

*Amman, Jordan*

*15-19 October 2017*

**4<sup>th</sup> Regional FMD Roadmap Meeting  
Middle East**

**(back-to-back to the 2nd PPR Roadmap meeting)**

**Report**



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



## **Vision for the Middle East Roadmap for FMD Control**

Regional cooperation among Middle East countries for the progressive control of FMD  
leading towards freedom of clinical disease by 2021  
for regional economic development, food security, and poverty alleviation.

# Acknowledgements

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FAO and the OIE express their sincere thanks to the Government of Jordan, and its Veterinary Services, for the logistical and financial support provided which contributed to the success of the event.

FAO and the OIE also acknowledge with much gratitude the valuable and continuous technical support of EuFMD experts before, during and in-between meetings, as well as of the experts from the Network of OIE/FAO Reference Laboratories for FMD (Pirbright Institute and ANSES).

Finally, FAO and the OIE would like to express their deep appreciation to all countries of the Middle East FMD Roadmap for their commitment and contributions over the years.

# Abbreviations

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<b>ANSES</b>	French Agency for Food, Environmental and Occupational Health & Safety
<b>CIRAD</b>	Centre International de Recherche Agronomique pour le Développement
<b>CVO</b>	Chief Veterinary Officer
<b>EUFMD</b>	European Commission for the Control of Foot-And-Mouth Disease (an Inter-Governmental Commission based in the FAO)
<b>FAO</b>	Food And Agriculture Organisation of the United Nations
<b>FMD</b>	Foot and mouth disease
<b>FMD WG</b>	FMD Working Group
<b>GF-TADs</b>	Global Framework for the Progressive Control of Transboundary Animal Diseases
<b>ISIS</b>	Islamic State of Iraq and Syria
<b>NSP</b>	Non Structural Proteins
<b>OIE</b>	World Organisation for Animal Health
<b>PCP</b>	Progressive Control Pathway
<b>PMAT</b>	PPR Monitoring and Assessment Tool
<b>PPR</b>	Peste des petits ruminants
<b>PVM</b>	Post-Vaccination Monitoring
<b>PVS</b>	Performance of Veterinary Services
<b>RAG</b>	Regional Advisory Group
<b>RBSP</b>	Risk Based Strategic Plan
<b>SAT2</b>	Southern African Territories Type 2 Strain of FMD
<b>TAD</b>	Transboundary Animal Diseases
<b>UAE</b>	United Arab Emirates
<b>WRL-FMD</b>	The World Reference Laboratory for Foot and Mouth Disease, Pirbright Institute, UK

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# Meeting report

## Background

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The 4th Regional Foot and Mouth Disease (FMD) Middle East Roadmap Meeting took place in Amman, Jordan, from 17- to 19 October 2017, back-to-back to the 2nd Peste des Petits Ruminants (PPR) Roadmap Meeting. It was organised by FAO and the OIE under the umbrella of their joint mechanism: the Global Framework for the Progressive Control of Transboundary Animal Diseases (GF-TADs), in collaboration with the Ministry of Agriculture of the Hashemite Kingdom of Jordan and with technical support from the European Commission for the control of FMD (EuFMD).

The two diseases are major transboundary animal diseases for which global strategies were developed and endorsed by the international community in 2012 and 2015, respectively. The specific objective of the global FMD control strategy is to improve FMD control in regions where the disease is still endemic, thereby protecting the advanced animal disease control status in other regions of the world. The goal of the PPR global strategy is to eradicate PPR by 2030. These two Strategies require a globally concerted effort to support both national and regional actions to control and subsequently eradicate the diseases, also highlighting the need to work on strengthening the capacities of national Veterinary Services and, when possible, generate wide-ranging benefits by combining measures to prevent and control other animal diseases.

The meeting was officially opened by His Excellency Eng. Khaled Al Huneifat, Minister of Agriculture of the Hashemite Kingdom of Jordan, following remarks from Dr Sami Aledwen, General Secretary Assistant of Livestock and OIE Delegate for Jordan, Dr Ghazi Yehia, OIE Regional Representative for Middle East and Dr Friederike Mayen, Senior Livestock Development officer, on behalf of the FAO Representative in Jordan.

The meeting brought together Chief Veterinary Officers (CVOs), laboratory and epidemiologists from Bahrain, Egypt, Iraq, Jordan, Kuwait, Lebanon, Palestine, Saudi Arabia, Syria, United Arab Emirates and Yemen as well as representatives from Turkey (which belongs to Central Asia PPR Roadmap/ West Eurasia FMD Roadmap), EU-FMD, the WRLFMD, ANSES, Boehringer Ingelheim, FAO and OIE.

The FMD meeting's objectives were to:

1. Review and assess countries' progress in respect to the vision identified by the region;
2. Share information on FMD virus circulation within the regional ecosystem to assist in planning of vaccination and other preventive measures;
3. Provide technical training in areas identified by the region as priorities; and
4. Encourage regional discussion on important FMD-related topics and areas of regional priority/challenges, with the purpose of identifying possible ways for improvements and planning for the coming months.

The agenda and list of participants of the meeting are respectively attached in Annex 1 and 2.

## SESSION FMD 1: Setting the scene

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Dr Laure Weber-Vintzel (OIE) presented the objectives of the FMD roadmap meeting, highlighting the FMD-specific topics, as well as the synergising topics with the PPR roadmap such as discussions on

cross-border coordination and the regional epidemiology and laboratory networks. She also encouraged the participants to take the opportunity of the presence in the room of almost all the countries of the region, FMD experts, public and private partners, OIE, FAO and EuFMD to interact with each other.

Four of the six members of the Regional Advisory Group for Middle-East (RAG) elected during the 3<sup>rd</sup> roadmap meeting in Doha (Qatar) in December 2015 being absent, its composition had to be renewed. For interested participants to be fully informed of the role of the RAG in the FMD roadmap, Dr Djahne Montabord (OIE) reminded the audience essential information about the RAG and its composition. She highlighted the external support provided by non-voting members, the role of voting members, in between and within the roadmap meetings, and the process of validation of the PCP stages after countries self-assessment.

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### **SESSION FMD 2: Country reports**

Countries delivered a short presentation on the FMD situation and on their progress along FMD control/ eradication. Summaries are provided in Annex 3.

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### **SESSION FMD-PPR 3: OIE PVS Pathway and implementation of PPR GEP and FMD Global Strategy**

Dr Yehia Ghazi (OIE) presented the OIE PVS pathway as the main tool for Component 2 of both PPR and FMD Strategies. This is clearly a synergising area for PPR, FMD and animal diseases in general. Dr Ghazi explained the pathway and clarified how the PVS Evaluation can be used to i) estimate the capability of the Veterinary Services to conduct the activities under each PCP Stages / PMAT steps; ii) identify the area where the Veterinary Services should build capacity in priority to further progress toward PPR Eradication and FMD control or eradication. His presentation and discussions during the interviews raised expressions of interest for the PVS Pathway toward request for PVS Follow-Up missions, PVS Legislation or PVS Laboratory missions.

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### **SESSION 4 FMD: Vaccination and post-vaccination monitoring :**

Dr Metwally (FAO) provided an overview on the content of the FAO-OIE FMD vaccination and post-vaccination monitoring (PVM) guidelines published in December 2016 (<http://www.fao.org/3/a-i5975e.pdf>). The guidelines aimed to provide background information on the FMD vaccine and vaccination, evaluation of the effectiveness of the vaccination programs, and monitoring the impact of vaccination and other control measures. Points of interest for the participants were how to determine the vaccine coverage which is well covered in the guidelines and the available tests for PVM. While the available serological tests not specific for each vaccine strain, the guidelines recommend that countries should request reference post-vaccinal sera from the manufacturers to deliver along with the vaccine orders. These sera would be used as a reference for the protective titers in any employed tests for the PVM studies. This discussion led to the formulation of two recommendations (see session 9). Countries were encouraged to use the guidelines to design their PVM studies and to seek assistance from the GF-TADs Working Group for the study design of the PVM. Copies of the PVM book were distributed at the meeting.

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### **SESSION 5 FMD: situation and regional roadmap**

#### ***Update on the implementation of the Global Strategy***

Dr Metwally gave an overview of the progress made during the first five years of the global control strategy. The strategy thus far has been successfully implemented in 71 of 79 affected countries where



the majority of countries advanced to PCP Stages 1 and 2 and few countries to Stage 3 and beyond 5 (official recognition of FMD free status without vaccination by the OIE) while limited countries remained in Stage 0. Countries in Stage 1 are assessing the FMD virus prevalence and identify high risk spots and those in Stage 2 have adopted and implementing national risk-based strategies. The added value is these monitoring programs assist with generating the regional and global surveillance results needed to inform the risk assessment.

Pool 1 (South East Asia) and Pool 7 (South America) have established their own regional FMD control plans. In Pools 2-6, 16 regional roadmap meetings have been conducted since 2012; West Eurasia (5), Middle East (4), South Asia (3), East Africa (2), Southern Africa (1) and West Africa (1). Regional roadmap meeting has not been conducted as yet in Central Africa.

The participants were interested in understanding how some countries advanced to Stages 4 and beyond 5 (OIE FMD free status with or without vaccination) in such a short time period.

### ***Overview of global and regional FMD situation***

Dr Nick Lyons (WRL) reminded how the epidemiology of FMD is very dynamic with several lineages threatening the region. The distribution of lineages is evolving with new patterns and antigenic variants being seen in Asia and North Africa which impacts on the selection of vaccine strains. Strains within the O/ME-SA/PanAsia-2 and A/ASIA/Iran-05 lineages continue to be a threat. The major emerging lineages in the region include A/ASIA/GVII and O/ME-SA/Ind2001 with multiple escapes seen from the Indian subcontinent with long distance trans-pool movements observed. Also threatening the region are viruses from Africa including O/EA-3 and A/AFRICA/GIV. There are many gaps in surveillance and the collection and sending of samples to the reference centres is essential to increase knowledge of the relevant strains and to detect new incursions or variants that could threaten the whole region and beyond.

### **SESSION 6: Cross border challenges**

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The cross border activities being of mutual interest for the control of FMD, PPR and other TADs, Dr Silvia Kreindel (FAO) invited the participants to discuss the key related challenges in the region to encourage collaboration. She proposed to focus the group discussion on (i) existing national and regional sanitary measures to address cross border issues, (ii) the challenges in implementing these measures and (iii) the existing arrangements for cross border coordination.

As a major concern in the region, a series of procedures already exists in the region based on bilateral protocols and prior approval and export certification, together with measures planned in case of illegal importations, notably harmonized in animal quarantine manual of the Gulf Cooperation Council.

However, gaps are still remaining, mainly linked to the lack of information sharing on epidemiological situation among countries, frequent non-controlled movements through borders, whose length and steep geography make it difficult to control animal crossings, and to human crisis and political situations. Despite already existing arrangements, the participants recognized the need to still enhance the cooperation between countries to stop animal smuggling.

### **SESSION 7: Regional epidemiology and laboratory networks**

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In this session, the establishment of epidemiology and laboratory networks was discussed in two groups with the outputs of the discussion presented in a subsequent plenary session. The subjects under discussion included: 1) The scope of the network (aims and objectives; how to reach the objectives including activities to be implemented; who should be in charge); 2) Information sharing (what, how and when information should be shared); 3) Capacity building (what should be improved

and how; who can assist); 4) Epi-lab network meeting (relevance of meeting and topics to be discussed).

The thoughts on the scope of the network concerned the exchange of information related to outbreaks (suspicions and confirmations, but especially new strains), research projects, training opportunities and other information related to disease control. The methods of sharing include meetings, emails and social media (specifically WhatsApp was mentioned which may be appropriate for informal information sharing such as rumours of outbreaks). In terms of capacity building there was a specified need for an improvement in epidemiology capacity including risk analysis and the design of serosurveys and other relevant studies. The groups felt this could be delivered through expert training and missions through assistance from FAO and OIE, although it was stated that regional assistance could also be provided. Regarding the epi-lab network meeting, it was felt that an annual meeting would be appropriate and issues to be discussed comprise the outcomes of any active surveillance, post-vaccination monitoring and issues related to laboratory capacity, including results. The inaugural meeting would be used to specify the exact information that should be shared and other issues proposed for discussion during this session that were not fully covered due to the limited time available.

### SESSION 8: Roadmap assessment

The PCP FMD Stages of the Middle East countries were discussed in accordance with the acceptance process, taking into consideration the self-assessment performed by the countries in fulfilling the check-list questionnaires, the country report presented in plenary session and the bilateral interviews. The findings were then discussed within the RAG and presented for acceptance in plenary.

The participants agreed on the PCP Stages presented in the table here below:

Countries	Validated Stages						Provisional Stages (not validated)								
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	
Bahrain	1	2	2	2*		2*	3	3	4	4	4	5	5	5	
Egypt	1	1	2*	2**		2	2	2	2	3	3	3	4	4	
Iraq	2	2	2*	2**		2*	2	2	2	2	3	3	3	3	
Jordan	1	1	2*	2**		2*	2	2	2	3	3	3	3	4	
Kuwait	2	2	3	3*		3*	3	3	4	4	4	4	4	4	
Lebanon	1	1	2*	2**		2*	2	2	3	3	3	4	4	5	
Oman	2	2	2*												
Palestine			1			1	1	2	2	2	2	3	3	3	
Qatar	2	2	3*	3*			4	4	4	4					
Saudi Arabia	1	1	2*	2*		2*	2	2	3	3	3	3	4	4	
Syria	2	2	2*	2*		2*	2	2	2	3	3	3	3	4	
UAE	1	1	2	2**		2*	2	2	2	3	3	3	4	4	
Yemen	1	1	1*			Suspended									

**Table 1: PCP-FMD stages of Middle-East countries as of October 2017**

\* Provisional status given to the country (countries has a limited time to provide additional information including Control Plan; if no, they will be considered in their previous validated stage)

Country: Country that did not attend the meeting in Amman



The details of the conclusion of the assessment, as well as the identified needs for support are available in Annex 4.

The participants noted the maintenance of provisional stages for several years in many countries of the region and committed to provide the required additional documentation (national Risk-Based Strategic Plans or national Control Plans) for acceptance by the RAG as detailed in Annex 4. Discussions on the decision to be taken if those documents would not be provided on time concluded that the countries would then be considered in the previous validated stage.

#### **SESSION 9: FMD-PPR conclusions and regional priorities – way forward**

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A draft Communiqué and identified regional priorities were endorsed by the participants. The PPR Secretariat and the FMD Working Group circulated the Communiqué within two weeks for feedback comments before final endorsement. Its final version is in Annex 5. This Communiqué includes recommendations specific to PPR, some specific to FMD, as well as some related to the two diseases, highlighting the efforts made at international level to work on Component 2 and 3 of the two Global Strategies.



