



# COMMITTEE ON AGRICULTURE

## SUB-COMMITTEE ON LIVESTOCK

### First Session

16 - 18 March 2022

### Progress towards the eradication of Peste des Petits Ruminants

#### Executive Summary

Peste des Petits Ruminants (PPR) is a highly contagious and devastating disease, affecting sheep and goats in 67 countries across Africa, Asia, Europe and the Near East. More than 80 percent of the global small ruminant population of circa 2.5 billion animals is located within countries with a PPR presence or countries that are recognized as “PPR-free” but whose shared borders put them at high risk of transboundary spread. The annual global economic impact of PPR has been estimated at between USD 1.4 billion and USD 2.1 billion.

In 2015, the 39th Session of the FAO Conference supported the implementation of the Peste des Petits Ruminants Global Eradication Programme (PPR GEP)<sup>1</sup>. FAO, the World Organisation for Animal Health (OIE), FAO Members and partners have been working to achieve global eradication of PPR by 2030. PPR GEP has been implemented under the Global Framework for the Progressive Control of Transboundary Animal Diseases (GF-TADs).

As at November 2021, 59 countries, plus one zone of Namibia, are officially recognized as “PPR-free”, and 138 countries are not, 67 of which have recent evidence of PPR infection. To build upon the success of the first phase of the PPR GEP, there is a need for sustained commitment to PPR control in the national budgets of the 67 countries where recent PPR infection has been identified, and continued commitment to build capacity and enhance and harmonize activities at national and regional levels.

Members have demonstrated a high commitment to PPR control, providing circa 66 percent (USD 640 million) of the estimated budget requirement for PPR control in the first phase of the PPR GEP (2017–2021). Renewed and innovative approaches to resource mobilization are needed in the second phase of PPR GEP, in addition to filling the gap of the first phase.

<sup>1</sup>FAO. 2015. *Report of the 39th Session of the Conference of FAO*. C 2015/REP, paragraph 43d. Rome. (also available at <https://www.fao.org/3/mo153e/mo153e.pdf>).

### **Suggested action by the Sub-Committee**

The Sub-Committee is invited to recommend COAG to:

- commend the progress made between 2015 and 2021 on implementation of the PPR GEP and emphasize the need to speed up actions to eradicate PPR by 2030;
- endorse suggested priority actions of the second phase of PPR GEP:
  - encourage Members to include PPR eradication in their United Nations Sustainable Development Cooperation Framework plans, and commit national budgets to fund the implementation of their PPR national strategic plans;
  - call upon regional institutions to have a stronger engagement in PPR GEP implementation and to strengthen their collaboration with regional coordinating partners, regional economic communities, regional advisory groups, national PPR coordination committees and the regional steering committees of the GF-TADs;
  - recommend FAO to promote and support PPR GEP, and to renew its agreement with OIE to support the FAO-OIE Joint Secretariat, and to work with other partners to sustain the progress achieved so far; and
  - call upon FAO to work with multilateral development banks, international financial institutions and other resource partners to develop innovative financing and investment streams to support Members and coordinating partners to complete the actions needed to achieve eradication by 2030.

Queries on the substantive document may be addressed to:

Keith Sumption

Chief Veterinary Officer

Animal Production and Health Division

Tel: +3906 57055328

## **I. Importance of small ruminants to global health and resilience**

1. Livestock contribute 40 percent of the global value of agricultural output and will continue to play a vital role in coming decades, given the increasing demand, particularly in sub-Saharan Africa and Southern Asia, due to population growth and transformations in the global food economy.
2. Small ruminant systems often have a dual purpose, supplying home consumption and contributing to household income. Goats and sheep can be sold easily and, in non-cash economies, bartered for other food commodities. Due to their prolificacy and resilience, small ruminants are often preferred for restocking following disasters, and they have been shown to protect rural households against shocks to income and consumption caused by climatic extremes such as drought.
3. Small ruminants represent 29 percent of the world's livestock breed diversity (including those already extinct). Thirty percent of these breeds are considered at risk of extinction (including those already extinct).<sup>2</sup> Small-ruminant breed diversity includes climate tolerance traits and genetic variation

