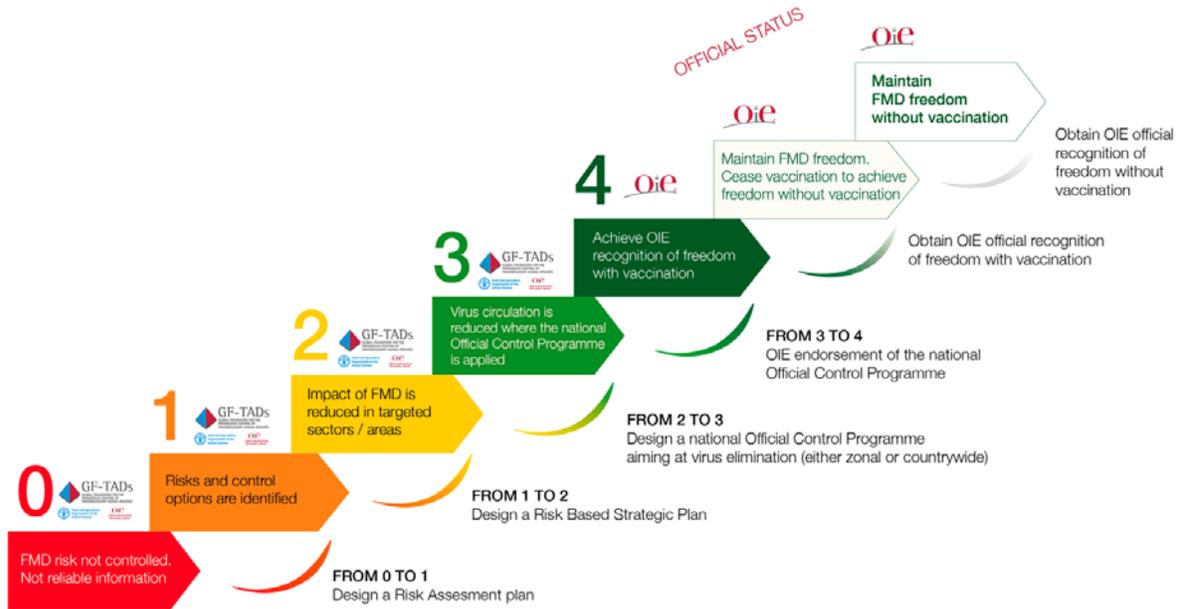


# RISK ASSESSMENT PLAN FOR THE CONTROL OF FOOT- AND-MOUTH DISEASE



# RISK ASSESSMENT PLAN FOR THE CONTROL OF FOOT- AND-MOUTH DISEASE



Country name:

Version <1.0>

<mm/dd/yyyy>

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## **Background to the Progressive Control Pathway**

The Progressive Control Pathway for Foot and Mouth Disease (PCP) has been developed to assist and facilitate FMD endemic countries to progressively reduce the impact of the disease and extent of FMD virus circulation. The PCP-FMD approach has been adopted as a key tool supporting the implementation of the FAO-OIE Global FMD Control Strategy.

The PCP is not intended to be compulsory or prescriptive; rather it is outcome-oriented and acknowledges that effective approaches to achieve the key outcomes will be different in different countries and regions.

## **Purpose of the Risk Assessment Plan**

The Risk Assessment Plan (RAP) is the outcome indicator to be eligible to enter PCP-FMD Stage 1, as defined in the PCP guidelines. The plan should clearly outline the activities to be implemented to progress along PCP Stage 1.

## **Objective of the Risk Assessment Plan**

The objective of the RAP is for the Veterinary Services **to outline** the different activities under PCP-FMD Stage 1. In PCP-FMD stage 1, eight expected outcomes are foreseen:

1. Value-chain analysis and stakeholder identification;
2. A working hypothesis on how FMD virus circulates in the country;
3. Assessing the socio-economic impact of FMD;
4. Identification of FMD virus circulating strains;
5. Enhancing the enabling environment;
6. Regional cooperation;
7. Identification of Risk Hotspots;
8. Developing a Risk-based Strategy Plan (RBSP)<sup>1</sup>.

More information on the eight expected outcomes and related activities can be found through online training under “the PCP e-learning”. To subscribe to this e-learning, please send an email request to [eufmd@fao.org](mailto:eufmd@fao.org).