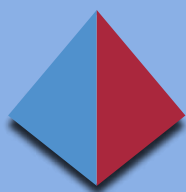
# Annex 1: Agenda of the meeting

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## AGENDA

2<sup>nd</sup> **Peste des petits ruminants (PPR)** and  
4<sup>th</sup> **Foot-and-Mouth disease (FMD)**

*Regional Roadmap Meetings – Middle East Countries*  
Amman, Jordan • 15 – 19 October 2017



**GF-TADs**

GLOBAL FRAMEWORK FOR THE  
PROGRESSIVE CONTROL OF  
TRANSBOUNDARY ANIMAL DISEASES



Food and Agriculture  
Organization of the  
United Nations

**OIE**

WORLD ORGANISATION  
FOR ANIMAL HEALTH

## DAY 1

## Sunday 15 October

08.00 – 09.00	Registration	
	<b>OPENING CEREMONY</b>	
09.00 – 10.00	Welcome remarks	<i>CVO Jordan</i>
	GCC Secretariat remarks	<i>GCC Representative</i>
	OIE remarks	<i>OIE Representative</i>
	FAO remarks	<i>FAO Representative</i>
	Opening remarks	<i>Ministry of Agriculture</i>
	Participants self-introduction	<i>Participants</i>
10.00 – 10.30	<b>Group photo &amp; coffee break</b>	
	<b>PPR SESSION 1: SETTING THE SCENE</b>	
10.30 – 10.40	Meeting objectives	<i>PPR Secretariat</i>
10.40 – 11.00	Follow up/implementation of the recommendations of the first PPR Roadmap Meeting	<i>RAG/PPR Secretariat</i>
	<b>PPR SESSION 2: UPDATE ON PPR SITUATION AND ACTIVITIES AT COUNTRY LEVEL</b>	
11.00 – 13.00	Country update ( <i>10 minutes per country</i> )	<i>Country Representatives</i>
	Questions & Answers	
13.00 – 14.00	<b>Lunch break</b>	
14.00 – 15.00	Country update ( <i>10 minutes per country</i> )	<i>Country Representatives</i>
	Questions & Answers	
	<b>PPR SESSION 3: UPDATE ON GLOBAL AND REGIONAL ACTIVITIES</b>	
15.00 – 15.20	PPR Global Eradication Programme (PPR GEP) overview	<i>PPR Secretariat</i>
15.20 – 15.40	PPR Regional Strategy for the Middle East	<i>Consultant</i>
15.40 – 16.00	<b>Coffee break</b>	
16.00 – 17.00	PPR GEP: Questions & Answers	<i>Participants</i>
	<b>PPR SESSION 4: NATIONAL STRATEGIC PLAN</b>	
17.00 – 18.00	PPR National strategic plan (NSP) ( <i>20 minutes</i> )	<i>PPR Secretariat</i>
	Discussion ( <i>40 minutes</i> )	<i>Participants</i>
18.00	<b>End of day 1</b>	

## DAY 2

## Monday 16 October

	<b>PPR SESSION 5: UPDATE PPR PROGRESSION STAGES</b>	
08.30 – 10.30	Update on the use of PMAT ( <i>30 minutes</i> )	<i>PPR Secretariat</i>
	Country group work ( <i>90 minutes</i> )	<i>Country Representatives</i>
10.30 – 11.00	<b>Coffee break</b>	
11.00 – 13.00	Reports from countries ( <i>5 minutes each</i> )	<i>Country Representatives</i>
13.00 – 14.00	<b>Lunch break</b>	
	<b>PPR SESSION 6: RESOURCES MOBILISATION AND PARTNERSHIP</b>	
14.00 – 15.30	PPR Resources Mobilisation Strategy	<i>FAO/TCR</i>
	Discussion	
15.30 – 16.00	<b>Coffee break</b>	
15.30 – 17.00	Opportunities for partnership	<i>GCC, Country Representatives &amp; Partners</i>
	Discussion	
17.00	<b>End of day 2</b>	

## DAY 3

## Tuesday 17 October

## FMD SESSION 1: SETTING THE SCENE

*Chair: Jordan*

08.30 – 08.40	Meeting objectives	L. Weber-Vintzel (OIE)
08.40 – 09.00	Report on the previous roadmap meeting and implementation of the recommendations	Y. Ghazi (OIE)

## FMD SESSION 2: COUNTRY REPORTS (15 min report and 5 min Q&amp;A)

*Chair: Lebanon & Egypt*

09.00 – 10.40	Country presentations (1 <sup>st</sup> group) Saudi Arabia, Oman, UAE, Bahrain, Kuwait	Country Representatives
10.40 – 11.00	Coffee break	

## FMD SESSION 2 (CONT'): COUNTRY REPORTS (15 min report and 5 min Q&amp;A)

*Chair: Iraq & Saudi Arabia*

11.00 – 12.40	Country presentation (2 <sup>nd</sup> group) Qatar, Yemen, Egypt, Jordan, Lebanon	Country Representatives
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## PPR - FMD SESSION 3: OIE PVS PATHWAY AND IMPLEMENTATION OF PPR-GEP AND FMD GLOBAL STRATEGY

12.40 – 13.30	OIE PVS Pathway for implementation of PPR-GEP and FMD global strategy	OIE
	Discussion	Participants
13.30 – 14.30	Lunch break	

## FMD SESSION 4: VACCINATION AND POST VACCINATION MONITORING

*Chair: Palestine*

14.30 – 16.10	Vaccination and post-vaccination monitoring Introduction to group discussion (20 min) Three breakout groups Group report (10 minutes per group)	S. Metwally (FAO)
16.10 – 16.30	Coffee break	
16.30	End of day 3	
16.30 – 18.00	Closed session: interviews with countries advancing to a higher PCP stage	

## DAY 4

## Wednesday 18 October

08.30 – 9.30 Closed session with the RAG and WG

## FMD SESSION 5: FMD SITUATION AND REGIONAL ROADMAP

09.30 – 10.30	Update on the implementation of the global strategy Overview of global and regional FMD situation Discussions	S. Metwally (FAO) N. Lyons (WRL) Participants
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10.30 – 10.45 Coffee break

## FMD SESSION 2 (CONT'): COUNTRY REPORTS (15 min report and 5 min Q&amp;A)

*Chair: Qatar & UAE*

10.45 – 12.00	Country presentation (3 <sup>rd</sup> group) Iraq, Syria, Turkey, Palestine	Country Representatives
12.00 – 13.00	Lunch break	





## PPR - FMD SESSION 6: UNDERSTANDING THE MAIN CHALLENGES FOR PPR ERADICATION AND FMD CONTROL IN THE REGION

*Chair: Syria*

<b>13.00 – 14.30</b>	Introduction to group discussion (10 minutes) Group discussion (60 minutes): Group 1 - Cross border coordination; Group 2 - Diagnostic capacity; Group 3 - Surveillance system Group reports (10 minutes per group)	<i>S. Kreindel (FAO) and D. Montabond (OIE)</i>     <i>Participants</i>
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**14.30 – 15.00** Coffee break

## PPR - FMD SESSION 7: REGIONAL EPI AND LABORATORY NETWORKS

*Chair: Oman*

<b>15.00 – 16.30</b>	Introduction to group discussion (10 minutes) Breakout Groups: (60 minutes) Group1- Epi Network; Group 2 - Lab Network Group report (20 minutes per group)	<i>F. Rosso and N. Lyons</i> <i>Participants</i>    <i>Participants</i>
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**16.30** End of day 4

**16.30 – 18.30** Closed session: countries interviews

**DAY 5**

## Thursday 19 October

**08.00 – 09.00** Closed session with the RAG and WG  
Roundtable discussions

## FMD SESSION 8: ROADMAP ASSESSMENT

*Chair: Kuwait*

<b>09.00 – 10.00</b>	Presentation of the roadmap based on assessment by RAG Round table discussion	<i>RAG chair</i> <i>Participants</i>
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**10.00 – 10.30** Coffee break

## PPR – FMD SESSION 9: CONCLUSIONS AND REGIONAL PRIORITIES AND WAY FORWARD

<b>10.30 – 12.00</b>	Conclusions, the regional priorities and the way forward	<i>Participants</i>
<b>12.00 – 12.30</b>	Closing remarks	<i>FAO/OIE/CVO/GCC</i>

### DAY 3 - 17 OCTOBER 2017

#### Country interviews

	Panel 1	Panel 2
1.	Bahrain	Kuwait
2.	Egypt	Lebanon
3.	Jordan	Oman

### DAY 4 - 18 OCTOBER 2017

#### Country interviews (close session Day 4) meeting rooms TBD

	Panel 1	Panel 2
4.	Palestine	United Arab Emirates
5.	Qatar	Yemen
6.	Saudi Arabia	Iraq
7.	-	Syria

#### Panelists

**Panel 1:** Samia Metwally, Djahne Montabond, Friederike Mayen, Nick Lyons

**Panel 2:** Silvia Kreindel, Laure Weber-Vintzel, Y. Ghazi, Fabrizio Rosso



# Annex 2: List of participants

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## 2nd PPR Roadmap and 4th FMD Workshop for Middle East Countries Amman, Jordan, 15 – 19 October 2017

### MEMBER COUNTRIES

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#### BAHRAIN

**Dr Fajer Al Salloom**

OIE Delegate  
Chief of Pharmacy & Vet Lab  
Ministry of Works, Municipalities Affairs & Urban  
Planning  
P.O Box:251  
Manama

**Dr Hassan Al Hashim**

Senior Veterinarian  
Ministry of Works, Municipalities Affairs & Urban  
Planning  
P.O Box:251  
Manama

#### EGYPT

**Dr Mohamed Ezz Eldin**

Under Secretary of Central administration of Preventive  
medicine  
General Organization for Veterinary Services Ministry of  
Agriculture and Land Reclamation  
1st Nadi el said st, Dokki, Giza  
Cairo

**Dr Shams Abogabal**

PCP- FMD Focal Point  
Responsible for RBSP establishment and follow its  
activities  
General Organization for Veterinary Services Ministry of  
Agriculture and Land Reclamation  
1st Nadi el said st, Dokki, Giza  
Cairo

#### IRAQ

**Dr Layth Abdulrasool**

Veterinarian  
Iraqi Central Veterinary Laboratories  
Baghdad

**Dr Khazaal Alqaisi**

Veterinarian  
Iraqi Central Veterinary Laboratories  
Baghdad

#### JORDAN

**Dr Sami Aladwan**

OIE Delegate  
General Assistant of Livestock  
Ministry of Agriculture  
Queen Rania Street PO BOX 2099 11118, Amman,

**Dr Zuhair Al Shurman**

Chief Veterinary Officer  
Ministry of Agriculture  
Queen Rania Street PO BOX 2099 11118,  
Amman

**Dr Majed Hawaasha**

Head of Animal Health Division  
Ministry of Agriculture  
Queen Rania Street PO BOX 2099 11118, Amman

**Dr Rachel Dodeen**

Head of Quarantine Division  
Ministry of Agriculture  
Queen Rania Street PO BOX 2099 11118, Amman

## **KUWAIT**

### **Dr Khaled Almutawaa**

Head of Veterinary Laboratory section,  
Central Veterinary Laboratory Department  
Public Authority of Agriculture Affairs & Fish Resources  
P.o.box.21422  
Safat 13075

### **Dr Talal Alazemi**

Veterinarian  
Epidemiology and Zoonotic Section  
Animal Health Department  
Public Authority of Agriculture Affairs & Fish Resources  
P.o.box.21422  
Safat 13075

## **LEBANON**

### **Dr Bassel El Bazzal**

Head of Animal Health Service  
Animal Resources Directorate  
Ministry of Agriculture  
Bir Hassan  
Beirut

### **Dr Riham Bassam**

Head of Export and Import Department  
Animal Resources Directorate  
Ministry of Agriculture  
Bir Hassan  
Beirut

## **PALESTINE**

### **Dr Ayman Amro**

Head of field Veterinary Services Department Ministry  
of Agriculture  
Ramallah

### **Dr Rami Fanous Khaled**

Head of field Services  
Nablus Veterinary Department  
Ministry of Agriculture  
Ramallah

## **SAUDI ARABIA**

### **Dr Ibrahim Ahmed**

Chief Veterinary Officer  
Ministry of Environment, Water and Agriculture  
Riyadh  
Riyadh King Abdulaziz Road KSA 11195

### **Ali Alsahaf**

Veterinarian  
Animal Health  
Ministry of Environment, Water and Agriculture  
Riyadh  
Riyadh King Abdulaziz Road KSA 11195

### **Dr Faisal Al Bayoumi**

Veterinary Consultant  
Ministry of Environment, Water and Agriculture  
Riyadh  
Riyadh King Abdulaziz Road KSA 11195

## **SYRIA**

### **Dr Mohamed Ali Alaboud**

Deputy Director of Animal Health Directorate  
Ministry of Agriculture and Agrarian Reform  
Bab Sharki, Airport Square, Veterinary Square  
Damascus

### **Dr Mazen Dib**

Veterinarian  
Head of Central Veterinary Laboratory Ministry  
of Agriculture and Agrarian Reform Bab  
Sharki, Airport Square, Veterinary Square  
Damascus

## **TURKEY**

### **Mr Yener Sekercan**

Official Veterinarian  
General Directorate of Food and Control  
Ministry of Food, Agriculture and Livestock  
Eskisehir Yolu 9. km Lodumlu  
Ankara

**UNITED ARAB EMIRATES****Dr Kaltham Kayaf**

Head of Animal Health Section  
Ministry of Climate Change and Environment Dubai

**Dr Mervat Al Nuaimat**

Veterinarian  
Ministry of Climate Change and Environment Dubai

**YEMEN****Dr Adurahman Alkhateeb**

Director General of Animal Health and Veterinary  
Quarantine  
Ministry of Agriculture and Irrigation  
Almansorah District, Reami Zone,  
Aden

---

**OBSERVERS**

---

**Dr Labib Bakkali Kassimi**

ANSES  
14 rue Pierre et Marie Curie  
94701 Maisons-Alfort  
FRANCE

**Dr David Elliott**

Programme Manager UK IBSP  
DSTL  
Porton Down  
Salisbury SP4 0JQ  
UNITED KINGDOM

**Dr Nicolas Denormandie**

Director  
Scientific Service Africa/Middle East  
VPH Boehringer Ingelheim  
Boehringer Ingelheim  
29 Avenue Tony Garnier  
69007 Lyon  
FRANCE

**Dr Stéphane Imbert**

VPH Director EMEA  
Boehringer Ingelheim  
29 Avenue Tony Garnier  
69007 Lyon  
FRANCE

