



FAO/OIE
GF-TADs

GLOBAL FRAMEWORK FOR THE
PROGRESSIVE CONTROL OF
TRANSBOUNDARY ANIMAL DISEASES

**5TH ROUND TABLE ON FMD SURVEILLANCE AND CONTROL IN THE MIDDLE EAST
07 – 08 APRIL 2009**

BEIRUT - LEBANON

Report

Participating countries:

Bahrain – Cyprus – Djibouti – Egypt – Jordan – KSA – Kuwait – Lebanon – Iran – Iraq – Oman – Qatar – Sudan – Syria – Turkey – United Arab Emirates - Yemen.

Proceedings of the meeting:

The meeting considered the progress made since the 4th roundtable held in Amman, Jordan in September 2007 and presented an analysis of the current situation with the recent epizootic events (e.g., the spread of A Iran 05 and persistence of O PanAsia 2). The meeting also reviewed the recommendations relevant to antigens for inclusion in vaccination programs, and discussed and adopted the outlines for a relevant programme in support of the OIE/ FAO strategy for the global control of FMD, which will be launched in Asunción, Paraguay, June 2009, taking into account regional specificities.

1. Welcoming Address

In the opening ceremony, Dr Nabih Gaouch, CVO of Lebanon and OIE Delegate welcomed all the participants and expressed his pleasure for hosting this meeting in Lebanon and highlighted the support of the Lebanese Government to hold this meeting in Beirut. He pointed out the importance of this meeting which would help the entire region in the analysis of updated information on the current FMD status and to assess an approach for the progressive control and enhanced surveillance for FMD in the region. He wished all participants a pleasant stay in Lebanon.

Dr Gaston Funes, Head of OIE Regional Activities Department, remarked that FMD is included in the list of priority diseases of all GF-TADs Regional Steering Committees worldwide and that the recommendations of the last FMD Round Table held in Amman in September 2007 were included in the preparation of the agenda of this meeting. He underlined that the main objective of this meeting is to discuss a regional framework for the control of the disease and to present such strategy during the forthcoming OIE – FAO global conference on FMD, which will be held in Paraguay in June 2009.

He stressed that coordination at regional level is a key factor when dealing with TADs such as FMD, and highlighted the important role of the RAHC in supporting countries of the region to the control of FMD.

Dr Keith Sumption, EUFMD Secretary, highlighted the current epidemic situation in the Middle East, notably with the recent spread of the A strain. He emphasized the high priority of developing a long term strategy in order to control the disease in the entire region.

2. Session 1: Disease situation – circulating strains – FMD country programmes

2.1. Disease situation

Dr Pierre Primot (OIE-ME) presented a general overview of the FMD situation in the Middle East including the country reports and notifications to OIE, reports of the OIE-FAO World Reference Laboratory, Pirbright UK, and countries' answers to a questionnaire prepared by the OIE Regional Representation for the Middle East.

Dr. Primot summarized the situation and reminded the attendees that FMD is endemic in all the Middle East and periodic devastating epidemics usually occur and led to the recent rapid spread across national and regional borders in the past few years:

- In 2005 and 2006, the Middle East has been severely affected by two separate type A epidemics, one which emerged in Iran (A Iran 05) in 2005 - 2006, and an incursion of an African type A virus into Egypt, causing widespread outbreaks in 2006.

The serotype A Iran 2005 was first observed in Iran and moved westwards into Turkey (including the European part of Thrace). It has continued to spread in 2006, circulating in Turkey and Iran, and has been also detected in Pakistan, Saudi Arabia and Jordan and in the first months of 2009 in Iraq, Kuwait and Bahrain, and was recently identified in samples sent by Lebanon and Libya to the WRL. This strain matches with A Iraq 22.

Since August 2007, a new sublineage of this strain (named A-Iran-05ARD-07) has been found in Turkey, for which A Iraq 22 is not protective. This new sublineage matches with A Turkey 2006.

The type A which affected Egypt in 2006, was diagnosed in 8 Governorates in this country. Genetically, this new serotype A differs considerably from the Middle Eastern viruses and was closely related to FMD viruses reported in East Africa. The same strain was again identified in February 2009 in Egypt. The detection in outbreaks in 2009 suggests establishment of this East African strain in the Mediterranean region.

- In 2007, a new type O, the type O PanAsia 2, appears in the Middle East. This new strain in the region is probably originated from a strain circulating in India in 2001 and the pandemic dispersal of O PanAsia 2 lineage affected Pakistan, Iran, Jordan, Turkey, Israel, the PAT, UAE, Kuwait, Bahrain, KSA, probably Lebanon and also Egypt. This strain was responsible of high mortalities on lamb and calves during the winter, and notably in 2007. Vaccines with O Manisa offer a good immune protection against this strain.
- In Sudan, the serotype identified so far in the country according to prevalence (high to low) among cattle, sheep and goats were A, O, SAT2 and SAT1 (for SAT1, there is no reports of virus isolation since 1976).

2.2. Circulating strains

Dr Antonello Di Nardo (OIE-FAO WRLFMD, Pirbright UK) presented the FMD situation for the Middle East (as determined from samples submitted to WRLFMD) and the different topotypes observed in the region, detailing sequencing of each batch received at the WRLFMD and underlining the possible threat for neighbouring regions, particularly Europe:

- The A Iran 05 topotype, belonging to the Asia topotype, is the predominant serotype A lineage circulating in Middle East. It has 2 different paths of evolution (S and NS genome regions): the A22 sub-lineage as starting point and A/IRN/105, A-Iran-96, A-Iran-99 as evolutionary intermediates. In Turkey, in 2007, the new sub-lineages A-Iran-05^{ARD-07} and A-Iran-05^{EZM-07} were observed and were predominant in this country. This strain is now presented in most of the Middle Eastern countries and has reached since the beginning of 2009 Bahrain, Kuwait, Lebanon and Libya. The new epidemic sub-lineage reported in the above countries and circulating recently in West EurAsia has been named as A-Iran-05^{BAR-08}.
- The A Egypt 06 has more than 90% identity with A/KEN/98, A/ETH/92 and A/KEN/05, and all topotypes are closely related (max ~ 5% difference). Its introduction in Egypt from East Africa was probably made through the trade in live cattle from Ethiopia (via sea-route). The A Egypt 09 identified recently in Egypt is close related to A/EGY/06 (95.5% identity). This confirms the persistence of African type A virus in Egypt, spread in 2006 and evolved until 2009.
- The O PanAsia II, belonging to the ME-SA topotype, was first recorded in 2003 in India and is now widely spread in all the Middle East. All viruses are closely related to each other (max ~ 5% difference) and distinct from the earlier PanAsia lineage. Over the period 2008-09, it has been reported in Turkey, Saudi Arabia, Kuwait, Iran, Bahrain, and Pakistan.

Dr Di Nardo also presented the vaccine recommendations of the WRL for Middle-East underlining that each country should undertake a risk assessment to consider risk of other types and subtypes including Type Asia-1 and SAT viruses. Furthermore, it has been stressed that serological matching of serotype A vaccine strains and some A-Iran-05 field isolates is currently poor, however studies have shown that vaccines with weak antigenic match to field isolates, as determined by serology, can nevertheless afford protection if they are of sufficiently high potency (PD50>7).

For the circulating strains:

Risk	Routine vaccination	Alternatives
A Iran 05 genotype (as circulating in 2009)	A Iran O5 or homologue (A TUR 06)	Or high potency (>7 and recommended to be 24 PD50 or higher): A 22 Iraq A Iran 99 A Iran 96
A Egy 06 (as circulating in 2009)	A Eritrea 98	Check WRL website/quarterly reports for vaccine matching in 2009
Type O	O Manisa or O PanAsia	Check WRL reports for vaccine matching in 2009

Vaccine recommendations:

Serotype	High Priority	Medium Priority	Low Priority
A	A ₂₂ IRQ* A-Iran-99* A-Iran-96* A Eritrea 98 [†]	A Iran 87 A Saudi Arabia 23/86 A Malaysia 97 (or Thai equivalent)	A 15 Bangkok
O	O ₁ Manisa	O Taiwan 97 (pig adapted strain or Philippine equivalent)	
Asia 1	Shamir		
SAT	SAT 2 Saudi Arabia (if high import risks)	SAT 2 Zimbabwe SAT 1 South Africa	SAT 2 Kenya SAT 1 Kenya

* High potency vaccines (PD50 >7 or better >24) is highly recommended in emergency vaccination.

