Food and Agriculture Organization of the United Nations

World Organisation for Animal Health

Peste des petits ruminants Monitoring and Assessment Tool

User guide version 2 (PMAT2)

Peste des petits ruminants Monitoring and Assessment Tool

User guide version 2 (PMAT2)

Food and Agriculture Organization of the United Nations

World Organisation for Animal Health

Rome and Paris, 2025

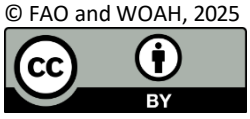
Required citation:
FAO and WOAH. 2025. *Peste des petits ruminants Monitoring and Assessment Tool — User guide version 2 (PMAT2)*. Rome.
https://doi.org/10.4060/cc8989en

The designations employed and the presentation of material in this information product do not imply the expression of any opinion whatsoever on the part of the Food and Agriculture Organization of the United Nations (FAO) or the World Organisation for Animal Health (WOAH) concerning the legal or development status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. The mention of specific companies or products of manufacturers, whether or not these have been patented, does not imply that these have been endorsed or recommended by FAO or WOAH in preference to others of a similar nature that are not mentioned.

The views expressed in this information product are those of the author(s) and do not necessarily reflect the views or policies of FAO or WOAH.

ISBN 978-92-5-139969-9 [FAO]

© FAO and WOAH, 2025



Some rights reserved. This work is made available under the Creative Commons Attribution- 4.0 International licence (CC BY 4.0: https://creativecommons.org/licenses/by/4.0/legalcode.en).

Under the terms of this licence, this work may be copied, redistributed and adapted, provided that the work is appropriately cited. In any use of this work, there should be no suggestion that FAO or WOAH endorse any specific organization, products or services. The use of the FAO or WOAH logos is not permitted. If a translation or adaptation of this work is created, it must include the following disclaimer along with the required citation: "This translation [or adaptation] was not created by the Food and Agriculture Organization of the United Nations (FAO) or the World Organisation for Animal Health (WOAH). FAO or WOAH are not responsible for the content or accuracy of this translation [or adaptation]. The original English edition shall be the authoritative edition."

Any dispute arising under this licence that cannot be settled amicably shall be referred to arbitration in accordance with the Arbitration Rules of the United Nations Commission on International Trade Law (UNCITRAL). The parties shall be bound by any arbitration award rendered as a result of such arbitration as the final adjudication of such a dispute.

Third-party materials. This Creative Commons licence CC BY 4.0 does not apply to non-FAO copyright materials included in this publication. Users wishing to reuse material from this work that is attributed to a third party, such as tables, figures or images, are responsible for determining whether permission is needed for that reuse and for obtaining permission from the copyright holder. The risk of claims resulting from infringement of any third-party- owned component in the work rests solely with the user.
FAO photographs. FAO photographs that may appear in this work are not subject to the above-mentioned Creative Commons licence. Queries for the use of any FAO photographs should be submitted to: photo- library@fao.org.

Sales, rights and licensing. FAO information products are available on the FAO website (www.fao.org/publications) and print copies can be purchased through the distributors listed there. For general enquiries about FAO publications please contact: publications@fao.org. Queries regarding rights and licensing of publications should be submitted to: copyright@fao.org.

Publications of the World Organisation for Animal Health are available either on the Organisation's website (www.woah.org) or can be purchased through its online bookshop (www.woah.org/en/ebookshop).

Cover photograph: ©FAO/Yousef Alrozzi

CONTENTS

ABBREVIATIONS

CVO	Chief Veterinary Officer
FAO	Food and Agriculture Organization of the United Nations
GF-TAD	Global Framework for the Progressive Control of Transboundary Animal Diseases
PMAT	PPR Monitoring and Assessment Tool
PMAT2	2021 PMAT revised version
PPR	peste des petits ruminants
PPRV	peste des petits ruminants virus
PPR GCES	PPR Global Control and Eradication Strategy
PPR-TSE	PPR Technical Support Experts
RAG	Regional Advisory Group
WOAH	World Organisation for Animal Health

FOREWORD

The PPR Monitoring and Assessment Tool (PMAT) is a resource to measure the achievement of and support the implementation of the Peste Des Petits Ruminants Global Eradication Programme. PMAT2 is the revised version of the original PMAT, which has been redesigned in light of user feedback to make it easier to complete and to make the process and results more useful. PMAT2 is a self-assessment tool in the form of an electronic questionnaire, which should be completed at least annually by the peste des petits ruminants (PPR) national coordinator and a team of subject matter experts. This user guide provides a comprehensive overview of the purpose and use of PMAT2. It includes a description of the role of the national staff, subject matter experts, the Regional Advisory Group (RAG) and the PPR Secretariat in the completion and review of PMAT at the national, regional and international levels. Country programmes are integrated into regional programmes through episystem approaches and regional road maps. PPR episystems are the interconnected host populations capable of maintaining the circulation and transmission of the virus indefinitely. An episystem-based approach has been considered in the PMAT2 design, recognizing that PPR virus circulates in ecological systems that transcend international boundaries. PMAT2 thus supports the development of holistic, technical eradication strategies that address the PPR virus maintenance systems. For implementation purposes, regional road maps repackage the integrated episystem-based strategies as national plans and timelines grouped by their respective Regional Economic Community.

The PMAT2 User Guide describes the structure of the questionnaire and presents examples of how to complete the questionnaire. It also describes the qualitative scoring system used in PMAT2 and how the results should be interpreted. In addition to categorizing their levels of achievement to date, users are asked to enter pending activities that need completing at each stage of the eradication process. Upon completion, the tool generates tables of pending activities to assist future work planning.

PMAT2 is intended to be easy to complete but it does not cover every possible activity required for eradication. The tool's primary purpose is to facilitate critical discussion among a team of committed subject matter specialists to help the team develop and record new insights for tasks requiring completion in order to succeed at eradication.

1. INTRODUCTION

The PPR Global Control and Eradication Strategy (PPR GCES) was adopted at the International Conference on PPR organized by the Food and Agriculture Organization of the United Nations (FAO) and the World Organisation for Animal Health (WOAH) in 2015 in Abidjan, Côte d'Ivoire, under the umbrella of the Global Framework for the Progressive Control of Transboundary Animal Diseases (GF-TADs), with a vision for PPR global eradication by 2030. Aligned with the overarching PPR GCES, control and eradication of PPR at the national level is based on a stepwise approach with four stages that correspond to a combination of decreasing levels of epidemiological risk and increasing levels of prevention and control (Figure 1). In Stage 1, the epidemiological situation is assessed. In Stage 2, control activities including vaccination are implemented. In Stage 3, PPR is eradicated. In Stage 4, vaccination must be suspended and the country must provide evidence that no virus is circulating, either at the zonal or national level, and that it is ready to apply to WOAH for official recognition of PPR-free status.

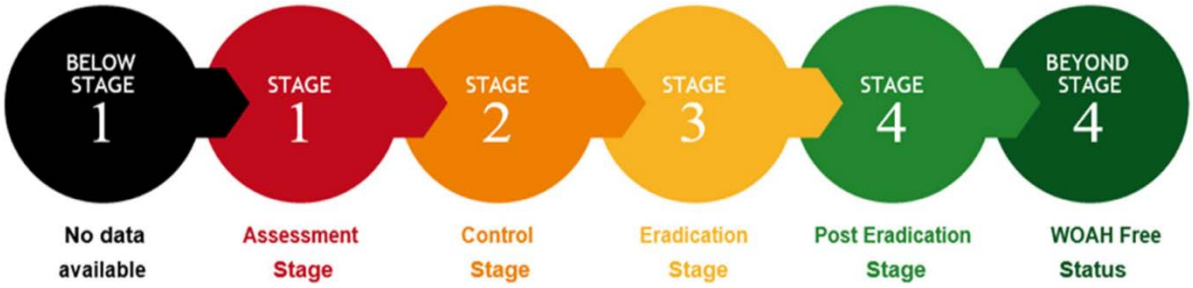


Figure 1. The stepwise approach for the eradication of PPR

PMAT is a companion tool of PPR GCES. It is intended to assist countries in eradicating PPR by (i) providing feedback to the countries on which stage they are in along the stepwise approach, and ii) enabling the identification of gaps that may affect progression along the stepwise approach and should be addressed. PMAT enables discussions about PPR eradication activities and the communication of results to partners. After the first version was appended to the PPR GCES document, the revised version, PMAT2, has been redesigned in light of stakeholders' feedback to simplify the completion of the assessment and to increase the usefulness of the process and its results. One goal of the redesign was to produce a tool that was self-explanatory. PMAT2 generates scores for the degree of completion of the four stages of PPR GCES as well as listing the activities needed to fill gaps and complete the steps of the eradication strategy.

Indeed, to achieve eradication, countries should:

- fully understand the patterns and drivers of PPR virus circulation in their territories;
- design an eradication programme in which interventions are targeted to achieve specific epidemiological goals in the context of regional PPR epidemiological patterns;
- cultivate a sense of ownership of the programme among stakeholders, including local government and communities, by effectively communicating the epidemiological and strategic principles, advocating for the socioeconomic benefits of PPR eradication and using participatory epidemiological approaches;
- implement the programme with local participation and in the context of regional episystems;
- at least annually conduct a self-assessment of the process and its performance to inform adaptive management of the programme.