**Dr Christopher Matthew Cochran**

Sales and Marketing Manager  
MSD Middle East  
Alpha Bldg. (EIB05)  
Suite 01, G Floor,  
Dubai Internet City  
P.O.Box 502947 Dubai  
UNITED ARAB EMIRATES

**Dr Raad Abed El Dayem**

G.M. Jordan Bio-Industries Center (Jovac)  
JORDAN

**Prof. Ehab Abu Basha**

PREDICT  
National Coordinator  
Consultant  
Eco Health Alliance  
Amman  
JORDAN

**Dr Ahmad Almajali**

Professor  
Faculty of Veterinary Medicine  
University of Science and Technology (JUST)  
JORDAN

---

**EUROPEAN COMMISSION FOR THE CONTROL OF FMD - EuFMD**

---

**Dr Fabrizio Rosso**

EUFMD  
FAO Headquarters  
Viale delle Terme di Caracalla  
Rome  
ITALY

**Dr Nicolas Anthony Lyons**

Epidemiologist  
European Commission for the Control of FMD (EuFMD)  
Animal Production and Health Division  
FAO Headquarters  
Viale delle Terme di Caracalla  
Rome  
ITALY

---

**FAO/OIE PPR SECRETARIAT**

---

**Dr Bouna Albouy Diop**

Secretary  
FAO/OIE/PPR Secretariat  
Food and Agriculture Organisation of the UN  
Viale delle Terme di Caracalla  
00153 Rome  
ITALY

**Dr Jean-Jacques Soula**

OIE Coordinator in PPR Secretariat  
FAO Headquarters  
AGA Division  
Room C579  
Viale delle Terme di Caracalla  
1-00153 Rome  
ITALY

---

**FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS**

---

**Dr Samia Metwally**

Senior Animal Health Officer  
Food and Agriculture Organisation of the UN  
Viale Delle Terme Di Caracalla  
00153 Rome  
ITALY

**Mr Pablo Rabczuk**

Marketing, Outreach and Reporting Team, TCR2  
Resource Mobilization Division  
Technical Cooperation Department

**Dr Silvia Kreindel****Dr Friederike Mayen**

FAO Senior Livestock Development Officer  
FAO Regional Office for the Near East and North  
Africa (RNE) 11 Al Eslah El Zerai St., Dokki – Cairo  
EGYPT

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**WORLD ORGANISATION FOR ANIMAL HEALTH (OIE)**

---

**Headquarters****Dr Laure Weber-Vintzel**

Head Status Department  
12, rue de Prony  
75017 Paris  
FRANCE

**OIE Regional Representation for the Middle East****Dr Ghazi Yehia**

Regional Representative  
Ministry of Agriculture Department  
Furn El Chebak  
LEBANON

**OIE Sub-Regional Representation for Central Asia****Dr Djahne Montabord**

50/1 Republic avenue  
Astana 10001  
KAZAKHSTAN

**Ms Rita Rizk**

Secretary

## Annex 3: Summary of country reports

### Bahrain



**PCP-FMD Stage**

**2015**      2\*

**2017**      2\*

**OIE PVS evaluation**

2008

\* RAG has assessed in provisional stage but need provide additional documentation

### Provisional Roadmap 2017

Countries	Validated Stages						Provisional Stages (not validated)								
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	
Bahrain	1	2	2	2*		2*	3	3	4	4	4	5	5	5	

\* indicates a provisional status given to the countries (countries had a limited time to provide additional information including a RBSP - if not, they will be considered in their previous validated stage)

**FMD outbreaks & surveillance:**

- FMD outbreaks
  - (2 in cattle (9 cases) in 2014 in Muharraq and Northern)
  - one in cattle and sheep (245 cases) in 2015 in Northern) / cases with a new strain not covered by vaccines
- No outbreak in 2016 and 2017 (no clinical)
- Ring vaccination (3km around outbreak)
- Type O Turkey identified by Pirbright
- Differentiation vaccinated/Infected animals by FMD 3ABC ELISA (some inconclusive results retested)

**FMD Control Measures:**

- Aftovac Vaccine upon Pirbright recommendations (A, O, SAT2)
- Analysis certificate requested for each vaccine batch
- Vaccination of all cattle and SR (2/year) only by public sector
- RBSP developed, submitted in 2016
- FMD eradication strategy including regional cooperation
- Pre and post vaccination monitoring (immune status and efficiency of vaccination) 2/year
- Movement control of all animals around outbreaks
- Import control: 1 month quarantine, with vaccination upon import or before import, with same vaccine as in Bahrain
- Emergency ring vaccination and disposal of animals, wastes and carcasses (3 km around)

**Other notes and priorities for the future:**

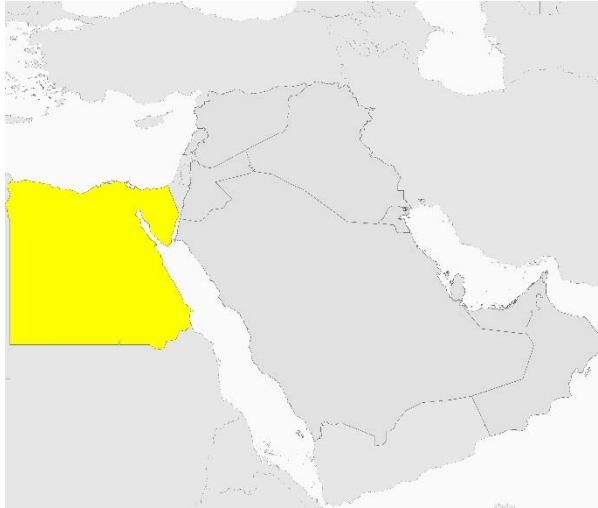
- New PVS requested
- Protect food security and environment

**National gaps:**

- Laboratory capacity for rapid identification and characterization of newly emerged viruses
- Communication and transparency improvement
- Establishment of a strong epidemiology unit
- Improve involvement of private sector
- Vaccine used (not pure and not approved)
- Border control



# Egypt



## PCP-FMD Stage

2015 2\*\*

2017 2

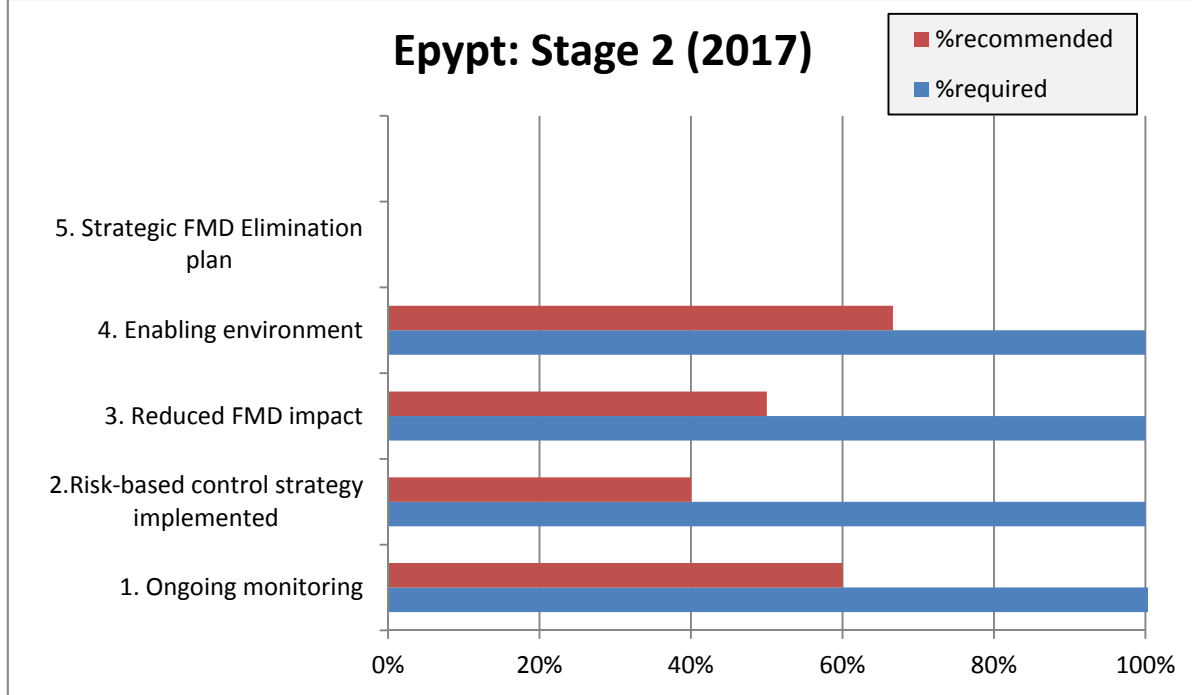
## OIE PVS evaluation

2007/2009  
gap 2010

\*\* RAG has assessed in provisional stage but has provided additional documentation to WG for review

## Provisional Roadmap 2017

Countries	Validated Stages					Provisional Stages (not validated)									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	
Egypt	1	1	2*	2**		2	2	2	2	3	3	3	4	4	



**FMD outbreaks & surveillance:**

- Numerous FMD notification, mainly in cattle and buffalos in 2017, more in winter
- Incidence (cattle 10%, buffalo 14%, sheep 3%, goat 1%)
- Imported cases in western regions (illegal import)
- Passive surveillance 2016 : A Africa, A, O/EA3, Pan FMD, SAT2 : VII ALX-12
- Passive surv 2017 : O/EA3, Pan FMD, SAT2
- Dominant serotype 2014-2017 : serotype O
- Active NSP surveillance 2016 (cattle and SR, 6-12 months, in 25/27 governorates) : 35% positive buffalos, 21% cattle, 17-18% sheep and goats
- PVM surveillance 2017 (5 governorates/27), 1-2 months after vaccination : 60% NSP negatives, of which 50%, 48% and 57% for SAT2, A, O

**FMD Control Measures:**

- Vaccination strategy in the whole country (cattle, buffalo, sheep, goat), (previously, vaccination limited to high risk areas)
- 3 times a year (applied since 2017, previously 2/y)
- Low price of vaccines (0,5 USD)
- Local vaccines (VSVRI and MEVAC) and Merial Aftovaxpur
- Average vaccination coverage : 35-50% (56% cattle, 11% SR) : concentrated on LR, as major losses and the country is still in stage 2
- Passive surveillance for immediate measures
- Animal movement restriction, markets closures

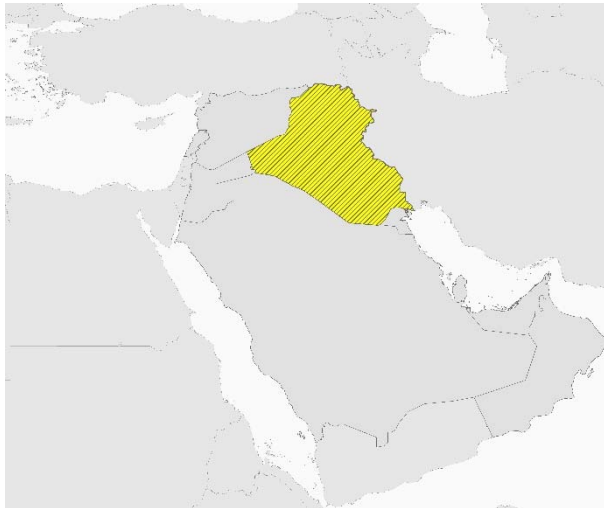
**Other notes and priorities for the future:**

- RBSP provided
- Awareness campaigns for owners (symptoms, reporting, vaccination, ...)
- Cascade training of official vets (biosecurity measures)
- Synergy to control other TADs (improvement of biosecurity measures, enhancement of lab capacities for sampling, diagnostic, vaccine quality, reporting system, ...)
- New PVS requested

**National gaps:**

- Biosecurity measures, animal movement patterns and restrictions, identification/registration system, stakeholders involved in value chain

# Iraq



**PCP-FMD Stage**

**2015**      2\*\*

**2017**      2\*

**OIE PVS evaluation**

Requested

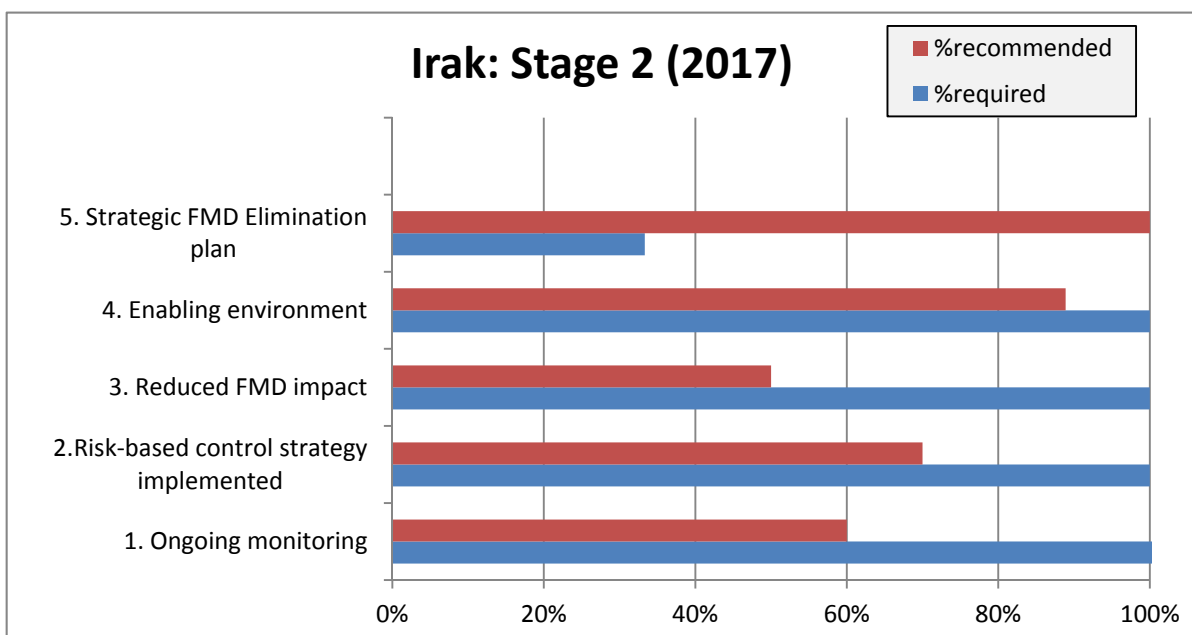
\*\* RAG has assessed in provisional stage but have provided additional documentation to WG for review

## Provisional Roadmap 2017

Countries	Validated Stages						Provisional Stages (not validated)							
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Iraq	2	2	2*	2**		2*	2	2	2	2	3	3	3	3