[†] For A/EGY/09.

A large discussion followed the presentation of the recommended vaccines for the region, notably on the fact that now high potency vaccines are recommended to protect susceptible animals against the A Iran 05 strains. There was a consensus on the fact that such vaccines are not the panacea, but considering the lack of routine vaccine available on the market, and therefore in the absence of a good match or where the match is unknown, they are actually the best option. Relevant routine vaccines matching the field strains are currently under-development.

2.3. FMD country programmes and presentations:

Dr Primot proposed a general overview of a country's programme on FMD according to countries' responses to the OIE-ME questionnaire. He detailed the national laboratory capacities and diagnostic techniques available, national sampling and surveillance, vaccination programmes, national control strategies and the availability of specific emergency funds, and the awareness programmes carried out in each country on this specific subject.

The detailed report is included in Annex 3.

Representatives of selected Member Countries (Egypt, Sudan, Yemen, Oman, Lebanon, Syria and Bahrain) presented the current situation of the disease in their country.

3. Session 2: The Progressive Control Pathway

3.1. The concept

Dr Keith Sumption (EUFMD) explained that FAO has developed a new tool for the self-assessment of the level of FMD risk management in regions that are not officially recognised by the OIE as free of FMD.

The use of the tool should result in baseline information on the current situation of FMD management for use in regional and global advocacy. The tool has been developed by FAO, as part of a progressive FMD risk reduction approach, based on both the measurement of FMD infection/circulation in the population at risk and the level of control of transmission/risk. Five different stages have therefore been identified, ranging from Stage 0 _ risk not controlled at all (with continuous FMD virus circulation in the country) to Stage 4 _ risk effectively managed (with country / zone officially free (OIE-status) of FMD virus, with vaccination). An ultimate Stage 5 is also provided for, applicable to a country / zone officially free (OIE-status) of FMD virus without vaccination. Only Stages 4 and 5 refer to an official status as defined in the OIE Terrestrial Code. Stages 0 to 3 have been created for the specific purpose of this survey.

The PCP document is attached in Annex 4.

The tool was first introduced and tested at the West Eurasia FMD Workshop, held in Shiraz in November 2008, with FAO experts to guide. A similar meeting was also conducted for a Pan-African survey at a meeting held in Nairobi, Kenya, in January 2009, to develop status and roadmaps for West/Central, East and Southern Africa, and during a sub-regional meeting for North African countries, held in Algiers (Algeria) in February 2009.

The objective is to obtain country responses on the PCP before mid May to present it during the next meeting of the OIE Regional Commission for the Middle East, the 25 May 2009 in Paris, when the GF-TADs activities will be presented.

3.2. The Outcomes of the West Eurasia FMD Workshop - Shiraz, Iran, November 2008

Dr Vahid Otarod from the Iran Veterinary Organization (IVO) summarized briefly the situation of FMD in Iran, the main problems with the control of the disease and the necessity to establish a regional strategy, the Roadmap, based on close collaboration within the region.

That was also the goal of the West Eurasia FMD Workshop, held in Shiraz in November 2008 and jointly organized by EUFMD and IVO, with the participation of countries from Middle East and West and Central Asia.

There was a collective agreement on the prepared draft for the progressive control of FMD with the vision of freedom from clinical disease at 2020. Regional collaboration and communication as well as laboratory services, reporting and information systems, FMD vaccination campaigns, the resolution of Trans-boundary animal movement control and staff training were identified as the main areas to be improved.

To reach these objectives a coordination unit is necessary to develop laboratory and epidemiological networks, support routine sero-surveillance programs, prepare annual meetings to assess progress and propose technical assistance to write national strategies against FMD.

A Regional Roadmap Infrastructure was proposed based on an organized regional network of national units, the National FMD Control Centres, with the support and assistance of Regional Centres and Reference Laboratories.

4. Session 3: Regional needs for a relevant programme

4.1. An example: the regional control of FMD in the MERCOSUR

Dr Gideon Brückner (OIE) presented the strategy developed in the MERCOSUR countries (Argentina, Bolivia, Brazil and Paraguay) as an example of a harmonized regional approach to control the disease, underlining the regional management of such programme through a regional agreement and a regional body, the Permanent Veterinary Committee, technically assisted by OIE experts under the coordination of the Scientific Commission for Animal Diseases of the OIE.

The adopted regional strategy was essentially focused on zonification by creating a High Surveillance Zone along frontier areas where harmonised approaches were established in relation to outbreaks containment, vaccination programme, control of animal movement, including animal identification and regular monitoring, and epidemiosurveillance.

After intensive efforts and high collaboration level of all participating countries no more outbreaks have been observed during the last 3 years in the countries participating in the programme.

4.2. Regional support needed to progress in FMD control

To assess what kind of support is needed for improving the control of FMD in the Middle East, an interactive session was organized, with Dr Brückner (OIE) and Dr Sumption (EUFMD) presided as facilitators.

Discussions were focused on 3 main topics. The needs identified by the countries in their answers to the OIE-ME questionnaire were the basis of the discussion.

- Laboratory services and networking

The main concerns were to

- Identify the circulating strains in the region;
- Support FMD laboratory diagnostic in Middle Eastern countries – Development of rapid and reliable field tests;
- Identification of additional candidates for Laboratory twinning (OIE programme);
- Establish the minimum capacity in every country for confirmation and contracts for services.

- Surveillance - Epidemiology support

The discussion identified the need to:

- Identify the circulating strains in the region;
 - Provide training courses on the improvement of preparedness, early warning surveillance systems and emergency management;
 - Harmonize national control strategies which are used in regional countries;
 - Use PVS reports to identify where are countries' gaps;
 - Improve information gathering;
 - Monitor the efficacy of vaccination in the field;
 - Identify and compile a list of experts available to assist countries providing technical support;
 - Have a minimal level of surveillance each year (PCP approach);
 - Train national staff ;
 - Support to awareness campaigns.
- Controlling informal/illegal trans-boundary animal movement

Participants identified the need to:

- Harmonize national control strategies within the region;
- Ensure a better control of animal movement throughout the region;
- Create FMD Free Zones according to OIE standards;
- Improve collaboration between countries on control measures at common borders;
- Assess the critical places and pathways of movement, country by country;
- Harmonise national legislation;
- Coordinate the program at a regional level (RAHC)

5. Session 4: Formulation of regional needs to the Paraguay Conference

Following discussions of Session 3, the delegates proposed ideas, actions and/or solutions to be set up taking into consideration the specific situation of the disease in the Middle East and countries' needs.

Proposals have been divided in four main domains:

- Laboratory networking
- Surveillance/Epidemiology support
- Controlling informal/illegal transboundary movement
- Optimizing vaccination and emergency response

Countries' needs	Solution – Action Proposals
I Lab Networking	
Identify and study the circulating strains in the region	<ul style="list-style-type: none"> - Continue to support the submission of samples to OIE – FAO Reference Laboratories – promotion of low cost procedures - Link with the OIE/FAO lab networking system - Minimum diagnostic capacity level for each country - Encourage lab quality assurance programme for labs from the region – proficiency testing - Analyze of collected data at regional level, leading to early warning and early control of the disease.
Support FMD laboratory diagnostic in Middle Eastern countries	<ul style="list-style-type: none"> - Creation of Regional Reference Laboratories - Voluntary countries? – Jordan – Turkey - Kuwait - Support of OIE Reference Laboratories - Twinning programme - Minimum capacity in every country for confirmation and contracts for services - Development of rapid and reliable field tests
Training courses	Organisation of training courses - RAHC in collaboration with WRL and Collaborating Centres
II Surveillance / epidemiology support	
Identify and study the circulating strains in the region	<ul style="list-style-type: none"> - Implementation of a regional surveillance programme – seromapping (encourage every country to participate in the seromapping program within the 2 years - 2011) - progressive control approach - Analyze of collected data in a regional reference centre, leading to early warning and early control of the disease - to better understand the disease - links to expert - Risk assessment established by countries - Improvement of animal movement control
Harmonize national control strategies which are used in countries of the region	<ul style="list-style-type: none"> - Establishment of a pilot programme - Link to the Progressive Control Approach - Creation of a Permanent Veterinary Body – RAHC with national contact person

