



**Regional Roadmap Meeting on PCP-FMD for
Southern African Development Community (SADC) Member States
Tanzania, September 11-13, 2017
Report**

Background

Foot and Mouth Disease (FMD) severely affects the production of livestock, disrupting regional and international trade in animals and animal products.

In order to reduce the FMD burden, the Food and Agriculture Organization of the United Nations (FAO) and the World Organisation for Animal Health (OIE) developed a 15-year Global FMD control Strategy in 2012. Since the Global FMD control Strategy was endorsed, several initiatives were identified to establish an enabling environment to make FMD control a feasible option. One of these initiatives is to encourage countries to progressively control FMD using the progressive control pathway for FMD (PCP-FMD) methodology at country level, with control efforts coordinated at regional level.

The meeting in Dar Es Salaam was the second FMD SADC Roadmap meeting held in the region, following the first one held in 2012. It was hosted by the Government of the Republic of Tanzania, and organized, under the umbrella of the FAO/OIE Global Framework for the progressive control of Transboundary Animal Diseases (GF-TADs), by its FMD Working Group, with the technical support from European Commission for Control of FMD (EuFMD). Participants from SADC Member states included Chief Veterinary Officers (CVOs) and laboratory and epidemiology experts engaged in FMD control programmes, ECTAD-Tanzania, RSU-SADC, the OIE Sub-Regional Representative, the FAO office in Tanzania, the Botswana Vaccine Institute and the OIE/FAO Reference Laboratory (WRL) of Pirbright. The agenda and list of participants are in Annexes 1 and 2.

Eleven of the 15 SADC countries attended the second Roadmap meeting, namely: Botswana, Democratic Republic of Congo, Lesotho, Malawi, Mauritius, Mozambique, South Africa, Swaziland, Tanzania, Zambia and Zimbabwe. Angola, Madagascar, Namibia and Seychelles did not attend. The region of Africa covered by these countries belongs to the virus pool 6 of FMD, which includes three serotypes (SAT 1, SAT 2 and SAT 3), whilst two additional serotypes, O and A, identified in northern Zambia and Tanzania, are considered a spill over from pool 4 to North and East. The virus isolated in Mauritius was identified as originating from Pool 2. Some SADC countries have been officially recognized as having an FMD free status without vaccination, either for the entire country or for one or several zones within the country. Over the past years these countries were able to maintain or recover their official FMD free status. However, some other areas in the sub-region still report FMD outbreaks, sporadically or endemically. The specific objectives of the meeting are described below.

Objectives:

1. To share information on FMD virus circulation within the Southern African FMDV ecosystem to support the implementation of the vaccination strategies, as well as experiences of successful control measures;
2. To gain understanding on the PCP-FMD principles and implementation;
3. To assess the progress on FMD control of SADC Member States;
4. To constitute a Regional Advisory Group to monitor and follow up the regional PCP-FMD roadmap;
5. To update the Roadmap for regional FMD control in SADC Member States until 2025, using the principles of the Progressive Control Pathway for FMD (PCP-FMD).

Expected outcomes:

1. Familiarize and update participants on the current regional FMD situation, main risk factors for disease spread and the PCP principles;
2. Identify FMD control gaps and share lessons learnt;
3. Advise on the use of appropriate vaccines;
4. Establish a Regional Advisory Group for monitoring the FMD PCP Roadmap in the SADC region;
5. Enhance the Epidemiology and Informatics Subcommittee and the Laboratory Subcommittee of SADC.

Report of day 1**Opening Remarks**

Dr Patrick Otto (FAO), Dr Letshwenyo (OIE) and Dr Makungu Selemani (CVO of Tanzania, representing the Republic of Tanzania) delivered the welcome remarks and opened the meeting.

Session 1. PCP-FMD

Dr Rosso (EuFMD) and Dr Paton (WRL & EuFMD) provided an overview on principles and implementation of Progressive Control Pathway (PCP) to assist endemic countries to progressively reduce the impact of FMD and the load of FMD virus (FMDV). Its methodology offers a structured 5-stages stepwise approach to FMD control and elimination. The endemic country starts with gaining a better epidemiological understanding of FMD (stage 1), gradually implementing risk-based control measures (stage 2), before evolving to stage 3, when the control measures are scaled up and country may apply for OIE endorsement of its FMD control programme aimed at eliminating FMDV circulation in at least one zone of the country or the entire country. The higher stages correspond to the country eventually applying for OIE recognition of the free status where vaccination is practised and FMD free status where vaccination is not practised. The FMD Global Control Strategy and the PCP-FMD include the fact that countries may not necessarily aim at eradicating FMD but rather try to reduce the economic losses that FMD may cause with cost effective investments in controlling and preventing clinical FMD.

Session 2. Global FMD situation and regional roadmap

Dr Metwally (FAO) gave an update on the implementation of the Global Strategy. Since the strategy was in place, it has been successfully implemented in 72 (including zones) of 79 affected countries where the majority of countries advanced to PCP stages 1 and 2 and few countries to stage 3 and 5 while limited countries remained in stage 0 during the first 5 years of the global strategy

Dr Mathlo (Botswana Veterinary Institute - BVI) and Dr Paton (WRL) described the regional and global FMD situation. Most of the outbreaks occurring recently in the SADC region involve SAT serotypes but some in Northern Zambia and Tanzania have involved spill over of serotypes O or A from pool 4. An outbreak in Mauritius involved a serotype O virus that probably originated from the Indian Sub-Continent (Pool 2). A moderate degree of vaccine match was reported for most isolates, indicating the importance of using high quality vaccines and monitoring their performance closely.

The terms of reference of the Regional Advisory Group (RAG) were presented by Dr Montabard (OIE), identifying the responsibilities of its members and the modalities for the constitution of the group.

Participants then elected the voting members of the RAG for the SADC region:

- Botswana: Dr Lethogile Modisa (Chair)
- Zambia: Dr Francis Mulenga, representing the CVO, Dr Y. Sinkala
- Mauritius: Dr Ram Ramjee
- Leaders of the SADC laboratory Sub-Committee (Zimbabwe)
- Leader of the SADC Epidemiology and Informatics Sub-Committee (Swaziland)

Non-voting RAG members:

- GF-TADs FMD WG members
- FAO and OIE regional representatives
- WRL and EuFMD representatives'

In the absence of the leaders of the here above mentioned Subcommittees, the existing regional laboratory and epidemiology networks, the CVOs of their countries acted on their behalf during the RAG meeting.

Participants requested that regional PVS experts be invited at the next roadmap meetings and participate in the RAG.

Session 3. SADC unique challenges and opportunities

Dr Weber-Vintzel and Dr Rosso presented the benefit to trade of FMD control. The different options to overcome the difficulties posed by sanitary barriers were discussed. The need for science-based assessment, for consistency and harmonisation, the principle of equivalence and the recognition of regionalisation were presented as key principles of the SPS agreement. The OIE standards and concepts supporting trade, including from infected countries, were discussed with highlights on the official status recognition for FMD freedom, the zoning and compartmentalisation concepts, and the commodity-based trade. The changes currently proposed to the FMD chapter to better accommodate Members' needs (and in particular African Members' needs) were mentioned and participant countries were invited to further contribute to the standard-setting process based on scientific information. Finally highlights were made on how the PCP could support the process for overcoming difficulties due to sanitary barriers.

A roundtable discussion on the management of FMD at the wildlife - domestic animal interface focussing on the challenges posed by buffalo as carriers and specifically on the fact that African buffalos pose a low risk of FMD transmission.