\* indicates a provisional status given to the countries (countries had a limited time to provide additional information including a RBSP - if not, they will be considered in their previous validated stage)

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



**FMD outbreaks & surveillance:**

- Outbreaks 2016 (many outbreaks, after 14 months without any possibility to vaccinate), 2017
- No sample sent to reference laboratory in 2016 and 2017
- Analyses of suspected samples
- PVM done (80% coverage in 2016)
- Serological NSP monitoring to detect subclinical cases, decreasing (37% in 2010, 26% in 2017)

**FMD Control Measures:**

- Vaccination campaigns (twice a year LR, once a year SR) : coverage in 2017 >85% in the South, <50% in the North, with unknown vaccination coverage in North-East
- Cattle vaccination campaign coverage from 80% to 95% from 2011 to 2017
- Trivalent vaccine (**A**/Turk/2006/20, **O**/Turk/05/2009 Panasia2, **Asia1**/Pak/8/2008-sindh-08),  $\geq 6$ PD50
- RBSP (serological monitoring, biosafety measures in infected areas, increase stakeholders awareness on disease and control measures)
- Objective of RBSP : Control FMD through control the main disease transmission paths and surround the virus with a high compatible immune barrier

**Other notes and priorities for the future:**

- Synergy to control other TADs (animal movement control, markets controls, detection of hotspots for other diseases, develop other RBSP based on FMD experience, training and awareness campaigns to encourage disease notification, support to labs, PVE for major diseases with vaccination strategy)

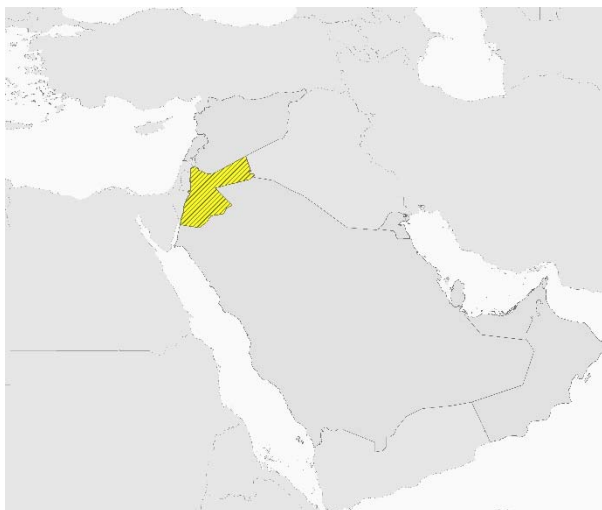
**National gaps:**

- Animal movement control
- Implement control strategic plan all over the country, involving private sector
- Inability to send samples for vaccine matching
- Insecurity in some regions

**Needs for support**

- Veterinarians training in some regions
- Workshops to design FMD surveillance guideline, FMD epidemiology (one held with cooperation of AOAD)
- Sample submission to WRL
- Revision of RBSP

# Jordan



**PCP-FMD Stage**

**2015**      2\*\*

**2017**      2\*

**OIE PVS evaluation**      2009/  
2016

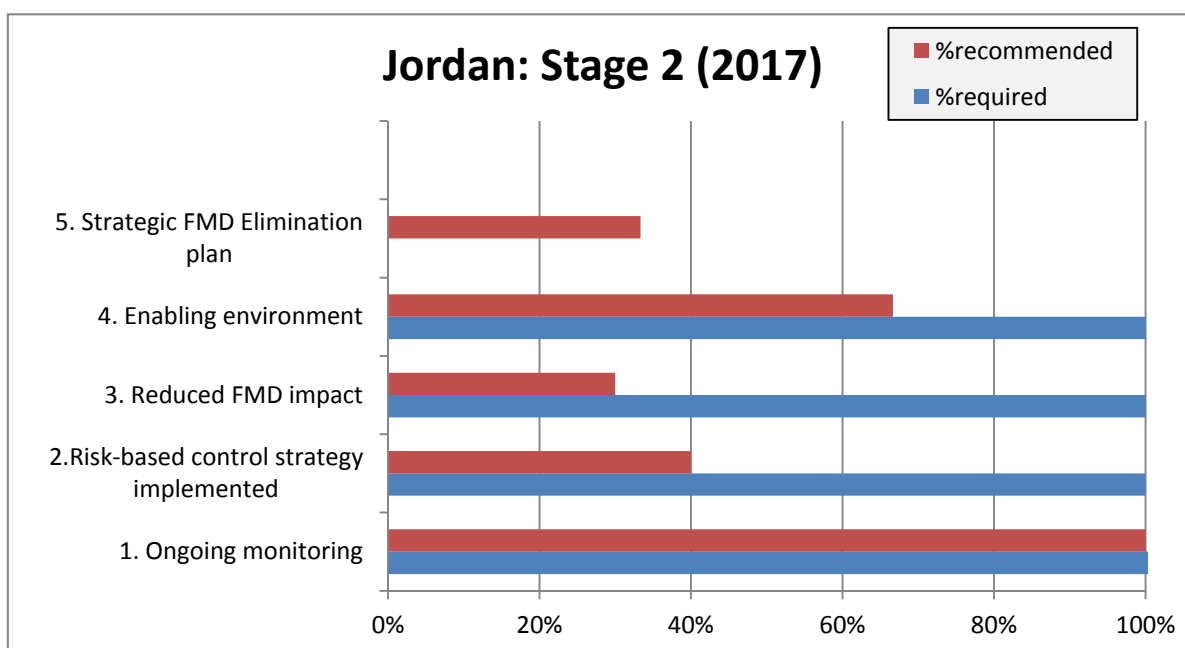
\*\* RAG has assessed in provisional stage but has provided additional documentation to WG for review

## Provisional Roadmap 2017

Countries	Validated Stages						Provisional Stages (not validated)								
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	
Jordan	1	1	2*	2**		2*	2	2	2	3	3	3	3	4	

\* indicates a provisional status given to the countries (countries had a limited time to provide additional information including a RBSP - if not, they will be considered in their previous validated stage)

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



**FMD outbreaks & surveillance:**

- Previous outbreak in 2006
- Outbreaks in cattle (3) and SR (3) in 2017 on non-vaccinated or recently vaccinated animals, with a new strain
- Strains O/ME-SA/Ind-2001 (JUST lab research)
- Absence of submission to reference laboratories for full characterization
- Response to outbreaks (mass vaccination, quarantine, treatment of animals, biosecurity and raising awareness of farmers)
- NSP serology: 10% sheep, 10% goat, 8% cattle

**FMD Control Measures:**

- Vaccination: sheep, goat, cattle (sheep 40%, goat 33%, cattle 82%)
- Vaccine sorbed polyvalent inactivated (A Iran 2005, A22, O1 Manisa, O PanAsia2) used since 2009, provided by ARRIAH
- Active surveillance for 5 diseases

**Strategy**

- FMD control strategy prepared by Jordan university, to be revised by EuFMD experts but not finalized
- Import live animals and products from FMD free countries (Romania, Australia, Columbia (stopped since the status of Columbia has been suspended))
- Seasonal migration sheep and goats

**Other notes and priorities for the future:**

- Enhance surveillance of other TADs
- Synergy to control other TADs (vaccination programs for PPR, Pox, brucellosis and anthrax, surveillance, farm biosecurity, training/workshop)
- Lab capacity

**National gaps:**

- Epidemiological field investigation, sample collection, transport, shipment, surveillance, vaccination strategy, animal movement control, lab diagnostic)

# Kuwait



**PCP-FMD Stage**

**2015**      3\*

**2017**      3\*

**OIE PVS evaluation**

2007

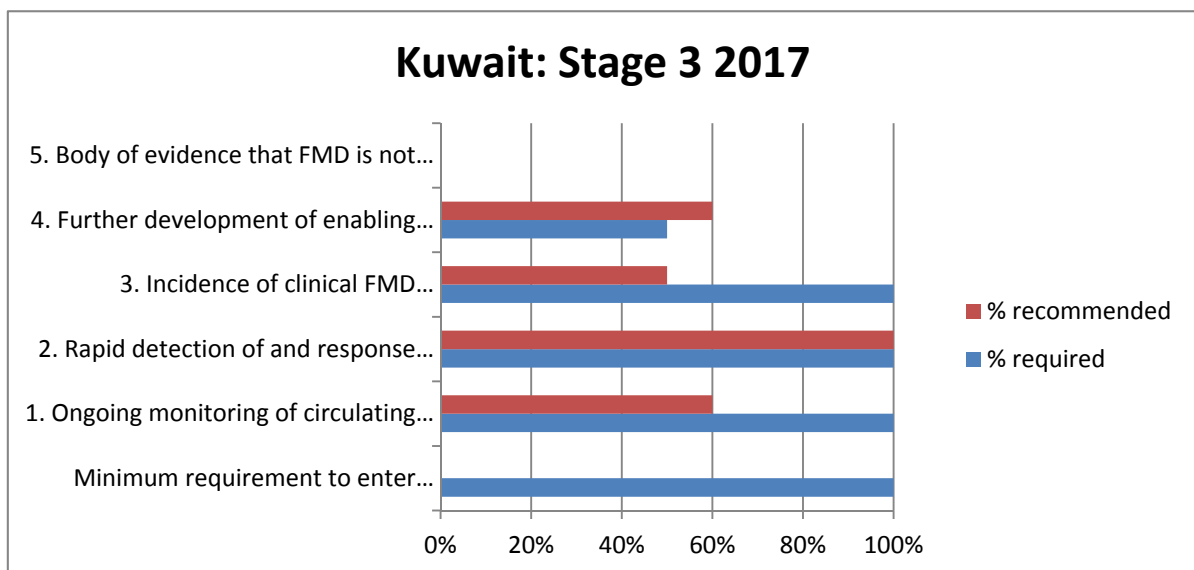
\* RAG has assessed in provisional stage but need provide additional documentation

## Provisional Roadmap 2017

Countries	Validated Stages						Provisional Stages (not validated)								
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	
Kuwait	2	2	3	3*		3*	3	3	4	4	4	4	4	4	

\* indicates a provisional status given to the countries (countries had a limited time to provide additional information including a RBSP - if not, they will be considered in their previous validated stage)

### Achievement of required and recommended outcomes for the PCP Stage 3:



**FMD outbreaks & surveillance:**

- FMD endemic but no clinical outbreak since January 2017
- 12 outbreaks in commercial dairy cattle farms in 2016
- Strain in 2016 (identified in national laboratory): O/MESA/Pan Asia 2 BAL 09 in cattle (from Iran)
- Gene sequencing and vaccine matching by WRL
- NSP serology : NSP on SR with mild or no clinical signs or with mix infection
- PVM between 2 vaccinations

**FMD Control Measures:**

- Risk-based control measures adopted
- Plan for zoning approach in the near future
- Around cases, movement restriction and increase of biosecurity in case of outbreak
- Serotypes A (2009), O (2016), SAT2 (2000)
- Vaccines (O, A, Asia1, SAT2)
- Vaccination every 4 months (cattle)
- Vaccination of SR upon owner's decision

**Other notes and priorities for the future:**

- Public awareness / Owners encouraged to report cases
- Synergy to control other TADs (bovine TB, brucellosis in ruminants, BVD, PPR), with adequate lab facilities at national level (samples sent to reference lab when required)
- Willingness to develop a vaccination strategy for small ruminants.

**National gaps:**

- No written National Control Plan to date
- No contingency plan, no simulation exercise
- No active surveillance for NSP and PVM programme
- Inability to apply import sanitary requirements for FMD testing during import/export between GCC countries and some endemic countries
- Lack of diagnostic facilities (for NSP serosurvey and PVM programme)



# Lebanon



**PCP-FMD Stage**

**2015**      2\*\*

**2017**      2\*

**OIE PVS evaluation**      2008

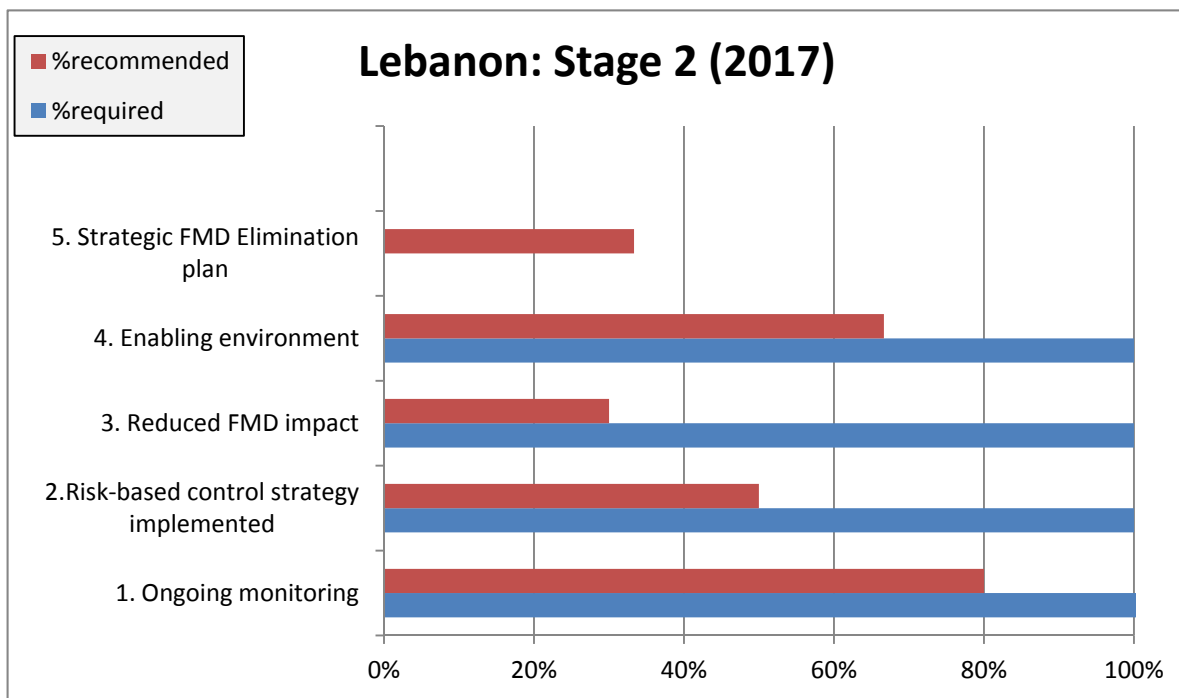
\*\* RAG has assessed in provisional stage but has provided additional documentation to WG for review

## Provisional Roadmap 2017

Countries	Validated Stages					Provisional Stages (not validated)								
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Lebanon	1	1	2*	2**		2*	2	2	3	3	3	4	4	5

\* indicates a provisional status given to the countries (countries had a limited time to provide additional information including a RBSP - if not, they will be considered in their previous validated stage)