---

<sup>2</sup> FAO. 2021. Domestic Animal Diversity Information System (DAD-IS). In: *Food and Agriculture Organization of the United Nations* [online]. Rome. [Cited 14 December 2021]. [www.fao.org/dad-is/en/](http://www.fao.org/dad-is/en/).

that enable adaptation and better productivity under diverse local environmental conditions. This can enable the livestock sector to contribute to future climate resilience.

4. The fast-growing demand for small ruminant products will generate new opportunities for value chain actors. However, many value chain actors are limited in their ability to exploit these opportunities due to numerous challenges, including the prevalence of high-impact small ruminant diseases like PPR.

## **II. Contribution of PPR eradication to the achievement of the Sustainable Development Goals**

5. Healthy livestock populations contribute to the achievement of the United Nations Sustainable Development Goals (SDGs), in particular SDG 1 (No poverty); SDG 2 (Zero hunger); SDG 3 (Good health and well-being); SDG 5 (Gender equality); SDG 8 (Decent work and economic growth); SDG 12 (Responsible consumption and production); SDG 15 (Life on land); and SDG 17 (Partnership for the goals). Thus, PPR eradication contributes to the FAO Strategic Framework 2022–31, and also promotes its aspirations: *better production, better nutrition, a better environment and a better life, leaving no one behind*.

6. PPR is a highly contagious and devastating disease affecting sheep and goats in 67 countries across Africa, Asia, Europe and the Near East. More than 80 percent of the global 2.5 billion small ruminants are at risk of PPR. This disease does not only cause high economic losses, but also adversely affects livelihoods and nutrition, exacerbating poverty and food insecurity. The annual global economic impact of PPR has been estimated at between USD 1.4 billion and USD 2.1 billion.<sup>3</sup> In 2016, a cost-benefit analysis estimated that PPR eradication would provide a net benefit of USD 74.2 billion, and all modelling scenarios indicated that investment in PPR eradication would be highly economically beneficial.<sup>4</sup> Vulnerability to the impact of PPR is highest among small-scale producers, with an estimated 330 million of them most at risk. Losses due to PPR include direct losses (mortality, reduction of productivity) and costs associated with treatment and control. Since small ruminants are primarily raised by women, PPR is also a barrier to their empowerment. While the disease does not infect humans, PPR has a major impact on human health, well-being and socio-economic development, and as such needs to be seen through a One Health lens.

## **III. Progress on the implementation of the PPR Global Eradication Programme 2015–2021**

7. The PPR Global Eradication Programme (PPR GEP) has been implemented as a priority programme by FAO and OIE under the GF-TADs agreement, in accordance with the arrangements endorsed by the twenty-fourth session of COAG.<sup>5</sup> The implementation of the FAO/OIE Global Strategy was adapted at regional level to account for their unique characteristics. At the global level, the programme is coordinated by the FAO-OIE Joint Secretariat hosted by FAO.

---

<sup>3</sup> FAO. 2021. *Eradication of Peste des Petits Ruminants (PPR) by 2030 (Draft Resolution)*. C 2021/LIM/8. Rome. (also available at [www.fao.org/3/nf062en/nf062en.pdf](http://www.fao.org/3/nf062en/nf062en.pdf)).

<sup>4</sup> Jones, B.A., Rich, K.M., Mariner, J.C. Anderson, J., Jeggo, M., Thevasagayam, S., Cai, Y. & Peters, A.R. 2016. The economic impact of eradicating peste des petits ruminants: a benefit-cost analysis. PLOS ONE, 11(2): e0149982.