PMAT2 underpins the annual self-assessment but does not by itself ensure successful assessment. Simply checking boxes and filling the blanks will not lead to an effective PPR eradication programme. The PMAT2 is intended as a guide to facilitate in-depth, critical discussion and analysis in line with PPR GCES. The national assessment and the assessment team could be guided and challenged by external experts suggested by the PPR Secretariat to support the quality of their national activities and analysis.

PMAT2 has been restructured according to the five technical elements of PPR GCES (diagnostic system; surveillance; prevention and control; legal framework; stakeholders' involvement) and it includes all three components of PPR GCES, namely PPR eradication (Component 1), strengthening of veterinary services (Component 2) and control of other high impact small ruminant diseases (Component 3, new addition in PMAT2). However, the categorization of a country in a specific stage is based only on the level of achievement within the PPR-specific component activities/achievements (i.e. Component 1 of PPR GCES), and only Component 1 criteria are required to progress along the stepwise approach. Activities related to Components 2 and 3 are recommended competencies/achievements but not taken into account when categorizing a country's stage along the stepwise approach of PPR eradication. Countries will have to take into consideration PPR GCES Component 2 requirements to comply with the WOAH standards at the point of submitting their dossier for the endorsement of their official PPR control programme or for the official recognition of their PPR-free status by WOAH. A scoring system has been introduced in PMAT2 to help quantify the level of achievement or degree of completion of activities. Even for Component 1, reaching 80 percent completion of activities is sufficient for progressing along the stepwise approach.

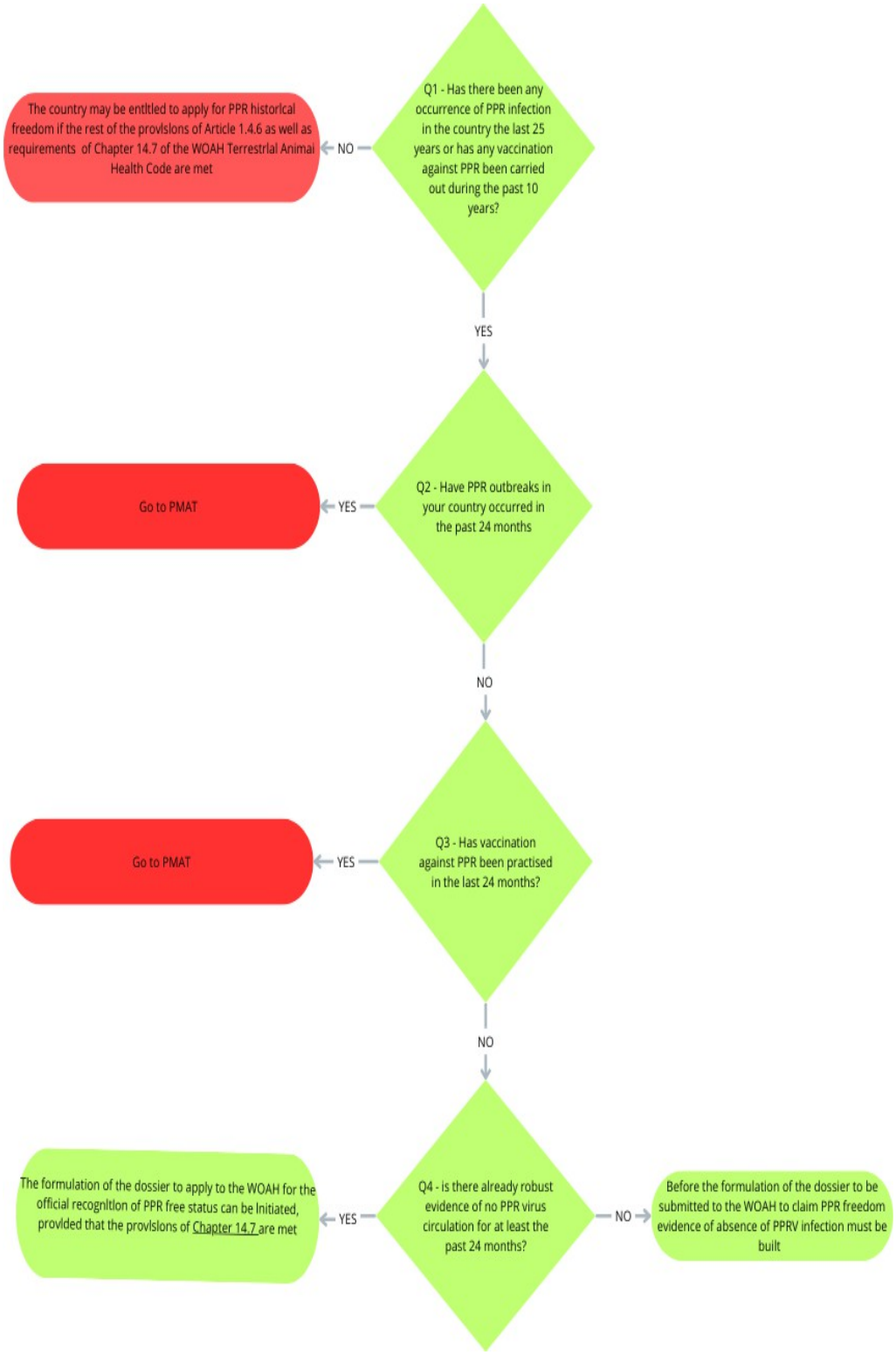
For the transition into Stage 4, countries must be convinced that they are free from PPR, must have stopped vaccination and must then demonstrate (during Stage 4) that there is no PPR virus circulation either at the zonal or national level.

To reach that final objective, the eradication of PPR, committed national and regional teams are required for the evaluation of the epidemiological, institutional or governance issues that contribute to the continued presence of PPR in countries and regions. The patterns of PPRV transmission and shared risk factors for infection or viral maintenance in an area should guide national and regional eradication strategies and regional road maps should complement the episystem approach by repackaging technical programmes in line with the political/governance structures of the Regional Economic Communities. National programmes need to be fully integrated with other programmes/projects in the region through a regional strategy for eradication based on an episystem approach to PPR.

The PPR National Committee members should openly discuss concerns in the management and implementation of surveillance and eradication interventions under the PPR National Strategic Plan and critically analyse existing perceptions, practices and constraints.

2. WHEN TO USE THE PMAT

Please consult the following flow diagram to determine whether your country should use the PMAT.



3. ROLES, RESPONSIBILITIES AND INTERACTIONS BETWEEN KEY STAKEHOLDERS

PMAT2 has been developed as a tool for countries to regularly self-assess their progress along the stepwise approach for the eradication of PPR. To meet this purpose, several key stakeholders need to assume different roles and responsibilities, work in partnership and input well-informed and detailed data into the tool.

This section describes the different roles, responsibilities and expected interactions (Figure 2) between the Chief Veterinary Officers, the PPR national coordinators, the subject matter experts, the RAG and the PPR Secretariat. Without their effective interactions, PMAT cannot generate useful information and cannot achieve the purpose it is designed for.

3.1 Chief Veterinary Officer (CVO)

The CVO assumes a supervisory role in the process of completing PMAT. The CVO should nominate the PPR national coordinator and the team of subject matter experts (see sections 4.2 and 4.3), based on their competencies in relation to the five technical elements, to carry out PMAT completion and regular self-assessment jointly as explained in section 5.

The CVO is the end user of the outputs of the PMAT for advocacy, planning and budgeting purposes for the implementation of the National Strategic Plan towards PPR eradication.

The CVO's responsibilities are:

- to approve, in consultation with the PPR national coordinator, the PMAT document as the final internal validation and submit it, accompanied by an up-to-date national strategic plan, to the RAG and the PPR Secretariat (PPR-Secretariat@fao.org, ppr-woah@woah.org) to be assessed by the members of the RAG during their regular meetings (i.e. section 4.5);
- to request, when appropriate, the RAG's acceptance of the country to progress by one or several stages of the stepwise approach of PPR GCES;
- to present the results of the PMAT evaluation during the regional road map meetings (section 4.5).

3.2 PPR national coordinator

The CVO of every country is expected to nominate a PPR national coordinator to oversee, under the CVO's supervision and guidance, the activities as described in the country's PPR assessment, control or eradication plan (depending on the stage a country is in the PPR eradication stepwise approach) and to keep the CVO informed.

The responsibilities of the PPR national coordinator are to:

1. liaise with and assist coordination between the implementing partners for field activities of the PPR National Strategic Plan (i.e. veterinary services, the private sector, farmer organizations, the wildlife sector, if appropriate, and others) and the CVO;
2. act as the contact point for the PPR Secretariat and the respective technical secretariat of RAGs (see section 4.5);
3. plan for a regular (at least once per year) PMAT self-evaluation to be carried out by the national team of subject matter experts (section 4.4);
4. in case of countries with decentralized systems of PPR control activities/governance, compile the different PMAT results into one consolidated document (section 4.4).

