



Food and Agriculture
Organization of the
United Nations



World Organisation
for Animal Health

8TH ANNUAL MEETING OF THE PPR GLOBAL RESEARCH AND EXPERTISE NETWORK (PPR-GREN)

25 – 27 NOVEMBER 2025 QINGDAO, CHINA



PPR-GREN: Achievements, Impact and Future Directions

Abdelmalik Khalafalla

PPR-GREN Chair,
Biosecurity Affairs Division, Abu Dhabi Agriculture and Food Safety
Authority

P.O. Box 52150, Abu Dhabi,
United Arab Emirates

中华人民共和国农业农村部

Ministry of Agriculture and Rural Affairs of the People's Republic of China



中国动物卫生与流行病学中心
China Animal Health And Epidemiology Center

Produced under the
GF-TADS framework



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

PPR-GREN: Guiding Scientific and Policy Innovation Towards PPR Eradication

PPR-GREN Mandate: To ensure the PPR Global Eradication Programme (PPR-GEP) remains **science-based and innovative**.

- Acts as the **primary technical adviser** to the Joint FAO/WOAH PPR Secretariat and the PPR Advisory Committee.
- Established in **2018**, has transitioned from an initial technical consultation forum to a dynamic, influential entity driving scientific and policy innovation essential for PPR-GEP.
- Major achievements include the standardization of diagnostic tools, the establishment of measurable criteria for next-generation vaccines (Thermotolerant and DIVA candidates), the emphasis on the Episystem approach, the systemic integration of socioeconomic research and identification of socio-technical gap in vaccine delivery

Establishment of the PPR-GREN (2018): Vision, Goal, and Role

- PPR-GREN was formally established in 2018 and the inaugural Meeting of the PPR-GREN was held in Vienna, Austria, from 17–19 April 2018.
- The network's core purpose, detailed in its Terms of Reference, is to promote and initiate an integrated, comprehensive research and expertise network that capitalizes upon synergies to eliminate the threat posed by small ruminant diseases, with a special focus on PPR.
- This network acts as the technical adviser to the Joint FAO/WOAH PPR Secretariat and the PPR Advisory Committee.
- The network's primary functions are:
 - 1) To serve as a communication and technology sharing gateway for the PPR-GEP.
 - 2) To identify and prioritize research opportunities within the strategic needs of the PPR-GEP.
 - 3) To build strong partnerships between researchers, institutions, and the private sector.
 - 4) To play an important advocacy and science translation role for policymakers and donors.
 - 5) To promote strategic, gender-responsive, and multi-disciplinary research to better understand PPR epidemiology, including at the livestock/wildlife interface.

Chronology of PPR Global Research and Expertise Network (PPR-GREN) Annual Meetings (2018–2025)

Meeting	Date	Place/Format	Key outputs (PPR-GEP Context and Highlights)
PPR-GREN I (Inaugural)	17–19 April 2018	Vienna, Austria	Launch of GREN, defining the initial thematic areas (Epidemiology, Diagnostics, Vaccine/Delivery, Outreach).
PPR-GREN II	13–15 November 2019	Nairobi, Kenya	Formalization of the network into four thematic working groups. Focused discussion on PPR in the Rinderpest Free World
PPR-GREN III	9–12 November 2020	Virtual (Videoconference)	Key outputs informed the technical drafting of the PPR-GEP II Blueprint. Focused on COVID-19 pandemic impacts on eradication activities.
PPR-GREN IV	6–8 December 2021	Virtual Zoom Meeting	Review of GEP Phase I progress (2017–2021). Discussions centered on knowledge gaps instrumental to developing the GEP II Blueprint.
PPR-GREN V	7–9 December 2022	Montpellier, France	Strategic pivot: Emphasis on the Episystem Approach as the most cost-effective path to eradication. WGS recognized as a management tool.
PPR-GREN VI	28–30 November 2023	Bengaluru, India	Formal creation of the dedicated Episystems Working Group. Focus on India's accelerated efforts and publication of meeting's outcomes in proceedings.
PPR-GREN VII	20–22 January 2025	Abu Dhabi, UAE	Restructuring of thematic groups (merging atypical/wildlife hosts). Focus on validation of DIVA vaccines and standardized socioeconomic protocols, Advocacy and Research Funding

Role of PPR-GREN in supporting the PPR Global Eradication Plan (PPR-GEP)