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



**FMD outbreaks & surveillance:**

- Sero-survey on imported animals
- 3% NSP positive : active surveillance in sheep
- Available tests
  - ELISA Test - F.M.D 3ABC Bo – Ov
  - ELISA - F.M.D nsp Ab
  - PCR - extraction virus but not detection for the virus

**FMD Control Measures:**

- Mass vaccination around 80%, free of charge
- Polyvalent vaccine from ARRIAH- Russia (Strains: O PAN ASIA2; A IRAN 05 and Asia)Notification
- Training, including farmers
- Identification of hot spot areas
- Free identification of animals, farmers registration
- Movement control of cattle, SR and pigs
- Import from Europe and South America, with pre-import permit
- Strict control of imports (sampling and test FMD) and vaccination program
- Notification

**Other notes and priorities for the future:**

- Development of RBSP, with EuFMD support, focussing on zoning and considering various livestock productions system
- Common actions : FMD, enterovirus, PPR, sheep and goat pox

**National gaps:**

- 

**Gaps at regional level**

- 
- 
-

# Palestine



## PCP-FMD Stage

2015 /

2017 1

## OIE PVS evaluation

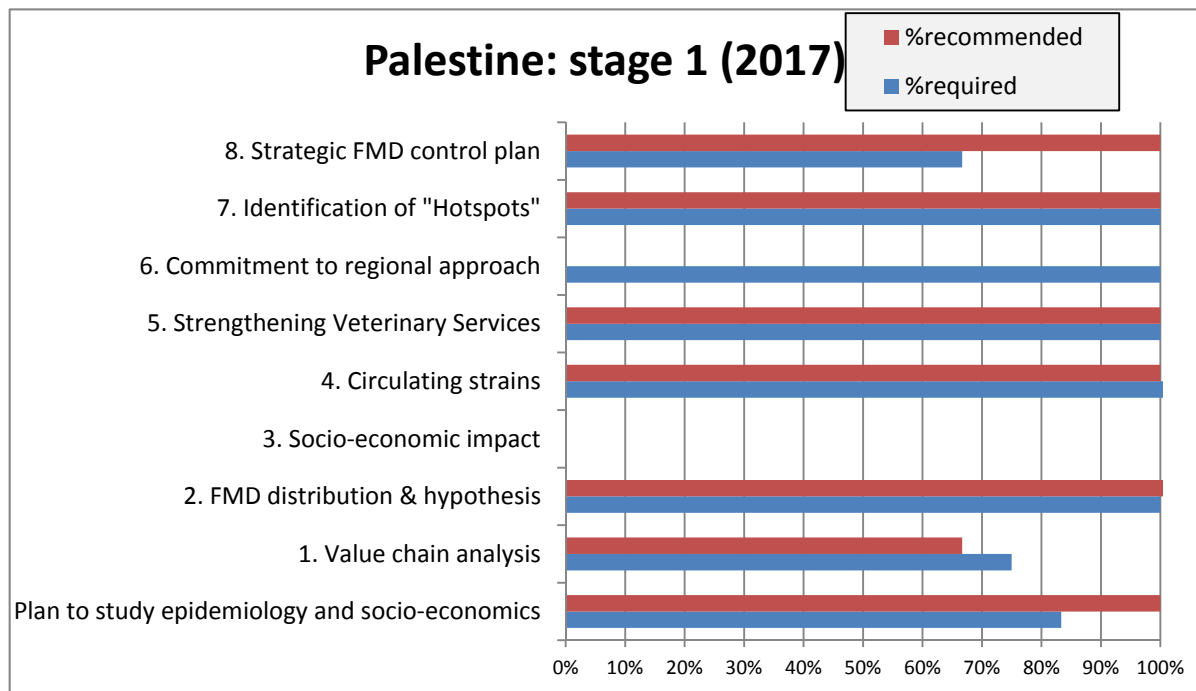
2010  
Palestinian terr  
2017

## Provisional Roadmap 2017

Countries	Validated Stages						Provisional Stages (not validated)								
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	
Palestine			1			1	1	2	2	2	2	3	3	3	

\* indicates a provisional status given to the countries (countries had a limited time to provide additional information including a RBSP - if not, they will be considered in their previous validated stage)

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



**FMD outbreaks & surveillance:**

- FMD endemic, mainly in December-March each year (more developed in Jenin, in the North) and Hebron
- Response to outbreaks: sampling, ring vaccination, movement control, serotyping and genotyping of strains
- 2013-2014 outbreaks closely related (98.28% identity) to the outbreak in Israel (O/ME-SA/PanAsia-2(Far-09))
- Only type O since 2014
- 2017 field isolates : O/PAT/5/2017
- NSP ELISA sero-surveillance in SR 2014 (12% and 3.5% positive in animals over and under 1 year)
- NSP ELISA sero-surveillance in cattle in 2016: 2.8% positive

**FMD Control Measures:**

- Free vaccination cattle (2/y) and SR (1/y)
- Merial vaccine : A,O, Asia1 (cattle) / A,O (SR)
- Movement restriction (limited by political problems)
- New animal identification System
- Increase public awareness
- Lab capacity (RT-PCR, serotype PCR primer, NSP ELISA, PrioCHECK FMDNS kits, Ag ELISA IZSLER)

**Other notes and priorities for the future:**

- Lack of data on socio-economic impact
- RBSP developed with EuFMD support (in approval process)
- Control measures for other diseases (identification, quarantine, cleaning/disinfection, biosecurity measures, raise of farmers' awareness)

**National gaps:**

- Risk hotspots
  - smuggled SR and cattle from Israel, wildlife cross-border, farm workers and people movements
  - animal movement, live animal markets, common grazing, inadequate vaccination coverage (SR), ineffective or late reporting/surveillance, insufficient biosecurity practices
- Strength of VS (according to PVS recommendations)
- Lab tests
- Lack of acceptance by public
- Need for additional support on tools and funds for implementation of RBSP (training, data management, epidemiology research, economy impact analysis, ...)

# Saudi Arabia



**PCP-FMD Stage**

**2015**      **2\***

**2017**      **2\***

**OIE PVS evaluation**

Requested

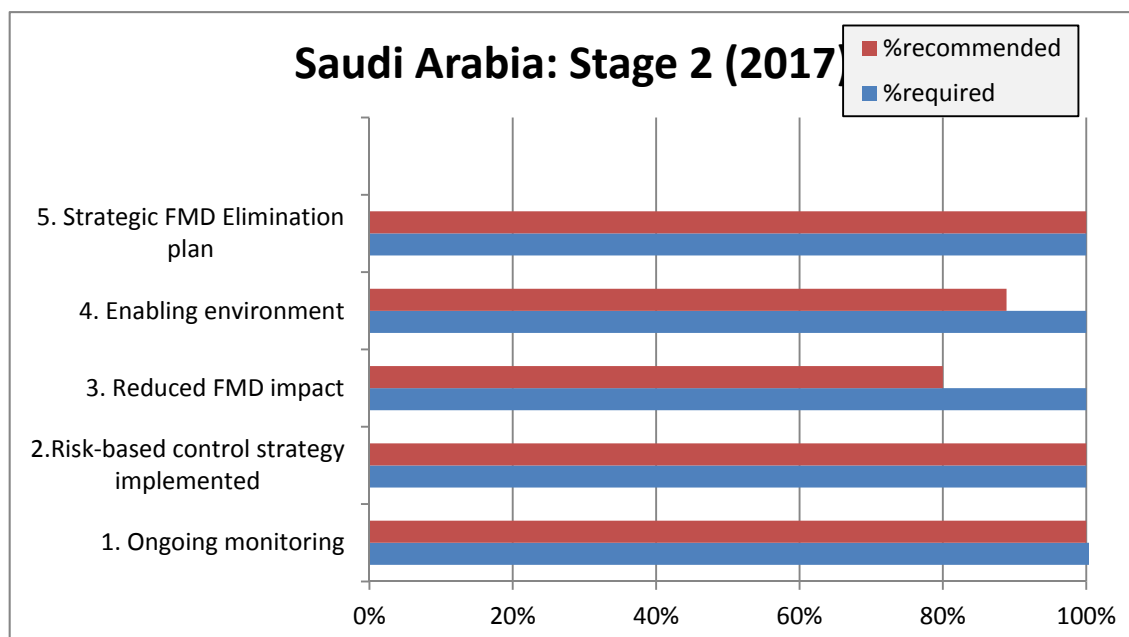
\* RAG has assessed in provisional stage but need provide additional documentation

## Provisional Roadmap 2017

Countries	Validated Stages						Provisional Stages (not validated)								
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	
Saudi Arabia	1	1	2*	2*		2*	2	2	3	3	3	3	4	4	

\* indicates a provisional status given to the countries (countries had a limited time to provide additional information including a RBSP - if not, they will be considered in their previous validated stage)

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



**FMD outbreaks & surveillance:**

- 21 outbreaks in 2016, 3 up to September 2017 (in 3 regions) on cattle and sheep
- A-Asia G VII // O-PanAsia II // O-ME SA Ind-2001 d
- NSP sero-survey (ELISA ABC) in 2017, but results not available before end of 2017
- Samples sent to the WRL
- Ring vaccination in case of outbreak

**FMD Control Measures:**

- Free vaccination cattle and SR
- Routine vaccination 2/y of cattle and SR
- Vaccination coverage 85% (cattle), less for SR
- Governmental vaccines and private purified vaccines : > 6PD50 per dose
  - Private vaccine A, O, SAT-2, ASIA1
  - Govt vaccine A-Iran, O,SAT-2
- Provider upon tender (2017: ARRIAH)
- National plan for disease control by 2030 (21 diseases, among which FMD is a top priorities)
- Electronic portal to report outbreaks
- Identification and registration system

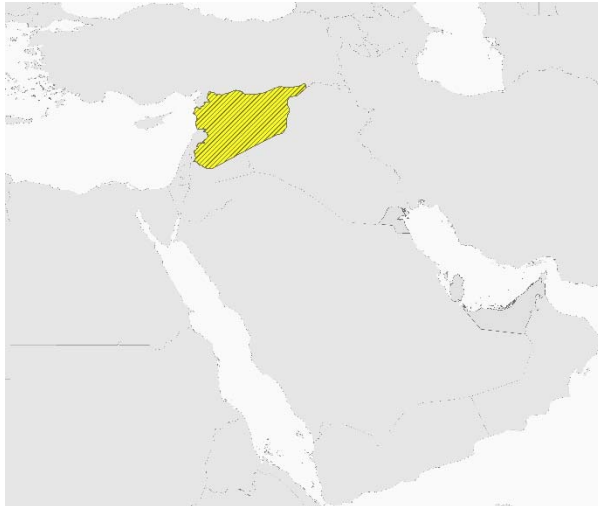
**Other notes and priorities for the future:**

- Objective country FMD free in cattle by 2020
- Contingency plan to be adopted in 2018
- Synergy to control other TADs: PPR, CBPP
- In preparation, a map of diseases, including FMD
- Improvement of Quality Assurance in labs (ISO) to enable laboratories to give credible results
- Collaboration with neighbouring countries and private sector

**National gaps:**

- Borders big import (6 million heads during S season), smuggling
- Need to strengthen veterinary services (PVS requested)

# Syria



**PCP-FMD Stage**

**2015** /

**2017** 2\*

**OIE PVS evaluation**

2008

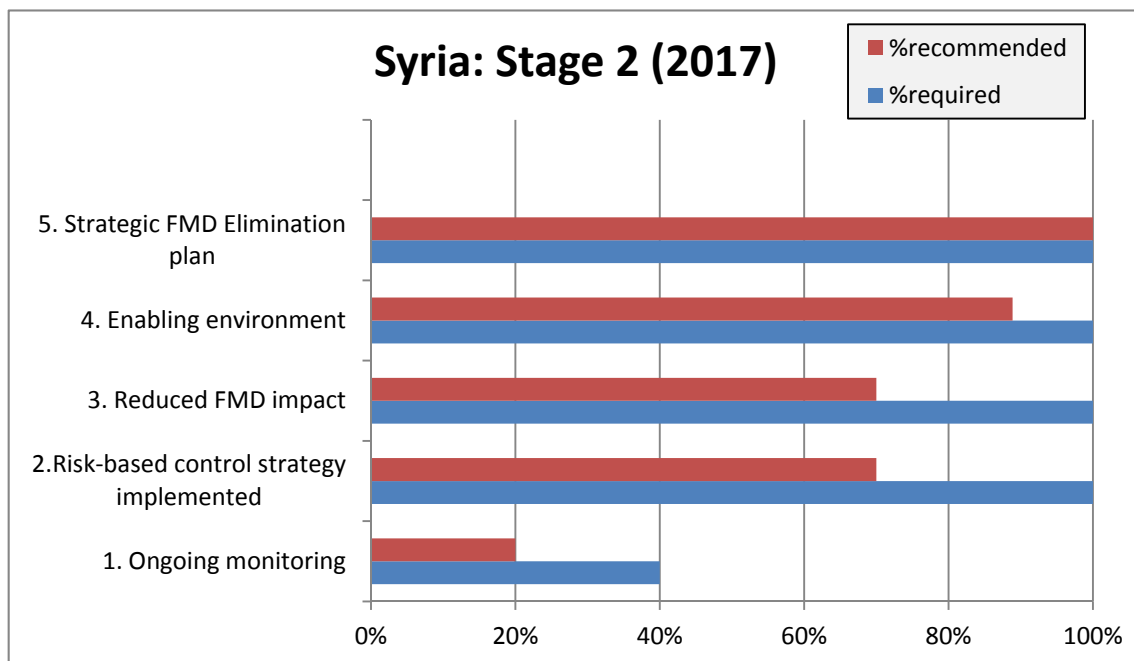
\* RAG has assessed in provisional stage but need provide additional documentation

## Provisional Roadmap 2017

Countries	Validated Stages						Provisional Stages (not validated)								
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	
Syria	2	2	2*	2*		2*	2	2	2	3	3	3	3	4	

\* indicates a provisional status given to the countries (countries had a limited time to provide additional information including a RBSP - if not, they will be considered in their previous validated stage)

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



**FMD outbreaks & surveillance:**

- Annual post vaccination survey on LR – SR (5000 sample/y) in most of Syrian areas with Ab kits provided with vaccines (obligatory condition in the tender)
- Active monitoring for FMDV circulation (recent difficulties due to lack of kits)
- FMD control strategy prepared in 2015 with specific budget allocated
- Regular visits conducted by Central committees for assessing health status of animal herds.

