveillance carried out according to point 1 and the vaccination plan;
 - (c) implementation of points 2 b), 2 d) and 2 e) above.

The compartment should be approved by the Department of Animal Husbandry & Dairying (DAHD), Govt. India based on the application submitted through State Animal Husbandry Departments or any Govt. Institutes/organisations. The approval should only be granted when no infection or transmission of FMDV has occurred within a 10-kilometre radius of the compartment during the three months prior to the application of the biosecurity plan.

5. Eligibility Criteria for Establishment of FMD Compartment.

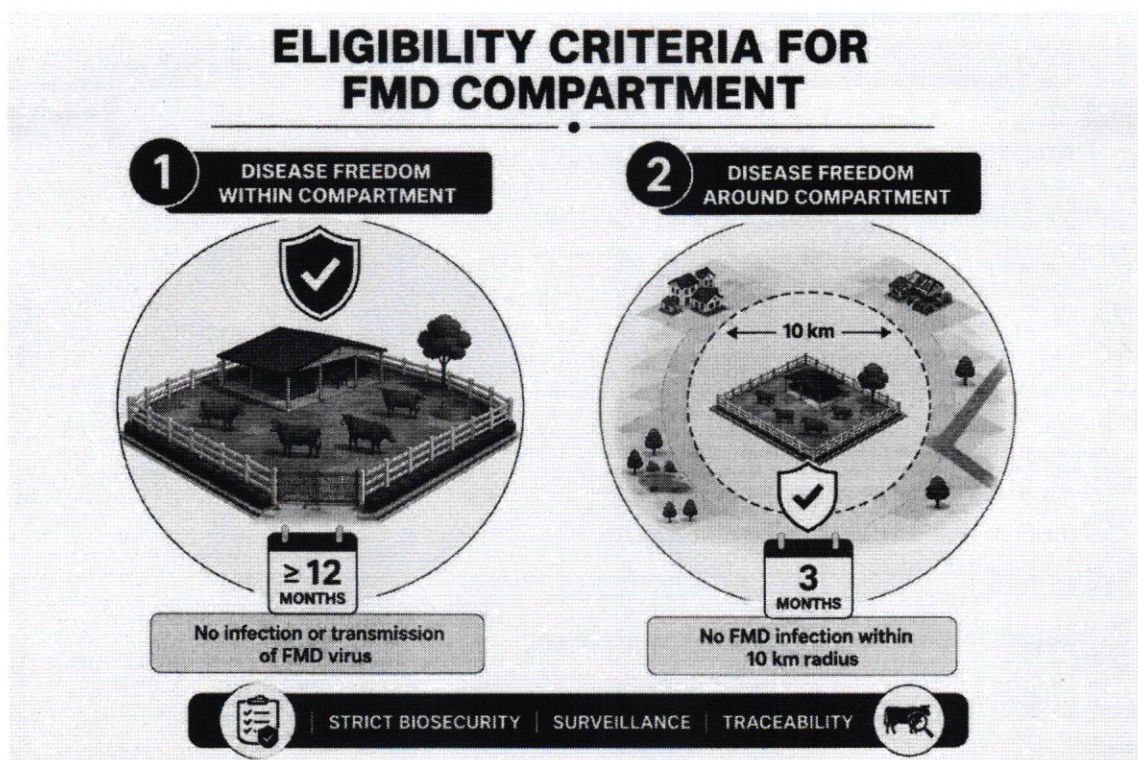
Disease Freedom Requirement

The compartment must demonstrate that:

- No infection or transmission of FMD virus has occurred within the compartment for at least 12 months.

Additionally:

- No FMD infection must have occurred within a 10 km radius of the compartment during the previous 3 months prior to implementation of the biosecurity plan.



Animal Subpopulation Definition

The establishment must clearly describe:

- the animal population within the compartment
- species and production system
- number of animals
- epidemiological links between facilities within the compartment, including animal housing, quarantine, feed storage, milk collection, laboratories, and waste disposal shall be documented to ensure effective biosecurity and disease risk management.

6. Biosecurity Requirements – Bio-Security Plan.

Each compartment must develop a comprehensive biosecurity plan identifying potential pathways for disease introduction and mitigation measures.

Potential Pathways of Disease Entry

Potential pathways include:

- movement of animals
- visitors and farm workers
- vehicles and equipment
- feed and water
- biological products like semen embryo etc
- wildlife and rodents
- insects and other vectors
- aerosols and environmental contamination.

Infrastructure Requirements

The following infrastructure should be available:

- perimeter fencing
- controlled entry points
- vehicle washing and disinfection stations
- changing rooms and showers for visitors
- isolation facilities for newly introduced animals
- controlled feed storage
- carcass disposal facilities
- pest and wildlife control measures
- secure water supply.

Biosecurity: Standard Operating Procedures

Standard operating procedures should include:

- animal entry protocols
- quarantine procedures
- visitor entry procedures
- vehicle sanitation
- feed sourcing protocols
- waste management
- disease reporting mechanisms.

Biosecurity plans should be structured according to risk analysis and HACCP principles.

Vaccination Strategy

- Vaccination within the compartment must be systematic and compulsory.
- compulsory systematic vaccination is carried out using a vaccines approved under the national control programme, with periodic antigenic matching to circulating strains as

guided by ICAR-NIFMD, vaccine that complies with the standards described in the Terrestrial Manual.

- Vaccination coverage and herd immunity should be periodically assessed.

Surveillance System

A robust surveillance system is essential to detect infection early.

Internal Surveillance

Includes:

- Syndromic surveillance for clinical signs related to FMD.
- serological surveillance
- virological testing
- mortality monitoring.

External Surveillance

External surveillance should monitor:

- farms surrounding the compartment
- epidemiologically linked premises
- livestock markets and animal congregation points.

Laboratory Diagnosis

Diagnostic testing should be conducted in officially designated laboratories i.e. the collaborating centers of ICAR-NIFMD complying with WOAHS standards, and results should be reported within 7 days to the State Animal Husbandry Department and DAHD. Further ICAR-NIFMD, Bhubaneswar to carry out proficiency testing (PT) with all collaborating centers.

Animal Identification and Traceability

A robust identification and traceability system must be implemented.

The system should:

- uniquely identify animals
- record movements into and out of the compartment
- maintain complete herd records.

All animal movements must be recorded and available for veterinary audit.