	<ul style="list-style-type: none"> - Improvement of information gathering - Need a minimal level of surveillance each year (PCP)
Training courses	<ul style="list-style-type: none"> - Organisation of training courses - RAHC in collaboration with WRL and Collaborating Centres, notably on <ul style="list-style-type: none"> o sampling on FMD and o risk analysis – identification by each country of their high risk points - Regional training workshop on the pathway, then national trainings
Strengthen public awareness	<ul style="list-style-type: none"> - Establishment of regional model – RAHC -To be adapted by countries according to their specificities - online resources should be used and adapted regionally - implication of farmers and private sector - communication between countries – networking - improve veterinary education in the region
III Controlling informal/illegal transboundary movement	
Harmonize national control strategies which are used in countries of the region	<ul style="list-style-type: none"> - Establishment of a pilot programme - RAHC - More bilateral meetings on measures to protect borders - Better communication between countries to develop trust - Encourage country collaboration – agreement between countries - Wider level agreement needed on measures to be taken on movement between countries - Harmonised national legislation? Promoted at regional level - National and /or Regional Plans to control animal illegal movements
Better control of animal movement throughout the region	<ul style="list-style-type: none"> - National Risk assessment should identify critical places and pathways of animal movement - Critical analysis of animal movement – critical risk point – animal introduction in the country – spread of virus - HACCP approach – critical control point - Coordinated actions across borders and sanitary measures should be strengthened - Respect of OIE recommendations for animal trade (importing and exporting countries obligations) – OIE TAHC Section 5 - Use of relevant sanitary certification for animal

	<p>movement (model established by the OIE RR for the ME) - Harmonisation of certification</p> <ul style="list-style-type: none"> - Improvement of animal identification and traceability according to OIE standards - Specific regional certification for transhumance? - Pre – export quarantine facilities to secure live animal trade - Harmonisation and improvement of country legislation
Creation of FMD Free Zone – Country (country interest)	<ul style="list-style-type: none"> - Respect of the relevant OIE Standards – OIE TAHC Chapter 8.5 - Encourage countries to reach freedom status
Training courses	Organisation of training courses - RAHC in collaboration with WRL and Collaborating Centres...
IV Optimizing vaccination and emergency response	
Harmonize FMD vaccination quality in the region	<ul style="list-style-type: none"> - Quality of vaccine - vaccine quality control - Vaccination should match with circulating strains – Consideration of WRL recommendations - Regional strategy for vaccination - RAHC / Reference Laboratory – annual meeting RT - Assessment of post vaccination immunity - Efficacy of vaccination in the field (part of monitoring control) - Sharing of experience between countries of the region - country vaccination data and programme - concentration of vaccination on risk areas
Develop FMD vaccine production in the region	<ul style="list-style-type: none"> - Specific agreements between vaccine producers at regional and international level, based on risk assessment of circulating strains and country specific capabilities
Establish an Ag bank for FMD virus for exotic strains	<ul style="list-style-type: none"> - Specific agreements with international vaccine producers or Reference Laboratories <p>or</p> <ul style="list-style-type: none"> - Regional body to be set up - Risk assessment
Prepare and implement a specific regional contingency plan to control any exotic FMD virus strain	<ul style="list-style-type: none"> - Establishment of a model of contingency plan (RAHC) – to be adapted by regional countries according to their specific situation - Emergency meeting? - Supply of emergency vaccine?

Strengthen public awareness	<ul style="list-style-type: none"> - Establishment of regional model – RAHC - to be adapted by countries of the region according to their specificities - Compensatory programmes in country
V Other comments - Remarks	
	<ul style="list-style-type: none"> - PVS useful to identify where are the weaknesses - Creation of a list of experts to assist countries to provide technical support

6. Conclusions

The evolution of the current FMD epidemic situation in the Middle East shows the lack of country preparation and coordination in the region. Middle Eastern countries still have limited capacities and capabilities for FMD surveillance and control, considering notably early detection and rapid response.

To control the disease in the region, vaccination in large ruminants, sometimes also in small ruminants, is the common strategy adopted. These vaccination programs utilise vaccines from a wide variety of sources, including producers based within the region and international suppliers from Europe, Russia and India. However, each country has its own specific strategy. The quality of vaccine is not always in compliance with OIE Standards and very few countries are monitoring the efficacy of their vaccination programs.

The extensive land and frontier borders in the region and the impact of animal movement between neighbouring countries, notably to satisfy peoples' needs during Muslim events (Hajj and Ramadan) make the disease control even more difficult.

Cooperation, collaboration and exchange of information between countries are lacking.

According to such situation, the Middle East shall be recognized as a high risk area for the spread of FMD virus to neighbouring regions, especially Europe

Thus a regional specific and relevant programme for the control of FMD in the Middle East should be established on a long term basis. The RAHC shall be the relevant structure to carry such program within the OIE – FAO global strategy to control the disease worldwide.

7. Recommendations

Cf. annex 1.

8. Agenda

Cf. annex 2.

9. Summary of countries' answer to the OIE-ME questionnaire

Cf. annex 3.

10. The Progressive Control Pathway

Cf. annex 4

11. List of participants

Cf. annex 5

Annex 1: Recommendations



5^h FMD roundtable for the Surveillance and Control of FMD in the Middle East

8 – 9 April 2009

Beirut – Lebanon

CONSIDERING THAT

1. FMD is endemic and widely spread in the Middle East and the disease can not be controlled at the individual country level and countries are at risk for FMD in neighbouring regions;
2. The extensive land border in the region which complicates FMD control;
3. The presence of different strains and variants of the FMD virus in different countries makes the correct diagnosis and the use of specific vaccines that match the circulating virus strains a crucial task;
4. Some countries are not able to secure funding within their budgets for surveillance programs;
5. Previous meetings adopted recommendations relating regional actions against FMD particularly the 4th FMD Round Table organized under the auspices of the Middle East Regional Steering Committee (RSC) of the GF-TADs in September 2007, in Amman, Jordan, and the West Eurasia FMD Workshop held in Shiraz, Iran, November 2008;
6. All participating countries endorsed in Amman, Jordan in 2007, their commitment to support an OIE – FAO project to implement a regional strategy for FMD control and surveillance in the region through the Regional Animal Health Centre under the GF-TADs umbrella;
7. OIE and FAO are elaborating a global approach to FMD control based on regional strategies and technical programmes;

The participants of the 5th FMD Round Table recommend that:

1. All countries of the region review and adapt their vaccination campaign, using vaccine matching of the circulating strains in the region, according to the WRL reports and recommendations made during the annual FMD Round Table;
2. FMD post vaccination serosurveys should be carried out on regular basis to assess the effectiveness of the vaccination;
3. A long term vision for the progressive control of FMD be developed by the RAHC / GF-TADs and validated by Member countries;
4. A framework for action including a specific project, for an harmonised regional control and surveillance of the FMD in the Middle East should be set up under the auspices of the Regional Steering Committee of the GF-TADs, through the RAHC;
5. The main objective of the project is to increase and harmonise the level of FMD surveillance and control in the Middle East region, through support to activities in the Progressive Control Pathway, including:
 - Assessing current country strategies to manage disease: surveillance and prevention programs, diagnostic, control measures, vaccine and vaccination system, and national disease control budget allocations;
 - Harmonisation between countries surveillance strategies, vaccine programs, animals and animal products movement control;
 - Design a regional FMD contingency plan and implement it at national level;
 - Training technical staff to conduct appropriate prevention and control measures against the disease;
 - Implementing appropriate measures and methodologies in collaboration with the WRL for FMD, to identify FMD strains circulating in the region and potential introduction of others;
 - Encouraging transparency through prompt notification of outbreaks or infection detection to the OIE using WAHIS.
6. To facilitate the implementation of a regional approach for FMD control, each country of the region should designate a National Contact Person, which will execute under the supervision of the CVO, all activities necessary for achieving the objectives of the project;
7. On their behalf, the FAO - OIE GF-TADs Regional Steering Committee shall present the conclusions of the 5th FMD Round Table and propose a strategic and long term framework and immediate actions to the OIE Regional Commission for its validation during the OIE General Session in May 2009, and at the OIE-FAO global conference on FMD, Asuncion Paraguay, 24-26 June 2009.

