The FAO/OIE Global PPR Control and Eradication Strategy

Joseph Domenech and Eran Raizman

On behalf of the FAO OIE GF-TADs Working Group

ABIDJAN, CÔTE D'IVOIRE 31 MARCH – 2 APRIL 2015
Importance of the disease

- 5th Global GF TADs Steering Committee (Paris, Oct 2012)
- OIE 82nd General Assembly (Paris, May 2014), Resolution No.24
- FAO 24th COAG and FAO 150th Council (Rome, 2014)

Support to the development of a Global Control and Eradication Strategy using the GF-TADs mechanism
Rationale

- Role of animal productions on food security, poverty reduction, sustainable development

- Impact of animal diseases

- Improving animal health is a global public good

- Veterinary Services are at the heart of animal health systems tasked with preventing and controlling animal diseases
Consultation process for the elaboration of the PPR Global Strategy

Similar to the preparation of the FMD Global Strategy

- With experts, national and regional authorities, policy-makers, development partners and private industry: Workshop in Rome, October 2014

- Peer review of the strategy

- Inputs from the OIE Scientific Commission and its Ad Hoc Group on PPR
OIE/FAO PPR Global Control and Eradication Strategy

PPR is a good candidate disease for eradication

- One serotype
- No carrier state after infection
- No reservoir outside domestic small ruminants
- Vaccine with long live immunity after a single dose, cheap to produce
- thermo-stable vaccine to come
- Diagnostic tests available
- Many of the tools required for progressive control and monitoring already available
Overall and specific objectives of the PPR Global Strategy

- The overall objective is a small ruminant sector contributing to global food security and nutrition, human health and economic growth, particularly in developing countries, thereby alleviating poverty, increasing income generation and improving the livelihoods of smallholder farmers and general human wellbeing.

- The purpose is to establish the capacity of stakeholders and VS to control and eradicate PPR and control other small ruminant diseases.
The specific objectives of the Global Strategy are:

- **The eradication of PPR by 2030**, which requires:
  - In infected countries, achieving a progressive reduction of the incidence and spread, leading to final eradication of PPR
  - In non-infected countries, maintaining the officially recognised PPR free status

While at the same time:

- **Reinforcing Veterinary Services**
- **Improving animal health globally by reducing the impact of other major infectious diseases**
RP Eradication
Country and regional experiences

To consider lessons learnt from

- Rinderpest eradication (2011)
- On-going PPR control programmes
  - Pan African Program for Progressive Control of PPR in Africa (AU-IBAR)
  - The SHARE programme in IGAD Region
  - The FAO Position paper on PPR Control
  - Vaccine Standards and Pilot Approach to PPR Control (OIE) in Africa
- Etc…
PPR Strategy - Main principles

- National, regional and global levels
- Combination of vertical (disease specific) and transversal / horizontal (VS strengthening) approaches
  - Component 1 – PPR
  - Component 2 – Veterinary Services
  - Component 3 – Combined disease control (mainly small ruminant diseases)
PPR Strategy - Main principles

- Risk-based approaches
- The PPR Control component of the strategy not only aims to reduce the burden of PPR on animal production in developing countries, but also in PPR-free countries
- Reducing PPR at source in PPR-endemic countries is therefore a shared interest and should be considered a Global Public Good
- Public Good versus private Good

Photo credit: CIRAD
# PPR Strategy - Expected results

<table>
<thead>
<tr>
<th>Stage</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘Stage 0’</td>
<td>25%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Stage 1</td>
<td>30%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
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<tr>
<td>Stage 2</td>
<td>30%</td>
<td>50%</td>
<td>20%</td>
<td>0%</td>
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<tr>
<td>Stage 3</td>
<td>10%</td>
<td>25%</td>
<td>30%</td>
<td>0%</td>
</tr>
<tr>
<td>Stage 4</td>
<td>5%</td>
<td>25%</td>
<td>50%</td>
<td>100%</td>
</tr>
</tbody>
</table>

**Expected progression of PPR infected countries in % overtime**
1.3.2. SWOT analysis

- **S-** Tools available
- **W-** VS resources (financial, human, physical)
- **W-** Delivery system / Owner involvement
- **O-** Interest of international community
- **T-** Lack of sanitary information in some countries
The Progressive Step-wise Approach for the prevention and control of PPR