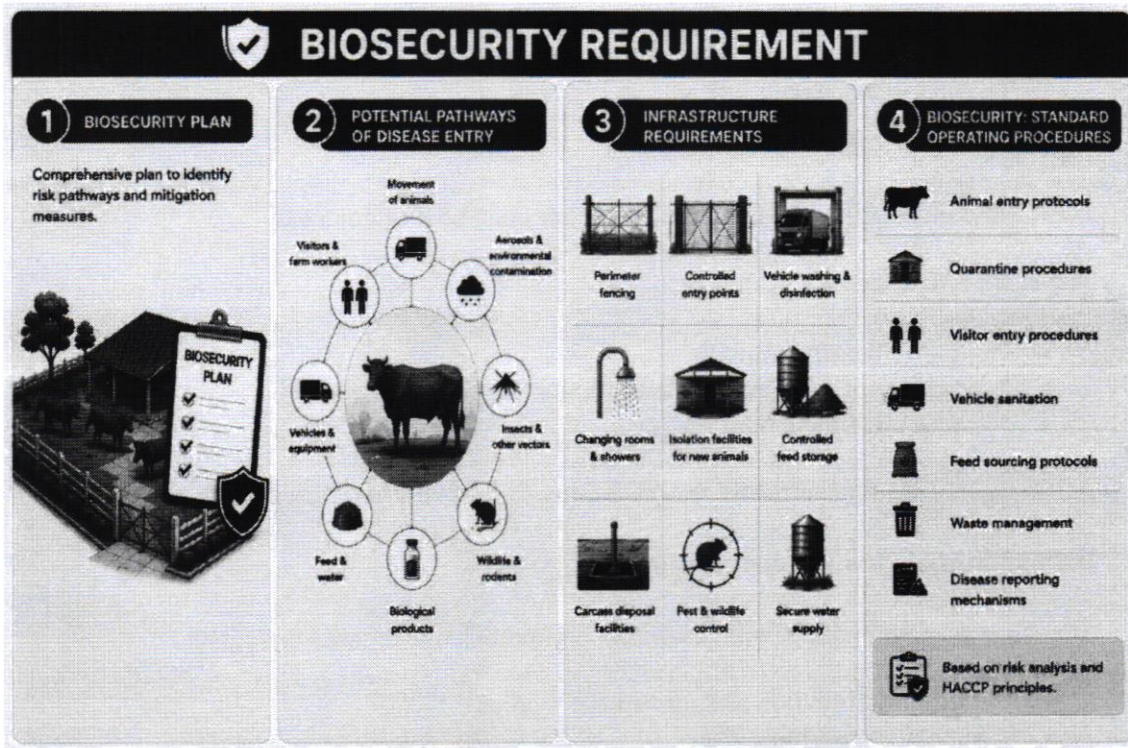
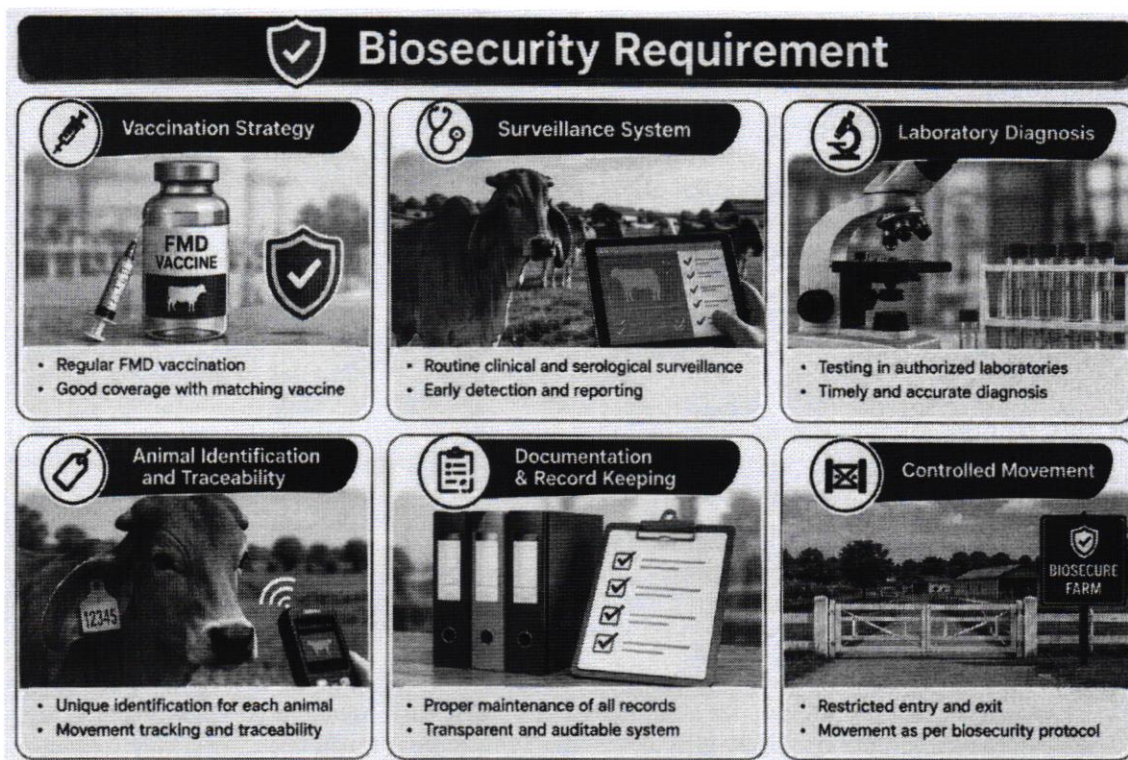
Documentation and Record Keeping

The compartment operator must maintain comprehensive records including:

- animal identification and movement records
- vaccination records
- laboratory test reports

- visitor logs
- feed sources
- mortality and morbidity records
- production records
- biosecurity training documentation.

All records must be transparent and auditable.



7. Supervision and Monitoring

The Veterinary Authority shall:

- conduct periodic inspections
- review surveillance data
- audit biosecurity compliance
- monitor disease reporting.

The authority may suspend or revoke the compartment status if compliance is not maintained.

8. Emergency Response

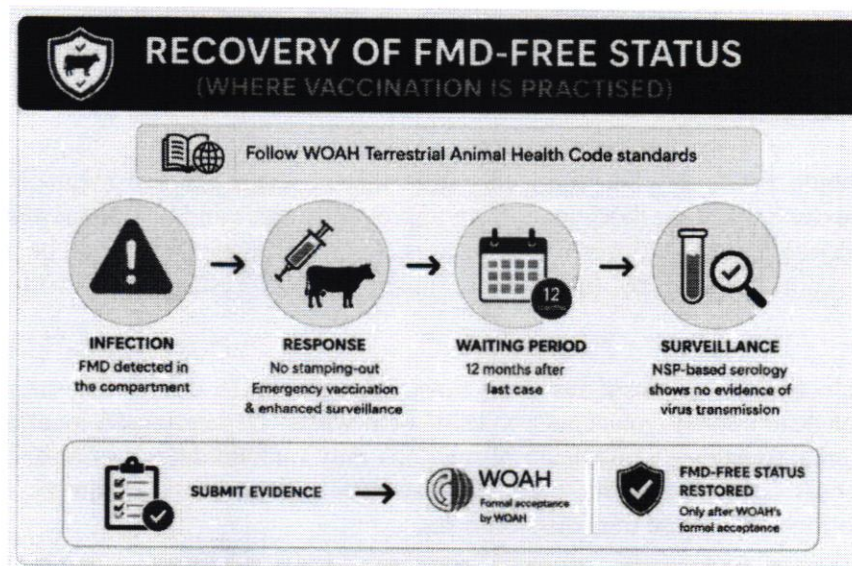
In case of suspected FMD:

1. Compartment status must be immediately suspended.
2. Samples must be tested in designated laboratories.
3. If infection is confirmed:
 - compartment status is revoked
 - State AHD , DAHD and trading partners must be notified.