Annex 2: Agenda



FAO/OIE
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**OFFICIAL INAUGURATION OF THE OIE-FAO REGIONAL ANIMAL HEALTH CENTRE
 4TH REGIONAL STEERING COMMITTEE OF THE GF-TADS
 5TH ROUND TABLE FOR THE SURVEILLANCE AND CONTROL OF FMD IN THE MIDDLE EAST**

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TUESDAY 7 APRIL AM OFFICIAL INAUGURATION OF THE REGIONAL ANIMAL HEALTH CENTRE FOR THE MIDDLE EAST

09:00-9:15	Presentation on the Regional Animal Health Centre for the Middle East by Dr George Khoury (FAO) and Dr Ghazi Yehia (OIE Middle East)
9:15-10:00	Welcome address by: <ul style="list-style-type: none"> • Dr Ali Moumen, FAO Representative in Lebanon • Dr Sultan Al Khalaf, Arab Veterinary Associations • Dr Gaston Funes, Chief of OIE Regional Activities Department • Dr Joseph Domenech, FAO Chief Veterinary Officer • H.E. the Lebanese Minister of Agriculture Eng. Elias Skaff
10:00-10:30	Cocktail

TUESDAY 7 APRIL AM (GF-TADS REGIONAL STEERING COMMITTEE)

12:00-13:00	GF-TADS 4 th Regional Steering Committee meeting <ul style="list-style-type: none"> - Welcome address: Dr Khoury, Chairman of the RSC - Election of the new RSC Bureau - Plan of Action for 2009-2010 - Interventions of MZCP/AOAD/USDA-APHIS/GCC - Adoption of the Plan of Action 2009 - 2010 - Discussions, conclusions and proposal for dates and venue of the next meeting
13:00-14:00	Lunch

TUESDAY 7 APRIL P.M. (OIE/FAO REGIONAL ANIMAL HEALTH CENTRE ACTIVITY)

14:00-16:00	Report Session from the Secretariat <ul style="list-style-type: none"> - Follow up of Amman Conference on Rinderpest Freedom Official Recognition P.Primot (OIE) and F. Njeumi (FAO) - Update on RVF S. De La Rocque (FAO) and G.Yehia (OIE) - Small ruminants diseases and regional approach A. Al Edrissi (FAO) and A. Hassan (OIE Regional Commission ME) - Discussions and conclusions
20:00	Diner hosted by Abu Yaser International Company, Djibouti Regional Quarantine Facility - Burj el Hamam Restaurant ,Movenpick Hotel Raoucheh



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4TH REGIONAL STEERING COMMITTEE OF THE GF-TADS
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WENESDAY 8 APRIL - 5TH FMD ROUND TABLE

09:00-09:30	Welcome Address Ministry of Agriculture 5 th Roundtable: aims and outcomes expected G. Funes and G. Bruckner (OIE) - K. Sumption (FAO) Adoption of the agenda Designation of session's chairman and reporter
09:30-10:30	Session One: - FMD situation in the Middle East (Summary and analysis of the questionnaires' response) P. Primot (OIE) - FMDV Strains and Sub-strains risk to the Middle East, recommended vaccine programs 2009 A. di Nardo (OIE/FAO FMD Reference Laboratory - IAH Pirbright) - Discussions
10:30-11:00	Coffee Break
11:00-12:00	Selected country reports (10 minutes, set format: Egypt, Sudan, Yemen, Oman, Lebanon and Kuwait)
12:00-13:00	Session Two: - Concept and stages in the Progressive Control Pathway for FMD K. Sumption (FAO) - Outcome of the Shiraz Workshop to develop a Regional Roadmap for FMD control in West EurAsia M. Khalaj and V. Otarod (IVO Iran) / K. Sumption (FAO)
13:00-14:30	Lunch
14:30-16:30	Session Three: - Regional approach for FMD control in MERCOSUR countries G. Bruckner (OIE) - Regional support needed to progress FMD control: statement and short panel discussions on: - Lab services and networking - Surveillance/Epidemiology support - Controlling informal/illegal trans-boundary animal movement Facilitators: G. Bruckner and K. Sumption
16:30-17:00	Coffee Break



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17:00-18:00	Activity: completion of survey on country stage in progressive FMD control Pathway (40 minutes) and assembly of regional progress tables (in Plenary) K. Sumption (FAO) and G. Yehia (OIE)
20:00	Dinner hosted by OIE-RRME Sun City Restaurant - Ajaltoun

THURSDAY 9 APRIL (5TH FMD ROUND TABLE CONT)

09:00-10:00	Session Four Formulation of regional needs to the Paraguay Conference G. Bruckner (OIE) and K. Sumption (FAO)
10:00-10:30	Coffee Break
10:30-11:30	Conclusion and Recommendations
11:30-12:00	Closing 5 th FMD Round Table / Date and Venue of the 6 th FMD RT
12:30-14:00	Closure Lunch

THURSDAY 9 APRIL – TOURISTIC VISIT

14:00-17:00	Visit to Jeita Grotto, Byblos and Notre Dame du Liban (Harissa)
20:00	Dinner hosted by FAO Karam Restaurant –Beirut Downtown

Annex 3: Summary of countries' answers to the OIE-ME questionnaire

FMD Questionnaire – Countries' answers 5th FMD Round Table Beirut Lebanon - 7- 9 April 2009

Prepared by the OIE Regional Representation for the Middle East
(Secretariat of the GF-TADs Regional Steering Committee for the Middle East)

Purpose of the Questionnaire:

The 4th Regional FMD Round Table, held in Amman (Jordan), 5-6 September 2007, recommends *establishing a regional FMD network for Member Countries to facilitate the exchange of information and to respond rapidly to an emergence of any new serotype circulation in the region.*

Member countries were also urged to participate actively in the above mentioned network and provide regular and updated information related to their FMD particular situation.

In June 2009, an international OIE/FAO conference on FMD will be held in Paraguay to define a global strategy to tackle the disease worldwide. This strategy will be adapted specifically to each region or sub-region.

It is therefore important to well prepare such event and to propose relevant regional project. This will be one major objective of the 5th FMD Round Table, which will be held in Beirut (2-4 December 2008).

The purpose of this questionnaire is to provide specific information on each regional country to prioritize relevant actions for FMD surveillance, control and eradication.

Country's answer

The following countries answered to the mentioned questionnaire: Cyprus, Bahrain, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Oman, Palestinian Autonomous Territories (PAT), Qatar, Sudan, Syria, Turkey, UAE and Yemen.

1. FMD Regional situation (summary)

FMD is endemic in all the Middle East and periodic devastating epidemics occur that spread rapidly across national and regional borders:

- In 2005 and 2006, the Middle East has been severely affected by two separate type A epidemics, one which emerged in Iran (A Iran 05) in 2005 - 2006, and an incursion of an African type A virus into Egypt, causing widespread outbreaks in 2006.

The serotype A Iran 2005 was first observed in Iran and moved westwards into Turkey (including the European part of Thrace). It has continued to spread in 2006, circulating in Turkey and Iran, and has been also detected in Pakistan, Saudi Arabia, Jordan and in the first months of 2009 in Iraq, Kuwait and Bahrain¹, and was recently identified in samples send by Lebanon and Libya to the WRL. This strain matches with A Iraq 22.

Since August 2007, a new sublineage of this strain (named A-Iran-05ARD-07) has been found in Turkey, for which A Iraq 22 is not protective. This new sublineage matches with A Turkey 2006.

The type A which affected Egypt in 2006, was diagnosed in 8 governorates in this country. Genetically, this new serotype A differs considerably from the Middle Eastern viruses and was

¹ http://www.wrlfmd.org/fmd_genotyping/me/irq.htm - http://www.wrlfmd.org/fmd_genotyping/me/bar.htm - http://www.wrlfmd.org/fmd_genotyping/me/kuw.htm

closely related to FMD viruses reported in East Africa. The same strain was again identified in February 2009 in this country. The detection in outbreaks in 2009 suggests establishment of this East African strain in the Mediterranean region.

- In 2007, a new type O, the type O PanAsia 2, appears in the Middle East. This new strain in the region is probably originated from a strain circulating in India in 2001 and the pandemic dispersal of O PanAsia 2 lineage affected Pakistan, Iran, Jordan, Turkey, Israel, the PAT, UAE, Kuwait, Bahrain, KSA, probably Lebanon and also Egypt. This strain was responsible of high mortalities on lamb and calves during the winter, and notably in 2007. Vaccines with O Manisa offer a good immune protection against this strain.
- In Sudan, the serotype identified so far in the country according to prevalence (high to low) among cattle, sheep and goats were A, O, SAT2 and SAT1 (for SAT1, there is no reports of virus isolation since 1976).