**FMD Control Measures:**

- FMD is notifiable disease
- FMD vaccination (O pan Asia2, A Iran 05, Asia 1) obligatory and free of charge implemented on cattle (2/y) and sheep (1/y) in most of Syrian areas (7 mln doses purchased in 2016)
- Vaccination campaigns carried out in difficult areas in cooperation with civil society, NGOs, syndicate of vets and stakeholders
- Controls at the borders, restrictions of introduction from infected areas, control of animal movements, awareness campaigns, early warning system, quarantine protocols in outbreaks and contingency measures

**Other notes and priorities for the future:**

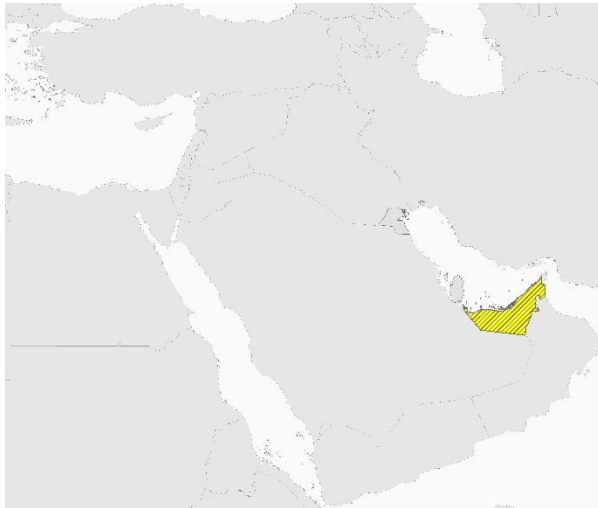
- Necessity to provide national lab with necessary kits
- Support requested (to FAO – OIE – EUFMD) for value-chain analysis, socio-economic impact and for the development of Risk Based Strategic Plan (RBSP)
- Necessity to develop long-term projects
- Improve possibilities to attend trainings (diagnosis – epidemiology), international and regional conferences ,workshops

**National gaps:**

- Availability of diagnostic kits (Ab and Ag detection kits, PCR reagents), difficulties in implementing NSP serosurvey
- Many veterinary laboratories out of service
- Shortfall in technical staff
- Difficulty in reaching to animal breeders in some villages



# United Arab Emirates



**PCP-FMD Stage**

**2015**      2\*\*

**2017**      2\*

**OIE PVS evaluation**      2009

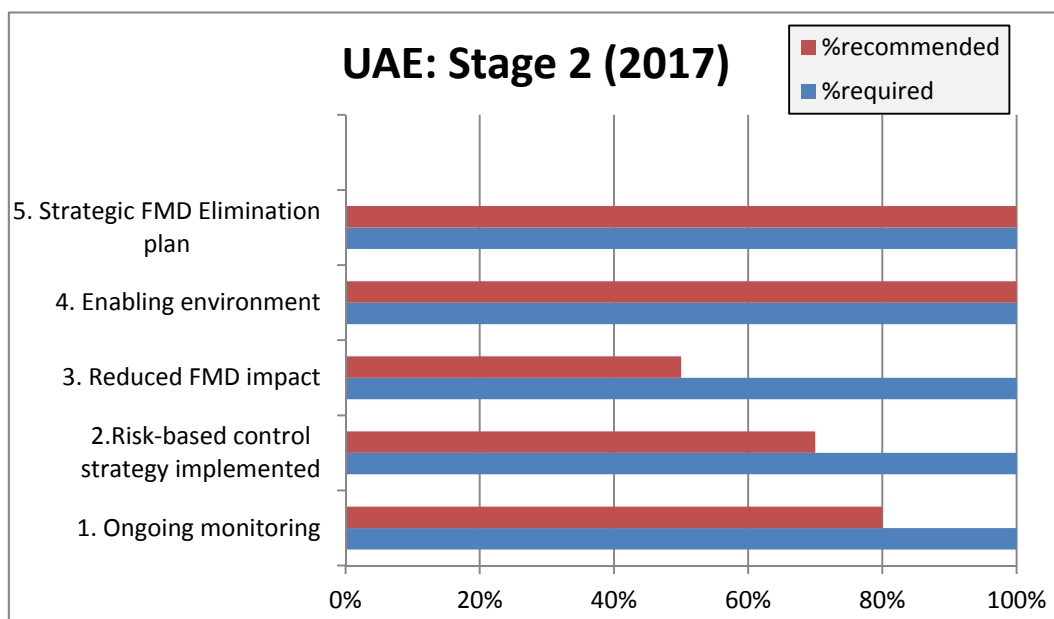
\*\* RAG has assessed in provisional stage but has provided additional documentation to WG for review

## Provisional Roadmap 2017

Countries	Validated Stages						Provisional Stages (not validated)								
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	
UAE	1	1	2	2**		2*	2	2	2	3	3	3	4	4	

\* indicates a provisional status given to the countries (countries had a limited time to provide additional information including a RBSP - if not, they will be considered in their previous validated stage)

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



**FMD outbreaks & surveillance:**

- Last record of FMD virus A in 1990, only type O identified since 90's (Pan Asia-2),
- Last outbreak (type O ) in April 2017 in Ajman (SR)
- Last sample shipped to WRL in 2016
- Periodical evaluation of vaccination efficiency and efficacy.
- Sero-surveillance carried out in 2013 and 2014: NSP prevalence detected 16% and 14%
- Disease control: animal isolation, control of movements of animal and products, quarantine, cleaning/disinfection, treatment of suspected contaminated animal products and animal by-products, vaccines approval
- Ring vaccination (10 km) of all susceptible animals

**FMD Control Measures:**

- FMD notifiable
- Mass vaccination of 80% ruminants free of charge (2/y for SR, 3/y for cattle, all in high density areas)
- Vaccines trivalent (O Manisa or O PanAsia, A Iran 05, Asia-1) + optional addition: O, SAT2
- Vaccines registered after certification
- Vaccine suppliers: Vetal (Turkey), Merial (France), ARRIAH (Russian Fed.), Jovac (Jordan)
- National PPR/FMD control/eradication program: strengthen reporting, notification, legislation, laboratory diagnostic capability, outbreak management, active surveillance, increase awareness and farm-level biosecurity, vaccination, strict border control measures (inspection, quarantine and testing)

**Other notes and priorities for the future:**

- Individual identification and registration (cattle, sheep, goat, camels) started in Abu Dhabi in 2010, expanded to other Emirates since 2015 (compulsory and free of charge for owners)
- Ongoing awareness of farmers (especially small holders)
- Priority diseases: FMD, PPR, brucellosis, sheep and goat pox (indicated in Animal Health Plan 2016-2025)
- Risk hotspots: livestock trade, cross-border movements of animals and vehicles, importation of products (meat and raw feed), SR movements inside the country, animal markets
- Economic impact: loss of export markets, restrictions for trade, cost of vaccination, reduction in milk production.
- Preparation of FMD and PPR free country status recognition

# Yemen



## PCP-FMD Stage

2014

1\*

2017

Suspended

## OIE PVS evaluation

Acknowledging the current situation in Yemen, the RAG Middle East decided to suspend the PCP assessment of Yemen

Provided information covered the situation until 2014

### FMD outbreaks & surveillance:

- First detection in 1973
- FMD thought to be endemic. Peaks detected every 3-4 years.
- Since the crisis, no official information from the field and no possibility to implement any activity with regard to FMD.
- Some unofficial report from the field (WhatsApp) indicative of clinical FMD; Some samples taken but laboratory has no diagnostic kits and is not functioning → request for support

### FMD Control Measures:

- Some dairy cattle farmers vaccinate at their own cost without official channels but with technical support from the VS.
- Farmers responsible for disposal of dead animals.
- Study on vaccination in 2014 – 50% coverage
- Cost for mass vaccination considered higher than the losses due to FMD.

### Other notes and priorities for the future:

- 70% of the Yemen population in rural area – rely on agriculture – Animal production represents 25% of the GDP
- Cattle mainly on the west, while sheep and goats mainly in the east.
- 1,5 M cattle; 7 M sheep, 7,5 M goats
- Veterinary Services have the internal competence and network to implement FMD control activities. However, due to the current situation in Yemen, they do not have the possibility to work.
- Twinning on RVF with South Africa and Pasteur Institute, France, frozen because of the crisis, will re-start with experts from Yemen going to France for training.

### National gaps:

- No risk assessment plan
- Lack of FMD vaccines and diagnostic kits
- Refreshing training for lab technicians (mainly on 3ABC ELISA) most likely through e-learning
- Still have old samples that would need to be tested for FMD. Shipment to regional lab would be needed.



## Annex 4: FMD-PCP Stage detailed assessment - Middle East countries

Country	2015	2017	Comments
Bahrain	2*	2*	<ul style="list-style-type: none"> <li>• Outbreaks reported in 2014 and 2015 with an incursion of new strain, O turkey 09 in 2015,. No outbreaks reported in 2016 and 2017</li> <li>• Biannual vaccination of large and small ruminants with un-purified vaccine (O TUR 07, A TUR 2014, A Nep 84(GVII) 2014, A IRAN 05, SAT2)</li> <li>• NSP sero-surveillance performed in 2016-2017 and planned for 2018-2019</li> <li>• Clinical surveillance implemented in high risk areas</li> <li>• Emergency vaccination around outbreaks (3km) and disposal of animals, wastes and carcasses</li> <li>• Animals movement control around outbreaks</li> <li>• Import control: pre-assessment of quarantine system at the exporting countries, one month quarantine, with vaccination before import and upon import</li> <li>• Gaps identified in: laboratory capacity (however a new facility is being built) for routine diagnostics and rapid identification and characterization of field isolates, epidemiological unit, public and private partnership</li> <li>• Last PVS performed in 2008 and a new PVS assessment is requested</li> <li>• A draft RBSP was provided during the interview. The plan needs extensive improvement to cover the 8 outputs of PCP stage 2</li> <li>• Requested technical support from FAO to assist in preparing the RBSP</li> </ul> <p><b>Recommendation from RAG:</b></p> <p>→ PCP stage 2* with the condition to submit the RBSP by February 2018 and accepted by the RAG within 3 months from submission, otherwise the country is considered in PCP stage 1.</p>