The PPR national coordinator should also collate and provide to the CVO supporting documents and evidence to accompany the PMAT document for submission to the RAG.

Upon request to the PPR Secretariat, the PPR national coordinator can receive technical support and guidance.

3.3 PPR national committee

The PPR GCES recommended that countries establish a PPR national committee as a platform to share details of the national efforts to eradicate PPR, facilitate consultation and promote stakeholder engagement, as well as coordinating all activities related to PPR prevention, control and ultimate eradication. The membership of this committee can be decided by the CVO and the PPR national coordinator and should include the most important stakeholders who should be regularly informed of any progress made and challenges encountered. In particular, the committee should be headed by the Central Veterinary Services and include representatives of other ministries/agencies involved in PPR eradication (wildlife, environment, finance and interior ministries, etc.) as well as private veterinarians (veterinary statutory bodies and veterinary associations) and all actors involved in small ruminant production and its value chains. The frequency of meetings of the PPR National Committee should be decided at the national level by the PPR national coordinator and the CVO.

3.4 Subject matter experts for the five technical elements

Experts working on PPR-relevant topics should be nominated by the CVO, in consultation with the PPR national coordinator, to cover the five following technical elements at the national level:

- diagnostic system
- surveillance
- prevention & control
- legal framework
- stakeholders' involvement

Their role is to answer the PMAT questions relevant to their areas of expertise. The experts should carry out the exercise jointly, if possible, as described in section 5.

The experts should be involved in the PPR eradication activities throughout the year and not only for the PMAT self-evaluation.

In decentralized countries, the CVO and PPR national coordinator might consider carrying out the PMAT exercise in different regions of the country simultaneously if the epidemiological situation, or other aspects of the above five technical elements, differ significantly. In that case, the different states/provinces/counties should have their own subject matter experts who complete the PMAT exercise for each decentralized unit and send it to the PPR national coordinator for compilation.

In case a decentralized approach has been taken, the PPR national coordinator could, when compiling the results, consider a zoning approach to depict the different epidemiological situations or the different progress made along the PPR stepwise approach.

3.5 Regional Advisory Group (RAG)

Since the inception of PPR GCES, nine regions/subregions have been identified for the definition of regional road maps, according to the distribution of the members of the FAO and WOAH regions/subregions, and the existence of relevant Regional Economic Communities.

Where countries belonging to different administrative and economic communities share common epidemiological challenges relating to PPR eradication, episystem meetings should be organized in addition to regional road map meetings.

PPR GCES envisages the organization of regional road map meetings once every two years to harmonize and synchronize policies and strategies, coordinate regional efforts and actions at the field level and create a common long-term vision for the region. The regional road maps are informed by the national road maps which in turn are based on the results of the PMAT self-evaluation. Regional road map meetings also provide an opportunity to review and update regional PPR eradication strategies.

A RAG is assigned to each regional road map. Each RAG comprises:

1. Voting members:
    - three CVOs (one Chair and two Vice-Chairs), nominated by the countries of the region, serving a term of at least four years
    - the coordinators of the regional laboratory and epidemiological networks
2. Non-voting members:
    - representatives from the respective WOAH and FAO regional/subregional offices and representing regional GF-TADs secretariat
    - representatives of Regional Economic Communities
    - PPR Secretariat

The Chair, nominated during road map meetings, will guide the work of the RAG and will present the work done by the RAG to the RAG meetings and the regional road map meetings. The two other CVOs will assume the role of Vice-Chairs.

The responsibilities of the RAG are to:

1. review self- and external assessments of countries' PPR stages as evaluated via PMAT assessments and assign the countries of the region to the most appropriate stage of the PPR GCES stepwise approach;
2. assist with the preparation of the PPR regional road map meeting recommendations and ensure their implementation;
3. provide guidance at regional road map meetings, and at the national level, and advise on factors hampering effective implementation of the PPR national or regional strategies;
4. coordinate and maintain regular contacts with countries in between meetings;
5. guide PPR training and capacity development activities to support regional and national strategies;
6. support the formulation, implementation and technical review of countries' national strategic plans;
7. support countries in the preparation of applications to WOAH for endorsement of their official PPR control programmes and their dossier for official recognition of their PPR-free status;
8. support and advocate for PPR eradication (including with resource partners, private sector organizations, governments, and other stakeholders);
9. report on regional progress during GF-TADs regional steering committee meetings.

The RAG plays a very important role in fostering a sense of ownership of the PPR eradication strategy and implementation at the regional level, facilitating regional exchange and encouraging countries to carry out regular self-assessments using PMAT and/or to request external expertise via the PPR Secretariat.

The non-voting members of the RAG should support its voting members and advise them on the technical assessment of the PMAT submissions by countries. In particular, these non-voting members should:

1. arrange a calendar of regular RAG meetings – these could be virtual or physical meetings at least once or preferably twice yearly;
2. announce the calendar of the RAG meetings to the countries of the regional road map and inform them at the beginning of the year about a date prior to each meeting by which to provide their completed PMAT questionnaires. If RAG meetings are held twice per year, countries should inform the RAG to which of the announced meetings they plan to submit their PMAT;
3. prior to the RAG meeting, provide technical comments on the PMAT submissions received from countries for the voting members' (CVOs') consideration. If particular technical expertise is necessary, the technical secretariat of the RAG may request inputs from PPR experts;
4. undertake the organization of the RAG meetings, including drafting concept notes and agendas, drafting and sending out invitation letters and, if needed, making the necessary arrangements for interpretation;
5. facilitate the meeting logistics (virtual or physical);
6. within a month after the meeting, prepare a report on the outcome of the RAG's assessment of countries PMAT submissions, including the stage assigned by the RAG to each country, have the report revised/validated by the voting members of the RAG, send it to the countries and ensure follow-up with participants on the RAG's recommendations.

The RAG report is later presented to the participants at the regional PPR Roadmap meeting.

3.6 PPR Secretariat

The Secretariat is responsible for liaising with and providing support to the RAGs. In

particular, the Secretariat is responsible for:

1. collation, storage and distribution to all members of RAGs of the PMAT assessments received from countries prior to the RAG's meetings;
2. collaboration with the members of the RAGs and PPR technical support experts to analyse the PMAT questionnaires received from countries;
3. collation of the work of the RAGs, particularly the regional road maps, and putting them into a central depository;
4. analysis of the performance of RAGs and mitigation of their constraints;
5. provision of regular updates on the global and regional progress made in view of PPR eradication by 2030 to the public, e.g. via the GF-TADs, FAO, WOAH or other appropriate websites;
6. organization of the regional road map meetings in collaboration with the RAG, including drafting concept notes, agenda and list of participants, drafting and sending out invitation letters and providing technical support;
7. organization of episystem meetings where appropriate, in collaboration with the RAGs of the participating regional road maps: draft concept notes, agenda and list of participants, draft and send invitation letters and provide technical support.

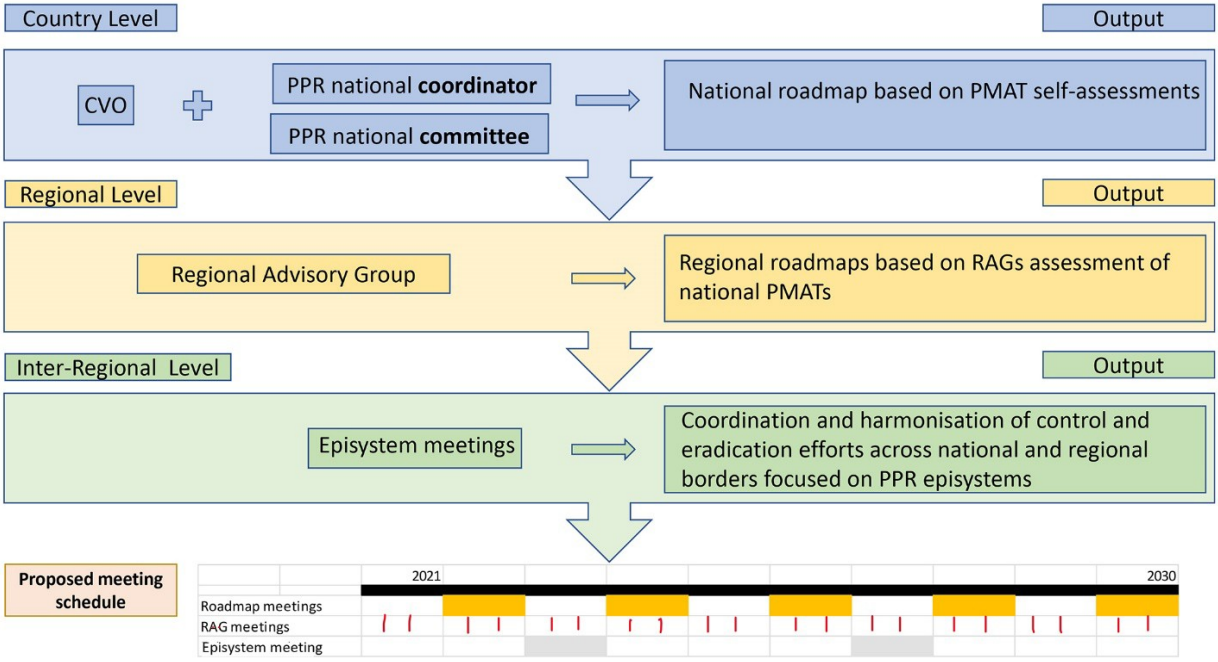


Figure 2. The Interactions between key stakeholders linking national, regional and interregional levels

4. THE PMAT2 QUESTIONNAIRE

4.1 Structure of the questionnaire

The questionnaire should be completed by a team of subject matter experts responsible for the implementation of the PPR eradication programme. Completion of the questionnaire requires reflection and discussion. The team may need to consult more broadly after studying the PMAT questionnaire to gather all the necessary information to complete the questionnaire and should note all the activities and tasks completed as they assess their progress towards the achievement of each task.