Status may only be reinstated after corrective measures are implemented and verified.

9. Recovery of FMD-Free Status (Where Vaccination is Practised):

In the event of infection or transmission of Foot and Mouth Disease virus in a compartment recognized as FMD-free with vaccination, recovery of the free status shall follow the standards prescribed by the World Organisation for Animal Health Terrestrial Animal Health Code. Where stamping-out is not applied but emergency vaccination and enhanced surveillance are implemented, the waiting period for recovery of free status shall be 12 months after detection of the last case, provided NSP-based serological surveillance demonstrates no evidence of virus transmission. In all cases, restoration of FMD-free status shall occur only after submission of the required evidence to DAHD and formal acceptance by the World Organisation for Animal Health.



Criteria for certification of FMD free compartments

1. Location and Infrastructure Requirement

Secure perimeter fencing e.g wall fencing, barbed wire with mesh etc should be established around the entire compartment to prevent unauthorized entry of people, vehicles, and animals, including stray livestock and wildlife. The fencing should clearly demarcate the compartment boundaries and be regularly inspected and maintained to ensure its integrity.

Controlled entry and exit points - Access should be restricted to designated gates equipped with security controls, visitor registration systems, and biosecurity controls.

a. Vehicle disinfection facilities should be located at all designated entry points to ensure that vehicles entering the compartment do not introduce infectious agents. These facilities shall have washing areas, wheel dips or spray systems, and **approved disinfectants** with documented procedures/SOP for cleaning and disinfection of vehicles, equipment, and transport containers. If possible, a separate wheel-washing area should be provided to ensure effective cleaning before disinfection. The wheel dip system should use a high-performance disinfectant with a short required contact time to ensure rapid and effective microbial inactivation.

Common Disinfectants: Disinfectants: sodium hydroxide (2%), sodium carbonate (4%), citric acid (0.2%), acetic acid (2%), sodium hypochlorite (3%), potassium peroxymonosulphate/sodium chloride (1%), and chlorine dioxide. A vehicle tyre dip (footbath/wheel dip) for Foot-and-Mouth Disease (FMD) biosecurity commonly utilizes a **1% to 2% potassium permanganate (KMnO₄) solution** or alternative broad-spectrum disinfectants.

b. The compartment should maintain **isolation and quarantine units** (to handle 10% of the herd) that are physically separated by mesh fencing from the main farm/animal population with a minimum of at least 100 m distance. These facilities are used for newly introduced animals, animals returning from exhibitions or external facilities, and animals suspected of disease or any susceptible animals. Adequate quarantine periods usually 21 days of veterinary observation, should be implemented before animals are allowed to join the resident herd. NSP testing of entrants mandatory with documented origin-herd FMD history and vaccination records, consistent with Art. 8.8.7 controlled-entry requirement.

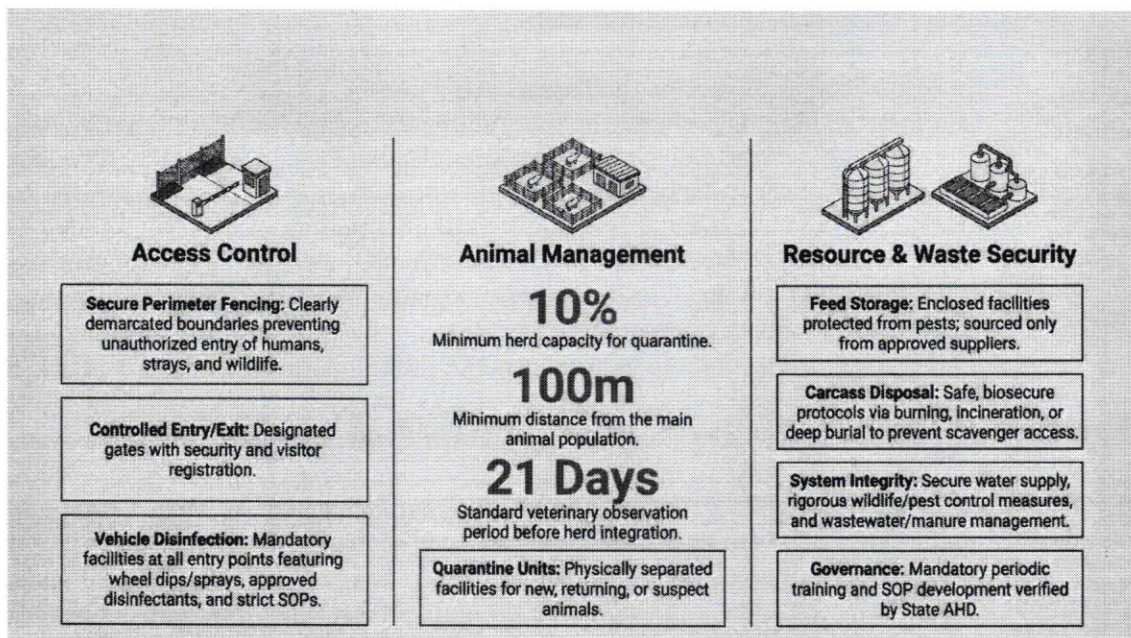
c. Dedicated feed storage facilities should be designed to protect feed and feed ingredients from contamination by rodents, birds, insects, moisture, and unauthorized access. Feed should be sourced from approved suppliers and stored in enclosed structures with appropriate inventory management and hygiene practices to minimize the risk of disease introduction through feed materials.

Fodder should preferably be produced within the biosecure compartment. Where fodder is procured externally, it shall originate from approved sources and be transported, handled, and stored under documented biosecurity measures. Appropriate measures shall be implemented to minimize contamination by livestock of unknown health status and wild cloven-hoofed animals.

d. Appropriate **carcass disposal facilities** must be available to ensure the safe and biosecure disposal of dead animals, placenta and biological waste. Depending on local regulations and environmental considerations, disposal methods may include deep burial or , incineration . The disposal system should prevent scavenger access and minimize environmental contamination and disease transmission risks.

- e. A reliable and **secure water supply system** should be established to provide clean and safe water for livestock and farm operations. Where necessary, water treatment and regular quality monitoring should be incorporated into the biosecurity programme.
- f. Finally, comprehensive **wildlife and pest control measures** should be implemented to reduce the risk of disease transmission by rodents, birds, insects, feral animals, and other wildlife species. This may include physical barriers, trapping programmes, vegetation management, exclusion systems, routine monitoring, and corrective actions.
- g. Provision for waste water treatment and efficient disposal and utilization of manure and other solid waste through composting/biogas etc.
- h. The workers working in the compartments may preferable be staying within 5 Km of the compartment and must not have large or small ruminants in their house.
- i. Training and maintenance of records

Collectively, these infrastructure components create a biosecure production environment that minimizes possibility of FMD virus introduction, supports compliance with WOAH compartmentalization requirements, and provides confidence to veterinary authorities and trading partners.