Session 4. Country reports

During day 1 and day2, the representatives of each country presented a report describing the FMD situation in their country, in accordance with a template provided before the meeting. Each country had a 10-15 minutes time slot, followed by a 5-minute question-and-answer session. Summaries of the information presented by the countries on day 1 and day 2 as well as the outcomes of their respective self-assessment questionnaires are provided in Annexes 3 and 5.

Country interviews

At the end of the two first days, the two interview panels, encompassed by the non-voting members of the RAG, interviewed representatives of Democratic Republic of Congo, Malawi, Mauritius, Mozambique, Tanzania, Zambia and Zimbabwe to discuss about their FMD situation, their plan for the coming years and the main identified gaps and challenges.

Report of day 2

RAG assessment's discussions

At the beginning of day2 and day3, the interview panels discussed the results of the interviews to the voting members of the RAG for their final assessment on country's PCP stages

Session 5. Cross-border coordination and for movement control

Dr Modisane (South Africa) and Dr Letshwenyo (OIE) introduced the topic of cross-border coordination and movement control and proposed to focus the group discussion on existing national and regional sanitary measures to address cross border issues; the challenges in implementing these measures and the existing arrangements for cross border coordination. This topic was highlighted as a major concern in the region despite the current regional efforts to address the challenges: bilateral/multilateral agreement, SADC coordination with the establishment of several Sub-Committees, joint border control and fence maintenance. Several gaps were also identified such as lack of harmonisation of disease surveillance and control strategies, formalisation of harmonisation of the cross-border movements.

The participants discussed and agreed on the specific recommendations for the region to overcome these gaps (Recommendations 6 and 7).

Session 6. Epidemiology and Informatics Subcommittee and for the Laboratory Subcommittee

The participants acknowledged the existence of the Laboratory Subcommittee, as well as ab Epidemiology and Informatics Subcommittee which are under the SADC Technical Livestock Committee. The discussion centred on the importance of Sub-Committees for the implementation of the existing FMD regional control strategy and the use of the PCP to enhance the regional effort. Key areas of progression identified during the discussion are included in the recommendations of the meeting (Recommendations 2 to 5).

Report of day 3

Session 7. Ensuring vaccine effectiveness and post-vaccination monitoring

Dr Metwally provided an overview on the content of the FAO-OIE FMD vaccination and post-vaccination monitoring (PVM) guidelines published in December 2016 (www.fao.org/3/a-i5975e.pdf). The guidelines aim to provide background information on FMD vaccine and its application in the field, and detailed procedures on how to measure the effectiveness of the vaccination program. The guidelines recommend that countries should request reference post-vaccinal sera from the manufacturers to be used as a reference indicating the protective titer for the PVM studies. The participants were interested in how to determine the vaccine coverage and the tests available for

PVM. This discussion led to the formulation of the recommendations 14-16 (Annex 4). Countries were encouraged to use the guidelines to design their PVM studies and to seek assistance from the FAO/OIE reference centers when necessary. A copy of the guidelines was distributed to each country.

Session 8. Roadmap assessment

The Chair of the SADC RAG presented the assessment on countries' PCP stages, conducted during the roadmap meeting. Annex 3 describes the RAG considerations and assessments of the SADC countries, interviewed on day 1 and day 2.

Session 9. Roadmap conclusion

Dr Rosso (EuFMD) presented possible opportunities for the development of e-learning and virtual networking to promote FMD and other TADs control. The presentation targeted the benefits related to the development of an e-learning hub for Southern African countries. This has been endorsed by the Technical Livestock Committee of SADC. The e-learning would be supported, first by the FAO sub-regional office, followed by the development of an e-learning hub by the SADC secretariat or other institutions. The e-learning courses on FMD and other TADS would be tailored to address the needs of the region.

Dr Montabord presented the provisional roadmap for SADC region, noting that the 2017 evaluation was, for the first time, based on the RAG assessment. This roadmap has been accepted by the participants as a starting point for the proposed evolution until 2025. Regional priorities and the summary of SADC's country reports are included in Annex 4 and 5, respectively.

Dr Otto (FAO) acknowledged the good participation of countries and institutions attending the meeting, with the request to continue working for the improvement of FMD control in the region.

Dr Weber-Vintzel on behalf of Dr Letshwenyo (OIE) highlighted the work already carried out by countries. She emphasised the need of developing realistic programmes for FMD control to further progress, knowing the existing challenges in particular with cross-border movements and wildlife. She also reminded the expertise available at regional and international level and invited the participants to make use of the existing supports from regional and international experts and institutions (Pirbright, EuFMD, OIE, FAO).

Annex 1



Food and Agriculture
Organization of the
United Nations



WORLD ORGANISATION
FOR ANIMAL HEALTH

2nd Regional Roadmap Meeting on PCP-FMD
Southern African Development Community (SADC) Member States
Dar Es Salaam, Tanzania - 11-13 September 2017
Meeting Venue: Hotel White Sands, Dar es Salaam

Provisional Agenda (final draft)

Day 1 - 11 September 2017

Time	Activities and Events	Chair/Facilitators/Rapporteur
08:00 – 09:00	Registration	All
09:00 – 09:45	Opening/Welcoming Remarks - SADC Secretariat - OIE - FAO - Ministry of Agriculture - - Objectives and adoption of the meeting agenda	Chair: P. Otto (FAO), M. Letshwenyo (OIE), <i>M. Letshwenyo (OIE)</i> <i>F. Kafeero (FAO-R)</i> <i>P. Otto (FAO)</i>
9:45 – 10:45	Session 1: PCP-FMD PCP Principles and implementation for FMD control	<i>D. Paton & F. Rosso (EuFMD)</i>
10:45 – 11:15	<i>Coffee</i>	
11:15 – 12:30	Session 2: Global FMD situation and regional roadmap - Update on the implementation of the global strategy (20 min) - Overview of global and regional FMD virus situation (45 min) including the virus distribution in SADC - Introduction to the RAG role and responsibilities (10 min)	Chair: A. Hayghaima (Tanzania) <i>S. Metwally (FAO)</i> <i>G. Matlho (BVI), F. Maree (OVI)</i> <i>D. Paton (EuFMD)</i> <i>D. Montabond (OIE)</i>
12:30 – 13:30	<i>Lunch</i>	

Time	Activities and Events	Chair/Facilitators/Rapporteur
13:30 – 14:30	RAG election (10 min)	<i>P. Otto (FAO)</i>
13:40 – 14:30	<p>Session 3: SADC unique challenges and opportunities</p> <ul style="list-style-type: none"> - Benefits of FMD control to trade (20') - Round table discussion on management of FMD in wildlife, domestic animal interface and ecological settings (20 min) - Group discussion (10 min) 	<p>Chair: U. Ushwokunze-Obatolu (Zimbabwe)</p> <p><i>L. Weber-Vintzel (OIE), F. Rosso (EuFMD)</i></p> <p><i>P. Otto</i></p> <p>All participants</p>
14:30 – 15:00	<i>Break</i>	
15:00 - 17:00	<p>Session 4 : Country reports</p> <ul style="list-style-type: none"> - 10 minutes presentation and 5 minutes questions and answers per country (Angola, Lesotho, Mozambique, South Africa, Swaziland, Zambia, Zimbabwe) - General discussion (10 min) 	Chair: L. Modisa (Botswana), P. Chikungwa (Malawi)
17:00	Close of Day 1	
17:00-18:00	<p>Closed sessions (Panel 1): interviews with countries to review their PCP-FMD questionnaires and control activities (Angola, Mozambique; 30 min per country)</p>	<p>Closed sessions (Panel 2): interviews with countries to review their PCP-FMD questionnaires and control activities (Zambia, Zimbabwe; 30 min per country)</p>