2. Sampling and Laboratory analysis

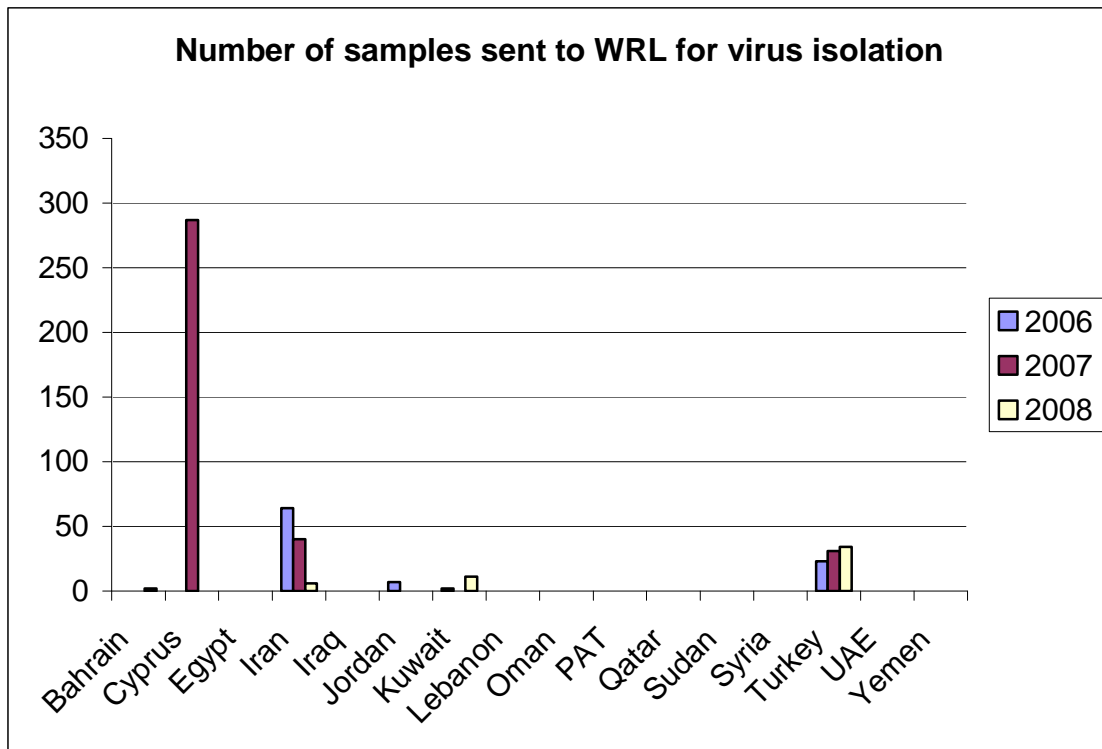
All countries have a national official laboratory which performs FMD analysis, essentially serological analysis using ELISA tests. But other techniques are used such as PCR (Iran, Jordan, Syria, and Turkey), cell culture isolation (Turkey), VNT (Egypt, Iran and Turkey) or CF (Iran).

The list of National Laboratories for FMD diagnostic and the tests used, country by country, are reported in Annex 1.

The OIE - FAO World Reference Laboratory (Pirbright - UK) is the reference laboratory where sample are sent. Cyprus uses also the Instituto Zooprofilattico Sperimentale – Brescia (Italy) and the PAT the Kimron Institute (Israel).

Sample numbers for serology and virus isolation, country by country, are presented in Annex 2 and 3.

Very few samples are sent to the WRL by Middle Eastern countries for virus isolation. Only Iran and Turkey are sending regularly samples. Both countries are benefiting from EUFMD projects.



3. Serosurveillance

Some countries are implementing regularly continuous serosurveillance programmes:

- **Turkey** conducts regularly serosurveillance in Thrace Region since 2000. Although the point prevalence has been variable, there was no value greater than 3 and within the 3 years less than 1,5 prevalence was recorded. In Anatolia Region it has not been carried out systematic study up to last year; to assess disease situation and preparedness for real serosurveillance design, an animal market and slaughterhouses serosurvey was conducted. The results of this study were variable among to regions. Although low percentage rate was determined in west of Anatolia, in the east Anatolia region approximately 35 of prevalence value was detected. According to this study results, in 2008 a systematic serosurveillance has been realised. Study has been still gone on.
- **Egypt** and **Bahrain** conduct serosurveillance program essentially to evaluate immune status (herd immunity) and post vaccination response.
- In **Cyprus**, as the disease is endemic in Turkey and because of the connections of this country with the areas of the island which are not under the effective control of the Government of the Republic of Cyprus, the buffer zone has been considered as the most probable port of entry of the disease into the island. For this reason the samples were collected from herds along the dividing line, between 2004 and 2006. In 2007 seropositive animals were detected. In 2008, it was decided to test around 5000 sheep and goats from around 140 herds located all over Cyprus. The selection of the herds is based on random sampling and the herd proximity to the dividing line.
- In the framework of an EUFMD project, a serosurveillance programme is implemented in **Iran**, in only 2 provinces: 13 000 samples have been realised in 2008.

In others, serosurveillance programmes are occasional:

- In **Jordan**, a serosurveillance programme using Elisa tests was set up during the last 2 years after the last outbreak in 2006, to detect any circulating FMD virus evidence (NSP) antibodies.
- **Syria** and **Lebanon** have conducted in 2008 serosurvey campaign with the assistance of FAO. 1500 samples were collected in Syria and 1800 in Lebanon. Results are still pending actually.
- **Iraq** carried out its first target serosurveillance in 2007 in which 1 280 serum samples were collected from 6 provinces from south part of the country. In 2008 a second campaign was carried out, 4 500 samples were collected from all 18 provinces of the country. The detected prevalence in each province fluctuated from 7.9 to 22.6 % in 2007 and from 4.7 to 95 % in 2008. For the entire country the detected prevalence was 23 % in 2008.
- In **Sudan**:
 - In 2005: sero- survey was done in cattle and small ruminants (sheep and goats) in Khartoum state only. Type A was the most prevalent serotype in cattle followed by O, SAT2 and SAT1. Among sheep type A is the most prevalent serotype (48.94%), followed by O (35.11%). Among goats type A (59.32%), and O (49.32%) were the most prevalent serotypes.
 - In 2008: sero-surveys were conducted in seven Northern states in the country (Research for M.V.Cs) namely: North and South Kordofan, White Nil, Gazira, Gedarif, River Nile and Northern. In cattle type A prevalence was the highest (78.13%), followed by type O (69.39%), SAT2 (44%) and the lowest prevalence was for type SAT1 (20%). Among small ruminants type O was the most prevalent (27.5%). Other serotype prevalence among small ruminants were less than 15 %. SAT1 serotype had the lowest prevalence among the other serotypes in all species involved (cattle, sheep and goat). Camels were also involved in all studies. In all cases, they gave very strong negatives results.

- **Qatar** has just started a surveillance programme.

4. Vaccination

FMD vaccination is prohibited in Cyprus, compulsory in Bahrain, Egypt, Jordan, Kuwait, Lebanon (cattle), Syria and Turkey, and implemented on voluntary basis in Iraq, Oman, PAT, Qatar, Sudan, UAE and Yemen. Qatar will soon enforce compulsory vaccination.