The compartment owner/establishment shall be responsible for establishing, implementing, maintaining and documenting all biosecurity measures prescribed under the approved Biosecurity Plan. This shall include maintenance of secure perimeter fencing, controlled entry and exit points, vehicle disinfection facilities, quarantine units, feed storage systems, carcass disposal facilities, water quality management systems, wildlife and pest control programmes, and sanitary procedures for waste management. Standard Operating Procedures (SOPs) for entry of animals, feed, semen, embryos, equipment, vehicles and personnel shall be developed, displayed and regularly updated. Farm personnel shall receive periodic biosecurity training and records thereof shall be maintained.

The State Animal Husbandry Department (AHD) shall evaluate, validate and periodically

inspect the implementation of biosecurity measures and verify continued compliance with compartment requirements.

2. Disease Surveillance -

- No reported FMD Outbreak in the last 12 months within compartment
- Surveillance system in place to detect the disease and report to the veterinary authorities.
- Vaccination coverage of all eligible population under the Livestock Health & Disease Control Programme and animal identification and data uploading in Bharat Pashudhan
- Absence of transmission of FMDV in last 12 months through NSP testing and other suggestive measures

The compartment shall maintain a comprehensive disease surveillance system for FMD and other major livestock diseases, including regular veterinary monitoring, health records, morbidity and mortality registers, outbreak investigations and prompt reporting of suspected disease events to the competent veterinary authority.

The establishment shall facilitate vaccination, animal identification, sample collection and surveillance activities and maintain all records related to animal health, movement, vaccination and traceability.

The State Animal Husbandry Department shall:

- Ensure availability of vaccines and associated logistics.
- Ensure vaccination of all eligible animals within the compartment and buffer zone.
- Ensure animal identification and registration in Bharat Pashudhan.
- Maintain disease surveillance and reporting systems.
- Evaluate surveillance data and epidemiological information.
- Provide veterinary services, laboratory support and outbreak investigation services.
- Create awareness among livestock owners regarding prompt reporting of unusual animal health events.
- Conduct regular inspections and monitoring of the compartment.

Baseline Epidemiological Assessment and Data Collection

Before establishment of an FMD-free compartment, a comprehensive baseline epidemiological assessment shall be conducted to determine the current health status of the proposed animal population and to identify potential disease risks that may compromise compartment integrity. This assessment provides the foundation for designing biosecurity measures, surveillance systems, vaccination strategies, and traceability mechanisms required for compartment recognition and long-term maintenance.

The first step involves preparation of a detailed **Animal Population Inventory**, documenting the species, breeds, age categories, production categories (such as dairy, breeding, replacement stock, or fattening animals), and the total animal population within the proposed compartment. The inventory should also include information on herd structure, animal sourcing practices, and any animal introductions during the previous 12 months. This information is essential for understanding population dynamics, assessing disease susceptibility, and planning vaccination and surveillance activities.

A thorough assessment of **Animal Health Status** should then be undertaken. Historical records

A thorough assessment of **Animal Health Status** should then be undertaken. Historical records relating to FMD vaccination for at least the preceding 24 months should be reviewed to evaluate vaccination coverage, compliance with vaccination schedules, and herd immunity status. Clinical disease records, mortality and morbidity data, veterinary treatment records, and laboratory diagnostic reports should be examined to identify any evidence of FMD occurrence or other diseases that could affect the epidemiological status of the compartment. The objective is to establish documented evidence that the animal population has remained free from FMD infection and transmission while maintaining an effective disease monitoring system.

The assessment should also evaluate the effectiveness of the **Animal Identification and Traceability System**. Every animal within the compartment must be uniquely identifiable through approved identification methods such as ear tags, electronic identification devices, or other officially recognized systems. The traceability assessment should verify the existence and functionality of animal movement recording systems, herd registers, birth and death records, and mechanisms for tracking animal movements into, within, and out of the compartment. A robust traceability system is critical for rapid disease investigation, risk management, and compliance with WOAHS compartmentalization requirements.

To support epidemiological analysis and risk management, detailed **GIS-based mapping** of the compartment and its surrounding environment should be undertaken. Maps should clearly depict compartment boundaries, neighboring livestock farms, villages, roads and transportation routes, livestock markets, animal congregation points, water sources, veterinary facilities, and other relevant infrastructure. Spatial mapping enables identification of potential disease transmission pathways and supports the development of targeted surveillance and biosecurity measures.

A structured **Risk Mapping Exercise** should be conducted to identify and evaluate all potential pathways through which FMD virus could be introduced into the compartment. Particular attention should be given to high-risk entry points, shared machinery and equipment routes, feed and fodder supply chains, personnel and visitor movement patterns, transport vehicles, semen and embryo sources, veterinary service providers, and other biological products entering the facility. The likelihood and consequences of each identified risk should be assessed, and appropriate mitigation measures incorporated into the compartment's biosecurity plan. The findings of the baseline assessment and risk mapping exercise shall serve as the basis for developing a scientifically justified and risk-based compartment management system.

The compartment owner shall prepare complete animal inventory records, herd health records, vaccination records, movement records, traceability documentation and other information required for epidemiological assessment.

The State AHD shall verify the accuracy of records, assess disease history, evaluate traceability systems and undertake epidemiological risk assessment before recommending compartment approval.

Development of a Biosecurity Plan as per Annexure-II.

A documented Biosecurity Plan shall be developed and implemented by the compartment owner in accordance with Annexure-II. The plan shall identify all potential pathways for introduction of FMD virus and prescribe mitigation measures.

The establishment shall ensure full implementation of the Biosecurity Plan and maintain documentary evidence of compliance.

The State AHD shall periodically evaluate and validate implementation of the Biosecurity Plan and recommend corrective measures where necessary.

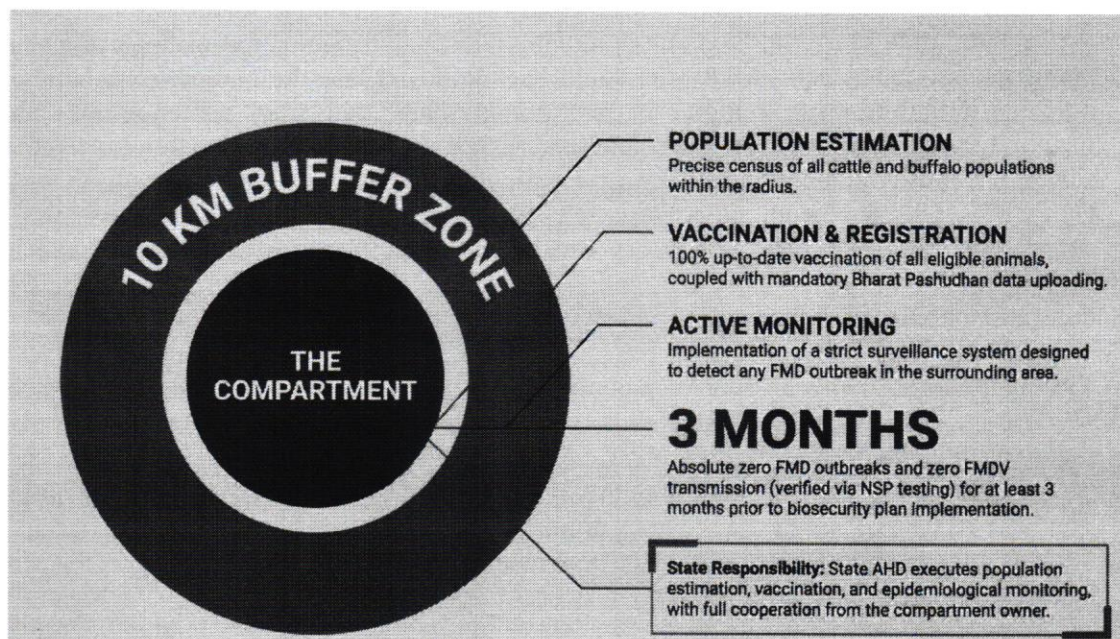
Management of the Buffer Zone (10 km radius around the compartment)