Day 2 – 12 September 2017

Time	Activities and Events	Chair/Facilitators/Speaker
08:00-08:45	RAG meeting	Closed session
08.45-09:00	Recap day 1. Setting the objective for day 2	<i>M. Letshwenyo (OIE)</i>
9:00-11:10	<p>Session 4 (Cont'd): Country reports</p> <ul style="list-style-type: none"> - 10 minute presentation and 5 minutes for questions and answers per country (Botswana, RDC, Madagascar, Malawi, Mauritius, Namibia, Seychelles, Tanzania) - General discussion (10 min) 	Chair: E. Natanel Dombolo (Angola), M. Molomo (Lesotho)
11:10-11:30	<i>Coffee-break</i>	
11:30 – 13:00	<p>Session 5: Cross border coordination for movement control</p> <ul style="list-style-type: none"> - Introduction to the group discussion: The risk of intraregional movement (10 min) - Group discussion (40 min) <ul style="list-style-type: none"> o Group 1 o Group 2 o Group 3 - Group reports (10 min per group) - Plenary discussion and regional priorities (25 min) 	<p>Chair: <i>B. Modisane (South Africa)</i></p> <p><i>M. Letshwenyo (OIE)</i></p>
13:00-14:00	<i>Lunch</i>	

Time	Activities and Events	Chair/Facilitators/Speaker
14:00-16:00	<p>Session 6: Action plan for the Epidemiology and Informatics Sub-Committee and for the Laboratory Sub-committee</p> <ul style="list-style-type: none"> - Introduction to group discussion (10 min) - Group discussion (60 min) <ul style="list-style-type: none"> o Group 1 o Group 2 o Group 3 - Group report (10 min per group) - Plenary discussion and regional priorities (30 min) 	<p>Chair: F. Andriamainty (Madagascar)</p> <p><i>F. Maree and G. Maltho (lab)</i> <i>TBE (epi)</i></p>
16:00	Close of day 2	
17:00-18:30	Closed sessions (Panel 1): interviews with countries to review their PCP-FMD questionnaires and control activities (Tanzania, RDC, Malawi; 30 min per country)	Closed sessions (Panel 2): interviews with countries to review their PCP-FMD questionnaires and control activities (Namibia, Mauritius; 30 min per country)

Day 3 - 13 September 2017

Time	Activities and Events	Chair/Facilitators/Speaker
8.00-8.45	<i>Closed Meeting WG – RAG</i>	
8.45- 09.00	Recap of day 2. Setting the objectives of day 3	<i>P. Otto (FAO)</i>
9:00-10:30	<p>Session 7: Ensuring vaccine effectiveness and post vaccination monitoring</p> <ul style="list-style-type: none"> - Introduction to group discussion (20 min) - Group discussion (40 min) <ul style="list-style-type: none"> o Group 1 o Group 2 o Group 3 - Group report (10 min per group) - Plenary discussion and regional priorities (10 min) 	<p>Chair: D. Meenowa (Mauritius)</p> <p><i>S. Metwally (FAO), D. Paton (EuFMD)</i></p>
10:30-11.00	<i>Coffee-break</i>	
11:00– 11:45	<p>Session 8: Roadmap assessment</p> <ul style="list-style-type: none"> - Presentation of roadmap based on the Regional Advisory Group assessment 	<p>Chair: F. Massago Cipriano (Mozambique)</p> <p>RAG chair</p>
11:45-12:45	<p>Session 9: Roadmap conclusion</p> <ul style="list-style-type: none"> - Virtual training - Roundtable discussion: Topic to be included in the next roadmap meeting - Regional Priorities and Communique - Proposal for the hosting of next meeting 	<p>Chair: RAG, A. Maseke (Namibia)</p> <p><i>F. Rosso (EuFMD)</i></p> <p><i>S. Kreindel (FAO), (D. Montabord) OIE</i></p>
12:45	Closing Remarks	<i>AU-IBAR, EU, FAO, OIE</i>



**2nd Regional Roadmap Meeting on PCP-FMD
 for Southern African Development Community (SADC) Member States
 Dar Es Salaam, Tanzania - 11-13 September 2017
 Meeting Venue: Hotel White Sands, Dar es Salaam**

Day 1 - 11 September 2017

- Country interviews (close session Day 1) – meeting rooms tbd

	Panel 1	Panel 2
1.	Angola	Zimbabwe
2.	Mozambique	Zambia

Day 2 - 12 September 2017

- Country interviews (close session Day 2) – meeting rooms tbd

	Panel 1	Panel 2
3.	DRC	Mauritius
4.	Malawi	Namibia
5.	Tanzania	

Countries that will not be interviewed:

1. South Africa
2. Lesotho
3. Botswana
4. Swaziland
5. Madagascar

Interview panelists:

Panel 1: Samia, Djahne, David and Patrick

Panel 2: Laure, Silvia, Fabrizio

Annex 2

List of Participants

Country/Organization	Short Title	First name	Last Name	Title
Angola	Mr	João Estevão	CAMALANGA	Chief Veterinary for the Province of Cunene
Botswana	Mr	Lethogile	MODISA	Director of Veterinary Services
Botswana	Mr	Mpho	PHOLOGOLO	FMD Diagnostics
Democratic Republic of Congo	Mr	Ezechiel	BUSHU MULINDA	Administrator of Veterinary Laboratory of Goma
Democratic Republic of Congo	Mr	Florent	NGAMUNA SUMBEY	Epidemiologist in charge of specific diseases working for official veterinary services
Lesotho	Mr	Marosi	MOLOMO	Director, Department of Livestock Services
Malawi	Mr	Gilson	NJUNGA	Head of the Central Veterinary Laboratory
Mauritius	Mr	Deodass	MEENOWA	Assistant Director, Division of Veterinary Services
Mauritius	Mr	Ram	RAMJEE	Officer in Charge Animal Health Laboratory and Senior Veterinary Officer
Mozambique	Ms	Florência	MASSANGO CIPRIANO	Head of Epidemiology Department
Mozambique	Mr	Zacarias	MASSICAME	Technician, National Directorate for Animal Health
South Africa	Mr	Botho Michael	MODISANE	South Africa/s OIE Delegate, CVO & Chief Director Animal Production and Health
South Africa	Ms	Marietta Alida	BRONKHORST	Deputy Director of Disease Control
Swaziland	Mr	Nhlanhla J.	SHONGWE	Deputy Director of Veterinary and Livestock Services
Tanzania	Mr	Abdu	HAYGHAIMO	Director, Veterinary Services