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<sup>1</sup> The RBSP is the plan needed to enter PCP-FMD Stage 2. It compiles information and understanding of the seven outcomes and defines the component objectives and tactics to address the so-called risk hotspots.

## Template for the Risk Assessment Plan

The template (pages 5-7) consists of a table with six columns. The first three columns form the lay-out or template for the RAP. A country may modify these typical activities and deliverables according to its objectives and situation. By column, the following is intended:

- Column 1: Describe the expected outcomes of the PCP-FMD Stage 1;
- Column 2: List the activities for each of the expected outcomes. Examples of typical activities are given in the template (pages 5-7);
- Column 3: Define the deliverables for each of the outcomes;

Columns 4, 5 and 6 require the country to fill out the planned actions:

- Column 4: Identifies **who will be responsible** to have the activities conducted on time;
- Column 5: Identifies **the time period** to conduct these activities;
- Column 6: Identifies **the challenges** and **the support** that may be needed or sought after.

This template helps the countries to organize and structure the activities in a logical manner. Although it is not required to use this template, it is recommended as a systematic step to consider each of the activities.

## Submission process and RAP Review

The submission of the RAP is part of an acceptance process<sup>2</sup>, outlined here:

1. Completion of the self-assessment questionnaire ("PCP checklist for PCP-FMD Stage 1). This enables a country to summarize the information in a standardized manner;
2. The GF-TADs FMD Working Group reviews the questionnaire to assess country progress with respect to the required and recommended outcomes in a given PCP-FMD Stage. The GF-TADs FMD Working Group assesses the RAP plan and drafts a written feedback;
3. The country provides evidence supporting the self- assessment including the RAP for peer review, usually with a presentation and interviews by the GT-TADs FMD WG during the Roadmap meetings. In the event that no Roadmap meeting is held, then supportive evidence should be provided to the RAG through the FMD WG, who will convene an extraordinary meeting of the RAG (usually an online meeting). This will be done:
  - a. As needed, for Stage progression
  - b. Every 3 years to maintain the Stage Acceptance
4. Evidence is reviewed by the RAG, who determines PCP Stage Acceptance

The RAP should be sent to the GF-TADs FMD WG via email: [FAO-FMD@fao.org](mailto:FAO-FMD@fao.org) and [OIE-FMD@oie.int](mailto:OIE-FMD@oie.int) .

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<sup>2</sup> See the PCP-FMD Guidelines: <http://www.fao.org/ag/againfo/commissions/docs/pcp/pcp-26012011.pdf>

## Technical backstopping for developing the RAP

For inquiries and technical support to develop the RAP, please contact [FAO-FMD@fao.org](mailto:FAO-FMD@fao.org), [OIE-FMD@oie.int](mailto:OIE-FMD@oie.int) and [EuFMD@fao.org](mailto:EuFMD@fao.org),

For supporting documentation and examples, please visit the GF-TADs' website ([www.gf-tads.org](http://www.gf-tads.org)) or Eu-FMD e-learning 's website (<https://eufmd.rvc.ac.uk>)

## Risk-Assessment Plan - Key information

Name of the country: \_\_\_\_\_ .....

Contact: .....

Name of Department responsible for this: .....

Date of submission: \_\_\_\_\_ .....

FMD Situation in the Country (2 pages max.)

**Table template for describing activities and planning of activities in PCP-FMD Stage1**

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
Expected outcomes of PCP-FMD Stage 1	Activities planned to be carried out under PCP-FMD Stage 1 ( <i>typical activities are described below: these should be added to/deleted according to the national situation</i> )	Deliverable	Actors responsible for designing and implementing activities	Time period when activities will be carried out	Identified challenges and support sought after <sup>3</sup>
1. Value-chain analysis and stakeholder identification: A thorough understanding of livestock flow from birth to rearing, marketing and slaughtering. Key stakeholders identified	e.g.1. Stakeholder interviews and/or workshops to identify stakeholders and develop value-chain maps for main production or husbandry livestock systems in country e.g.2. National experts' consultation	Value chain maps List of key stakeholders	-To be filled out -	-To be filled out -	-To be filled out -
2. Distribution of FMD is well described and there is a working hypothesis on how FMD virus circulates	e.g.1. Develop a national case definition for FMD e.g.2. Develop system to ensure that the central vet services are informed about FMD suspect or confirmed cases e.g.3. Collect, and analyse data in order to describe the incidence of FMD outbreaks according to the region, the season and the husbandry system e.g.4. Conduct a NSP-Ab sero-survey to estimate the distribution and level of virus circulation in the different livestock production systems and regions in the country. e.g.5. Combine the information on value chain with information related to outbreaks. Identify the most likely transmission pathways influencing the spread between farms and among different regions e.g.6. Assess the awareness of stakeholders (private vets, slaughterhouse, farmers...)	Report describing the spatial-temporal distribution of FMD in the different production systems and the working hypothesis of the routes by which FMD may be transmitted	-To be filled out -	-To be filled out -	-To be filled out -