- A 10 km radius around the proposed compartment acts as the Buffer Zone.
- Estimation of population (cattle and buffalo, sheep goat and pigs) in the buffer zone
- Up to date Vaccination along with animal identification and data uploading in Bharat Pashudhan of all eligible population in the buffer zone
- Surveillance system in place for detection of any outbreak of FMD.
- No outbreak of FMD and no transmission of FMDV in the buffer zone (NSP testing) in last 3 months.

The State Animal Husbandry Department shall be responsible for:

- Estimation of cattle and buffalo population in the buffer zone.
- Vaccination of all eligible animals in the buffer zone.
- Animal identification and registration in Bharat Pashudhan.
- Surveillance, outbreak reporting and epidemiological monitoring in the buffer zone.
- Verification of absence of FMD outbreaks and FMDV transmission within the prescribed period.

The compartment owner shall cooperate with State authorities in activities related to surveillance, monitoring and maintenance of compartment integrity.



Demonstration of Absence of FMD Virus Transmission in the Compartment and Buffer Zone

- A buffer zone extending 10 km around the proposed compartment shall be established to provide an additional layer of protection against the introduction of Foot-and-Mouth Disease (FMD) virus. The first activity shall be the estimation and verification of the total susceptible livestock population, particularly cattle and buffaloes, within the

buffer zone. All eligible animals in the buffer zone shall be vaccinated against FMD as per the National FMD Control Programme, individually identified through identification systems, and their details uploaded and maintained in the Bharat Pashudhan database to ensure complete traceability. Prior to implementation of the compartment biosecurity plan, there shall be no reported FMD outbreak and no evidence of FMD virus transmission within the buffer zone for a minimum period of three months. This shall be demonstrated through active clinical surveillance and serological surveillance using Non-Structural Protein (NSP) antibody testing.

- **Non-Structural Protein (NSP) antibody testing in a compartment:** To qualify for recognition as an FMD-free compartment, it shall be demonstrated that no infection or transmission of Foot-and-Mouth Disease Virus (FMDV) has occurred within the compartment during the preceding twelve months. This implies that no animal on the farm became infected with FMDV, irrespective of whether clinical signs were observed or not, no transmission of the virus occurred among animals within the compartment.
- The absence of FMDV transmission shall be established by clinical, serological, and epidemiological analysis.

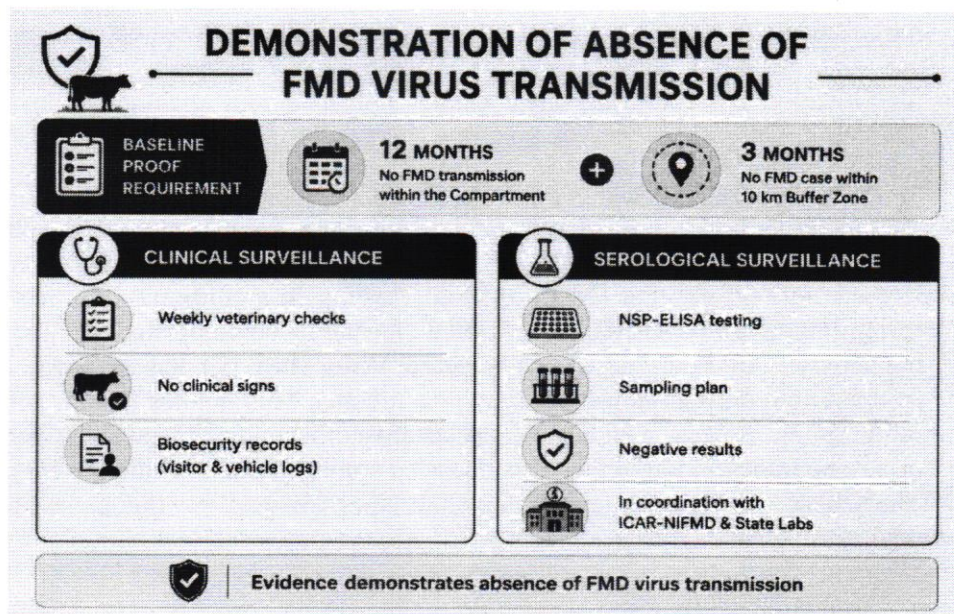
a. **Clinical surveillance** shall include maintenance of weekly animal health records, veterinary inspection reports, and documentation confirming the absence of FMD-compatible clinical signs such as vesicular lesions in the mouth and feet, excessive salivation, lameness, teat lesions or other suggestive symptoms. Records shall further demonstrate that no unexplained disease outbreaks occurred within the compartment during the previous twelve months.

b. **Serological surveillance** shall be undertaken using validated NSP-ELISA tests to detect evidence of natural FMDV infection. Negative results in all sampled animals support the demonstration of absence of FMDV circulation in the herd or epidemiological unit. Minimum frequency (e.g. twice yearly NSP sampling in proposed compartments and once in the buffer zones). Target age group (6–18 months for NSP to reduce false positives from repeated vaccination).

c. Further, a two-tier serial NSP testing and a Virological Confirmatory Pathway (probang Oropharyngeal Fluid (OPF) + RT-PCR + VP1 sequencing) may be employed if the NSP titre is around no less than 2%. All NSP positive cases to be correlated with other factors like clinical symptoms, vaccination status etc. Only confirmed reactors trigger status action.

d. A sentinel surveillance for small ruminants ay also be carried out in the buffer zone by ICAR-NIFMD, Bhubaneswar.

A detailed sampling plan is given as Annexure-IV



The establishment shall:

- Maintain weekly health records and veterinary inspection records.
- Ensure implementation of quarantine procedures for introduced animals.
- Maintain visitor logs, vehicle movement records, cleaning and disinfection records and animal movement registers.
- Support sample collection, sero-surveillance and disease investigations.
- Bear prescribed charges for NSP testing and surveillance activities wherever applicable.

The State AHD shall conduct or facilitate sample collection, surveillance, epidemiological investigations and monitoring activities in the compartment and buffer zone.