From

**Stage 1** – where the epidemiological situation is being assessed

To

**Stage 4** – where there is no virus circulation either at zonal or national level (country ready to apply for the OIE official status of PPR freedom)
**Focuses according to the stage**

<table>
<thead>
<tr>
<th>STAGE 1</th>
<th>STAGE 2</th>
<th>STAGE 3</th>
<th>STAGE 4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Assessment Stage</strong></td>
<td><strong>Control Stage</strong></td>
<td><strong>Eradication Stage</strong></td>
<td><strong>Post-eradication Stage</strong></td>
</tr>
<tr>
<td>To gain a better understanding on the presence of PPR</td>
<td>To control both PPR clinical disease and infection in a specific zone or productive system</td>
<td>To achieve PPR eradication throughout the national territory</td>
<td>To build evidence that there is no clinical disease nor virus circulation</td>
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FOCUS

1. To gain a better understanding on the presence of PPR
2. To control both PPR clinical disease and infection in a specific zone or productive system
3. To achieve PPR eradication throughout the national territory
4. To build evidence that there is no clinical disease nor virus circulation
Characterisation of the stages

- Aspects addressed for each PPR stage
- Five technical elements characterise each stage

**Legal framework**

**Surveillance**

**Diagnostic**

**Prevention and Control**

**Stakeholder involvement**
Progressivity of each specific objective along the succession of the stages

<table>
<thead>
<tr>
<th>Stage 1 (Assessment)</th>
<th>Stage 2 (Control)</th>
<th>Stage 3 (Eradication)</th>
<th>Stage 4 (Post-eradication)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Diagnostic</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>To establish laboratory diagnostic capacity mainly based on ELISA methods</td>
<td>To strengthen the laboratory capacity through the introduction of bio-molecular methods for a better characterization of field strains</td>
<td>To further strengthen laboratory capacity to support eradication through the introduction of a laboratory quality assurance system</td>
<td>To maintain laboratory capacity as in the previous Stage and strengthen the differential diagnostic pathways. To start implementing PPRV sequestration activities</td>
</tr>
<tr>
<td><strong>Surveillance</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To implement monitoring activities and evaluate socio-economic impacts</td>
<td>To implement surveillance incorporating a response mechanism and risk mitigation measures</td>
<td>To strengthen surveillance incorporating an emergency response mechanism</td>
<td>To shift the goal of surveillance to proving the absence of PPR</td>
</tr>
</tbody>
</table>
Progressivity of each specific objective along the succession of the stages

<table>
<thead>
<tr>
<th>Prevention &amp; Control</th>
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<tr>
<td>No vaccination</td>
<td>No vaccination</td>
<td>Targeted vaccination</td>
<td>Either mass vaccination or vaccination of the remaining non vaccinated zone (depend on the result of Stage 2 and monitoring system in place)</td>
<td>No vaccination (or emergency vaccination with back in Stage 3)</td>
</tr>
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Focus on vaccination
# Progressivity of each specific objective along the succession of the stages

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<td>To improve the legal framework to support the implementation of control activities in targeted sectors</td>
<td>To further improve the legal framework to support prevention risk mitigation at population level, including the risk of PPR introduction from abroad, and possibly accommodate a compensation mechanism</td>
<td>To further improve the legal framework to accommodate more stringent border control policies; prepare additional legal provisions (such as containment) to implement in the context of an official PPR free status</td>
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<td></td>
<td></td>
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<td>To engage stakeholders for their agreement and concurrence on the PPR control and eradication objectives (notably in terms of transparency)</td>
<td>To actively involve stakeholders in increased reporting and in targeted sectors in the realisation of vaccination campaigns</td>
<td>To fully involve stakeholders in establishing procedures for accessing compensation funds in the event of PPR outbreaks</td>
<td>To keep Stakeholders fully vigilant and committed with regard to PPR</td>
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## Progressivity of each specific objective along the succession of the stages

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<thead>
<tr>
<th>Stages</th>
<th>Elements</th>
<th>Stage 1 (Assessment)</th>
<th>Stage 2 (Control)</th>
<th>Stage 3 (Eradication)</th>
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Capacity of VS considered as the ‘Enabling Environment’ (compliance with OIE Standards as well)

- OIE official recognition (chapters 14.7 and 1.6)
- Option to apply for OIE endorsed PPR control programme (chapters 14.7 and 1.6)

OIE standards on quality of VS

- (most) Level 3 of OIE PVS Critical Competences

12 CCs
27 CCs
29 CCs
33 CCs
Tools to be used

- **Generic tools:**
  OIE PVS Pathway, OIE standards, Diagnostics laboratories, Epidemiology Centers/teams, GLEWS, and their Regional and International Networks...