The questionnaire is available electronically and divided into 11 individual worksheets named as follows (from left to right):

8. Preliminary info
9. Diagnostic system
10. Surveillance
11. Prevention & control
12. Legislation framework
13. Stakeholders' involvement
14. Output
15. Pending activities Stage 1
16. Pending activities Stage 2
17. Pending activities Stage 3
18. Pending activities Stage 4

The only worksheets to be filled in by the users are those named: Preliminary info, Diagnostic system, Surveillance, Prevention & control, Legislation Framework, and Stakeholders' involvement while the remaining sheets (indicated in brown) are automatically populated according to the entries made in other sheets.

The worksheet Preliminary info is where the users should provide information about the country, the officers contributing to filling in the questionnaire and the date of completion. Figure 3 shows how this worksheet appears.

COUNTRY		
List of officers filling the PMAT	Technical Element	Position
Date of completion		

Notes
(1) Please write only within the cells filled in grey color
(2) It is assumed that there is one responsible officer for each of the five technical elements. If this is not the case additional rows can be added
(3) When inserting the date of completion please use the format dd/mm/yyyy

Figure 3. Preliminary Info worksheet

Moving from left to right, the user can open the worksheets corresponding to each of the five technical elements of PPR GCES. Each of these five sheets is structured in exactly the same way. A first set of

statements and questions is related to Component 1 of the PPR GCES (PPR-specific); a second set of statements is related to Component 2 of the PPR GCES (strengthening veterinary services) and finally a third set of statements and questions is related to Component 3 of the PPR GCES (Combining PPR control and eradication with other high impact small ruminant diseases).

Figure 4 illustrates how the three components are structured in each sheet (taking as an example the sheet on the technical element named Diagnostic system).

	A	B	C	D	E	F	G	H
1			Diagnostic system - Component 1					
2	Stage	Question	STATEMENT	QUESTION	Level of Achievement** (please see the footnote)	Comments on achievements to date	Activities to be completed	Timeline
3	STAGE 1	Q1	Diagnosis is the first step in the management of any disease. Throughout the implementation of the national PPR control and eradication activities, samples must be collected for laboratory testing in order to confirm or rule-out PPR virus infection.	Has the National Veterinary diagnostic capacity been assessed and is there EITHER at least one national laboratory designated for PPR diagnostic activities OR an agreement in place with at least one laboratory abroad to carry out this service?	<Select an option>			
4		Q2	Currently, in accordance with the World Organisation for Animal Health (WOAH) Terrestrial Manual, the basic technique for PPR diagnosis is the enzyme linked immunosorbent assay (ELISA) for both antibody and antigen detection.	Are staff trained to perform ELISA tests?	<Select an option>			
5		Q3	Because PPR virus is highly infectious, early detection using diagnostic tests and early response are key elements in the management of PPR. The diagnostic system in place must provide diagnostic test results in a timely manner.	Is (are) the designated national veterinary laboratory (or laboratories) capable of analysing diagnostic samples from at least 60% of suspected PPR outbreaks across the country?	<Select an option>			
6		Q4	Stage 1 is the stage during which the country's PPR epidemiological situation is assessed: this implies that all regions are targeted for serum sampling of small ruminants (to determine sero-prevalence of anti-PPR antobodies).	Have representative sets of serum samples from all regions of the country where small ruminants are present been tested for PPR antibodies?	<Select an option>			
7		Q5	Test results depend on the quality of the submitted samples. It is important that samples are collected appropriately into the correct transport containers, maintained at the appropriate temperature and therefore arrive in the laboratory (either national or outsourced) in good condition in accordance with the WOAH Terrestrial Manual.	Is there capacity to ensure proper handling and transportation of field diagnostic samples?	<Select an option>			

Figure 4. A screenshot illustrating the first five questions of the Diagnostic system sheet

As the user scrolls down the sheet, the remaining statements and questions will appear grouped by the stage they belong to, as illustrated in Figures 5, 6 and 7.

	A	B	C	D	E	F	G	H
1			Diagnostic system - Component 1					
2	Stage	Question	STATEMENT	QUESTION	Level of Achievement** (please see the footnote)	Comments on achievements to date	Activities to be completed	Timeline
8								
9	STAGE 2	Q6	Field veterinary service personnel (veterinarian and veterinary paraprofessionals) are at the forefront of the animal disease diagnostic system. Therefore, they should have training and basic knowledge about PPR clinical signs and which samples should be taken for diagnostic testing.	Have field veterinarians received sufficient training in order to possess knowledge of the sample types and sample collection/transport requirements for PPR diagnostic testing?	<Select an option>			
10		Q7	Nucleic acid amplification techniques, for example polymerase chain reaction (PCR), are powerful, robust, and very sensitive techniques for pathogen identification. Increasingly, such molecular-based techniques are used routinely in diagnostic laboratories and, in this stage, more than one technique should be available in the designated laboratory (or laboratories) to assist in testing samples for PPR virus.	Is at least one of the designated laboratories for national PPR eradication activities, either in-country or outsourced, able to perform basic molecular-based diagnostic tests, for example conventional reverse transcription (RT)-PCR?	<Select an option>			

Figure 5. Screenshot illustrating Questions 6 and 7 related to Stage 2 of the Diagnostic system sheet

	A	B	C	D	E	F	G	H
1			Diagnostic system - Component 1					
2	Stage	Question	STATEMENT	QUESTION	Level of Achievement** (please see the footnote)	Comments on achievements to date	Activities to be completed	Timeline
11								
12	STAGE 3	Q8	Reliability of test results is ensured through the implementation of quality assurance and quality control (QA/QC) system in diagnostic laboratories.	Is a QA/QC system for PPR diagnostic activities in place in the designated laboratory (or laboratories)?	<Select an option>			
13		Q9	Participation in interlaboratory proficiency testing (PT) is an important element of the QA/QC system. There are laboratories (WOAH/FAO reference laboratories or collaborating centres) that organize yearly PT for PPR diagnostic testing.	Is the laboratory (or laboratories) designated for PPR diagnosis and eradication activities participating in PPR proficiency testing, either at national level or at international level organized by an international reference laboratory?	<Select an option>			
14		Q10	PPR viruses are grouped into four lineages based in their gene sequence data: I, II, III and IV. Although there is a single serotype, and vaccines will cross-protect against all genetic lineages, knowledge of the virus lineage is useful for understanding PPR epidemiology.	Is nucleic acid sequencing capacity either in place within the country or outsourced abroad to provide gene sequence information on PPR viruses in collected samples?	<Select an option>			

Figure 6. Screenshot illustrating Questions 8, 9 and 10 related to Stage 3 of the Diagnostic system sheet

	A	B	C	D	E	F	G	H
1			Diagnostic system - Component 1					
2	Stage	Question	STATEMENT	QUESTION	Level of Achievement** (please see the footnote)	Comments on achievements to date	Activities to be completed	Timeline
15								
16	STAGE 4	Q11	PPR virus full genome sequencing is now possible and carried out by many laboratories across the world. The full genome sequence information is useful for molecular epidemiology as well as for virus sequestration.	Is full genome sequence information available for the PPR virus strain(s) collected in your country, either from sequencing within the country or via outsourcing the full genome sequencing abroad?	<Select an option>			
17		Q12	As cessation of vaccination increases the risk of disease re-emergence, the risk of accidental release or intentional misuse of the wild type PPR virus and the vaccine strain must be minimized.	Are PPR virus isolates and PPR virus-containing materials safely and properly sequestered in a laboratory in the country or abroad? [Note that guidelines for PPR virus sequestration are not yet available but will be similar to rinderpest virus sequestration guidelines (see https://www.woah.org/fileadmin/Home/eng/Media_Center/docs/pdf/A_RESO_Tech_2017_No.21_Guidelines.pdf)]	<Select an option>			
18		Q13		If not sequestered, have PPR virus-containing materials been destroyed?	<Select an option>			

Figure 7. Screenshot illustrating Questions 11, 12 and 13 related to Stage 4 of the Diagnostic system sheet

As the user scrolls further down the worksheet, the section for Component 2 will appear, as illustrated in Figure 8.