ICAR-NIFMD and collaborating laboratories shall:

- Supply approved NSP-ELISA kits as required.
- Ensure timely testing and reporting of NSP samples through designated laboratories.
- Provide technical support for surveillance and interpretation of laboratory results.

Approval Procedure

Application: The compartment owner submits a formal application to the State AHD as per Annexure-III including:

- description of the compartment
- biosecurity plan
- vaccination programme
- surveillance programme
- traceability system
- disease history.

Evaluation: A committee shall be constituted at the State level with the following composition

- Additional Director (LH) – Chairman
- Joint Director, State Disease Diagnostic Laboratory
- District Veterinary Officer of the designated district
- Representative from DAHD

The committee shall inspect the establishment and conduct

- document review including biosecurity plan
- epidemiological risk assessment
- site inspection
- verification of records.

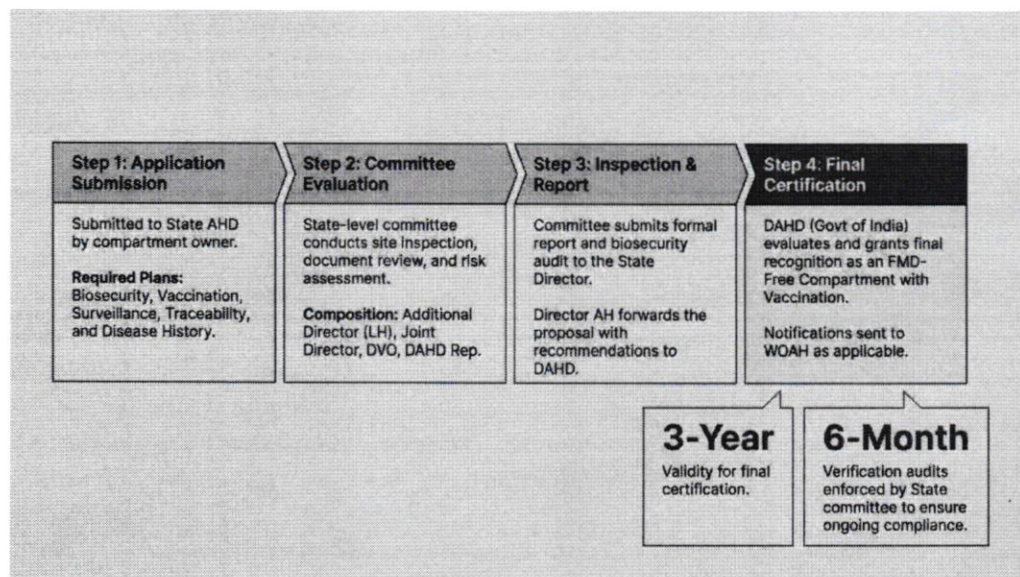
and submit a report to the Director, AH of the concerned State as per the Annexure-I .
Director AH shall submit the proposal with his recommendations to DAHD.

Certification

The Department of Animal Husbandry & Dairying (DAHD), Government of India, shall evaluate recommendations received from the State Government, grant recognition as an FMD-Free Compartment with Vaccination, and undertake submission of necessary declarations and notifications to relevant national and international bodies, including WOA, as applicable.

Validity of Certification and Renewal for 3 years.

The State committee shall visit the said establishment every six month basis to verify the status.



Annexure

I – Biosecurity Audit & Inspection Checklist (For Veterinary Authorities Inspecting Dairy Farms / Breeding Centres/any establishments)

II– Model Biosecurity Plan Template/ FMD-Specific Biosecurity Requirements for Dairy Farms / Breeding Centres (For Farms Applying for FMD-Free Compartment Recognition)

III- Application Format for Farms

IV. Sampling Plan for the NSP

V. WOAHP Terrestrial Animal Health Code, 2025 (Chapter 8.8)

Biosecurity Audit & Inspection Checklist

(For State AHD Committee Inspecting Dairy Farms / Breeding Centres- Probable compartments)

This checklist may be used by State Veterinary Officers / Competent Authorities for inspection of farms applying for recognition under FMD-free compartment systems or other biosecure livestock programmes.

Each item may be scored as:

- **Compliant (C)**
- **Partially Compliant (PC)**
- **Non-Compliant (NC)**
- **Not Applicable (NA)**

1. General Farm Information

Parameter	Details
Name of Farm	
Owner	
Address	
State / District	
GPS Coordinates	
Species maintained	
Total animal population	
Inspection Date	
Inspecting Officer	

2. Boundary and Access Control

Inspection Point	Status
Farm boundary	Present/ Not Present
Controlled farm entry point	Present/ Not Present
Adequate signage indicating restricted entry	Present/ Not Present

3. Entry Control and Farm Access

Parameters	Status
Visitor logbook maintained	
Footbath or disinfectant station present	
Handwashing facilities available	
Protective clothing provided for visitors	
Entry restrictions for non-essential visitors	

4. Animal Identification and Traceability

Parameters	Status
Animals individually identified	Yes/ No
Animal inventory records maintained	Yes/ No
Birth and movement records available	Yes/ No
Traceability system documented	Yes/ No
Records accessible for veterinary inspection	Yes/ No

5. Animal Introduction and Quarantine

Parameters	Status
Written protocol for animal purchase	
Veterinary health certification required	
Quarantine facility available	
Quarantine period followed (minimum 21 days)	
Disease screening of new animals	
Separate equipment used in quarantine area	

6. Vaccination Programme

Parameters	Status
Vaccination schedule	Available/ Not available
FMD vaccination conducted biannually	Yes/ No
Vaccination coverage documented	Yes/ No
Vaccine batch numbers recorded	Yes/ No
Vaccination supervised by veterinarian	Yes/ No
Cold chain maintained for vaccines	Yes/ No

7. Farm Hygiene and Sanitation

Parameters	Status
Schedule for Routine cleaning of animal sheds	Available/ Not available
Milking parlour sanitation maintained	Yes/ No
Disinfectants available and used along with SOPs displayed	Yes/ No
Footbaths functional	Yes/ No
Wastewater management system	Available/ Not available

8. Personnel Biosecurity

Parameters	Status
Dedicated farm clothing provided	
Workers trained in biosecurity	
Handwashing facilities available	
Workers restricted from contact with outside livestock	
Visitor protective equipment available	

9. Vehicle Biosecurity

Parameters	Status
Vehicle disinfection facility present	
Designated livestock loading/unloading area	
Restricted entry for external livestock transport vehicles	
Equipment sanitation procedures present	

10. Feed and Water Safety

Parameters	Status
Feed sourced from reliable suppliers	
Feed storage protected from pests	
Water source documented	

Water quality testing conducted	
No contamination from manure or waste	

11. Waste and Carcass Disposal

Parameters	Status
Carcass disposal protocol/SOP	
Carcass disposal pit or incinerator present	
Manure management system implemented	
Waste stored away from animal housing	

12. Vector and Wildlife Control

Parameters	Status
Rodent control programme implemented	
Insect control measures in place	
Bird-proofing of feed storage areas	
Measures to prevent wild animal entry	