<sup>3</sup> Challenges such as policies, infrastructure, competencies. Support such as budget/human resources, laboratory capacities etc.

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
<b>Expected outcomes of PCP-FMD Stage 1</b>	<b>Activities planned to be carried out under PCP-FMD Stage 1 (typical activities are described below: these should be added to/deleted according to the national situation)</b>	<b>Deliverable</b>	<b>Actors responsible for designing and implementing activities</b>	<b>Time period when activities will be carried out</b>	<b>Identified challenges and support sought after<sup>3</sup></b>
3. Assessing the socio-economic impact of FMD: Understanding of the direct losses of clinical FMD for use in awareness raising campaigns and advocacy with decision makers.	e.g.1. Conduct a survey to estimate the direct/indirect losses due to clinical FMD in different livestock production systems. These data may also be collected during thorough outbreak investigations with multiple visits. e.g.2. Experts consultation e.g.3. Impact assessment of pilot projects e.g.4. Describe how the FMD control activities can benefit other animal diseases programs (Component 3 of the FMD Global Control Strategy).	Report describing the direct/indirect losses due to clinical FMD in different livestock production systems and potential interventions.	-To be filled out -	-To be filled out -	-To be filled out -
4. Identification of FMD virus strains: Understanding which are the most common FMD serotypes and strains circulating in different livestock production systems (and wildlife if relevant).	e.g.1. Outbreak investigations in all geographic regions and key husbandry systems to obtain virologic samples e.g.2. Establishing FMD virus detection diagnostics and, when needed, submission to a reference laboratory such as OIE/FAO Reference Laboratory e.g.3. Capacity building on sampling collection and submission. e.g.4. Awareness of farmers, and other stakeholders to detect acute lesions	Laboratory results (serotype, genotype, vaccine matching data) representing all regions	-To be filled out -	-To be filled out -	-To be filled out -
5. Enhancing the enabling environment: Strengthened Veterinary Services compliant with the 13 critical competencies for PCP-FMD Stage 1 (Component 2 of the FMD Global Control Strategy). Annex 1	e.g.1. Request a PVS follow-up mission if the report is older than 5 years or if PVS assessment has never been conducted e.g.2. If available, refer to the OIE-PVS assessment or GAP analysis reports and fill in the form available in Annex 1 e.g.3. propose a plan for improving the performance of the Veterinary Services with regard to the 13 critical competences relevant for PCP-FMD Stage 1 e.g.4. A legal framework is created/revised identifying FMD as a notifiable disease	PVS or GAP report Legal framework Action plan to implement activities identified	-To be filled out -	-To be filled out -	-To be filled out -