Egypt	2*	2	<ul style="list-style-type: none"> <li>• Active and passive surveillance are ongoing with a response plan in place for follow-up</li> <li>• The prevalence of serotype O is the highest followed by A. It was noted that the incidence of SAT2 is low (around 5%) in the past three years with limited geographic distribution. This makes it a potential candidate to eliminate with a vigorous intervention</li> <li>• Vaccination with serotypes O, A and SAT2 are practiced with an average coverage of 50% and 10% for large and small ruminants, respectively</li> <li>• RBSP was revised for the third time and resubmitted to the FMD WG prior to the meeting. The plan has improved and acceptable.</li> <li>• Gaps identified in: farm biosecurity, awareness among small holders on the importance of vaccination, animal movement control, public, private partnership</li> </ul> <p><b>Recommendation from RAG:</b></p> <ul style="list-style-type: none"> <li>→ Advance to stage 2</li> <li>→ Increase the vaccination coverage to ensure the effectiveness of the vaccination program</li> <li>→ The government may consider offering free vaccination for the small holders to provide incentive for vaccination and increase the vaccination coverage</li> </ul>
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Iraq	2*	2*	<ul style="list-style-type: none"> <li>• During 2016-2017, three vaccination campaigns were implemented - they conducted two annual vaccinations for cattle and one for small ruminants using a trivalent vaccine.</li> <li>• Two defined regions with different vaccination coverages (less than 50% in the northern region in the provinces (previously) controlled by ISIS, and over 85% in the southern region); no information on Kurdish autonomous region.</li> <li>• RSBP has been drafted, but they need help to further develop chapters 4, 6, and 7</li> <li>• They have identified hotspots for FMD and recognize uncontrolled animal movements, weakly controlled livestock markets, and weak information in the northern provinces as the main problems for FMD control</li> <li>• Other important gaps identified include the need to conduct FMD awareness campaigns and integrating other stakeholders (industries) in the implementation of the control strategy, and inability to send samples to the reference lab for vaccine matching.</li> <li>• Have requested a PVS evaluation</li> </ul> <p><b>Identified needs:</b></p> <ul style="list-style-type: none"> <li>• Training and support to complete the RBSP</li> <li>• Epidemiological training particularly targeting the regions previously under ISIS control</li> </ul> <p><b>Recommendation:</b></p> <p>→ PCP stage 2* with the condition to submit an early draft of the RBSP to the FMD WG ASAP for feedback to continue developing the plan for submission of the final version by February 2018 and accepted by the RAG within 3 months from submission, otherwise the country is considered in PCP stage 1.</p>
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Jordan	2*	2*	<ul style="list-style-type: none"> <li>• Good progress made on the identification of risks and control options</li> <li>• Vaccination of large and small ruminants with different level of coverage (cattle 82%, small rum 33-40%)</li> <li>• Vaccination has been practiced (A Iran 2005, A22, O1 Manisa, O PanAsia2) since 2009, provided by ARRIAH</li> <li>• Collaboration with Jordan university, JUST, for laboratory support (strain identification)</li> <li>• NSP Serosurveillance conducted with prevalence of 8-10%</li> <li>• Import of live animals and products from FMD free countries (Romania, Australia); Colombia imports stopped after free FMD status has been suspended</li> <li>• Risk of animal movement within the country due to the seasonal migration of sheep and goats and animal markets</li> <li>• Gaps identified in: epidemiological field investigation, sample collections and shipment, surveillance design, vaccination strategy, animal movement control, laboratory diagnostics</li> <li>• Last PVS performed in 2016</li> <li>• The first draft of RBSP is developed with support from the Jordan University and EuFMD. The plan is in the second phase of revision with support of EuFMD and will be finalized by February 2018</li> </ul> <p><b>Recommendation from RAG:</b></p> <p style="padding-left: 40px;">→PCP Stage 2* with the condition to submit the RBSP by February 2018 and accepted by the RAG within 3 months from submission, otherwise the country is considered in PCP stage 1.</p>
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Kuwait	3*	3*	<ul style="list-style-type: none"> <li>• Zoning approach</li> <li>• No written plan but have already several protocols on vaccination, surveillance, laboratory, field investigation, etc). Confident that they can develop a National plan within 1 month.</li> <li>• No NSP survey conducted recently – only passive surveillance.</li> <li>• Clear strategy for vaccination with monitoring and further adjustment.</li> <li>• Private accredited vets involved in the compulsory, free vaccination for cattle. Farmer have to pay for small ruminants.</li> <li>• Only movement of small ruminants is allowed, subjected to registration – incentive: farmers receive support for feed when they register the movement.</li> </ul> <p><b>Identified needs for support:</b></p> <ul style="list-style-type: none"> <li>• List of experts for consultancy for active surveillance design, as well as in the development of a strategy for small ruminant vaccination.</li> <li>• PVS follow-up</li> <li>• Twinning for PPR with CIRAD to be re-activated.</li> </ul> <p><b>Recommendations:</b></p> <p>→ PCP stage 3* with the condition to submit the control plan by February 2018 and accepted by the RAG within 3 months from submission, otherwise the country is considered in PCP stage 2.</p>
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Lebanon	2*	2*	<ul style="list-style-type: none"> <li>• Have developed a RBSP and is currently working with EuFMD to improve and adjust it (1st meeting on the 3 planned already conducted). Will have finalise it before the end of 2017</li> <li>• Delays in obtaining funding for vaccines which is delaying the vaccination campaign which posing risk of FMDV introduction and circulation.</li> <li>• Old regulatory framework does not allow to recruit laboratory technicians (there is a need to change current regulations)</li> </ul> <p><b>Identified need for support:</b></p> <ul style="list-style-type: none"> <li>• Vaccine doses to begin the vaccination campaign, financial support to hire vaccination teams</li> <li>• Support from FAO to conduct the a socio-economic analysis of FMD incursion in Lebanon</li> <li>• Strengthening of the laboratory: only one lab in the country with only 3 staff – limited capacities (e.g. cannot do PVM). Shortage of staff linked to an old regulation that does not fit anymore with the current situation → Lebanon should send an official request to the OIE to have a PVS laboratory mission. And the OIE to reactivate the PVS legislation mission that is in the pipeline</li> <li>• Mid-term: training of the staff to be recruited and possible twinning</li> </ul> <p><b>Recommendation:</b></p> <p>→ PCP stage <b>2*</b> with the condition to submit to the FMD WG an early draft of the RBSP by mid- November and the final version by February 2018 for acceptance by the RAG within 3 months from submission, otherwise the country is considered in PCP stage 1.</p>
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Palestine	1	1	<ul style="list-style-type: none"> <li>• FMD is endemic, with a peak of disease seen in December</li> <li>• NSP ELISA serosurveillance in small ruminant in 2014 (12% and 3.5% positive in animals over and under 1 year)</li> <li>• NSP ELISA serosurveillance in cattle: 2.8% positive</li> <li>• Since 2014 only serotype O has been reported. Samples sent to WRL in 2017</li> <li>• Vaccination is free and done twice yearly in cattle (A, O,Asia-1) and once yearly in sheep (A,O). Merial vaccine is used</li> <li>• Value chain analysis has been performed and there is an understanding of animal movements</li> <li>• Lacking Socio-economic impact assessment although there are plans to do this with a focus on small ruminants. Encouraged to also consider other sectors (e.g. cattle) to ensure advocacy across the different systems in Palestine</li> <li>• Control through movement restriction is limited by political problems</li> <li>• New animal identification system</li> <li>• Increase public awareness</li> <li>• Lab capacity (RT-PCR, serotype PCR primer, NSP ELISA, PrioCHECK FMDNS kits, Ag ELISA IZSLER)</li> <li>• Risk from illegal movements of animals from neighboring countries (estimated only 20% of movements form Israel are official)</li> <li>• Within country there is disease spread from animal movements, live animal markets, common grazing, inadequate vaccination coverage (SR), ineffective or late reporting/surveillance, insufficient biosecurity practices</li> <li>• PVS in progress in 2017</li> <li>• Noted that experience gained on FMD control is helpful for PPR control</li> <li>• RBSP has been developed with assistance from EuFMD and is in final stages of approval. The plan will be submitted to the WG by the end of the year</li> <li>• Request for support: from FAO to conduct the socioeconomic studies, technical backstopping for implementation of RBSP once approved and procurement of diagnostic kits</li> </ul> <p><b>Recommendation from RAG:</b></p> <p>→ Remain in PCP stage 1 with recommendation to send the completed RBSP once completed for review by the working group</p>
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Saudi Arabia	2*	2*	<ul style="list-style-type: none"> <li>• FMD is endemic in KSA. In 2016, 21 outbreaks reported in cattle and sheep (PanAsia II, O Ind 2001, A Asia G-VII) and 3 outbreaks in 2017 (O Ind 2001)</li> <li>• NSP serosurveillance started in May 2017 with 10,000 serum samples were collected and currently being analysed. Results will be available Dec 2017</li> <li>• There is a plan to improve importation protocols and policy, expand in the quarantine stations and harmonize importation with neighboring countries</li> <li>• Two type of vaccines; government includes 6 strains and private sector includes 7 strains in their vaccine blends. Vaccination coverage is 85% for cattle but the coverage for small ruminants was not determined</li> <li>• PVM is not conducted</li> <li>• PVS is requested for 2018</li> <li>• Plans to move to PCP stage 3 in 2018, too ambitious</li> <li>• A copy of a control plan in Arabic was presented at the interview. The plan is not risk-based and requires further improvement</li> <li>• It was agreed that KSA will host a workshop for training on how to formulate a RBSP. This workshop will include other Gulf countries namely Kuwait, Bahrain, UAE and Yemen. The FMD WG will assist in coordinating this meeting for Dec 2017</li> </ul> <p><b>Recommendation from RAG:</b></p> <p>→PCP Stage 2* with the condition to submit the RBSP by February 2018 and accepted by the RAG within 3 months from submission, otherwise the country is considered in PCP stage 1.</p>
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Syria	2*	2*	<ul style="list-style-type: none"> <li>• Cattle vaccination is applied twice a year, sheep once a year. Campaigns carried out in cooperation with civil society, NGO, syndicate of vets and the private sector (private veterinarians) _ good cooperation</li> <li>• In 2016, they have purchased 7 million doses of FMD vaccine</li> <li>• Vaccination takes place even in areas with difficult access and affected by the war (e.g., Hasake and Raca)</li> <li>• Thanks to the systematic use of companion kits, vaccinators test for immunity (last year they tested 5000 animals).</li> <li>• No NSP surveys anymore due to the difficulties to obtain the diagnostic kits.</li> <li>• Existence of appropriate legislation to implement the FMD national strategy.</li> <li>• Computerised reporting system for passive surveillance</li> </ul> <p>Identified needs:</p> <ul style="list-style-type: none"> <li>• FMD-NSP-ELISA diagnostic kits are difficult to get due to logistics and funding – any support would be welcome</li> <li>• Support to finalise the RSBP</li> <li>• Specific training for the laboratory (serological tests, cell culture and PCR)</li> <li>• Support and training for conducting epidemiological studies including serological surveys (e.g. EuFMD real-time training)</li> <li>• Needs related to PPR (master seed, ELISA-PCR Kits) to be addressed to the FAO/OIE joint PPR Secretariat</li> </ul> <p>Recommendation:</p> <p>→ PCP stage 2* with the condition to submit an early draft of the RBSP to the FMD WG ASAP for feedback to continue developing for submission of the final version by February 2018 and accepted by the RAG within 3 months from submission, otherwise the country is considered in PCP stage 1.</p>
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UAE	2*	2*	<ul style="list-style-type: none"> <li>• Have developed a general strategic and technical plan for the four diseases of priority (FMD, PPR, SGP, brucellosis). The FMD plan covers 2016-2025, and has been enforced. They also developed a case definition and manual for outbreak investigation. All these documents are in Arabic and confidential.</li> <li>• Apparently this plan is quite aggressive, targeting freedom with vaccination by 2025 for the whole country</li> <li>• Vaccination coverage is currently 61% but the plan would describe how and when they reach 80% coverage.</li> <li>• No NSP sero-survey conducted recently. Only rely on clinical surveillance. The plan apparently will include regular NSP surveys.</li> </ul> <p><b>Identified needs:</b></p> <ul style="list-style-type: none"> <li>• Training for PVM for lab technicians</li> <li>• List of experts that could develop a strategy for the design to monitor vaccination program effectiveness and assess the vaccination campaign.</li> </ul> <p><b>Recommendation:</b></p> <p>→PCP Stage 2* The draft RBSP will be provided to FMD WG by the end of December 2017 (if possible in English) for finalisation by February 2018 and accepted by the RAG within 3 months from submission, otherwise the country is considered in PCP stage 1.</p>
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Yemen	1*	Stage suspended	<ul style="list-style-type: none"> <li>• Information on FMD situation provided in the country report and in the interview are back dated to 2014</li> <li>• Since the political unrest, no official information is reported from the field and the Veterinary Services have been challenged to implement any activity on FMD</li> <li>• FMD thought to be endemic. Some unofficial notification via WhatsApp.</li> <li>• Laboratory not functioning.</li> <li>• The rare FMD activities (vaccination of some dairy farms) are conducted by private farmers, without official channels.</li> <li>• Veterinary Services are competent and have the network to implement FMD control activities; however, due to the current situation in Yemen, there is no possibility to resume their function. Confidence that Yemen could move to Stage 1 as soon as the situation improves and they will develop the risk assessment plan to re-assess the FMD situation</li> <li>• Twinning on RVF with South Africa and Pasteur Institute, France was interrupted because of the crisis and will resume with experts from Yemen going to France for training.</li> </ul> <p><b>Identified needs:</b></p> <ul style="list-style-type: none"> <li>• FMD diagnostic kits</li> <li>• Refreshing training for lab technicians (mainly on 3ABC ELISA) most likely through e-learning</li> <li>• Still have old samples that would need to be tested for FMD. Shipment to regional lab would be needed.</li> </ul> <p><b>Recommendation:</b> due to the current political unrest in Yemen and the challenges for Yemen Veterinary Services to perform FMD activities, the RAG decided to suspend the PCP assessment.</p>
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# Annex 5: Communiqué – final version

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## 2<sup>nd</sup> PPR and 4<sup>th</sup> FMD Regional Roadmap Meetings

### Middle East countries

Amman, Jordan, 15 – 19 October 2017

### DRAFT FINAL COMMUNIQUE

#### I. BACKGROUND

*Peste des petits ruminants* (PPR) and foot and mouth disease (FMD) are two major transboundary animal diseases for which global strategies were developed and endorsed by the international community in 2015 and 2012, respectively. The specific objective of the global FMD control strategy is to improve FMD control in regions where the disease is still endemic, thereby protecting the advanced animal disease control status in other regions of the world. The goal of the PPR global strategy is to eradicate PPR by 2030. These two Strategies require a globally concerted effort to support both national and regional actions to control and subsequently eradicate the diseases.

The two diseases are present in the Middle East countries where they affect the livelihoods of populations in particular in rural areas. Globally, PPR deeply affects the lives of some 300 million of the world's poorest rural families, whose livelihoods depend on sheep and goats.

The global strategies for these two diseases have highlighted the need to work on strengthening the capacities of national Veterinary Services to control and eradicate these two diseases, and, when possible, generate wide-ranging benefits by combining measures to prevent and control other animal diseases. Engagement of communities in the implementation of the control and eradication programmes will also result in professional and income generating opportunities in poor and rural areas, namely through training and capacity-building of veterinary para-professionals and community animal health workers.

The first PPR Roadmap meeting for Middle East countries was held in Doha, Qatar, 1 – 3 December 2015, back to back with the 3<sup>rd</sup> FMD Roadmap meeting.

In collaboration with the Ministry of Agriculture of the Hashemite Kingdom of Jordan, FAO and OIE, through their joint PPR Secretariat and joint FMD Working Group organised the 2<sup>nd</sup> PPR and 4<sup>th</sup> FMD Roadmap workshops for Middle East countries in Amman, Jordan, from 15 to 19 October 2017.

The meeting was officially opened by **His Excellency Eng. Khaled Al Huneifat**, Minister of Agriculture of the Hashemite Kingdom of Jordan, following remarks from Dr Sami Aledwen, General Secretary Assistant of Livestock and OIE Delegate for Jordan, Dr Ghazi Yehia, OIE Regional Representative for Middle East and Dr Friederike Mayen, Senior Livestock Development officer, on behalf of the FAO Representative in Jordan.

The meeting brought together Chief Veterinary Officers (CVOs), laboratory and epidemiologists from Bahrain, Egypt, Iraq, Jordan, Kuwait, Lebanon, Palestine, Saudi Arabia, Syria, United Arab Emirates and Yemen as well as representatives from Turkey (which belongs to Central Asia PPR Roadmap/ West Eurasia FMD Roadmap), EU-FMD, The Pirbright Institute, ANSES, Boehringer Ingelheim, FAO and OIE. List of participants is attached in Annex 4.

The PPR meeting's objectives were to:

- 1- Follow up of the implementation of the recommendations of the first PPR roadmap workshop
- 2- Assess the PPR epidemiological situation in the region and country progress in PPR control
- 3- Present the PPR Global Eradication Programme (PPR-GEP)
- 4- Present the PPR National Strategic Plan (NSP) template and agree on the modalities to develop NSP for each country
- 5- Discuss the PPR Resources mobilization strategy and partnerships in the region.

The FMD meeting's objectives were to:

5. Review and assess countries' progress in respect to the vision identified by the region;
6. Share information on FMD virus circulation within the regional ecosystem to assist in planning of vaccination and other preventive measures;
7. Provide technical training in areas identified by the region as priorities; and
8. Encourage regional discussion on important FMD-related topics and areas of regional priority/challenges, with the purpose of identifying possible ways for improvements and planning for the coming months.

The review of the recommendations from the 1<sup>st</sup> PPR and 3<sup>rd</sup> FMD Roadmap meeting in 2015 and the country presentations demonstrated that some progress had been made; , however, the following challenges remain in the region:

- Cross border control of animal movement and relaxed compliance with sanitary measures;
- Insufficient laboratory and epidemiology capacity and capability;
- Lack of political will and shortage of resources at national, regional and international levels;
- Insufficient stakeholders engagement;
- Risk assessment and risk management skills are inadequate ;
- Lack of communication for timely exchange of information between neighboring countries;
- Political unrest in several areas.

PPR is still endemic in Egypt, Iraq, Kuwait, Lebanon, Palestine, Saudi Arabia, UAE and Yemen. No PPR outbreaks reported in Jordan and Syria since the first Roadmap meeting. Bahrain remains historically free without vaccination. Turkey continues to report PPR outbreaks in Anatolia.

FMD is reported across the region. Prevailing FMD virus lineages circulating in the region are as follows:

- Established lineages: **O/ME-SA/PanAsia-2; A/ASIA/Iran-05 and Asia-1**

- Emerging lineages (that are present in some countries in the region): **O/ME-SA/Ind-2001; A/ASIA/G-VII, SAT2/VII and O/EA-3.**

The most appropriate strains for vaccine for current risks in the region and recommended for use in 2017 are provided in Annex 3.

Following fruitful discussions, the participants in the meeting agreed on the following recommendations.