The network's role in supporting the PPR-GEP can be as:

1. Advancing Scientific and Technical Expertise- to ensure the PPR-GEP remains a science-based and innovative

- Technical Advisory Role- reviewing field intelligence and scientific breakthroughs, and translating them into policy guidance
- Defining Research Priorities- aligned with the PPR-GEP's strategic needs.
- Developing and evaluating New Tools such as:
 - 1) Thermotolerant Vaccines
 - 2) DIVA Vaccines and Diagnostics: Essential for the end-game phases (Stage 3 and 4) where proof of freedom from infection must be verified.
 - 3) Advanced Diagnostics- Including multiplex PCR

2. Bridging Science and Implementation

- Knowledge Transfer and Capacity Building: The network serves as a communication and technology-sharing gateway for the PPR-GEP.
- Informing Strategy and Planning- directly inform the development and refinement of the PPR-GEP blueprint.
- Operational and Technical Support- to countries implementing their NSP, assisting in field assessments and capacity building.

3. Adapting to New Challenges

- Address emerging epidemiological challenges that could jeopardize the 2030 eradication goal.
- Addressing Atypical Hosts and Wildlife- fosters research
- Integrating Socio-Economics- to understand farmers' willingness to pay and vaccine acceptance, and evaluate vaccine delivery systems and costs.
- Advocacy and Resource Mobilization

PPR-GREN Improvement Processes

The network streamlined its research mandate by:

- **Creating a dedicated Episystems Group** (GREN VI) to accelerate the necessary merger of molecular and epidemiological data.
- **Merging the Atypical Host and Wildlife Groups** (GREN VII) into a single entity. This action acknowledges the high research overlap concerning diagnostic validation in non-typical species and the shared dynamics at the livestock-wildlife interface, thereby streamlining the One Health agenda.
- **Allocating more time for working group discussions** (post-GREN VII). This process improvement recognizes that decentralized, focused technical consultation among thematic experts provides higher value for the PPR-GEP Secretariat than general plenary presentations.
- **Documentation: Publication of meeting reports and proceedings** (starting GREN VI), including abstracts and extended abstract for better dissemination of knowledge and expertise
- **Knowledge Management: Systematic reviews and "state of knowledge or art for thematic issues"**, (starting GREN VII), to enhance the network's efficiency, and formalize research priorities, prevent redundant efforts, and serve as a robust, centralized evidence base for the PPR-GEP Blueprint updates.

The Roadmap to 2030: GEP Phases and GREN Focus

PPR-GEP Phase II (2022–2027): Control and Halt Circulation.

- **Goal:** To stop virus circulation globally by the end of 2027.
- **GREN Action Focus:**
 - 1) Research using participatory epidemiology surveys for identifying episystems,
 - 2) Implementation of episystem approach and risk-based vaccination,
 - 3) Integrating Socio-Economics: PPR-GREN promotes research in socio-economics to understand farmers' willingness to pay and vaccine acceptance, and evaluate vaccine delivery systems and costs.

PPR-GEP Phase III (2027–2030): Verification and Eradication.

- **Goal:** Cessation of PPR field control activities by **2028**; complete evidence collection to demonstrate freedom by the end of **2030**.
- **Action Focus:** developing and validating tools necessary for the final stages, intensive surveillance supported by **DIVA diagnostics** and robust verification of atypical host status.

Post-2030 Outlook:

- GREN should evolve to support broader **Small Ruminant Health and One Health** platforms.
- **Longitudinal surveillance** in atypical hosts and wildlife must continue to prevent re-emergence.

Conclusions

- PPR-GREN, has successfully transitioned from an initial technical consultation forum focused on identifying foundational knowledge gaps to a dynamic, influential entity driving scientific and policy innovation essential for the PPR-GEP.
- Over seven annual meetings, the network has guided the shift from general control strategies to the geographically and biologically precise Episystem Approach, commencing with the PPR-GEP Phases II and III Blueprint (2022–2030).
- Major achievements include the standardization of diagnostic, the establishment of measurable criteria for next-generation vaccines, adoption the Episystem approach, and the systemic integration of socioeconomic research.

I) Vienna, 2018



II) Nairobi, 2019



III) 2020 and IV) 2021, virtual

V) Montpellier, 2022



VI) Bangalore, 2023



VII) Abu Dhabi, 2024





VIII) Qingdao, 2025



THANKS