Tanzania	Mr	Michael Japhet	MADEGE	Acting Assistant Director for transboundary Animal Diseases
Zambia	Mr	Francis	MULENGA	Chief Veterinary Officer
Zambia	Mr	Frank	BANDA	Senior Research Scientist
Zimbabwe	Mr	Josphat	NYIKA	Director
Zimbabwe	Mr	Chenjerai	NJAGU	DVS Epidemiologist
FAO HQs	Ms	Samia	METWALLY	Senior Animal Health Officer
FAO HQs	Ms	Silvia	KREINDEL	Animal Health Officer
FAO SRO (SFS)	Mr	Patrick	OTTO	Animal Production and Health Officer
OIE HQ	Ms	Djahne	MONTABORD	Technical Advisor
OIE HQ	Ms	Laure	WEBER-VINTZEL	Head of Status Department - OIE
OIE SRO (Southern Africa)	Mr	Moetapele	LETSHWENYO	OIE Sub-Regional Representative for Southern Africa
EUFMD	Mr	David	PATON	Consultant, EUFMD/Veterinary Adviser, FMD World Reference Laboratory
EUFMD	Mr	Fabrizio	ROSSO	EuFMD Manager European neighbourhood FMD Risk Reduction work Programme
ILRI	Mr	Felisberto	MAUTE	Liaison Officer, ILRI-Mozambique Officer
Sokoine University of Agriculture (SUA)	Mr	Maulilio John	KIPANYULA	Principal, College of Veterinary Medicine and Biomedical Sciences
BVI	Mr	Mbaakanyi	MAZWIDUMA	Sales and Marketing Manager
BVI	Mr	George	MATLHO	General Manager

Annex 3

PCP-FMD Assessment of SADC Countries

RAG considerations

September 2017

Country	RAG proposal	Comments
Democratic Republic of Congo	1*	<ul style="list-style-type: none">• Big country with nine borders is representing a challenge to control FMD given the limited resources• FMD is one of the priority diseases among many other TADs• The East side of the country is considered the high risk area, however further evaluation is required to identify the hot spots• Socioeconomic impact study is not done• PVS evaluation was conducted in 2008 and gap analysis in 2011• Requested supported from AU-IBAR for FMD and PPR• Assistance is requested for expert support to design the serosurveillance plan and conduct the socioeconomic impact study and provide training to laboratory staff in Goma lab <p><u>Recommendation by the RAG</u></p> <ul style="list-style-type: none">→ Submit the risk assessment plan to the FMD WG by March 2018→ Continue to seek support from the continental and regional organizations and encourage government investment

Country	RAG proposal	Comments
Malawi	2*	<ul style="list-style-type: none"> • First outbreak recorded in 1957 - 22 outbreaks have been reported since then. • Two high risk areas identified near game parks: in the south close to a game park and more recently in the north at the border with Tanzania. Surveillance conducted in 2010 to identify the game parks presenting the higher risk by of 25 buffalo and 25 cattle from two national park's interface. The results indicated High Ab titers against SAT2 and 3 in both buffaloes and cattle, 3 out of 50 cattle tested positive for the FMDV by NSP test. All the 25 buffaloes and 50 cattle in Vwaza and Liwonde Game Reserves (north) were negative on serological test. • Working Hypothesis: domestic cattle infected from contact with buffaloes which are the subclinical carriers of the circulating virus. The cattle surrounding the national park share common watering and grazing points with buffaloes during droughts • Currently, samples to conduct serologic testing are collected to define the magnitude of the outbreaks and identify the zone in which ring vaccination should be conducted. • PVS conducted in 2007 and 2015. The 2015 is not available (pending feedback from the country). • FMD Strategies include: emergency vaccination in the face of an outbreak, restriction of animal movements from the southern risk zone to the rest of the country, and to be implemented, routine vaccination in the high risk areas using a trivalent vaccine SAT 1, SAT 2 and SAT 3 targeting twice a year vaccination, strengthening FMD surveillance. • An FMD Control strategy is currently implemented but not written. Malawi has an FMD emergency preparedness plan and work on a contingency plan addressing current risk factors. <p><u>Recommendation by the RAG</u></p> <p>→ Stage 2* with the condition to submit the risk-based strategic plan to the FMD WG within 6 months for the RAG final assessment</p>

Country	RAG proposal	Comments
Mauritius	Official status suspended following FMD incursion	<ul style="list-style-type: none"> • 3rd vaccination campaign after incursion; no more clinical cases. • Animal health act being currently revised. • Plan to recover freedom but need for general guidance on how to proceed (transparency, surveillance, early warning system, movement control & traceability) • Current serosurvey shows NSP positive in goats • Take the opportunity of the recent incursion and its considerable impact to <ul style="list-style-type: none"> - maintain public, politics and vet awareness to FMD and other TADs incursion, - implement a movement control system between Rodrigues and Mauritius and in Mauritius (internal animal movements). <p><u>Recommendation by the RAG</u></p> <ul style="list-style-type: none"> → no PCP assessment per-se but support Mauritius plan to recover FMD free status with the above-mentioned recommendations → to further investigate the seropositive animals (current serosurvey), in accordance with article 8.8.42 of the OIE Terrestrial Code and to seek guidance from OIE/FAO Reference Laboratories. → to carefully consider the design of the survey to ensure that an appropriate level of confidence is reached when demonstrating absence of FMDV infection. Request for support from OIE/FAO Reference Laboratories if needed.

Country	RAG proposal	Comments
Mozambique	2*	<ul style="list-style-type: none"> • Long term goal to achieve free zones without vaccination in the South bordering South Africa and Swaziland and in the Centre • Biannual vaccination is practiced with unpurified SAT1 and SAT2 in high risk areas, and ring vaccination in response to outbreaks • There was no formal socio-economic analysis conducted • NSP serosurvey in outbreak areas of Maputo and Gaza provinces confirmed a high seroprevalence. No systematic serosurvey in low risk areas • Last PVS mission in 2008, Gap analysis in 2009, the country prepares a Veterinary legislation Support Programme • Gaps are laboratory capacity (including for PVM), animal identification and traceability systems, advocacy and training on field activities • Requested support: diagnostic bench training in country, diagnostic kits and reagents, and training on biosecurity and PCP <p><u>Recommendation by the RAG</u></p> <p>→ 2 provisional and submit RBSP to the FMD WG by March 2018</p>

Country	RAG proposal	Comments
Tanzania	2*	<ul style="list-style-type: none"> • Information is available on circulating virus strains, risk hotspots and socioeconomic impacts. Some updating of prevalence distribution is needed • A draft strategic FMD control plan needs to incorporate required elements of risk-based strategy and be signed off • New control measures implemented include an identification and traceability system and a new order to enforce removal of livestock from Game Parks • Ranches established as future trading compartments have remained FMD-free <p>Recommendation by the RAG → Stage 2* with the condition to submit the risk-based strategic plan to the FMD WG within 6 months for the RAG final assessment</p>

Country	RAG proposal	Comments
Zambia	2	<ul style="list-style-type: none"> • 3 high risk areas have been identified and actions taken to control FMD impact there. Mainly vaccination but movement control has also been implemented in one of the high risk area. Risks linked to game parks and to a border from which a lot of cattle movement happens. • Vaccine used depends on the area: SAT1 & SAT2 / SAT 1, 2 & 3 for the areas close to the game parks and O, A, SAT1 & SAT2 for the border area. Non-purified vaccine. • Surveillance mainly relies on passive surveillance with farmers and a network of veterinarian and vet assistant covering the whole territory. No sero-survey conducted. Support currently support from WRL for a methodology allowing the estimation of FMD prevalence despite the NSP induced by non-purified vaccine. • “Green zone” identified in the centre of the country. No clinical outbreaks reported for years and risk from the neighbouring country considered low. Recommendation to seek regional and international expertise for zoning approach. • Performance of the VS has improved since the last PVS evaluation (2009), and consideration is given to a follow-up PVS mission to highlight this progression and focus on the next steps to further improve. • Target PCP Stage 3 in 2021 and Stage 4 in 2025. Aware of the challenges to move to Stage 3. • Existing national strategy based on the risk. • Request from some training in the lab diagnostic, in PCR in particular. <p><u>Recommendation by the RAG</u></p> <ul style="list-style-type: none"> → PCP Stage 2, with the condition to provide the risk-based Strategy within 1 month and recommendation to further explore with WRL a way to assess FMD prevalence → Ensure that the budget for each activity and the technical assistance plan are included in the National Strategy