13. Disease Surveillance

Parameters	Status
Daily health monitoring conducted	
Mortality records maintained	
Veterinary inspections conducted regularly	
Laboratory testing conducted when required	
Suspected diseases reported to authorities	

14. Emergency Disease Response Plan

Parameters	Status
Written disease contingency plan available	
Isolation facility for sick animals	
Procedures for reporting disease	
Sample collection protocol available	
Staff trained in emergency procedures	

15. Documentation and Record Keeping

Parameters	Status
Visitor logbook maintained	
Vaccination records maintained	
Treatment records maintained	
Feed procurement records maintained	
Training records maintained	

Overall Status:

16. Approved
17. Approved with recommendations
18. Re-inspection required
19. Not approved

FMD-Specific Biosecurity Requirements for Dairy Farms / Breeding Centres

(Critical Control Points for FMD Prevention)

This annexure identifies key critical control points (CCPs) that must be implemented to prevent the introduction and spread of Foot and Mouth Disease virus in dairy farms and breeding centres. The requirements are aligned with the standards of the **World Organisation for Animal Health Terrestrial Animal Health Code (TAHC, 2025)** and are intended for farms seeking recognition under **FMD-free compartments where vaccination is practised**.

1. Farm Location Risk Assessment

Before establishing a biosecure farm or compartment, a location-based epidemiological risk assessment should be conducted.

Key considerations include:

- distance from livestock markets
- distance from slaughterhouses or abattoirs
- presence of livestock in surrounding villages
- proximity to animal transport routes
- Wild-life sanctuaries and forest areas
- local FMD disease history.

Farms located in high livestock density areas should implement enhanced biosecurity measures.

2. Control of Animal Entry

Animal introduction is the highest risk pathway for FMD introduction.

Mandatory requirements

- purchase animals only from known disease-free herds
- require veterinary health certification
- verify recent FMD vaccination status
- ensure transport vehicle disinfection before entry.

3. Quarantine of Newly Introduced Animals

All newly introduced animals must undergo quarantine.

Minimum requirements:

- quarantine period 21 days
- daily clinical monitoring
- observation for FMD symptoms
- laboratory testing for NSP.

Quarantine facilities must be physically separated by mesh fencing from the main herd.

4. FMD Vaccination Programme

A robust vaccination programme is essential.

Requirements:

- vaccination using WOAH-compliant vaccines
- adherence to national vaccination schedules
- vaccination coverage above 90% of herd population
- maintenance of vaccination records and data in Bharat Pashudhan

Regular monitoring of herd immunity levels should be conducted through serological surveys where feasible.

5. Control of Human Movement

Humans can act as mechanical carriers of FMD virus.

Measures include:

- restricted farm access
- mandatory visitor registration
- provision of farm-specific clothing and footwear
- handwashing and disinfection before entry.

Visitors who recently visited livestock farms should avoid entering the farm for at least 48–72 hours.

6. Control of Vehicle Movement

Vehicles transporting animals, feed, or milk may introduce infection.

Biosecurity measures include:

- vehicle disinfection at entry points
- dedicated milk collection vehicles where possible
- restricted entry of livestock transport vehicles.

7. Feed and Fodder Safety

Feed may serve as a fomite for virus transmission.

Measures include:

- sourcing feed from reliable suppliers
- preventing contamination by livestock from outside sources
- protecting feed from wildlife and rodents
- avoiding feeding uncooked food waste.

8. Equipment and Fomite Control

Farm equipment should not be shared with external farms.

Measures include:

- dedicated equipment for each farm
- cleaning and disinfection before reuse
- restriction on equipment borrowed from other farms.

9. Wildlife and Vector Control

Wildlife and stray animals may act as mechanical carriers of infection.

Measures include:

- fencing around the farm
- control of stray cattle and pigs
- rodent control programmes
- bird-proofing feed storage areas.

10. Milk Collection Biosecurity

Milk collection activities may increase contact between farms.

Biosecurity measures include:

- designated milk collection areas
- disinfection of milk collection equipment
- preventing entry of external personnel into animal housing areas.

11. Manure and Waste Management

FMD virus can survive in organic matter.

Measures include:

- proper manure storage and disposal
- composting before field application
- preventing contamination of water sources.

12. Carcass Disposal

Dead animals should be disposed of immediately using approved methods:

- deep burial
- incineration

Carcasses must **never be transported through livestock areas unnecessarily.**

13. Isolation of Sick Animals

Animals showing symptoms such as:

- fever
- lameness
- mouth lesions
- excessive salivation

must be immediately isolated.

Veterinary authorities should be informed immediately.

14. Surveillance and Health Monitoring

Routine health monitoring must include:

- daily observation of animals
- mortality tracking
- veterinary inspections.

Laboratory testing should be conducted where clinical suspicion exists.

15. Staff Training and Awareness

Farm workers must be trained to recognize early symptoms of FMD.

Training topics should include:

- disease recognition
- reporting procedures
- hygiene practices
- emergency response protocols.

16. Emergency Response Preparedness

Each farm must maintain a disease contingency plan.

Key components include:

1. immediate isolation of suspected animals
2. restriction of farm movements
3. notification to veterinary authorities
4. diagnostic sample collection.

17. Biosecurity Documentation

The following documents should be maintained:

- biosecurity plan
- vaccination records
- animal movement records

- visitor logs
- training records.

These documents should be available for inspection by veterinary authorities.

18. Periodic Biosecurity Audit

Farms should undergo **annual biosecurity audits** conducted by veterinary authorities.

Audits should assess:

- compliance with biosecurity measures
- effectiveness of vaccination programmes
- adequacy of disease surveillance.

Corrective actions should be implemented where gaps are identified.

**Model Application Format - Application for Recognition of FMD-Free Compartment
(Where Vaccination is Practised)**

1. General Information of the Applicant

- Name of the Applicant Organization / Farm
- Registered Address of the Organization
- Farm / Facility Address
- Contact Details
 - Telephone
 - Email
- Name and Designation of Authorized Signatory

2. Description of the Proposed Compartment

- Name of the Proposed Compartment
- Location (Village / District / State)
- GPS Coordinates of the Farm / Facility
- Total Area of the Compartment (in hectares)
- Description of physical boundaries (fencing, natural barriers, controlled access)
- Type of Livestock Production System
 - Dairy Farm
 - Breeding Farm
 - Bull Mother Farm
 - Semen Station
 - Integrated Livestock Unit
- Species and Breeds Maintained

Species	Breed	Total Population	Production Category
Cattle			
Buffalo			

3. Animal Population Details

- Total number of animals in the compartment
- Source of animals (own breeding / purchased / government breeding farms etc.)
- History of animal introductions during the last 12 months
- Animal identification system used (ear tags / electronic ID / other)
- Traceability system in place

4. Biosecurity Measures

Provide details of the biosecurity plan implemented in the compartment, including:

4.1 Farm Access Control

- perimeter fencing
- controlled entry points
- visitor entry register
- staff entry protocols

4.2 Vehicle Control

- vehicle cleaning and disinfection procedures
- restricted vehicle movement inside the farm

4.3 Personnel Biosecurity

- protective clothing
- hand and footwear disinfection
- training of farm personnel

4.4 Feed and Water Biosecurity

- source of feed, fodder and water
- feed storage arrangements
- prevention of contamination

4.5 Waste and Carcass Disposal

- manure management system
- carcass disposal method (burial/incineration/rendering)

Attach Biosecurity Plan Document as Annexure.