	A	B	C	D	E	F	G	H
1			Diagnostic system - Component 1					
2	Stage	Question	STATEMENT	QUESTION	Level of Achievement** (please see the footnote)	Comments on achievements to date	Activities to be completed	Timeline
22		CC II.1.A	The veterinary services (VS) has access to and uses laboratory tests to confirm PPR diagnosis.	Level 2	<Select an option>			
23	STAGE 1	CC II.1.B	The national laboratory system generally meets the needs of the VS PPR activities. Resources and organization appear to be managed effectively and efficiently, but funding is insufficient for a sustainable system, and limits throughput. Some laboratory biosafety and biosecurity measures have been put in place.	Level 3	<Select an option>			
24	STAGE 3	CC II.1.C	One or more laboratories servicing the public sector VS for PPR diagnostic services and post vaccination evaluation (PVE) including the major national animal health reference laboratory, are using formal QA/QC systems.	Level 2	<Select an option>			

Figure 8. Screenshot illustrating the only three Performance of Veterinary Services critical competencies associated with the diagnostic system while in Stage 1

The above statements refer to the WOAH Performance of Veterinary Services critical competencies related to the diagnostic system in the country, with an indication about the minimum expected level of achievement assumed to be in place for the country to have the capacity to implement the related activities.

Finally, as the user scrolls further down the worksheet, questions relating to Component 3 will become visible, as illustrated in Figure 9.

			Other small ruminant diseases (country specific) - Component 3			
26		STATEMENT	QUESTION	Level of Achievement	Comments on achievements to date	
27	Q13	Priority infectious diseases of small ruminants should be identified for control along with the specific PPR eradication activities.	Has (have) the laboratory (ies) the capacity for diagnosis of other priority small ruminant diseases present in the country?	No		
28	Q14	Field veterinarians are a crucial part of the national animal disease diagnostic system and should be able to recognize the clinical signs of the major small ruminant diseases present in the country.	Have field veterinary service personnel been trained to recognize and differentially diagnose priority infectious diseases of small ruminants present in the country?	Yes		
29	Q15	In the PPR eradication phase, active disease search is an important activity. All outbreaks with PPR-like clinical signs (stomatitis-enteritis) should be attended to, samples collected and tested in the designated laboratory.	Does the designated laboratory (or laboratories) for PPR eradication activities have the capacity for differential diagnosis between PPR virus and pathogens that cause other small ruminant diseases with similar clinical signs to PPR?	25% Achieved		

Preliminary Info | Diagnostic | Surveillance | Prevention&Control | Legal Framework | Stakeholders | OUTPUT ...

Figure 9. Screenshot illustrating rows from 26 to 29 of the Diagnostic system sheet with the statements and questions related to Component 3 of PPR GCES

For Component 3, the user should indicate to what extent combined activities (PPR + other small ruminant diseases) are being implemented.

In addition to the sheets for each technical element, the electronic questionnaire contains additional sheets that will be automatically populated. On the right side of the worksheet named Stakeholders,

the sheet named Output will provide a table and graphics depicting the disaggregated scores for each technical element by stage, as well as overall scores both by stage and technical element of PMAT (note that the scoring applies only for those questions under Component 1, i.e. PPR-specific questions). Scoring and the interpretation of scores are discussed in section 5.3 of this user guide.

To the right of the Output sheet are four additional individual worksheets named Pending activities Stage 1, Pending activities Stage 2, Pending activities Stage 3 and Pending activities Stage 4. These worksheets are also automatically populated (illustrated later in section VII).

4.2. Filling in the questionnaire

Each technical element worksheet is organized into columns from A to H. Columns A and B are self-explanatory. Under column C [STATEMENT], a series of statements describe the activities needed to be completed at each stage for each technical element. The next column D [QUESTION] is the question that countries should answer. Note that the cells in columns A to D are protected, i.e. the content cannot be modified by the user, who can only fill in the unprotected cells in columns E, F, G and H.

Column E [Level of achievement] contains drop-down lists of response options to the question – the user should select the option that best fits the country's level of implementation (note that they can only select one of those proposed options and cannot add any other option). To open the drop-down menu, the user must place the cursor over the cell for the response, causing a down arrow to appear. The user must then click on the down arrow to see and select the response options.

Some questions can have two, three or more options for the answer. In the screenshot below, Question 1 of the Diagnostic system sheet is shown to give an example of a question with three possible responses. The example below is related to whether diagnostic services are available in the country or alternatively whether such services have been outsourced abroad.

The user simply highlights the correct option. (In the example, the option "DIAGNOSTIC SERVICES AVAILABLE AT NATIONAL LEVEL" is highlighted and the user clicks on it to enter it in the cell).

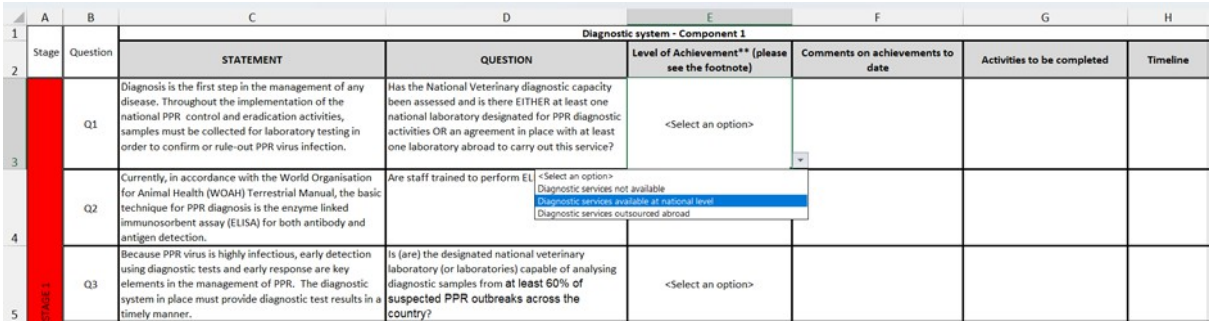


Figure 10. Example of how to fill in a cell to indicate the level of achievement

The user can modify his response at any time by simply revisiting the cell and selecting a new response from the drop-down list.

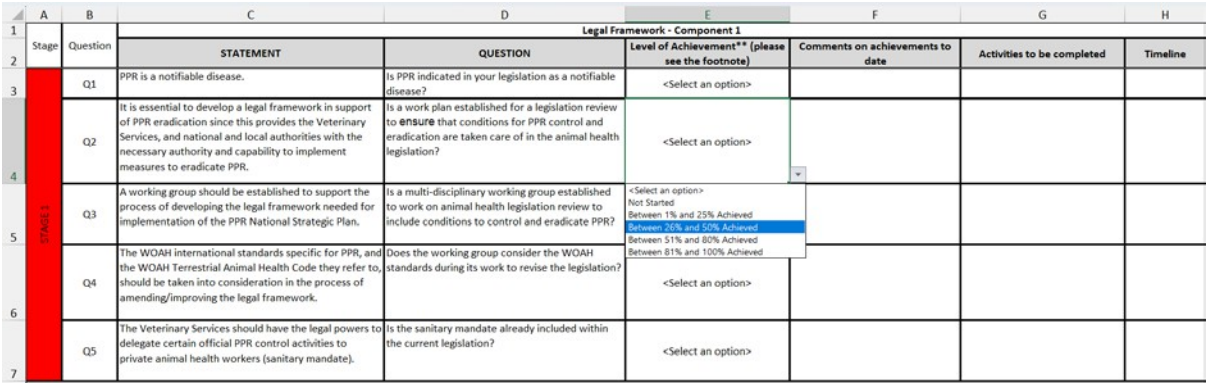
Figure 11 illustrates a type of response (under the Legal framework sheet) with five different options: from "NOT STARTED" up to "BETWEEN 81% AND 100% ACHIEVED".

Answers are provided as semi-quantitative options to allow users to describe a process (e.g. drafting, adoption, implementation of an activity) rather than a Yes or No statement of achievement. The following criteria can be considered when choosing the appropriate answer:

- Not started (or not answered)
- Between 1% and 25% achieved: when the process has been drafted but not yet adopted
- Between 26% and 50% achieved: when the process has been adopted and implementation has begun
- Between 51% and 80% achieved: when the process is implemented but needs to be scaled out or updated
- Between 81% and 100% achieved: when the process is implemented and regularly revised/monitored

Note that the drop-down menu is open and all five options are visible. The user clicks on the best answer with the cursor and the value is entered into the cell.

In the example below, the user has selected a level of achievement between 26 percent and 50 percent.