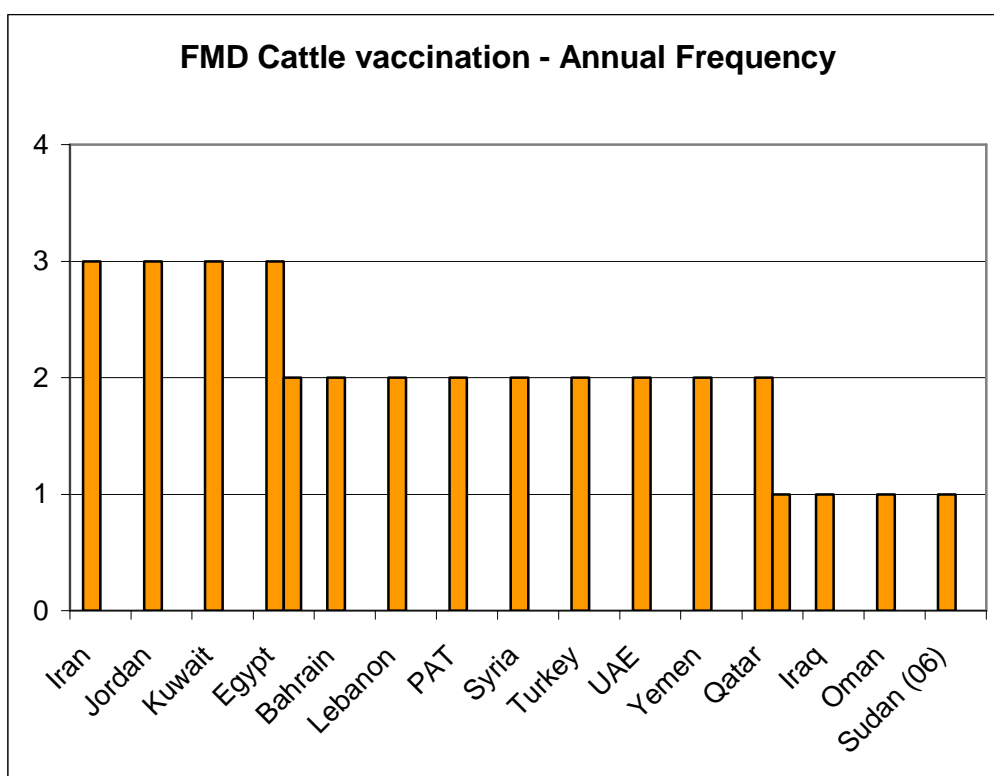
Different vaccines and suppliers are used in the Middle East. Egypt, Jordan, Iran and Turkey are vaccine producers. Other supplier sources are Europe, India, Russia or Botswana (only for Sudan).

FMD vaccination is mainly focused on cattle. Some countries (Kuwait, Lebanon, Sudan and Yemen) have no vaccination programme on sheep and goats.

- On cattle, trivalent vaccination (O, A 22, Asia 1) is commonly implemented in most of Middle Eastern countries: Bahrain, Iran, Iraq, Lebanon, Oman, PAT and Turkey. Syria is using trivalent vaccines with O India 53/73, A Iran 96 and Asia 1, twice a year on cattle. Egypt, Jordan, Turkey and Yemen are using also bivalent vaccines (A and O Manisa). Kuwait, UAE and Qatar are using tetravalent vaccines (O, A, Asia 1 and SAT 2). Quadrivalent vaccine (O, A, SAT1 and SAT2) was used until 2006 in Sudan, targeted for dairy and export cattle, once a year. KSA is using also heptavalent vaccines. Type of vaccine and annual vaccination frequency are summarized in the table 1.

FMD Vaccine Type	Country	Annual Frequency
Quadrivalent vaccine (O, A, SAT1 and SAT2)	Sudan (2006)	Once
Tetravalent vaccines (O, A, Asia 1 and SAT 2)	Kuwait	3 times
	Qatar	Once or twice
	UAE	Twice a year
Trivalent vaccines (O India 53/73, A Iran 96, Asia 1)	Syria	Twice
Trivalent (O, A 22, Asia 1)	Bahrain	Twice
	Iran	3 times
	Iraq	Once
	Lebanon	Twice
	Oman	Once
	PAT	Twice
	Turkey	Twice
Bivalent vaccines (A and O Manisa)	Egypt	Twice (fattening herds) or 3 times (dairy cattle)
	Jordan	3 times
	Turkey	Twice
	Yemen	Twice

Table 1: FMD vaccine used in the Middle East for cattle protection (type and annual frequency)



- Monovalent vaccination with O Manisa is generally restricted to small ruminants, vaccinated once a year. Bivalent vaccines (O1, A 22) are used in Turkey. Iran and Syria are using trivalent vaccines once a year, while Qatar and UAE are using tetravalent vaccines. Type of vaccine and annual vaccination frequency are summarized in the table 2.

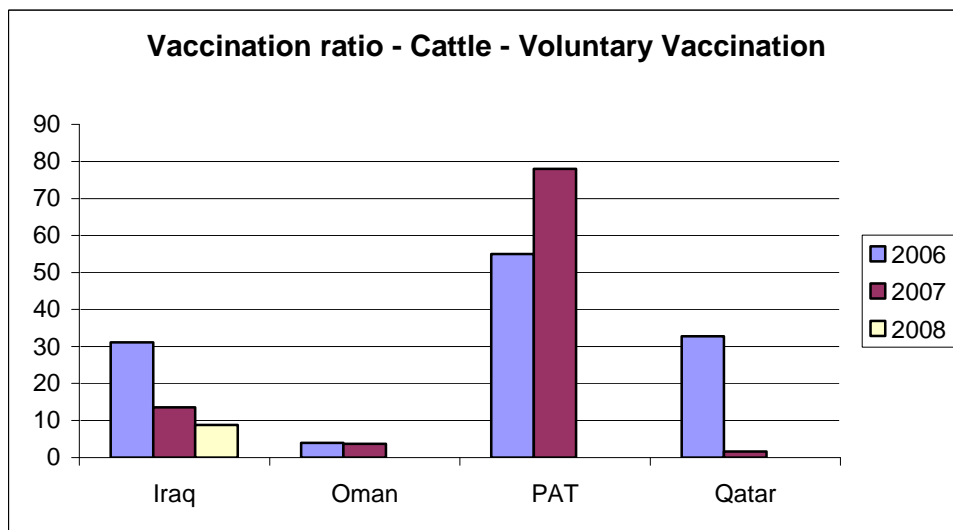
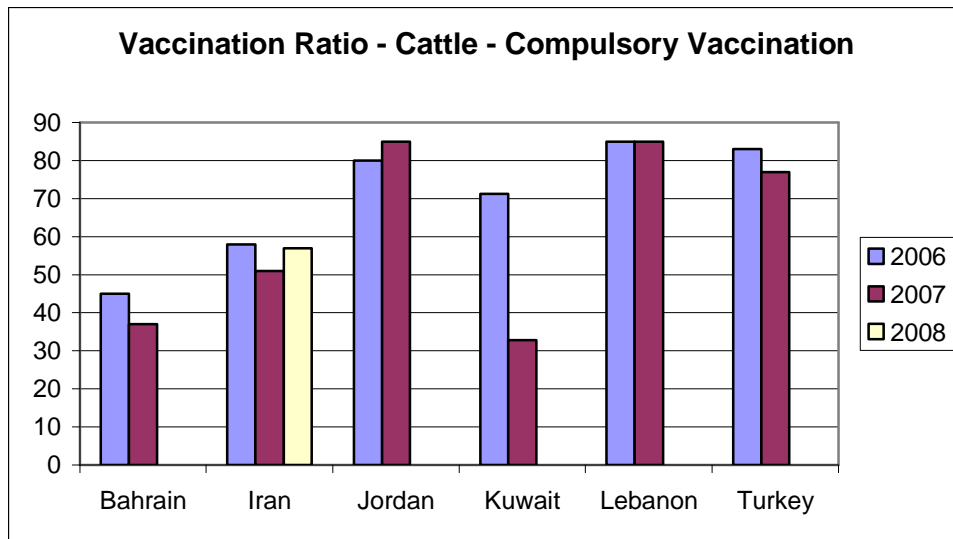
FMD Vaccine Type – Sheep and Goats	Country	Annual Frequency
Tetravalent vaccines (O, A, Asia 1 and SAT 2)	Qatar	Once - twice
	UAE	Twice
Trivalent vaccines (O India 53/73, A Iran 96, Asia 1)	Syria	Once
Trivalent (O, A 22, Asia 1)	Bahrain	Twice
	Iran	Once
	Oman	Once
Bivalent (A and O Manisa)	Turkey	Once
Monovalent (O Manisa)	Iraq	Once
	Jordan	Twice – 3 times
	PAT	Once - Twice

Table 2: FMD vaccine used in the Middle East for sheep and goats protection (type and annual frequency)

The vaccination number is very variable country by country.

In country where the vaccination is implemented on a compulsory basis, the immune population ratios are fluctuating between 40 to 85 % in cattle, 40 to 90 % in sheep and goats.