<sup>5</sup> FAO. 2015. *Report of the 24th Session of the Committee on Agriculture (29 September - 3 October 2014)*C 2015/21, paragraph 13. Rome. (also available at [www.fao.org/3/ml895e/ml895e.pdf](http://www.fao.org/3/ml895e/ml895e.pdf)).

8. This section summarizes progress made in monitoring the PPR situation, diagnosis and surveillance, vaccination, development of strategic plans, capacity development and institutional arrangement and partnership.

### **A. Monitoring the PPR situation**

9. Between 2015 and 2019, 12 757 outbreaks were reported to OIE by 59 countries. By 2020, this number decreases significantly. As at December 2021, 67 countries have active or recent evidence of PPR infection.

10. Currently, 21 of the 67 infected countries have no reported PPR outbreaks for more than 24 months, and ten of these have had no outbreaks between 2015 and 2019. This supports the conclusion that the control measures have had a significant positive impact.

11. Progress of countries along the eradication pathway has been assessed by comparing the stage of control in 2015 and in 2021, using the four stages defined in the PPR Global Strategy for the Control and Eradication of PPR, namely: Stage 1, in which the epidemiological situation is assessed; Stage 2, in which control activities including vaccination are implemented; Stage 3, in which PPR is eradicated and; Stage 4, in which vaccination is suspended. To complement the outcomes of the regional road map meetings and help review the progress of PPR GEP, in 2021 a survey was sent to 73 countries with infected or at-risk status and responses were obtained from 46 countries. The survey showed that between 2015 and 2021, countries at Stage 1 or below declined from 88 to 43 percent, with an increase in those at Stage 2, the vaccination-based control stage (from 7.6 to 38 percent). In 2021, 15 percent are now in Stage 3. Two countries reported that they are at Stage 4, the final stage, whereas no countries were in this position in 2015.

12. Progress is therefore on track, but 10 percent of countries did not show any evidence of progression from the assessment stage to the vaccination stage (from Stage 1 to 2) and almost 15 percent of countries have not changed status. The lack of progress in certain countries may mean that the vaccination stage has to be extended far beyond the planned time period. These countries will need particular attention to ensure that the benefits and gains at regional level are not lost.

### **B. Diagnosis and surveillance**

13. Based on the role of the International Atomic Energy Agency (IAEA) in rinderpest eradication, synergies have been strengthened through the recently established Joint FAO/IAEA Centre of Nuclear Techniques in Food and Agriculture (CJN) and its agriculture and biotechnology laboratories to build capacities and transfer technology that enables more effective diagnosis and surveillance. Since 2015, the FAO/IAEA Animal Production and Health Laboratory (APHL) has organized a yearly inter-laboratory comparison: 32 veterinary laboratories in 29 countries participated and provided results (21 from Africa, 9 from Asia and 2 from Europe). PPR serological and polymerase chain reaction (PCR)-based tests have been transferred to almost all partners in the FAO/IAEA veterinary laboratory network. To date, 12 to 15 laboratories in Africa and Asia are currently applying multiplex PCR assays, developed and validated by CJN/APHL, for differential diagnosis of PPR. Since 2016, CJN has developed a standardized multistep procedure for sequencing services through an external service provider for registered users which are counterparts in the CJN/APHL. It enables laboratories operating in resource-limited settings to confirm and characterize PPR virus strains genetically, leading to enhanced understanding of PPR molecular epidemiology and virus epistemics.

### **C. Vaccination**

14. Of the planned 1.5 billion doses of vaccine to be used in the first phase of PPR GEP, over 60 percent were deployed. Optimizing the use of vaccines through risk-based approaches has been promoted to reduce the quantity and cost of programmes and improve their impact. Meetings of PPR

vaccine manufacturers have been held every two years to ensure the quality of the vaccines, and the unit cost per vaccine dose has significantly dropped from USD 0.10 in 2014 to USD 0.04. Development of thermotolerant PPR vaccines will be important for effective immunization and is currently under way, with the assistance of the African Union–Pan African Veterinary Vaccine Centre (AU-PANVAC).