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
<b>Expected outcomes of PCP-FMD Stage 1</b>	<b>Activities planned to be carried out under PCP-FMD Stage 1 (typical activities are described below: these should be added to/deleted according to the national situation)</b>	<b>Deliverable</b>	<b>Actors responsible for designing and implementing activities</b>	<b>Time period when activities will be carried out</b>	<b>Identified challenges and support sought after<sup>3</sup></b>
6. Demonstrated commitment to regional cooperation and participating in regional FMD control	e.g.1. Participation in Regional Roadmap Meetings on FMD control e.g.2. Participation in regional CVO meetings e.g.3. Nomination of national points of contact for PCP, epi and laboratory e.g.4. Support the regional laboratory and epi networks e.g.5. Timely reporting to the OIE (involvement of the OIE notification focal point activities)	Self-assessment questionnaire, country presentation Take part in the implementation of regional priorities and epi/lab annual work plan Regular WAHIS reports	-To be filled out -	-To be filled out -	-To be filled out -
7. Identification of risk hotspots for FMD transmission and FMD impact, and identification of main gaps and needs for implementing FMD control	Risk assessment using results of the activities 1 through 6 e.g.1 Assess risk of FMD introduction and spread along the value-chains developed under expected outcome 1 e.g.2 Rank and prioritise the risks defined into risk hotspots and identify gaps in knowledge	Compilation of identified risk hotspot, impact, gaps and needs	-To be filled out -	-To be filled out -	-To be filled out -
8. Developing a risk-based strategic (RBSP) plan for FMD control	Compiling the activities 1 to 7 into an overall strategy for FMD control with focus on mitigating the impact of clinical FMD (PCP-FMD Stage 2), and including a mechanism for monitoring and evaluation of anticipated FMD control measures  (example template and guidance document available at: <a href="http://www.fao.org/ag/againfo/commissions/eufmd/commissions/eufmd-home/progressive-control-pathway-pcp/en/">http://www.fao.org/ag/againfo/commissions/eufmd/commissions/eufmd-home/progressive-control-pathway-pcp/en/</a> )	The RBSP: a comprehensive document with goal, strategic objectives, component objectives, tactics and activities for FMD control	-To be filled out -	-To be filled out -	-To be filled out -

## **Annex 1.**

### **Quality Veterinary Services as part of the Enabling Environment of an efficient and sustainable FMD prevention and control**

This annex describes the second component of the PCP-FMD ‘enabling environment’ that is related to the capacity and capability of Veterinary Services (VS) to manage and implement the activities to control FMD.

The VS reinforcement activities are an integral component of the control programmes and should be considered when drafting the Risk Assessment Plan to be implemented while in PCP FMD Stage 1.

A tool was developed to assess the level of compliance of VS with the OIE standards: PVS evaluation tool which is composed of 47 criteria, known as “Critical Competences (CC)” against which the VS are assessed. For each CC, there are five levels of advancement indicating the levels of compliance with OIE standards; from level 1: no compliance to level 5: full compliance.

Out of those 47 CCs, 36 are of particular relevance to the prevention and control of FMD - hereafter named ‘FMD relevant CCs’.

Achievement of relevant CCs level of advancement is not prerequisite to entering a PCP-FMD stage; their achievement should be sought as early as possible after entering that Stage, for FMD specific activities to be successfully conducted during that same Stage.

**Most countries have had an OIE PVS evaluation and PVS Gap Analysis missions and the related Reports are key to design the content of this Annex.**

Supporting documents on this subject can be found at:

- OIE Section on the Quality of the Veterinary Services  
[http://www.oie.int/index.php?id=169&L=0&htmfile=titre\\_1.3.htm](http://www.oie.int/index.php?id=169&L=0&htmfile=titre_1.3.htm)
- OIE PVS Tool  
<http://www.oie.int/en/support-to-oie-members/pvs-evaluations/oie-pvs-tool/>
- OIE PVS Gap analysis tool (costing Tool)  
<http://www.oie.int/en/support-to-oie-members/pvs-gap-analysis/>
- FAO-OIE global FMD control strategy: <http://www.oie.int/doc/ged/D11886.PDF>

**1 Analysis of the PVS results**

*1.1 Missions conducted and reports available*

Please fill in the tables below according to your PVS evaluations.

Type of evaluation (PVS, GAP, Follow Up, laboratory, legislation, etc)	Date when conducted	Comment (if any)

*1.2 Score level of the CCs relevant in PCP-FMD Stage 1*

[Use the latest PVS Report, if available]

Critical competencies relevant to PCP-FMD Stage 1	Recommended Score	Score from		Comment (if any)
		OIE evaluation	Self-evaluation	
I.1.A. Veterinarians and other professionals	2			
I.1.B. Veterinary para-professionals and other technical personnel	2			
I.2.A. Professional competencies of veterinarians	3			
I.3. Continuing education	3			
I.7. Physical resources	2			
II.1.A. Access to veterinary laboratory diagnosis	2			
II.3. Risk analysis	3			
III.1. Communications	2			
III.2 Consultation with interested parties	3			
III.3. Official representation	2			
III.6. Participation of producers and stakeholders in joint programmes	2			
IV.1 Preparation of legislation and regulations	2			
IV.6. Transparency	2			