	A	B	C	D	E	F	G	H
1			Legal Framework - Component 1					
2	Stage	Question	STATEMENT	QUESTION	Level of Achievement** (please see the footnote)	Comments on achievements to date	Activities to be completed	Timeline
3	STAGE 1	Q1	PPR is a notifiable disease.	Is PPR indicated in your legislation as a notifiable disease?	<Select an option>			
4		Q2	It is essential to develop a legal framework in support of PPR eradication since this provides the Veterinary Services, and national and local authorities with the necessary authority and capability to implement measures to eradicate PPR.	Is a work plan established for a legislation review to ensure that conditions for PPR control and eradication are taken care of in the animal health legislation?	<Select an option>			
5		Q3	A working group should be established to support the process of developing the legal framework needed for implementation of the PPR National Strategic Plan.	Is a multi-disciplinary working group established to work on animal health legislation review to include conditions to control and eradicate PPR?	<Select an option>			
6		Q4	The WOAH international standards specific for PPR, and the WOAH Terrestrial Animal Health Code they refer to, should be taken into consideration in the process of amending/improving the legal framework.	Does the working group consider the WOAH standards during its work to revise the legislation?	<Select an option>			
7		Q5	The Veterinary Services should have the legal powers to delegate certain official PPR control activities to private animal health workers (sanitary mandate).	Is the sanitary mandate already included within the current legislation?	<Select an option>			

<Select an option>
Not Started
Between 1% and 25% Achieved
Between 26% and 50% Achieved
Between 51% and 80% Achieved
Between 81% and 100% Achieved

Figure 11. Example of a response to indicate the level of achievement with five different options

The next two columns (F and G) provide space for the user to record comments on current activities and achievements [Comments on achievements to date] (Column F), as well as actions remaining to be implemented or completed [Activities to be completed] (Column G), that contribute to the completion of the activities described in the same row under [STATEMENT]. The last column H [Timeline] provides space for the user to enter the proposed time frame during which the remaining tasks (those listed in column G) will be completed. These columns are to assist the team in analysing their progress, judging their degree of completion, and build input for future workplans. Please note that the cells in Column F [Comments on achievements to date] cannot contain more than 400 characters (including blank spaces). Similarly, the cells in Columns G [Activities to be completed] and H [Timeline] cannot contain more than 300 characters and 50 characters, respectively. If the user attempts to enter more than the maximum number of characters allowed, an error message will appear.

Important: If during the Assessment phase (i.e. after the country has filled in Stage 1 for all technical elements), the country has built robust evidence of PPR being absent, the fast-track procedure can be followed which allows countries to move directly from Stage 1 to Stage 4 (Figure 12). In Stage 4, the country can then start implementing a full set of activities that should lead to its recognition as officially free from PPR by WOAH.

The fast-track procedure can also apply to PPR-endemic countries willing to eradicate PPR more rapidly, allowing them to move from Stage 1 to Stage 3 or Stage 2 to Stage 4. In this regard it is important to recall that there is an essential requisite to be fulfilled when moving to Stage 4 (post-eradication): the cessation of vaccination.

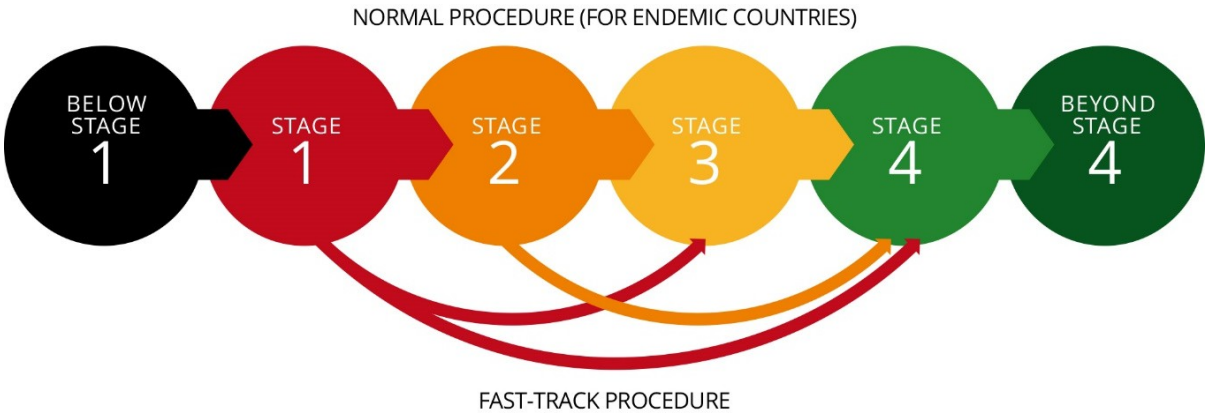


Figure 12. Normal and fast-track procedures to progress along PPR stepwise approach

4.3 Outcomes from filling in the questionnaire

The OUTPUT worksheet presents quantitative summaries of the results of all the questions by technical element and stage. Each question within each technical element and stage is given an equal weighting.

The scores for each question are calculated automatically as follows: (i) for questions with two possible responses (YES or NO, APPOINTED or NOT APPOINTED, etc.), the score is either 0 percent (corresponding to NO, or NOT APPOINTED, etc.) or 100 percent (corresponding to YES, or APPOINTED, etc.); (ii) for those questions where the type of responses is multiple (in the example below there are five options) the score will be 0 if not started (or not answered) or a score reflecting the cumulative level of advance. Such score is obtained by dividing 100 by the number of options available minus 1[1]. In the example below there are 5 options and thus [100/(5-1)] = 25 which indicates the contribution of each option to the level of advance. The example below clarifies:

- Not started (or not answered) – the score assigned will be 0
- Between 1% and 25% achieved: when the process has been drafted but not adopted yet – the score assigned will be 25 (stated in another way is 25 + 0 + 0 + 0 = 25)
- Between 26% and 50% achieved: when the process has been adopted and implementation has begun – the score assigned will be 50 (25 + 25 + 0 + 0 = 50)
- Between 51% and 80% achieved: when the process is implemented but needs to be scaled out or updated – the score assigned will be 75 (25 + 25 + 25 + 0 = 75)
- Between 81% and 100% achieved: when the process is implemented and regularly revised/monitored – the score assigned will be 100 (25 + 25 + 25 + 25 = 100)

The overall score within each technical element (at each stage of the pathway), is obtained by calculating the arithmetic mean of the scores assigned to each individual question belonging to that technical element and that stage.

Taking the DIAGNOSTIC SYSTEM's technical element as an example (in particular, the three questions: Q11, Q12 and Q13, corresponding to Stage 4 activities [Figure 13]):

[1] Note that the general criteria applies as well for questions with only two options (Y/N) where [100/(2-1)]=100

Stage	Question	Diagnostic system - Component 1					
		STATEMENT	QUESTION	Level of Achievement** (please see the footnote)	Comments on achievements to date	Activities to be completed	Timeline
STAGE 4	Q11	PPR virus full genome sequencing is now possible and carried out by many laboratories across the world. The full genome sequence information is useful for molecular epidemiology as well as for virus sequestration	Is full genome sequence information available for the PPR virus strain(s) collected in your country, either from sequencing within the country or via outsourcing the full genome sequencing abroad?	No			
	Q12	As cessation of vaccination increases the risk of disease re-emergence, the risk of accidental release or intentional misuse of the wild type PPR virus and the vaccine strain must be minimized.	Are PPR virus isolates and PPR virus-containing materials safely and properly sequestered in a laboratory in the country or abroad? [Note that guidelines for PPR virus sequestration are not yet available but will be similar to rinderpest virus sequestration guidelines (see https://www.woah.org/fileadmin/Home/eng/Media_C	No			
	Q13		If not sequestered, have PPR virus-containing materials been destroyed?	Yes			

Figure 13. Example of Q11, Q12 and Q13 of the Diagnostic system sheet filled in

The answers provided indicate NO to Q11 (which scores 0), NO to Q12 (which scores 0) and YES to Q13 (which scores 100).

The overall score for these three questions is obtained by calculating the average (mean) of the corresponding three values:

$$\frac{0+0+100}{3} = 33.3 \text{ (or } 33.3\%$$

As already indicated, the quantitative summaries of the results are presented in the worksheet named OUTPUT containing different graphs and tables (Figures 14, 15 and 16).