Country	RAG proposal	Comments
Zimbabwe	2*	<ul style="list-style-type: none"> • Majority of the outbreaks SAT2 • Response to the outbreaks: quarantine, emergency vaccination, lab testing, public awareness campaigns • Non-purified vaccine • Sero-surveillance in place (Solid phase Elisa testing - limited NSP testing - results inconclusive) • Conducted socioeconomic study, stakeholders well involved. • Game parks in three regions (north-west, south west and south east). The game parks in the south are bordered by an area where vaccination campaigns are conducted three times per year and by a high surveillance area (without vaccination). In the northern area the game park is separated from the rest of the country by natural barriers, no vaccination is in place. • Movement of live animals in the country have been reduced by the creation of marketing points and slaughterhouses in the high risk area. • A risk based strategic plan has been implemented but is not yet endorsed by the government. <p><u>Recommendation by the RAG</u></p> <p>→ Stage 2* with the condition to submit the risk-based strategic plan to the FMD WG within 6 months for the RAG final assessment</p>

FMD Progressive Control Pathway of SADC Countries September 2017

Provisional roadmap for 2011-2025, based on self-assessment questionnaires

Countries	Validated Stages			Provisional Stages (not validated)							
	2011	2012 to 2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Angola	1										
** Botswana			3	3	4	4	4	4	4	4	4
Dem. Rep. Congo	1		1*	1	1	1	2	2	2	3	3
Lesotho (officially free without vaccination)											
Madagascar ¹ (officially free without vaccination)											
Malawi	3		2*	3	3	3	4	4	4	5	5
Mauritius (OIE status suspended)											
Mozambique	2		2*	3	3	4	4	4	5	5	5
** Namibia ¹											
Seychelles ¹	5		5	5	5	5	5	5	5	5	5
** South Africa											
Swaziland (officially free without vaccination)											
Tanzania	1		2*	2	2	2	3	3	3	3	3
Zambia	2		2	2	2	2	3	3	3	3	4
Zimbabwe	1		2*	2	2	2	2	3	4	5	5

Legend

* Provisional status given to the country (countries has six months to provide additional information including Control Plan; if no, they will be downgraded to the previous stage)

** Country with FMD free zone without vaccination

¹ Country did not attend the meeting in Dar Es Salaam in 2017



Annex 4

Regional Recommendations

Considering

- The adoption of the FAO-OIE Global Strategy for the control of FMD (Bangkok, June 2012) with its three inter-related Components respectively on the control of FMD, the reinforcement of Veterinary Services and the combined control of FMD with other animal diseases;
- The importance of controlling FMD at regional level;
- The importance of having a Regional Advisory Group (RAG) for SADC to review the progressive control pathway (PCP)- FMD stage assessments of countries during the PCP-FMD regional roadmap meetings but also to support the implementation of the regional strategy by performing activities as described in the Terms of Reference of the RAG, such as guiding FMD training and capacity development activities and advocating at regional level with countries, private sector and donors the importance to invest in FMD control and prevention;
- The existence of a Laboratory Sub-Committee and an Epidemiology and Informatics Sub-Committee under the SADC Livestock Technical Committee, and the importance of these two Sub-Committee to support the PCP regional effort.

Eleven participating countries: Botswana, Democratic Republic of Congo, Lesotho, Malawi, Mauritius, Mozambique, South Africa, Swaziland, Tanzania, Zambia and Zimbabwe agree:

- To elect the CVOs of Botswana, Zambia, and Mauritius as voting members of the RAG for the SADC region, for a 3-year term. To nominate the CVO of Botswana as the Chair of the RAG.
- To nominate the leaders of the Epidemiology and Informatics Sub-Committee and Laboratory Sub-Committee currently in place, under SADC Livestock Technical Committee, as voting Members of the RAG.
- To include, whenever appropriate, existing PCP and PVS experts from the region, and the SADC secretariat as non-voting members of the RAG.
- To include members of GF-TADs FMD WG and representatives from the OIE and FAO Sub-regional representations for Southern Africa as non-voting members
- To use the assessments of the regional FMD Roadmap Meeting (Dar es Salam, 2017) as a basis to establish the provisional Roadmap for the SADC countries, 2017-2025.

The countries identified the following areas of priorities for a better implementation of the Global FMD Control Strategy at regional level:

1. To continue progressing along the Roadmap towards the vision of 'Absence of Clinical FMD' by 2025, based on the guidelines and principles of the progressive control of FMD (PCP-FMD) and the need for competent Veterinary Services;
2. To implement the existing regional FMD control strategy;
3. To promote/encourage the use of the PCP as a relevant driving tool for FMD control in endemic countries, when drafting or reviewing their national FMD control strategy;
4. To regularly monitor the implementation of the national FMD control strategies and align with the regional FMD control strategy;
5. To support and strengthen the SADC Livestock Technical Committee and its Sub-Committees in order to prioritize the work on the coordination and harmonisation of cross border movement of animals and their products and on the coordination of other activities in trans-frontier areas, such as surveillance and vaccinations;
6. Considering the risk posed by both legal and illegal movements, to build capacities to effectively implement the international standards and guidelines on the movement of animals and animal products;
7. To identify the relevant information that should be shared among the Members of the SADC subcommittee (i.e. vaccine and vaccination campaigns, circulating strains etc.);
8. To use these relevant information to improve response and coordination between neighbouring countries and trading partners;
9. To use existing tools to assess laboratories, when appropriate, such as the FAO laboratory mapping tool (LMT) and OIE PVS Pathway Laboratory Missions. The existing LMT could be adapted and circulated among the national focal points of SADC Laboratory Sub-Committee and analysed by the Laboratory Sub-Committee. The results from the questionnaires could be used to address gaps, design PTS, building capacity and provide appropriate trainings;
10. To have regional reference laboratories leading technical activities, including PTS and training;
11. To evaluate alternatives to Liquid Phase Blocking Elisa for Post Vaccination Monitoring (PVM) serology;
12. The GF-TADs FMD Working Group and EuFMD to provide training on the PCP-FMD and on the development of risk-based strategic plans;
13. To make better use of the webinars with support of the Eu-FMD complementary to physical meetings. Additionally, the use of social media might be considered;

14. To consider appointing a PCP-FMD point of contact from each Member State;
15. To conduct a regional train the trainer workshop on FMD vaccination and PVM guidelines and assist in the design and evaluations of the vaccination strategy and PVM; and
16. To improve lab capability to conduct the required tests for PVM.

Proposal for hosting the next meeting: Mauritius and Malawi will explore possibilities to organize the next meeting.