- **Specific PPR tools:** PMAT, PVE, Vaccines, regional vaccine banks, OIE PPR standards, diagnostics assays, PPR-GREN
Some key issues

- Vaccine delivery systems → Public and private veterinary professionals, CAHWs,
- Cost recovery → public-private good
- Incentives → OIE status and control plans; combination with other activities, etc
- Vaccines:
  - Protocols: one or two rounds of vaccinations per year
  - Combined vaccination
Research and knowledge development

- Socio economics
- Epidemiology
- Vaccine delivery systems
- Vaccines and vaccination
- Diagnostic tests

Photos: credit Adama Diallo
Regional approaches

- Coordination
- Laboratory Networks with Regional Leading laboratory
- Epidemiology Networks with Regional Leading Center
- Regional vaccine banks
- Regional Animal Health Centers

The regional networks are tools of paramount importance

- Regional Road Map meetings

Photo credit: Iran Vet Organisation
Regional approaches

- **Leading Laboratories**
  - Regional meeting every year for exchanges between national laboratory or epidemiology staff or for training purposes
  - Regional proficiency testing for PPR annually (ring trials)
  - Regional training of diagnostic methods, quality assurance, etc. on a regular basis
  - Provide reference diagnostics as needed
  - Request twinning project when needed

- **Leading Epidemiology Centers**
  - Undertake regional situation monitoring, risk analysis and disease intelligence studies
  - Provide training and expertise as needed by the countries belonging to the Network
International approaches

- OIE-FAO Reference laboratory Network
- International Epidemiology Network
- PPR Global Research and Expertise Network (PPR-GREN)

- Epidemiology Network
  - Organise data collection and management, risk analysis, disease intelligence, etc.
  - Organise international conferences in the field of PPR epidemiology
  - Support regional and national epidemiology networks and centres/teams through training, expertise work, etc.
International approaches

- Laboratory Network:
  - Proficiency testing for the regional leading laboratories annually (ring trials)
  - Support the regional leading laboratories in organising proficiency testing for the national laboratories and regional training sessions
  - International conferences in the field of PPR diagnostic methods
  - Conduct strain characterisation monitoring, research programmes,
  - Training sessions, etc.
### Timelines

#### Table 1
**Timeline of expected results: Global**

<table>
<thead>
<tr>
<th>Stage</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
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<td>4/5</td>
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<table>
<thead>
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<th>(%)</th>
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<tr>
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<td>96</td>
<td>96</td>
<td>100</td>
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#### Table 2
**Timeline of expected results: Africa**

<table>
<thead>
<tr>
<th>Region</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
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<tbody>
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<td>14</td>
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<table>
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<th>5</th>
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</tr>
<tr>
<td>100</td>
<td>55</td>
<td>100</td>
<td>100</td>
<td>100</td>
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</tbody>
</table>
Governance

GF-TADs principles and governing bodies

- Global and Regional Steering Committees
- PPR Specialized Working Group
- Role of Regional Organizations, e.g.:
  - AU-IBAR in Africa
  - SADC, ECOWAS, ASEAN, SAARC...

A Global Control and Eradication Programme (GCEP)

to be launched to implement the Global Strategy with a Joint FAO-OIE Secretariat and a Global Steering Committee
Monitoring and evaluation

- Comp 1. Evaluation of PPR control & eradication
  - PPR PMAT  
    see N. Leboucq and G. Ferrari presentation
  - Post Vaccination Evaluation  
    see S. Munstermann & all. presentation
  - (sub) regional PPR Roadmaps meetings that are designed according to FAO and OIE (sub)regions and Regional Economic Communities (RECs) with some epidemiological considerations

- Comp 2. Evaluation VS → OIE PVS evaluation tool  
  see N. Leboucq presentation

- Comp 3. Other SR diseases → evaluation according to the disease
The evaluation and country PPR stage ranking

The Regional Advisory Group (RAG)
Thank you
For your attention

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Photo credit: Iran Vet Organisation

Photo credit: Iran Vet Organisation