## **II. RECOMMENDATIONS**

### **2.1. PPR RECOMMENDATIONS**

#### **2.1.1. Assessment of the PPR situation and update of the PPR Stages Progression**

Considering that the implementation of the PPR control and eradication stepwise approach requires a clear understanding of the PPR situation;

Considering that an assessment of the PPR situation will also contribute to a deep understanding of current country capacities with regard to laboratory, surveillance, prevention and control, legal framework and stakeholders' involvement;

Considering the follow-up of the recommendations from the previous meeting (Doha, 2015);

The meeting recommended countries carry out an assessment using the PPR Monitoring and Assessment Tool (PMAT), which will contribute to identify PPR risk areas and practices along the small ruminant value chains that may contribute to PPR introduction and/or spread.

The meeting agreed on the attached provisional updated PPR Stages Progression 2017-2030 and recommended to countries to confirm their final status to the PPR Secretariat by 20 December 2017.

#### **2.1.2. PPR National Strategic Plan (NSP)**

Considering that PPR eradication requires harmonised approach and logical and structured framework for action in each country;

Considering the current status in the formulation of the PPR NSP (see table 1 below);

The meeting recommended countries develop or update their PPR National Strategic Plan (NSP) using the template provided by the PPR Secretariat.

Furthermore, the country representatives agreed on the following timeframe for the development of their draft NSP or Contingency Plans.

Table 1: Deadline for submission of draft NSP

<b>Countries</b>	<b>PPR NSP Formulation Status</b>
Bahrain	PPR Contingency plan to be developed
Egypt	Draft NSP elaborated to be submitted for review by end of December 2017
Iraq	NSP to be drafted and submitted by end of February 2018
Jordan	NSP to be drafted and submitted by end of February 2018
Kuwait	NSP to be drafted and submitted by end of February 2018
Lebanon	NSP to be drafted and submitted by end of February 2018

Palestine	Draft NSP already reviewed by the PPR Secretariat to be finalized and approved by national relevant authorities
Saudi Arabia	Animal health programme including PPR already developed. PPR plan to be aligned with the NSP and submitted for review by end of December 2017
Syria	PPR Contingency plan to be developed
UAE	Animal health plan already developed for several diseases including PPR and FMD. PPR plan to be aligned with the NSP and submitted to the PPR Secretariat for review by end of December 2017
Yemen	NSP to be drafted and submitted by end of February 2018

The meeting also agreed that the PPR Secretariat will share the draft PPR Regional Strategic plan for review and inputs by countries by mid November 2017.

### 2.1.3. PPR Vaccination

Considering that vaccination (using quality certified vaccines in compliance with OIE standards) remains the main tool to control PPR outbreaks; Depending on the assessment and surveillance data, PPR vaccination should be time-limited (two successive years vaccination in Stage 2, followed by vaccination of young animals (4 months to one year in age) within one year or two) with high coverage aiming for 100 percent vaccination coverage to achieve the necessary flock immunity in high-risk areas;

The meeting recommended:

- Countries adopt a risk-based vaccination approach aiming to reach 100% immunity of the flocks in hotspot areas;
- Countries carry out Post Vaccination Evaluation (PVE) at the completion of each round of vaccination to evaluate the immune response and the population immunity;
- FAO and OIE support PVE training as needed.

### 2.1.4. Control of other small ruminant diseases in support of PPR eradication

Considering that the PPR GCES advocates combining PPR with strategies to control other important diseases of small ruminants for better cost-effectiveness when adequate epidemiological data are available;

Considering the updated list of priority diseases (table 1 below);

The meeting took note that only one single disease (Sheep and Goat Pox) has been prioritized by all countries and, therefore, agreed that countries should provide adequate epidemiological data for the other diseases for further consideration in their national PPR programme.

Table 2: List of priority diseases for small ruminant (DSR) to consider in the PPR programme

Countries	Priority DSR		
	Disease 1	Disease 2	Disease 3
Bahrain	CCPP	SGP	Enterotoxaemia
Egypt	FMD	SGP	Brucellosis
Iraq	Brucellosis	Enterotoxaemia	SGP
Jordan	FMD	SGP	Brucellosis

Kuwait	Brucellosis	SGP	FMD
Lebanon	FMD	SGP	Brucellosis
Palestine	Brucella	FMD	SGP
Qatar	SGP	Brucellosis	Enterotoxaemia
Saudi Arabia	Brucellosis	SGP	Enterotoxaemia
Syria	FMD	SGP	Enterotoxaemia
UAE	Brucellosis	FMD	SGP
Yemen	To be completed		

### **2.1.5. PPR Resource Mobilization**

Considering that PPR eradication can be achieved only with sufficient political and financial investment, that the PPR resource mobilisation is a shared responsibility between FAO/OIE, the regional economic organizations and the countries;

The meeting recommended:

- Countries advocate and raise awareness of decision makers and stakeholders as well as sensitize their national partners on the PPR GEP;
- Countries map domestic budgets allocated for animal health interventions and in particular for PPR control and share consolidated information with the PPR Secretariat.
- Countries plan to attend the PPR Pledging Conference planned to be held in Brussels during the first semester 2018. It would be a forum for countries to commit national investments and to confirm political commitment to the initiative and for donors and resource partners to contribute to the global programme and to establish a global coalition for PPR Eradication.
- FAO and OIE provide the various communication materials in Arabic language, as much as possible.

### **2.2. FMD 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 and the results of previous FMD regional Roadmap meetings which took place since 2012 (Cairo/2012; Amman/2014, Doha/2015);
- The importance of having a Regional Advisory Group (RAG) for Middle East 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;

1. The PCP-FMD stages as recommended by the RAG<sup>1</sup> and agreed on by country's representatives: :

	PCP-FMD Stage
Bahrain	2*
Egypt	2
Iraq	2*
Jordan	2*
Palestine	1
Kuwait	3*
Lebanon	2*
Oman	<i>(absent, not assessed)</i>
Qatar	<i>(absent, not assessed)</i>
Saudi Arabia	2*
Syria	2*
United Arab Emirates	2*
Yemen	<i>Assessment suspended due to the situation in Yemen</i>

\*Provisional PCP stage

2. Considering the need for countries to comply with the PCP requirements to progress in their PCP stages, the participants recommended:
- Countries in a provisional PCP-FMD Stage 2 or Stage 3 submit their revised Risk-Based Strategic Plan (RBSP) or National Control Plan, respectively, for review by the GF-TADs FMD Working group (FAO-FMD@fao.org and OIE-FMD@oie.int), in accordance with the dates recommended by the RAG members in their final assessment;
  - That an electronic consultation within the RAG may take place to finalise the assessment of PCP stages for countries that would have submitted their RBSP or control plans by February 2018;
  - FAO, OIE and EuFMD assist in organizing a workshop for training on the formulation of the RBSP for countries in provisional stage 2;
  - Countries share their FMD national control plan with the Middle East countries.
3. Considering the importance of evaluating the vaccination programme effectiveness, and lack of diagnostic tools for countries to conduct their own post-vaccination monitoring testing, the meeting recommended:
- Countries utilize the FAO-OIE guidelines in conducting PVM studies in regular basis, to continue assessing the quality of the vaccine and vaccination programme in reducing the FMD burden and to determine the cost benefits;

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<sup>1</sup> See section 2.3.1.

- FAO and OIE encourage vaccine manufacturers to make available a highly specific and sensitive companion serological diagnostic kit including standard control sera, to enable countries to conduct post-vaccination monitoring for evaluation of the vaccination programme effectiveness;
- FAO and OIE encourage vaccine manufacturers to share their vaccine virus strain(s) and homologous sera (or packaged vaccine to prepare the homologous sera) with the reference centre(s) for vaccine matching and post-vaccination monitoring testing, upon agreed procedures for material transfer;

### **2.3. JOINT PPR AND FMD RECOMMENDATIONS**

#### **2.3.1. PPR and FMD Regional Advisory Group (RAG)**

The meeting participants discussed the composition of the Regional Advisory Group (RAG) and agreed on the following.

##### Voting members:

- Chair : Bahrein
- Members : UAE and Jordan
- Epidemiology representative : Egypt
- Laboratory representative : Syria

##### Non-voting members:

- Regional organizations: the participants agreed that GCC<sup>2</sup> and AOAD<sup>3</sup> could be considered in future roadmap meetings, as these regional organisations, while invited, did not attend the present Roadmap meeting.
- Member of the GF-TADs FMD working group, PCP experts and other FAO and OIE representatives.

#### **2.3.2. Participation of Turkey in the PPR and FMD Middle East**

The participants welcomed Turkey as an observer in the Middle East PPR and FMD Roadmap meetings.

#### **2.3.3. Regional epidemiology and laboratory networks**

Considering that FMD and PPR are transboundary animal diseases that need coordination and harmonisation of strategies and activities as well as information sharing;

Considering the existing regional network within the GCC countries;

The meeting recommended:

- Countries establish regional laboratory and epidemiology networks for FMD-PPR and other important diseases to share information, exchange expertise and harmonize control measures in the Middle East.
- As a first step, countries submit their point of contacts to the FMD WG and PPR Secretariat to complete the exiting list.

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<sup>2</sup> Gulf Cooperation Council

<sup>3</sup> Arab Organization for Agriculture Development



- FAO and OIE in collaboration with the GCC Secretariat, explore the possibility to expand the existing GCC network to other Middle East countries.

The meeting agreed to organize the inaugural meeting of the regional network in Kuwait during the second semester 2018.

#### **2.3.4. OIE PVS Pathway**

Considering the key role of the Veterinary Services in FMD control and PPR eradication, in line with Global FMD control Strategy and PPR Global Control and Eradication Strategy, the meeting recommended:

- Countries make use of their OIE PVS mission reports to i) estimate the capability of the Veterinary Services ii) identify the area where the Veterinary Service should build capacity to further progress toward PPR Eradication and FMD control or eradication.
- Countries having carried out a PVS evaluation before 2013 consider requesting a PVS Follow-up mission and that countries having identified specific needs under the PVS pathway (PVS legislation or PVS Laboratory) send an official request to the OIE,

#### **2.3.5. Other recommendations**

The meeting also recommended that:

- Countries continue to improve transparency and diseases reporting, including by using the World Animal Health Information System (WAHIS) functionality to monthly report selected endemic diseases.
- Considering the risk posed by both legal and illegal animal movements, importing and exporting countries should implement and follow the OIE *Terrestrial Animal Health Code* standards for safe international trade of live animals and animal products, including the risk assessment standards.

The meeting agreed that material presented at roadmap meeting, including country reports and meeting reports, be published on the GF-TADs website,

### **Acknowledgement**

The participants in the PPR and FMD Regional Roadmap Meeting for Middle East are grateful to the Hashemite Kingdom of Jordan, the Ministry of Agriculture, the CVO and the veterinary services of Jordan, FAO and OIE for the support extended to them during the preparation and the conduct of the meeting.

Amman, 19 October 2017

## ANNEXES

### Annex 1 - Updated PPR Stage Progression 2017 – 2030

*(based on country self assessment)*

Middle East [13]	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Bahrain	1	4	FREE											
Egypt	2	2	3	3	3	3	4	FREE						
Iraq	2	2	2	2	3	3	3	4	4	FREE				
Jordan	2	2	2	3	3	3	4	4	4	FREE				
Kuwait	3	3	3	4	FREE									
Lebanon	2	2	2	3	3	3	4	4	FREE					
[Oman]														
Palestine	1	1	1	2	2	2	4	4	4	FREE				
[Qatar]	2	3	3	4	FREE									
Saudi Arabia	2	4	4	4	4	4	FREE							
Syria	2	2	2	2	2	3	3	3	3	4	4	4	FREE	
United Arab Emirates	2	2	3	3	3	3	4	4	FREE					
Yemen	1	1	2	2	2	3	3	4	4	FREE				

## Annex 2 - Updated FMD PCP 2017 – 2025

Countries	Validated Stages						Provisional Stages (not validated)								
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	
Bahrain	1	2	2	2*		2*	3	3	4	4	4	5	5	5	
Egypt	1	1	2*	2**		2	2	2	2	3	3	3	4	4	
Iraq	2	2	2*	2**		2*	2	2	2	2	3	3	3	3	
Jordan	1	1	2*	2**		2*	2	2	2	3	3	3	3	4	
Kuwait	2	2	3	3*		3*	3	3	4	4	4	4	4	4	
Lebanon	1	1	2*	2**		2*	2	2	3	3	3	4	4	5	
Oman	2	2	2*												
Palestine			1			1	1	2	2	2	2	3	3	3	
Qatar	2	2	3*	3*			4	4	4	4					
Saudi Arabia	1	1	2*	2*		2*	2	2	3	3	3	3	4	4	
Syria	2	2	2*	2*		2*	2	2	2	3	3	3	3	4	
UAE	1	1	2	2**		2*	2	2	2	3	3	3	4	4	
Yemen	1	1	1*			Suspended									

**Table 1: PCP-FMD stages of Middle-East countries as of October 2017**

\* Provisional status given to the country (countries has a limited time to provide additional information including Control Plan; if no, they will be considered in their previous validated stage)

Country : Country that did not attend the meeting in Amman

**Annex 3**  
**FMD vaccine recommendations for Middle East**

*OIE/FAO Reference Labs recommend that Veterinary Services ensure that the vaccines used are appropriate for the viruses circulating in the region.*

*The selection and deployment of these vaccines should consider the extent of these co-circulating lineages and available data from in-vitro (vaccine matching) and in-vivo (vaccine challenge and field efficacy evaluation) studies.*

*Internationally produced vaccines (used individually or in combination) that can be used in the region for current risks in the Middle-East include:*

*PanAsia-2 including O-Tur-5-2009 (or equivalent such as O-3039)  
O-Manisa  
A-Iran-05 (A-TUR-06)  
A22 Iraq  
Asia-1 Shamir  
SAT2 Eritrea (or SAT2 Saudi Arabia)  
A/ASIA/G-VII \**

Points to note:

- \* Very poor matching data was generated for A/ASIA/G-VII samples collected throughout the region from a range of different candidate serotype A vaccines – including A-Sau-95 which is the closest genetic relative available from the International Suppliers. **New vaccines with A/ASIA/GVII strains are either available or close to being available from International suppliers which is likely to be recommended in combination with A-Iran-05 for most countries in the region.**
- Field isolates from the A/ASIA/Iran-05 lineage are still often poorly matched (using in-vitro tests) with A-Iran-05 and A-Tur-06 vaccines. There is still an urgent need to evaluate whether these vaccines are still providing protection in the field.
- Other vaccines may be suitable for use in the region, but advice should be sought from the OIE/FAO Reference Laboratories regarding their use. The OIE/FAO Laboratories also recommend that greater use should be made of the vaccine matching services offered by the World Reference Laboratory at Pirbright and other FAO/OIE Reference Centres.