Annex 5 - Summary of contents of country reports

Botswana**



PCP-FMD Stage

2011

2017

OIE PVS evaluation

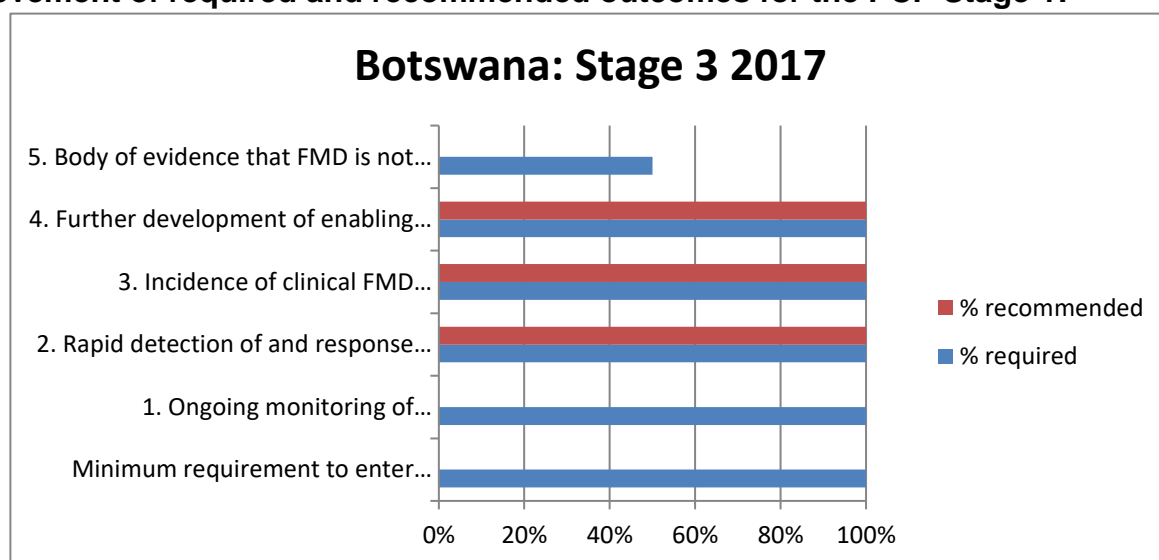
2010

Provisional Roadmap 2017

Countries	Validated Stages			Provisional Stages (not validated)							
	2011	2012 to 2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
** Botswana			3	3	4	4	4	4	4	4	4

**Country having OIE recognition of an FMD free zone without vaccination

Achievement of required and recommended outcomes for the PCP Stage 1:



FMD outbreaks & surveillance:

- Presentation focused on the non-recognised zones
- Passive surveillance: clinical inspection for animal movement permit, regular inspection of animals by field extension officers
- Active surveillance: annual serosurveys, in the free zones + in the vaccination zones, including in buffalo (not frequent as buffalo are considered infected by default)
- Last outbreak in 2014: SAT 1 in zone 2c notified by the farmer that had missed routine vaccination in August

FMD Control Measures:

- Risk hotspots: unvaccinated cattle, contact with wild species, in particular buffalo, destruction of fences (elephants and people)
- Control measures: movement control, control of wildlife reservoir, strategic vaccination, biosecurity measures, disease surveillance, public education and zoning

Other notes and priorities for the future:

- Laboratory: 2 qualified labs including the OIE Ref Lab
- PVS indicating that the VS have the capacity to maintain freedom and manage the national strategy.
- Regional approach seems as a key point, including in the time of an outbreak
- Willingness to move all the vaccination zones into stage 4 (freedom with vaccination) in 2019 to create a protection zone for the OIE recognised FMD free zones without vaccination.
- Plan to send the official control programme to the OIE in 2018 for endorsement
- CBT from vaccinated areas

Democratic Republic of Congo



PCP-FMD Stage

2011 1

2017 1*

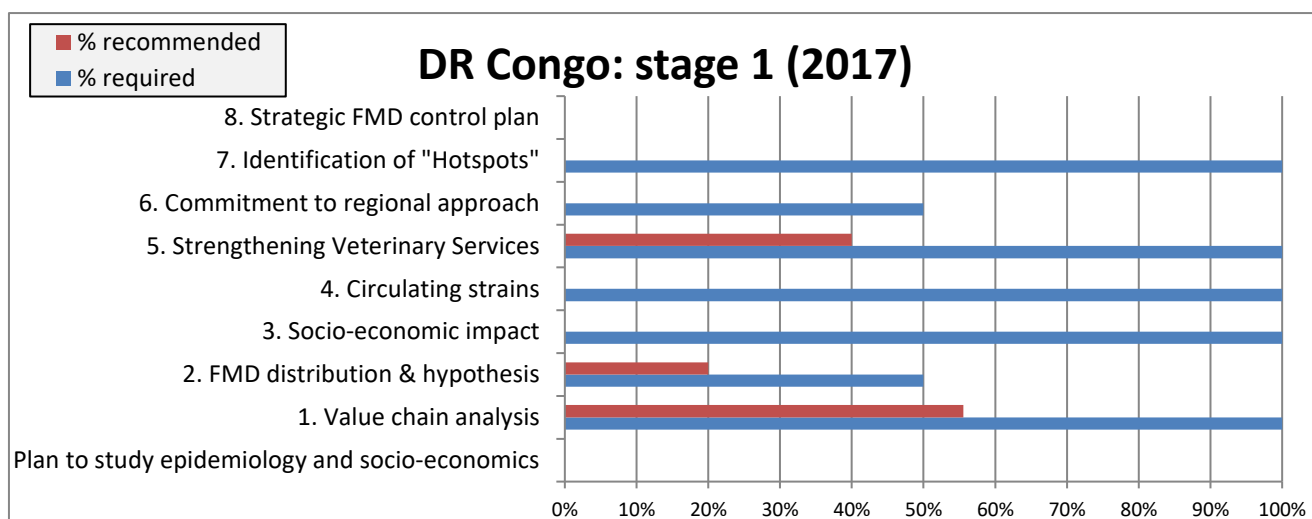
OIE PVS evaluation

2007

Provisional Roadmap 2017

Countries	Validated Stages			Provisional Stages (not validated)							
	2011	2012 to 2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Dem. Rep. Congo	1		1*	1	1	1	2	2	2	3	3

Achievement of required and recommended outcomes for the PCP Stage 1:



FMD outbreaks & surveillance:

- Passive surveillance. Sample collection. Training needs on disease surveillance sample collection
- Active surveillance: National lab.
- Virus characterised with support from international labs.
- 24 outbreaks in the past 2 years, in South Kivu (border with Tanzania)

FMD Control Measures:

- Disease located in the eastern part of the country
- From Burundi, Tanzania, as well as Rwanda (nomadism and imports)
- Vaccination: campaign in the 3 eastern provinces: in 2012 (project funded) and 2013 (government supported 71,5% coverage)
- Movement control in endemic areas

Other notes and priorities for the future:

- No socio economic studies
- PVS in 2008 indicated low performance. No much progress since then.
- Will coordinate with the PPR activities for which a national sub-network has been build. In the past vaccination campaign for FMD and CBPP.
- Plan to develop a national strategy for control of priority diseases (including FMD)
- Awareness campaign organised
- Plan Stage 2 in 2021