a. : A graph presents the percentage of questions answered by the country

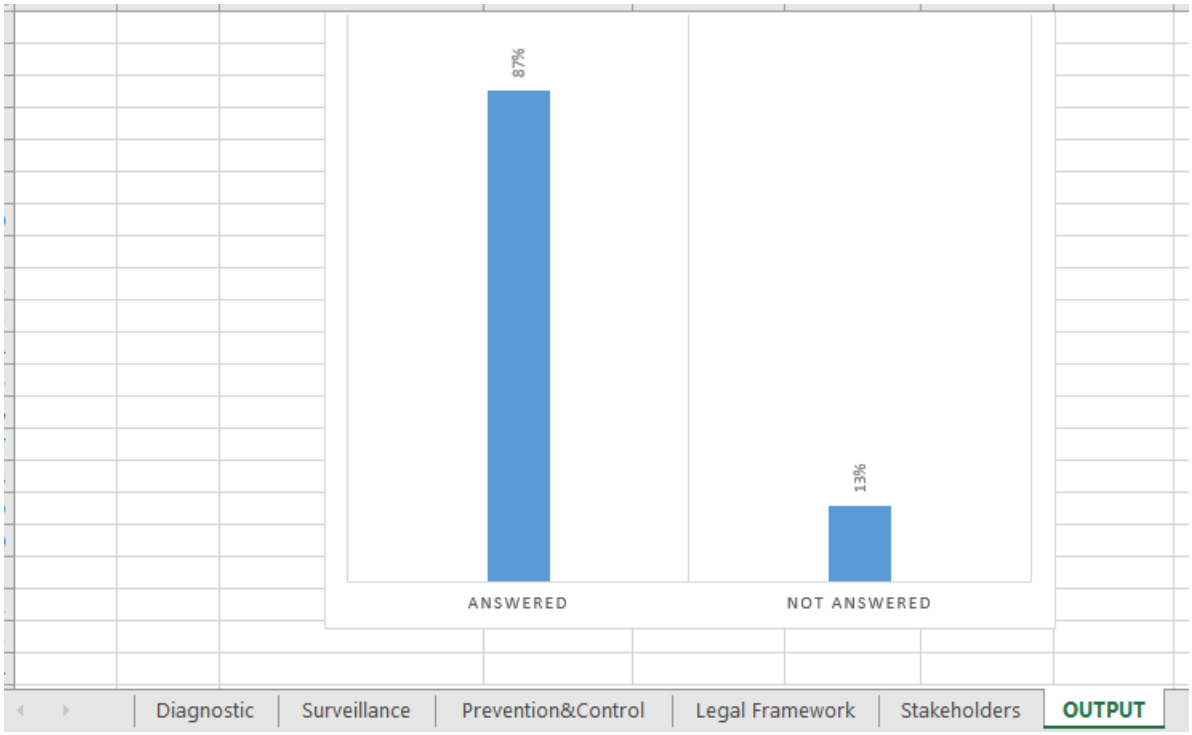


Figure 14. Graph indicating the percentage of questions answered

In the above example, the country has answered to 87 percent of the questions leaving 13 percent of the questions unanswered.

b. A table (Figure 15) indicates the overall level of achievement by stage and technical element with the composite score for the stage being the average of the values inserted, depending on the level of completion selected in the responses to the questions.

Overall level of achievement by Stage and Technical element in %

Technical element	Stage 1	Stage 2	Stage 3	Stage 4	Averages across stages
Diagnostic	80,00	50,00	-	-	32,50
Surveillance	33,33	12,50	4,17	-	12,50
Prevention&Control	27,77	-	25,00	-	13,19
Legal Framework	20,00	-	-	-	5,00
Stakeholders	70,00	15,63	12,50	-	24,53
Averages within stages	**46,22**	**15,63**	**8,33**	-	

Figure 15. Table showing the overall level of achievements

The scores summarized in the cells of the table Overall level of achievement by stage and technical element in percent provide the summed score within each stage calculated as the average of values across each technical element. The column AVERAGE ACROSS STAGES provides an average score for each technical element across all stages. For example, the table above shows that the country has achieved 80 percent of DIAGNOSTIC activities under Stage 1 and has already completed 50 percent of DIAGNOSTIC activities under Stage 2, which in turn indicates that for the technical element DIAGNOSTIC SYSTEM, the country has achieved an overall score of 32.50 percent.

The row AVERAGES WITHIN STAGES provides the average score for each stage across all five technical elements. In the example, the country has completed 46.22 percent of all the activities required for Stage 1 considering achievements/activities across all five technical elements.

19. Figure 16 displays the achievements for each technical element by stage as a bar chart.

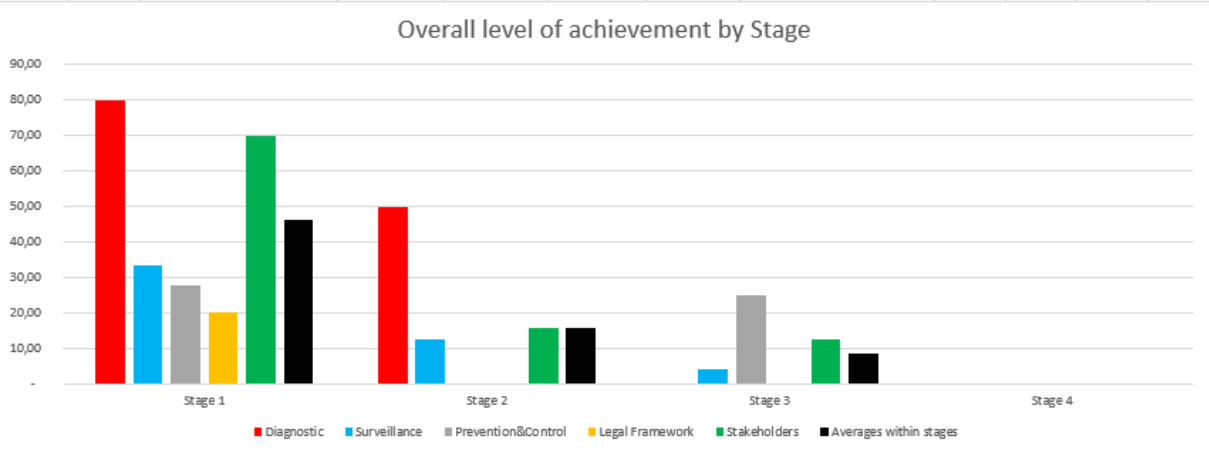


Figure 16. Level of achievements by stage

The bar chart enables easy visualization, showing that for activities relating to Stage 1, the lowest level of achievement was obtained under the Legal framework element (yellow column).

The above graph, provided as an example, would be consistent with a country that is likely to be located in Stage 1 of the PPR stepwise approach. Moreover, the output indicates that, while activities under Diagnostic system and Stakeholders' involvement can be considered satisfactory, the activities under Surveillance, Prevention and control, and Legal framework are completed at a level of less than 50 percent.

It is recommended that countries work to obtain a stage score of at least 80 percent within a stage before requesting the RAG to recognize their completion of the stage and progression to the next stage. Eighty percent is a rough guide for achievement and is not a strict threshold for transitioning between stages. The RAG can raise additional questions and request additional data before deciding on a country's request to be recognized as having reached a specific stage.

<!> The achievement of 80 percent when moving to Stage 4 will not be sufficient if vaccination has not ceased. Moreover, countries wishing to apply to WOAH for the endorsement of their official PPR control programme (during Stage 3) or for the official recognition of their PPR-free status (at the end of Stage 4) have to fulfil all requirements of the Terrestrial Animal Health Code and the threshold of 80 percent for moving from one stage to another is not applicable in that case

The last four sheets are named Pending activities Stage 1, Pending activities Stage 2, Pending activities Stage 3, and Pending activities Stage 4.

These sheets aim at providing the basis to formulate a workplan to show which activities need completing before being able to move into the next stage. The sheets named Pending activities are structured by stage (as an example: Pending activities Stage 1 indicates the activities of Stage 1 across all five technical elements that should be completed if the country is still in Stage 1).

These sheets are automatically filled in with the information that the country has provided when filling in the technical element specific sheets, as illustrated in Figure 17.

	A	B	C	D	E	F	G	H
1			Diagnostic system - Component 1					
2	Stage	Question	STATEMENT	QUESTION	Level of Achievement	Comments on achievements to date	Activities to be completed	Timeline
3		Q1	Diagnosis is the first step in the management of any disease. Throughout the implementation of the national PPR control and eradication activities, samples must be collected for laboratory testing in order to confirm or rule-out PPR virus infection.	Has the National Veterinary diagnostic capacity been assessed and is there EITHER at least one national laboratory designated for PPR diagnostic activities OR an agreement in place with at least one laboratory abroad to carry out this service?	Diagnostic services available at national level			
4		Q2	Currently, in accordance with the OIE Terrestrial Manual, the basic technique for PPR diagnosis is the ELISA for both the antibody and antigen detection.	Are staff trained to perform ELISA tests?	Yes			
5	STAGE 1	Q3	Because PPR virus is highly infectious, early detection using diagnostic tests, and early response are key elements in the management of PPR. The diagnostic system in place must provide diagnostic test results in a timely manner.	Is (are) the designated national veterinary laboratory (laboratories) capable of analysing diagnostic samples from 80% of PPR outbreaks?	No	We have estimated that we are able to analyse samples from apprximately 50% of PPR outbreaks.	We have planned an awareness campaign among veterinarians and stakeholders to increase uptake to 80%.	31 October 2021

Figure 17. Example of the Diagnostic system sheet filled in with comments, activities to be completed and timeline

The example above refers to a country filling in the technical element DIAGNOSTIC SYSTEM that has answered NO to Q3. The country has commented under [Comments on achievements to date] that currently samples are collected from approximately 50% of the outbreaks. Under [Activities to be completed] it has been indicated that an awareness campaign among veterinarians and stakeholders has been planned to increase sampling to 80% of the outbreaks and this activity will be completed with a [Timeline] of 31 October 2021.

In this case, these comments will be automatically copied into the sheet named [Pending activities Stage 1] because the questions were related to activities of Stage 1.

This is illustrated in Figure 18.