15. The capacity of PPR vaccine production laboratories (for example, those in Ethiopia and Pakistan) has been increased at least fivefold: they are now able to supply neighbouring countries as well as meet their national demands.

#### **D. Development of PPR strategic plans**

16. FAO, OIE and partners have provided support to countries and regions to formulate national strategic plans (NSPs) and regional strategies, and regional road map meetings were organized at least twice in each Regional Economic Community (REC).<sup>6</sup> Since 2015, more than 80 percent of infected and at-risk countries were assisted to formulate NSPs including budgets. Two regional strategies have been endorsed by their RECs (the Economic Community of West African States and the Intergovernmental Authority on Development). However, greater ownership and engagement of the regions in the GEP is essential if there is to be sustained progress in all the affected regions.

#### **E. Capacity-building**

17. Over 600 front-line veterinarians have been trained in PPR control in 17 countries. Almost 15 000 copies of manuals and guidelines were distributed to more than 20 000 veterinarians and para-veterinarians.

#### **F. Institutional arrangements and partnership**

18. Key achievements to support the governance of PPR GEP included the establishment of (i) the FAO-OIE Joint Secretariat in April 2016; (ii) the PPR Advisory Committee in June 2017, (iii) the PPR Global Research and Expertise Network (PPR GREN) in 2018; and (iv) the advocacy group of Rome-based United Nations organizations Group of Permanent Representatives Friends of the PPR GEP in 2018 (“Friends of PPR Eradication”).

19. The PPR Advisory Committee provides strategic guidance for the PPR GEP, benefiting from the results of the PPR GREN scientific findings for their decision-making. Members of this Committee include all actors in the small ruminant value chain. The PPR GREN comprises approximately 350 researchers worldwide within four thematic areas: (i) atypical hosts; (ii) wildlife; (iii) socio-economics; and (iv) vaccination strategy (vaccines, epidemiology, modelling and social science). A total of 463 peer-reviewed scientific articles on PPR were published between 2015 and 2020, further demonstrating the active research supporting the GEP.

20. To address the role of wildlife in PPR epidemiology and the threat posed by PPR to biodiversity, FAO and OIE in collaboration with the Wildlife Conservation Society and the Royal Veterinary College have organized workshops every two years since 2015 on “Controlling PPR at the livestock/wildlife interface”. As an outcome of these meetings, funding was secured from the United Kingdom and the United States of America. Using these funds, research undertaken in Mongolia and in the Great Serengeti ecosystem in East Africa has found no evidence that wildlife is a silent

---

<sup>6</sup> Arab Maghreb Union; Arab Organization for Agricultural Development; Association of Southeast Asian Nations; Economic Community of Central African States; Economic Cooperation Organization; Economic Community of West African States; Gulf Cooperation Council; Intergovernmental Authority for Development; South Asian Association for Regional Cooperation; Southern African Development Community.

reservoir. This validates the PPR global strategy of focusing on eliminating PPR from sheep and goats, which should also result in the absence of infection and disease in wildlife populations.

21. To address the need for continental and regional coordination, FAO and OIE have developed partnerships with global and regional organizations, the African Union–Inter-African Bureau for Animal Resources (AU-IBAR), the African Union Pan African Veterinary Vaccine Centre (AU-PANVAC; to assure quality control and validate the serology test for a blocking enzyme-linked immunosorbent assay that considerably reduced sero-surveillance costs) and RECs, as well as with civil society organizations and national veterinary services.

22. FAO and OIE have also partnered with (i) the International Livestock Research Institute to estimate PPR’s socio-economic impact; (ii) the Pirbright Institute, United Kingdom, to research pathogenesis and differentiate infected animals from vaccinated animals, vaccines, and RECs, as well as with civil society organizations and national veterinary services for the implementation of NSPs.