Malawi



PCP-FMD Stage

2011 3

2017 2*

OIE PVS evaluation

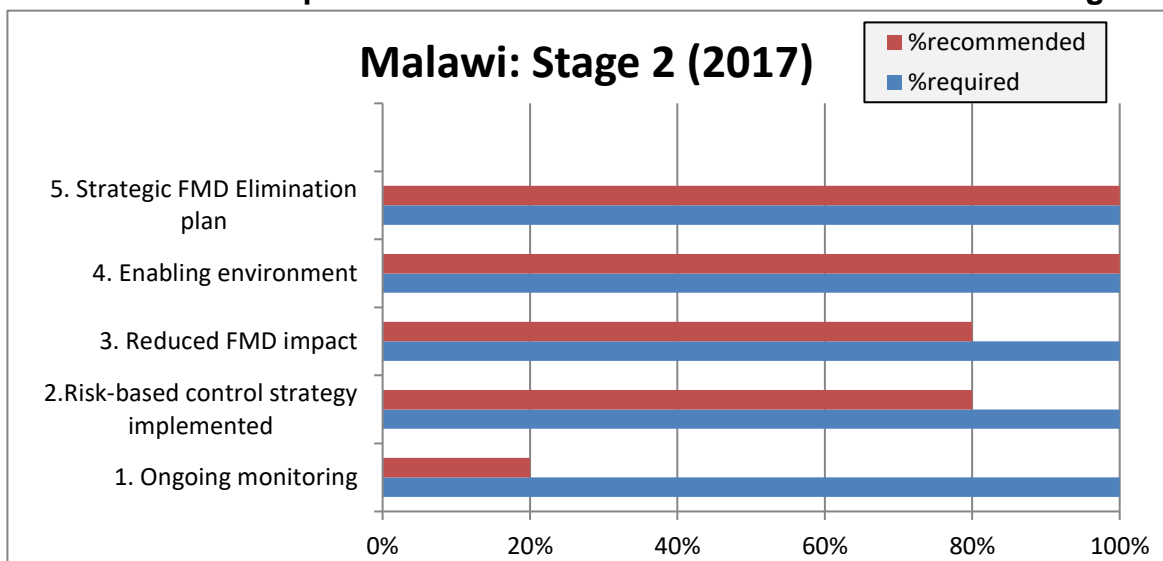
2007 and 2015

Provisional Roadmap 2017

Countries	Validated Stages			Provisional Stages (not validated)							
	2011	2012 to 2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Malawi	3		2*	3	3	3	4	4	4	5	5

* Provisional status given to the country (countries has six months to provide additional information including Control Plan; if no, they will be downgraded to the previous stage)

Achievement of required and recommended outcomes for the PCP Stage 2:



FMD outbreaks & surveillance:

- 22 outbreaks since 1957
- Recent outbreak in 2017 in Shire Valley (>50% NSP-seropositive) – samples sent to BVI – 3 dip tanks, 26 kraals
- Clinical cases only in cattle but antibodies against A in small ruminant in the 70's.
- Surveillance conducted in 2010 to identify the game parks presenting the higher risk by of 25 buffalo and 25 cattle from two national park's interface. Only the animals in the South were seropositive
- cattle surrounding the national park being infected from wild buffalo when entering the game park for watering and grazing during droughts and then domestic-to-domestic transmission

FMD Control Measures:

- Risk hotspots identified at the southern border (buffalo) and northern border (type O likely introduced from Tanzania)
- 3 zones: the central part self-declared historically free without vaccination. Sporadic in the two other regions (North and South)
- emergency vaccination in the face of an outbreak,
- restriction of animal movements, including road blocks from the southern risk zone to the rest of the country
- routine biannual vaccination planned in the near future in the southern high risk area using a trivalent vaccine SAT 1, SAT 2 and SAT 3
- Emergency plan that needs to be translated into an effective contingency plan, based on current risk factors

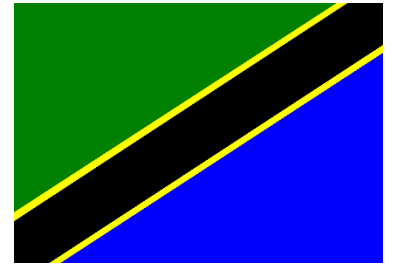
Other notes and priorities for the future:

- National strategic plan is not written but a strategy is being followed and reports of surveillance are available to follow its implementation.
- Synergies with other diseases (no TADs, rather LSD) + education and surveillance network.

Recommendations:

- The confidentiality status of the PVS report conducted in 2015 should be clarified
- Provisional Stage 2 provided a risk-based strategic plan is sent to the FMD Working Group within 6 months.

Tanzania



PCP-FMD Stage

2011 1

2017 2*

OIE PVS evaluation

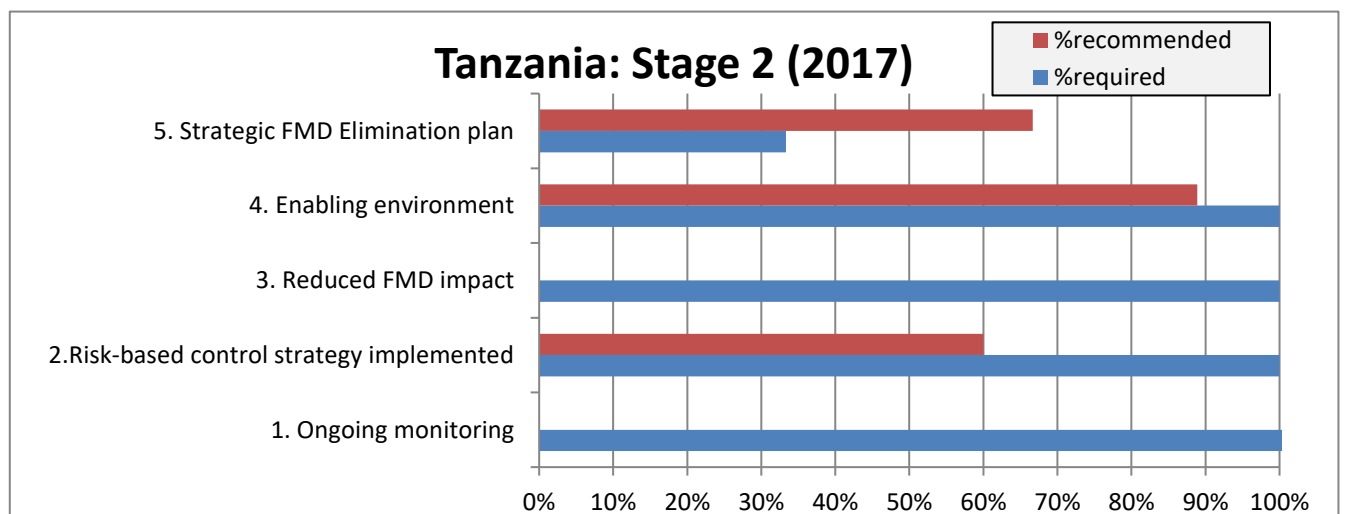
2016

Provisional Roadmap 2017

Countries	Validated Stages			Provisional Stages (not validated)							
	2011	2012 to 2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Tanzania	1		2*	2	2	2	3	3	3	3	3

* indicates a provisional status given to the countries (countries had 6 months to provide additional information including a Risk Based Strategic Plan - if not, they will be downgraded to the previous stage)

Achievement of required and recommended outcomes for the PCP Stage 2:



FMD outbreaks & surveillance:

- 28M BV, 17M CP, 5M OV, 2M pigs
- 30% of the land dedicated to conservation → 240000 African buffalo
- FMD endemic in Tanzania. Mortality in adult < 5% - up to 50% in young
- Serotypes A, O, SAT1 and SAT2
- 14 outbreaks in 2017, 3 were investigated. Sequencing and TVLA
- Have worked to address the identified gaps

FMD Control Measures:

- Short lasting post-vaccination immunity
- Risk hotspots: mainly at the borders
- Ring vaccination
- Mandatory livestock identification in the whole country currently implemented - new order to enforce removal of livestock from Game Parks
- Cross border control between Tanzania and Kenya and with Uganda (TBC) MoU signed.
- Ranches established as future trading compartments have remained FMD-free

Other notes and priorities for the future:

- Draft FMD control strategy
- Consideration for free zone not applicable to the national context → rather CBT and compartment
- Move to Stage 3 in 2020. And still in Stage 3 by 2025