In those where the vaccination is implemented on a voluntary basis, the ratios are very low or no information is provide, except for the PAT where 78 % of the cattle population and 63 % of the sheep and goat population were vaccinated in 2007.



Only Egypt, UAE, Turkey (as part of a EU project) and Bahrain (on a random sampling of 10 % of vaccinated animals) have a regular program to monitor their vaccination campaigns.

Details of countries' vaccination programme are reported in Annex 4.

5. Emergency response

- FMD is a mandatory notifiable disease in all country. A summary of country regulations on FMD is presented in Annex 5.
- Only Cyprus, Iran, Iraq, Kuwait, Qatar, Sudan and Syria have a National Emergency Fund available for disease control. Such Fund can be used for FMD emergency response. Details are provided in Annex 6.
- Iran, Jordan, Syria, Bahrain, Kuwait and UAE have an Emergency Stock of Vaccine available. Egypt and Lebanon have project to establish an Emergency Antigen Bank. Jordan has an official agreement signed between a local private company and the OIE-FAO Reference Laboratory of Pirbright (WRL) for vaccine or antigen supply in emergency situation. The same type of agreement is on going in Sudan between the National Laboratory and the WRL. UAE has a agreement for emergency vaccine supply.

Occasional agreement to supply countries in emergency situation could be established: Iraq received recently in March 2009 vaccines from EU in order to control the disease. Cyprus can received vaccines in emergency situation by the EU vaccine bank.

Country details are reported in Annex 7.

6. Awareness programs

All countries have awareness programmes on FMD, mainly focused on farmers. Depending on country situation, regular meeting are organised with farmers and farmers associations, or on a regular basis (Bahrain, Iran, UAE and Kuwait).

Iran has developed specific and regular training programmes for farmers.

TV and radio awareness programmes are implemented in Bahrain, Cyprus, Kuwait, Sudan and Turkey.

Country details are reported in Annex 8.

7. Comments

All countries support the OIE-FAO project to implement a regional strategy for FMD control and surveillance in the region.

They underline the need to:

- Identify the circulating strains in the region;
- Support FMD laboratory diagnostic in Middle Eastern countries – Development of rapid and reliable field tests ;
- Harmonize national control strategies which are used in regional countries;
- Establish an Ag bank for FMD virus for exotic strains;
- Harmonize FMD vaccination (virus strain Ag used in vaccine) in the region, according to circulating FMD strains;
- Develop FMD vaccine production in the region;
- Prepare and implement a specific regional contingency plan to control any exotic FMD virus strain;
- Provide training courses the improvement of preparedness, early warning surveillance systems and emergency management;
- Strengthen public awareness;
- Better control animal movement throughout the region;
- Take into account that FMD is not an important issue for most of small breeders in the region.

Annex 1: National Laboratories in the Middle East for FMD Diagnostic and tests used

Country	National Laboratory	Tests used
Bahrain	Vet National Labs	Rapid and ELISA Test
Cyprus	Diagnostic and Research Laboratory for Animal Diseases, Virology Section Nicosia	Cedi-NSP ELISA Cedi-O ELISA
Egypt	Animal Health Research Institute, Dokki, Giza (AHRI)	ELISA test and VNT (3ABC)
Iran	CVL – Razi Institute	ELISA (Ab,Ag) CF, VN,PCR
Iraq	1. Central Laboratory (Baghdad) 2. Central Laboratory (Erbil – Kurdish region)	3ABC FMD Elisa test
Jordan	Animal wealth lab Amman	3ABC Elisa RT-PCR (2007 and up)
Kuwait	Dept of Vet Laboratory Diagnosis and Research, Public Authority for Agriculture Affairs & Fish Resources, State of Kuwait	ELISA for FMD antigen detection (7 serotypes) from BDSL
Lebanon	Fanar Laboratory	antibody detection ELISA
Oman	Veterinary research centre	
PAT	Central Veterinary Lab- Ramallah Gaza	No
Qatar	Central Veterinary & Research Lab, Dept. of Animal Resources, Doha- Qatar	FMDV check
Sudan	1. Central Veterinary Research Laboratory, Khartoum, Soba 2. ELISA Lab., Khartoum (FMAR&F)	Liquid phase blocking ELISA (for Abs detection) Antigen Detection ELISA (for virus isolation)
Syria	Directorate of animal health - central veterinary lab Damascus - Syria	3 ABC Elisa test Ag detection Elisa test Ab detection Elisa test PCR recently
Turkey	Şap Enstitüsü, Ankara-Turkey	Cell Culture Isolation, Antigen Detection ELISA, LPBE, VNT, NSP ELISA PCR, Nucleotid Sequencing
UAE	C.V.L Sharjah UAE	<ul style="list-style-type: none"> • chekit FMD 3ABC bo-ov ELISA • FMD – Rapid test- detection of 2C Nsp
Yemen	CVL	Elisa

Annex 2: Sampling realised country by country for serology

	2006			2007			2008		
	Number of Samples realised	Samples sent to National Lab.	Samples sent to Reference Lab.	Number of Samples realised	Samples sent to National Lab.	Samples sent to Reference Lab.	Number of Samples realised	Samples sent to National Lab.	Samples sent to Reference Lab.
Bahrain	0	0	0	0	0	0	2	2	0
Cyprus	1053	1053	0	41021	41021	0	3422	3422	0
Egypt	4000	4000	6	4000	4000	0	240	240	35
Iran	0	0	0	0	0	0	13000	13000	0
Iraq	146	146	0	1280	1280	0	4550	4550	0
Jordan	0	0	0	10000	10000	0	15000	15000	0
Kuwait	0	0	0	0	0	0	0	0	0
Lebanon	0	0	0	0	0	0	1800	1800	0
Oman	0	0	0	0	0	0	0	0	0
PAT	0	0	0	0	0	0	0	0	0
Qatar	113	113	0	1320	1320	0	4048	4048	0
Sudan	0	0	0	1	1	0	1	1	1
Syria	0	0	0	0	0	0	1500	1500	0
Turkey	30000	30000	0	14000	14000	0	50000	50000	0
UAE	468	468	0	4316	4316	0	1866	1866	0
Yemen	225	225	0	225	225	0	0	0	0

Annex 3: Sampling realised country by country for virus isolation

	2006			2007			2008		
	Number of Samples realised	Samples sent to National Lab.	Samples sent to Reference Lab.	Number of Samples realised	Samples sent to National Lab.	Samples sent to Reference Lab.	Number of Samples realised	Samples sent to National Lab.	Samples sent to Reference Lab.
Bahrain	0	0	0	0	0	0	2	0	2
Cyprus	0	0	0	287	0	287		0	0
Egypt	0	0	0	0	0	0	0		0
Iran	1255	1255	64	591	591	40	314	314	6
Iraq	1	1	0	3	3	0	0	0	0
Jordan	7	0	7	0	0	0	0	0	0
Kuwait	2	2	2	0	0	0	11	11	11
Lebanon	0	0	0	0	0	0	0	0	0
Oman	0	0	0	0	0	0	0	0	0
PAT	0	0	0	0	0	0	0	0	0
Qatar	0	0	0	0	0	0	0	0	0
Sudan	3	0	3	22	0	22	8	0	8
Syria	0	0	0	0	0	0	0	0	0
Turkey	1551	1551	23	1045	1045	31	282	282	34
UAE	0	0	0	0	0	0	0	0	0
Yemen	7	7	0	7	7	0	0	0	0

Annex 4: FMD Vaccination in the Middle East

	Regulation	Vaccine Used Name	Origin - Producer	Type (monovalent, bivalent...)	Type of virus strain included	Frequency	Monitoring	Comments
Bahrain	Compulsory	FMD vaccine FMD DOE	India (Ratsh Trivalnte) Intervet	Trivalent Inactivated	O1.A,Asia 1	Twice year vaccination program for FMD are done for cows, camels, sheep, and goat.	Yes	Every years vaccination monitoring is done after 21 days from the vaccine injection and the number of samples depends of each governorate (5 governorates), but in general we collect randomly samples (10%) from the total population on cattle, sheep and goats.
Cyprus	Prohibited							
Egypt	Compulsory free of charge	Inactivated vaccine	Vaccine and Serum Research Institute (VSVRI)	Bivalent vaccine	A, O Manisa	Every 4 months on lactating animals and every 6 months on fattening animals	4000 blood samples are collected annually from all Governorates Immune protection results were satisfactory	
Iran	Compulsory		Merial Razi	Trivalent	A, Asia 1, O	On cattle 3 times a year On sheep and goats once a year Few vaccination in camels	No	
Iraq	Voluntary basis	Racksha Vital	India Turkey	Trivalent Monovalent	A22,O1,Asia 1 O1	Vaccine implemented once yearly in Cattie, Buffalo, Sheep and Goat in addition the urgently used in case of zoning of local outbreaks	No	Emergency vaccination is used after outbreak occurrence in a defined zone
Jordan	Compulsory Free of charge	Foot and mouth disease,sorbed monovalent Vital	Russia Turkey	Bivalent Monovalent	O - A O	Bivalent vaccine used to protect cattle against FMD virus type A & O each 4 months. Monovalent vaccine used to protect small ruminant against FMD type O each 4-6 months. Some cattle farm owners use Trivalent (O, A, SAT 1) vaccine which is imported by private sector	No	