23. The budget required for the first phase of the PPR GEP (2017–2021) was estimated at USD 996 million. In addition to national funding, several resource partners currently support the programme including China, Japan, the Swiss Agency for Development and Cooperation, the European Union (EU), the International Fund for Agricultural Development, and the World Bank. Others are supporting the FAO-OIE Joint Secretariat including the Defense Threat Reduction Agency of the United States of America, France and the EU. In addition, international non-governmental organizations (such as Veterinarians Without Borders and the International Committee of the Red Cross, among others) also fund vaccination campaigns at community or provincial levels.

#### **IV. Challenges and strategies for action**

24. Based on regional road map meetings, regional consultation meetings for the formulation of the second phase of the PPR GEP and the 2021 survey of Members, the following challenges were identified (in order of importance): (i) lack of funding at the national level; (ii) lack of personnel; (iii) uncontrolled cross-border animal movements; (iv) lack of awareness and compliance; (v) lack of capacity including training and diagnostic equipment. These findings support the need for continued capacity-building by FAO and partners, as well as formal endorsement of NSPs, and their integration into existing agriculture sector programmes, making a business case for investment at national level to increase national budgets available for PPR eradication.

In 2020, the PPR GEP funding gap for the first phase was estimated at USD 340 million. To achieve eradication by 2030, in addition to the budget for the second phase, this gap must be reduced via contributions from national budgets and new projects. Therefore, advocacy and resource mobilization must continue, with the support of the “Friends of PPR Eradication.” Based on the advice of the PPR Advisory Committee, FAO and OIE have commissioned an independent group of experts to develop a blueprint and road map to verify global freedom from PPR, and are establishing a partnering and financing panel of experts under GF-TADS to provide guidance on addressing the challenges of financing the programme and ensuring the commitments needed at country and regional levels.

#### **V. Suggested priority actions for second phase of the PPR GEP (2022–2030)**

25. The following priority actions are required to sustain progress and safeguard the advances made in the first phase:

##### *At country level*

- Include PPR eradication in the United Nations Sustainable Development Cooperation Framework plans, to leverage national and international investment support;

- Commit to the pathway to eradication through endorsement and implementation of their NSPs, with strong engagement of the key stakeholders and particularly the private sector, and to monitor and report progress;
- Gather the necessary evidence for the 71 countries that are either historically free or have not reported the presence of PPR and assist them to proceed to official OIE endorsement of PPR freedom; assist the 67 countries that are currently infected with PPR to use the revised PPR Monitoring and Assessment Tool<sup>7</sup> for self-assessment to implement their NSPs; and the 59 PPR-free countries and one country zone to put contingency plans in place in case of incursion.

*At regional level*

- Strengthen commitment and ownership by regional institutions and governance to enhance regionally-adapted resource mobilization and implementation of regional strategies;
- Strengthen the coordination between the RECs to address the risks of sustained PPR circulation in common risk areas using an episystem approach based on knowledge of PPR epidemiology, animal movements, value chains, and animal identification systems, as well as instruments such as Memorandums of Understanding between countries to formalize cross-border harmonization.

*At global level*

- Promote and support GEP implementation, and support regional implementation through technical capacity-building and provision of appropriate tools and guidance for investment in PPR control and eradication;
- Promote and support countries to better control PPR through better data and other innovations that will optimize control programmes and provide evidence-based guidance;
- Promote and support PPR control to sustain progress, supporting inclusion of PPR eradication through the United Nations Sustainable Development Cooperation Framework, and part of regional investment plans;
- Enhance the coordination capacity of the PPR Global Secretariat to support the implementation of regional and national strategies.

---

<sup>7</sup> FAO. 2021. Peste des petits ruminants. In: *Food and Agriculture Organization of the United Nations* [online]. Rome. [Cited 14 December 2021]. [www.fao.org/ppr/global-programme/stepwise-approach/en/](http://www.fao.org/ppr/global-programme/stepwise-approach/en/).