Zambia



PCP-FMD Stage

2011

2017 2

OIE PVS evaluation

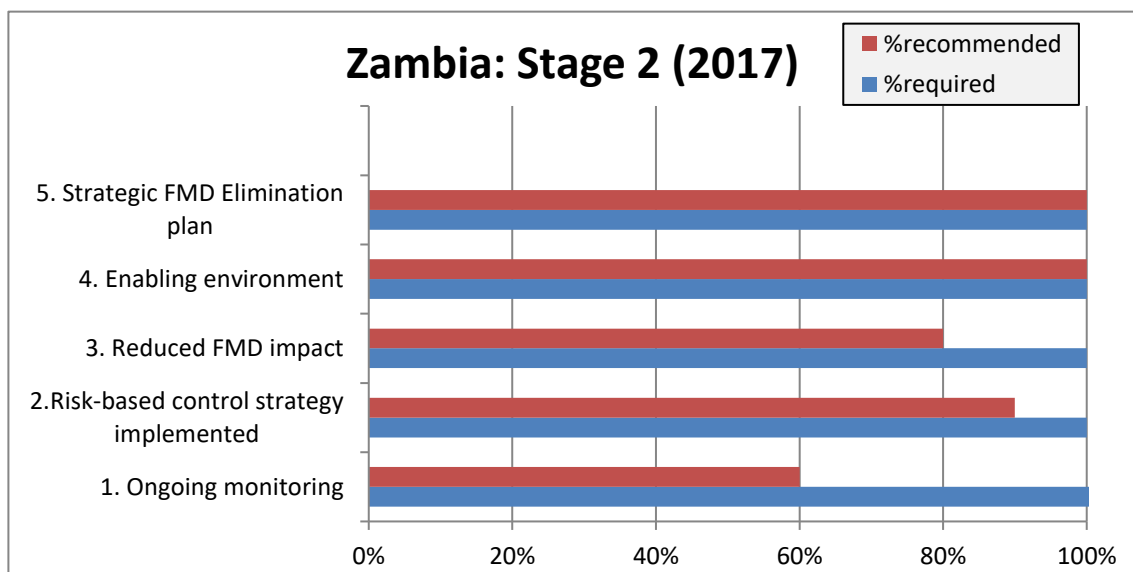
2009

Provisional Roadmap 2017

Countries	Validated Stages			Provisional Stages (not validated)							
	2011	2012 to 2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Zambia	2		2	2	2	2	3	3	3	3	4

* Provisional status given to the country (countries has six months to provide additional information including Control Plan; if no, they will be downgraded to the previous stage)

Achievement of required and recommended outcomes for the PCP Stage 2:



FMD outbreaks & surveillance:

- 2 outbreaks reported in 2017 - SAT 1&3
- Surveillance activities include active and passive surveillance. Farmers report outbreaks to veterinary staff and there are routine inspections by veterinary assistants. There are investigations taking place for clinical presentation of disease - Identification of the source of outbreaks have identified re-emergence of disease, and introduction cross border. Spread of disease by movement of animals

FMD Control Measures:

- 3 high risk areas have been identified and actions taken to control FMD impact there. Vaccination and movement control have been implemented in one of the high risk area. Risks linked to game parks and to a border from which a lot of cattle movement happens.
- Vaccine used depends on the area: SAT1 & SAT2 / SAT 1, 2 & 3 for the areas close to the game parks and O, A, SAT1 & SAT2 for the border area.
- Non-purified vaccine.
- "Green zone" identified in the centre of the country. No clinical outbreaks reported for years and risk from the neighbouring country considered low.
- National Strategy is based on the risk

Other notes and priorities for the future:

- Request from some training in the lab diagnostic, in PCR in particular.
- Target PCP Stage 3 in 2021 and Stage 4 in 2025. Aware of the challenges to move to Stage 3
- A risk based strategic plan has been implemented but is not yet endorsed by the government.

Zimbabwe



PCP-FMD Stage

2011 1

2017 2*

OIE PVS evaluation

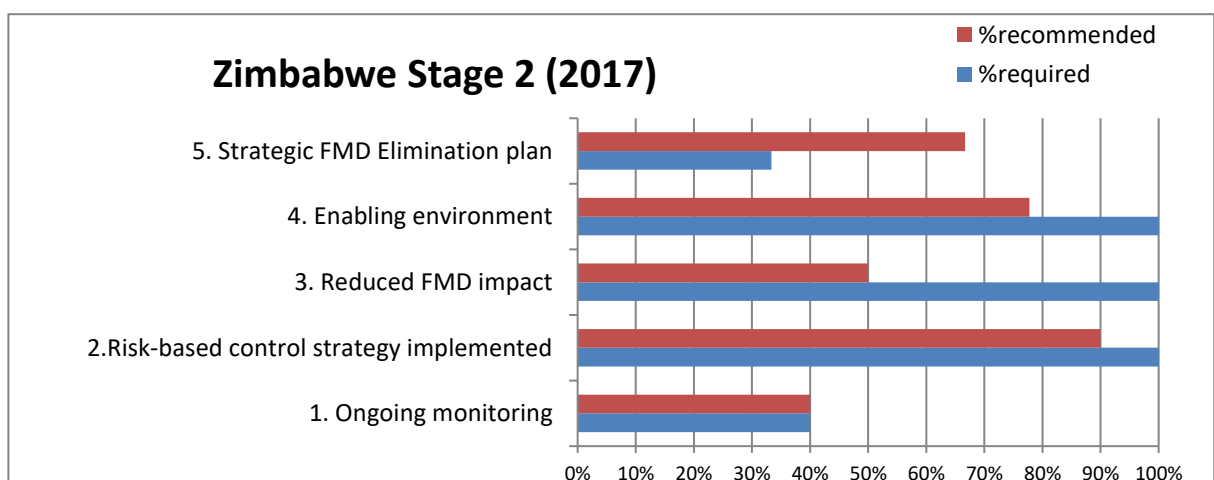
2009

Provisional Roadmap 2017

Countries	Validated Stages			Provisional Stages (not validated)							
	2011	2012 to 2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Zimbabwe	1		2*	2	2	2	2	3	4	5	5

* Provisional status given to the country (countries has six months to provide additional information including Control Plan; if no, they will be downgraded to the previous stage)

Achievement of required and recommended outcomes for the PCP Stage 2:



FMD outbreaks & surveillance:

- 90% of the outbreaks are 2 also SAT 1&3
- 10 samples submitted to ref lab since 2015
- Passive surveillance with routine inspection of cattle during dipping sessions + scheduled farm inspection
- Active surveillance programme
- Limited NSP testing – results inconclusive
- Current active outbreak in the south east

FMD Control Measures:

- Risk hotspots: bordering national parks, linked to the observation of buffalo-cattle overlap
- The game parks in the south are bordered by an area where vaccination campaigns are conducted three times per year and by a high surveillance area (without vaccination).
- In the northern area the game park is separated from the rest of the country by natural barriers, no vaccination is in place.
- Response to the outbreaks: quarantine, emergency vaccination, lab testing, public awareness campaigns
- Non-purified vaccine
- Movement of live animals in the country have been reduced by the creation of marketing points and slaughterhouses in the high risk area.

Other notes and priorities for the future:

- 90% of cattle in communal sector
- Socio-economic impact assessment with extensive stakeholder participation
- Improvement of the VS since the last PVS in 2009.
- Synergies with other tads, mainly at lab level.
- Request for support at lab level
- PCP3: 2022.
- Regional support and solidarity: 5 year joint vaccination programme along the border with Botswana with donation of vaccine from Botswana