5. Vaccination Programme

1. Vaccination schedule against FMD followed in the farm
2. Name and source of vaccine used
3. Vaccination coverage (%)
4. Vaccination records maintained (Yes / No)

Attach:

- vaccination records (last 24 months)
- herd immunity monitoring reports (if available)

6. Disease Surveillance

Provide details of surveillance conducted in accordance with WOAHS standards:

1. Clinical surveillance system
2. Laboratory diagnostic support
3. Frequency of veterinary inspections
4. Reporting system for suspected cases
5. Serological surveillance programme (if conducted)

Attach:

- laboratory reports
- surveillance records

7. Animal Movement Control

Provide details regarding:

1. Procedures for introduction of new animals
2. Quarantine system for new animals
3. Movement control measures within the compartment
4. Procedures for dispatch of animals, semen or animal products

Attach movement records for the previous 12 months.

8. Evidence of Absence of FMD

The applicant shall provide documented evidence that:

- no infection or transmission of FMD virus has occurred in the proposed compartment during the preceding 12 months, and
- systematic vaccination and surveillance have been implemented.

Attach supporting evidence including:

- veterinary certification
- laboratory testing reports
- surveillance data.

9 Risk Assessment

Provide a brief description of:

- proximity to livestock markets
- livestock density in surrounding areas
- measures taken to mitigate external disease risks.

10. Supporting Documents Checklist

The following documents must be enclosed:

- Biosecurity Plan
- Farm Layout Map
- Animal Population Records
- Vaccination Records (last 2 years)
- Surveillance Reports
- Animal Movement Records
- Veterinary Certification
- Farm Infrastructure Details
- Staff Training Records

11. Declaration by the Applicant

I hereby declare that the information provided in this application is true and correct to the best of my knowledge and that the proposed compartment complies with the requirements of the WOAHA Terrestrial Animal Health Code for establishment of FMD-free compartments where vaccination is practised.

Signature:

Name:

Designation:

Date:

Official Seal of the Organization

Sampling Strategy for demonstration of freedom from transmission of FMD Virus

The sampling strategy is based on the principles of disease freedom surveillance rather than prevalence estimation. The sample size is determined using the herd size, prevalence, desired confidence level and diagnostic test sensitivity.

For large populations, the required sample size shall be estimated using the following formula:

$$n = \ln(1 - CL) / \ln(1 - P^* \times Se)$$

where n is the required sample size, CL is the desired confidence level, P* is the prevalence, and Se is the diagnostic sensitivity of the NSP test.

For smaller herds, finite population correction shall be applied using:

$$n_{adj} = (N \times n) / (N + n - 1)$$

where N represents the total herd size and n is the initial sample size estimate. The selected design prevalence should reflect the minimum level of infection that the surveillance programme intends to detect, while maintaining a confidence level of at least 95%.

Testing to be done using the indigenously developed recombinant 3AB3 DIVA-FMD kit validated for large-scale sero-surveillance. Testing shall be done at ICAR-NIFMD collaborating and reference centres located nearest to the proposed compartment. The kit demonstrates a diagnostic sensitivity of 95% and specificity of 98%. Minimum frequency (e.g. twice yearly NSP sampling in proposed compartments). Target age group (6–18 months for NSP to reduce false positives from repeated vaccination). It is now widely used across the country as a companion diagnostic tool in the National FMD Control Programme.

Number of samples to be tested in the compartment

Herd Size upto 500 is 30 samples and upto 1000 is 35 samples and upto 2000 is 40 samples taking into account the overall NSP titre of the country to be around 8% during 2025. Animals above 6 months of age to be tested. Testing to be done twice a year. Rotating animals between round can improve the herd coverage. However a sampling plan based on the NSP prevalence is prepared as under to be followed by the States

NSP Prevalence (%)	No. of Samples to be tested based on the herd size			
	Up to 100 Animals	Up to 200 Animals	Up to 500 Animals	Up to 1000 Animals
1	67	98	193	239
2	47	65	119	135
3	37	49	86	94
4	31	39	67	72
5	27	33	55	58
6	24	29	46	49
7	22	26	40	42
8	20	23	35	37

9	18	21	31	32
10	17	19	28	29
11	16	18	26	26
12	15	17	24	24
13	14	15	22	22
14	13	14	20	21
15	13	13	19	19
16	12	13	18	18
17	11	12	16	17
18	11	11	16	16
19	10	11	15	15
20	10	10	14	14

Further, a two-tier serial NSP testing and a Virological Confirmatory Pathway (probang Oropharyngeal Fluid (OPF) + RT-PCR + VP1 sequencing) may be employed if the NSP titre is below 2%. All NSP positive cases to be correlated with other factors like clinical symptoms, vaccination status etc. Only confirmed reactors trigger status action.

In addition, records shall demonstrate that all animals introduced into the compartment during the preceding twelve months originated from known and approved sources, were subjected to quarantine and testing requirements where applicable, and did not represent a significant risk for introduction of FMDV. Comprehensive biosecurity documentation shall be maintained, including records of controlled entry of personnel and vehicles, visitor logs, cleaning and disinfection procedures, animal movement registers, and measures ensuring separation from livestock of unknown health status.

Finally, outbreak investigation records shall confirm that no FMD outbreaks were reported within the compartment and that any suspected cases or clinical events suggestive of FMD were promptly investigated, appropriately sampled, and conclusively ruled out through laboratory diagnosis.

Non-Structural Protein (NSP) antibody testing in the buffer zone

The same principles of surveillance, vaccination coverage, traceability, outbreak reporting and investigation shall be applied within the 10 km buffer zone to ensure that the compartment remains protected from external sources of FMDV infection and continues to comply with the requirements for recognition and maintenance of FMD-free compartment status.

Sampling Plan to cover 30% of the villages and test around 200 animals (both cattle and buffalo) and the testing to be done once only 3 months prior to the implementation of the biosecurity plan in the compartment.

Prevalence (%)	Minimum Sample Size (95% Confidence)	Recommended Operational Size*	Sample	Suggested % Villages Covered
1	299	500		100%
2	149	300		80-100%
3	99	250		70-80%
4	74	220		60-70%
5	59	200		50-60%
6	49	180		50-60%

7	41	170	40-50%
8	36	150	40-50%
9	32	140	35-45%
10	29	130	30-40%
11	26	120	30-40%
12	24	110	25-35%
13	22	100	25-35%
14	20	95	20-30%
15	19	90	20-30%
16	17	85	20-30%
17	16	80	20-25%
18	15	75	20-25%
19	14	70	20-25%
20	13	65	20-25%