## 2. Identify the main weaknesses for each CC

Identify the main weaknesses for each CC whose score level is below the required score

*[Use the section 'Weaknesses of the OIE PVS Report']*

Critical competency	Main weaknesses
CC #	• • •
CC #	• • •
CC #	• • •

## 3 Strategic objective and overall Goal of VS strengthening

*[Provide in one sentence the strategic objective with relation to VS reinforcement. The strategic objective may be related to the capacity of the VS regarding the Critical CCs relevant to PCP-FMD Stage 1 within one year after entering Stage 1, such as "Reaching appropriate level of advancement for the 13 CCs related PCP-FMD Stage 1 by 201X"].*

## 4 Workplan and activities

*[For all CCs for which the score required is not achieved, define some key activities to reach the expected level. Whenever available, use the proposed activities formulated in the Gap Analysis Report]*

Critical competency	Current score	Targeted score	Activities to reach the target score
CC #			Activity x.1 Activity x.2
CC #			Activity y.1
CC #			Activity z.1 Activity z.2 Activity z.3

*[Nota bene: the activities proposed in the Table above will be considered to develop section 5 of the risk assessment plan.]*

## Annex 2

### KEY TERMS Progressive Control Pathway (PCP-FMD) terms:

**Biosecurity:** Implementation of practices that create barriers in order to reduce the risk of the introduction and spread of disease agents. Three principle elements of biosecurity are segregation, cleaning and disinfection (from FAO Biosecurity for Avian Influenza Handbook)

**Critical risk control point:** A risk hotspot where feasible control measures exist to mitigate the risk. Feasible control measures imply that they can be implemented from both the technical and socio-economic standpoint.

**Direct losses:** A loss that is the immediate result of the hazard of concern, in this case FMD infection. For FMD, direct losses include: lameness (especially impacts draught power), weight loss, increased mortality in young animals, abortion and decreased milk yield.

**Enabling environment:** The 'environment' refers to the underlying setting or context, in this case in which animal production occurs, FMD circulates and control measures are applied. The 'environment' includes the socio-economic status of the country, the laws and norms that govern all aspects of the country (including animal production and trade), the proficiency and resources of the Veterinary Services. An 'enabling environment' indicates that this underlying setting and conditions are favourable to the control of FMD.

**Epidemiological unit (epi-unit):** A group of animals with a defined epidemiological relationship that share approximately the same likelihood of exposure to a pathogenic agent. This may be because they share a common environment (e.g. animals in a pen), or because of common management practices. Usually, this is a herd or a flock. However, an epidemiological unit may also refer to groups such as animals belonging to residents of a village, or animals sharing a communal animal handling facility. The epidemiological relationship may differ from disease to disease, or even strain to strain of the pathogenic agent. (Source: OIE Terrestrial Code)

**Husbandry systems/livestock sector:** the different methods used to breed, raise and care for livestock.

Extensive husbandry system: Characterized by low animal density, animals are grazing or scavenging and the producer may not see them regularly (e.g. cattle or sheep may graze on a pasture for several months without regular contact with the producer)

Intensive husbandry system: Characterized by high animal density, feed provided by the producer, producer has regular contact with livestock.

**Impact:** Measure of the consequences of one 'thing's' (here: FMD's) influence upon another. The impact of FMD refers to the magnitude of the consequences of FMD entry and/ or spread. In this case, the consequences may be epidemiological, environmental and/or economic, and may be direct or indirect.

Epidemiological consequences refer primarily to the probability and extent of onward spread, given FMD infection in an animal/sector/area.

Economic consequences include both direct losses (production losses, losses due to morbidity and mortality) and indirect losses (due to lost trade, costs of control measures etc.).

Environmental consequences are foreseen to be primarily related to resultant control measures, such as large-scale disposal of carcasses (e.g. burial), construction of fences.

**Incentives:** Something, such as the fear of punishment or the expectation of reward that induces action or motivates effort.

In this case, incentives are the factors that cause a stakeholder to conduct their business in the way that they do. The most important incentives are usually monetary gain and improved production. For example, a dealer (stakeholder) might choose to sell animals at a particular market because that is where they can get the highest price (monetary gain). Or a producer chooses to vaccinate their animals because they believe that they will be more productive (or chooses not to vaccinate because they believe it will reduce production). Or a veterinarian might re-use needles in different farms to save money. All these are incentives that impact FMD risk.