Technical Element	QUESTION	Level of achievement	Comments on achievements to date	Activities to be completed	Timeline
Diagnostic	Has the National Veterinary diagnostic capacity been assessed and is there EITHER at least one national laboratory designated for PPR diagnostic activities OR an agreement in place with at least one laboratory abroad to carry out this service?	Diagnostic services available at national level			
	Are staff trained to perform ELISA tests?	Yes			
	Is (are) the designated national veterinary laboratory (or laboratories) capable of analysing diagnostic samples from at least 60% of suspected PPR outbreaks across the country?	No	We have estimated that we are able to analyse samples from approximately 50% of PPR Outbreaks	We have planned an awareness campaign among veterinarians and stakeholders to increase uptake to 80%	31-Oct-21

Figure 18. Example of a Pending activities sheet automatically populated

Please note that the sheets named [Pending activities Stage x] contain duplications only of those cells that, in the technical element sheet of origin, are shown under the columns; QUESTION, LEVEL OF ACHIEVEMENT, COMMENTS ON ACHIEVEMENTS TO DATE, ACTIVITIES TO BE COMPLETED and TIMELINE.

Moreover, the information copied into the Pending activities sheets are only the answers related to the PPR-specific activities (Component 1), and not those answers related to the other two Components of PPR GCES.

In contrast to the sheet of origin, the answers and comments in the Pending activities sheet are grouped by technical element. In the previous screenshot it is possible to see only the technical element DIAGNOSTIC SYSTEM and by scrolling down the sheet all the questions and comments belonging to the other technical elements become visible.

Once the country has been able to identify where it is likely to be located in the PPR stepwise approach (through the sheet OUTPUT), it can review the Pending activities of the corresponding stage to see what should be completed to progress further along the approach.

When countries are filling in the questionnaire, it is recommended that they aim to be very concise and avoid long sentences. Please also note that all sheets named [Pending activities Stage x] in the PMAT questionnaire are currently protected and no changes are allowed. If the country wishes to make changes in [Pending activities] column, these changes should be made in the column labelled [Activities to be completed] in the respective technical element sheet.

In the following section 5.4, there are some examples of a full description of typical activities (structured by both stage and technical element).

4.4 Examples of typical activities per stage of the PPR stepwise approach

The following table presents some examples of typical activities per stage of the PPR GCES stepwise approach for each of the five technical elements of the PMAT.

	Stage 1	Stage 2	Stage 3	Stage 4
Diagnostic	Designation of at least one laboratory (at the national level or outside the country) for PPR diagnosis.	Training of field veterinarian personnel on PPR clinical diagnosis and samples to be submitted to the laboratory for diagnostic testing.	Establishing a quality assurance/control system in the designated PPR diagnostic laboratory with participation in interlaboratory proficiency testing.	Full genome sequencing either at the national level or outside the country for all PPRV collected samples; sequestration of all PPRV containing materials.
Surveillance	A post-assessment evaluation form to quantify the clinical and (possibly) the socioeconomic impact is implemented at this stage. Confirmed clinical outbreaks should be investigated for such purposes.	Organizing the training of field veterinarians to increase their awareness about PPR and its differential diagnosis. (Training should also address the collection, storage and submission of samples to the closest diagnostic laboratory in proper condition and to avoid any potential spoiling of test results.)	While the surveillance activities indicated in previous stages continue to operate, the surveillance system is complemented with an early warning component. Establishment of procedures to capture PPR events in neighbouring countries or countries from which animals are imported becomes an essential component of the surveillance system. A specific group dedicated to qualitative risk assessment can be identified within the Central Veterinary Services for this purpose.	Specific studies will be designed aimed at proving that the cohort of animals born after the suspension of vaccination has not been exposed to PPRV (likely to be done through serology targeting the birth-cohort of animals born after cessation of vaccination in accordance with WOAH procedures for official recognition of PPR freedom).
Prevention and control	Formulating/designing and implementing standard operating procedures for a response mechanism (appropriate to this stage) in case of a suspected/confirmed PPR outbreak.	Conducting Post-Vaccination Evaluation with collection of data for evaluating the efficacy of the vaccination programme.	Promptly implementing measures for containing virus spread once the outbreak is confirmed. (Whether that is based on animal movement restriction and/or culling and/or emergency vaccination is a country policy choice).	In the event of an outbreak, implement the provisions of the contingency plan.
Legal framework	Establishing a working group specifically to evaluate gaps in the veterinary legislation on PPR control and eradication that need to be addressed. The working group should consist of legal experts	The working group holds meetings with stakeholders to better understand the economic impact of PPR control measures such as quarantine, vaccination and culling, and evaluates approaches for financial assistance (compensation,	The working group proposes procedures for compensation and receives legal approval for these; the working group ensures that all legal provisions required for Stage 4 are being prepared while still in Stage 3 (e.g. strengthening import control, biosecurity at	The working group makes final adjustments to the legal framework to support Stage 4, including the provision for risk assessments to be carried out in trade

	Stage 1	Stage 2	Stage 3	Stage 4
	and relevant stakeholders.	emergency funding, etc.) best suited to these situations and submits proposals for relevant changes to legislation.	marketplaces, compensation schemes).	partner countries prior to the importation of small ruminants into the country.
Stakeholders' involvement	To have an idea of the actual impact of PPR, key stakeholders have been identified and involved through appropriate mechanism(s) from the beginning of control/eradication programme.	To achieve a high degree of success in PPR control, regular interactions with stakeholders at all levels (national, provincial, district & local) along with their feedback on disease reporting, vaccinations, other disease control measures, are important at this stage and are being carried out.	Intensive awareness programmes for community involvement are key to eradicating PPR. These programmes are being steered by the national PPR committee with the help of experts from all five technical elements at the national, provincial, district and local levels. Veterinary legislation and legal framework are part of awareness activity at the community level.	All stakeholders are aware that there is now no PPR in the country, and any suspicion of PPR needs to be treated as an emergency response. The stakeholders, especially at national borders, are vigilant for any such incursion and import regulations are strictly in place.

5. CONCLUSION

PMAT2, the revised PMAT, can be downloaded from FAO's and WOAH's websites: Peste des petits ruminants | Food and Agriculture Organization of the United Nations and should be submitted by email to the PPR Secretariat (PPR-Secretariat@fao.org, ppr-woah@woah.org). The PMAT2 will also be made available in electronic format. In this way, the role of the PPR Secretariat to enable PMAT data collection and storage will be facilitated. It is a flexible tool, not overly prescriptive, regarding the control and eradication of PPR, as this can vary from country to country according to the prevailing epidemiological situation and other factors.

An effort has been purposely made to keep PMAT2 simple. Compared with the first version, the experts in charge of completing PMAT2 have to respond to a questionnaire for all stages of PPR GCES. In that way, at the end of the exercise, they have an overview of the overall level of achievement by stage and technical elements. It also provides a summary of pending activities to enable prioritization and planning of future activities of the country PPR eradication programme. In that regard, it is very important that PMAT2 be completed by a team comprising experts of the five technical elements. PMAT2 does not cover every possible action required for PPR eradication. Its main purpose is to systematically raise themes for discussion and provide a place to record the extent of implementation and to help plan actions that need to be taken to complete activities and objectives at each stage. There will undoubtedly be additional actions needed to resolve national and regional issues and enable successful strategies in order for PPR eradication to succeed.

The PPR Monitoring and Assessment Tool (PMAT) is a resource to measure the achievement of and support the implementation of the peste des petits ruminants (PPR) global eradication programme (PPR GEP). PMAT2 is the revised version of the original PMAT, which has been redesigned in light of user feedback to make it easier to complete and to make the process and results more useful. PMAT2 is a self-assessment tool, in the form of an electronic questionnaire, that should be completed at least annually by the PPR National Coordinator and a team of subject matter experts. This user guide provides a comprehensive overview of the purpose and use of PMAT2. It includes a description of the role of the national staff, subject matter experts, the Regional Advisory Group (RAG) and the PPR Secretariat in the completion and review of the PMAT at the national, regional, and international levels. Country programmes are integrated into regional programmes through episystem approaches and regional roadmaps. Episystem being a geographical area with some specific characteristics (climatic conditions, production systems and livestock contact patterns), an approach based on that fact has been taken into consideration in the PMAT2 design to recognize that the PPR virus circulates in ecological systems that transcend international boundaries. Thus, PMAT2 supports the development of holistic, technical eradication strategies that address the PPR virus maintenance systems. For implementation purposes, regional roadmaps repackage the integrated episystem strategies as national plans and timelines grouped by their respective Regional Economic Community (REC).

The PMAT2 user guide describes the structure of the questionnaire and presents examples of how to complete the questionnaire. The user guide also describes the qualitative scoring system used in PMAT2 and how the results should be interpreted. In addition to categorizing their levels of achievement to date, users are asked to enter pending activities that need completion at each stage of the eradication process. Upon completion, the tool generates tables of pending activities to assist future work planning.

This document has been produced under the umbrella of

GF-TADs
GLOBAL FRAMEWORK FOR THE PROGRESSIVE CONTROL OF TRANSBOUNDARY ANIMAL DISEASES

Food and Agriculture Organization of the United Nations

World Organisation for Animal Health

To know more

https://www.fao.org/ppr/en/
https://www.woah.org/en/disease/peste-des-petits-ruminants/
https://www.gf-tads.org/

ISBN 978-92-5-139969-9

9 789251 399699

CC8989EN/1/10.25