**Incidence:** The number of cases of FMD in a defined population within a specific period. It is calculated by:

$$I = \frac{\text{the number of FMD infected epidemiological units in a given period of time (eg. 1 year)}}{\text{the total number of susceptible epidemiological units}}$$

**Indicators:** Indicators are measurements that can be repeated over time to track progress toward achievement of objectives.

Implementation indicators "indicate" the extent to which planned activities have been conducted, for example the percentage vaccination coverage that was attained in a sector or zone, the number of markets that had surveillance visits, the percentage of outbreaks for which the serotype was identified etc.

Impact indicators measure whether the Plan's objective is being achieved (e.g. percentage decrease in FMD incidence in a certain area or sector over 3 years, or the percent increase in profit or productivity in a given period of time).

**Monitoring:** means the intermittent performance and analysis of routine measurements and observations, aimed at detecting changes in the FMD status of a population. This includes routine recording, analyses and distribution of information related to the disease.

**Non-structural protein (NSP) serosurvey:** Sampling a population to determine the prevalence of NSP antibodies. Antibodies to NSP will be usually present in animals naturally infected by FMD virus, but NOT those that are vaccinated by a purified vaccine. Therefore, a carefully designed NSP serosurvey can be used to estimate the incidence of FMD in a population.

**Outbreak investigation:** A thorough case-study that describes the clinical presentation of the disease verifies the diagnosis through laboratory testing, identifies the source and common mechanisms of spread, as well as the causative serotype. Ideally, there should Standard Operating Procedures and standard data recording forms should be developed and used for these investigations.

**Risk:** measure of the combination of probability and impact of FMD entry and/or spread

**Risk hotspot:** Point in production or marketing network where there is a high probability and/or consequence of FMD entry/spread. It may or may not be possible to mitigate the risk associated with the hotspot.

**Risk-based control:** Control measures that are selected based on their effectiveness at reducing the probability and impact of FMD entry and/or spread. Usually these will be identified through risk analysis, and mitigate risk at 'critical risk control points'.

**Risk pathways:** The risk pathway describes all the stages in the biological process that lead to the unwanted outcome. A risk pathway is a series of conditions that must be met, or events that have to occur, in order for the unwanted outcome to occur (FAO. 2011. A value chain approach to animal diseases risk management.)

**Robust epidemiological data:** refers to data that are appropriate to generate the desired information and as reliable and free from bias as possible.

**Stakeholders:** A stakeholder is any person, group, or institution that—positively or negatively—affects or is affected by a particular issue or outcome. As such, stakeholders in FMD control can include producers of all types of susceptible livestock, vaccine suppliers, livestock transporters, veterinarians, dealers, animal health workers, consumers...

**Socio-economic drivers:** Social and economic factors that provide impulse or motivation; in this case the reasons behind the ways of raising and marketing (selling) livestock

**Surveillance:** means the systematic ongoing collection, collation, and analysis of information related to animal health and the timely dissemination of information so that action can be taken. The term disease surveillance is used to describe a more active system than monitoring and implies that some form of directed action will be taken if the data indicate a disease level above a certain threshold. Therefore, disease surveillance is made up by at least three components: (1) a defined disease monitoring system, (2) a predefined disease intervention strategy (directed action), and (3) a defined threshold of disease frequency.

**Targets:** A desired goal or aim to be achieved, in this case they should be measurable.

Implementation targets refer to goals set for the activities within the Strategic Plan, such as the vaccination coverage that should be achieved, number of surveillance visits that should be done within a year, the percentage of outbreaks for which the serotype should be identified.

Impact targets refer to the desired reduction in FMD incidence or FMD losses that occur because of the implementation of the strategy.

**Transmission pathways:** The routes and mechanisms by which a disease spreads from animal-to-animal, farm-to-farm and/or region-to-region.

**Value chain:** Description of all systems involving FMD susceptible species from input suppliers, through producers of animals, to the marketing system, processors and consumers. Importation of relevant animals and animal products as well as movements of animals associated with transhumance should also be described. It is important to describe the nature of the links between the components in the system, and to include consideration of why the network is structured as it is (economics, incentives, governance).

**Working hypothesis:** A tentative explanation for a set of observations, that is meant to be reviewed for accuracy, refined and improved as more information becomes available