Kuwait	Compulsory	Aftovaxpur	Merial Pirbright, GU24 ONQ, UK	Tetravalent	O-3039+ O1BFS+AIRAN96 + A22+ A-4165 + ASIA1 + SAT2	Three times a year in the cattle population.	No	
Lebanon	Compulsory (Cattle)	FMD Vaccine	Russia IHA	Trivalent	O1 A22 Asia 1	Twice a year	Serosurveillance in 2008, 3 months after the vaccination	Private farmers vaccinate sheep and goats on voluntary basis A prevention plan is under preparation to vaccinate cattle, sheep, goats and pigs all over the lebanese territory as a measure taken to control the disease
Oman	Voluntary basis	Foot and mouth disease (raksh – ovac)	india	Trivalent	A,O,Asia-1	Once a year (cattle, sheep and goats)	No	
PAT	Voluntary	FMD	Merial, UK	Trivalent Monovalent	A, O, Asia 1 (Cattle) O (Sheep and goats)	Intensive program of vaccination occurred since 2005 on cattle and small ruminants	No	In the past vaccination carried out through the year but from 2008 in our strategy there is vaccination campaign should be done twice a year.
Qatar	Voluntary basis	FMD vaccine sorbed Aftovac	FGI ARRIA (Russia) Vetal (Jordan ?)	Tetravalent	O ₁ ,A ₂₂ , Asia 1 and SAT 2	Routine Vaccination is carried out once - twice to the following species: Cattle, Oryx, deer, Sheep and goats	No	Compulsory vaccination twice a year and vaccination monitoring are proposed through the approved control program
Sudan	Voluntary basis	Aftovax	Botswana Vaccine Institute (PTY) Ltd.	Quadrivalent	A, O, SAT1 & SAT2	in 2006 Vaccination was applied only and once in cattle and for dairy farms only in Khartoum State (Khartoum North or Shargh Al Neel).	No About 6715 dairy cattle were vaccinated from 40,000 targeted head out of 222,000 total population of dairy cattle in Khartoum state (dairy farms) against the disease from December 2005 up to January 2006 which gave the above mentioned vaccination coverage for the disease in that area and vaccination was	Vaccination against .the disease was adopted early in 1980, a Quadrivalent vaccine (O,A,SAT1 & SAT2) was imported from Wellcome, UK. Vaccination was targeted for dairy and export cattle in Khartoum state.

							applied only once.	
Syria	Compulsory There is a National plan to vaccinate all sheep, goat and cattle herds annually	Aphrovax	Merial	Trivalent	Asia 1 O India 53/79 A Iran 96	Cattle are vaccinated twice a year, sheep and goats annually,		Potency of the vaccine is tested at the time of its importation before using it in the field. In general, the vaccine contains more than 3 PD 50/dose for each strain which the vaccine consists of.
Turkey	Compulsory Provinces are obliged to vaccinate certain number of animals as they have declared. However, this is not the whole country population.	Turvac-Oil	Sap Institute / TURKEY	Trivalent Bivalent	O1, A22, Asia1 O1, A22,	Cattle- twice a year as spring and autumn Sheep and goats-once a year as spring	vaccination monitoring is carrying on as part of EU project	When type A outbreak was occurred the first time in 2006, the vaccine strain A 22 Iraq was used against the virus for vaccination. During 2006-2008 period, laboratory analysis showed that viruses were changed as antigenically and resulted current A22 Iraq vaccine strain was not protected well for field isolates. So vaccine strain has been changed as type A TUR 2006.
UAE	Voluntary basis	In 2008: Aftovac In 2007: Aftovaxpur	Vetal - Turkey Merial - France		A22-Iraq, A-sau23/86, O1 Manisa, Asia1, Sat2, A iran O, A, Asia1, SAT2	Twice a year for all kind of animals	Yes	Every year a mobile clinic going around to all farms to check and do vaccination, in 2008 : Goat: 27877 Sheep: 14672 Cattle: 536 Camels: 18 Total: 43103
Yemen	Voluntary basis	Bivat	Jordan	Bivalent	O + A	Twice a year in dairy farm. (cattle). small holders used the vaccine only when the outbreak with a big economic impact and they vaccinated only cattle privately.		Vaccination program against FMD is not within the annual strategic control of the government – Economic issue – cost of vaccine

Annex 5: Country regulation on FMD

Country	Comments
Bahrain	FMD is a notifiable disease
Cyprus	FMD is a notifiable disease. The surveillance, control and eradication measures applicable for animal diseases are provided in the Framework (Basic) Law "The Animal Health Law 109 (I) of 2001". Specific control measures to be applied in the event of FMD are laid down in "The Animal Health (The Control of FMD) Regulations of 2004-K.Δ.Π. 872/2004", which have transposed into the national legislation the EU "Council Directive 2003/85/EC on Community measures for the control of FMD". According to Article 6 of "the Animal Health Law 109 (I) of 2001", veterinarians and animal owners are obliged to notify any suspicion or presence of a notifiable disease or any increase in the mortality rate of their animals to the Veterinary Services. The information shall be submitted by the fastest means of communication available to them to the Chief Veterinary Officer or the District Veterinary Officer.
Egypt	FMD is a notifiable disease. Bipartite delegation from GOVS (GENERAL ORGANIZATION OF VETERINARY SERVICES) and AHRI (ANIMAL HEALTH RESEARCH INSTITUTE) rapidly responding to outbreak notification, other labs like VSVRI (VETERINARY SERUM AND VACCINE RESEARCH INSTITUTE) could be included in that delegation.
Iran	FMD is a notifiable disease
Iraq	FMD is a notifiable disease. FMD is denoted as infectious animal disease in livestock, bringing it under the scope of the act require compulsory notification of suspected FMD by the owner/keeper and the veterinarian This means that the veterinarian is also obliged to ensure that no damage is inflicted to animal health or that there is no damage to public health or the national economy
Jordan	FMD is a notifiable disease. Notification of FMD is a must according to regulation number (Z/34) which issued by agriculture law 2002
Kuwait	FMD is a notifiable disease. All former OIE list A diseases and other important diseases are notifiable in Kuwait and thus livestock owners are required by law to report any suspicion of such diseases to a nearby veterinary authority
Lebanon	FMD is a notifiable disease
Oman	FMD is a notifiable disease
PAT	FMD is a notifiable disease, but most cases are not informed to veterinary office because farmers knew the cases and they knew that there is no compensation or treatment (as they argued), on the other hands they complain from the side effects of the vaccine.(lameness and loss of appetite. Etc), so that we loss a lot of cases,
Qatar	FMD is a notifiable disease
Sudan	The direct and indirect losses of the disease were reported among farmers dairy herds and above all it affects the livestock trade (inter states and international)
Syria	FMD is a notifiable disease. There is a reporting system between the Directorate of Animal Health and the provinces departments and this system is obliged to inform of any FMD suspected cases. FMD is a mandatory notifiable disease according to the National Regulations.
Turkey	FMD is a notifiable disease
UAE	FMD is a notifiable disease
Yemen	FMD is a notifiable disease. But mostly the farmers doesn't notify about the disease because they are afraid for the negative results in marketing value of their animals.

Annex 6: National Emergency Fund and availability for FMD control

Country	National Emergency Fund	Availability for FMD control
Bahrain	Not available	Not available
Cyprus	Finance is available through an annual budgetary allocation which will cover the cost, beyond the normal running cost of the Veterinary Services, of controlling whatever disease outbreak may occur.	During an FMD epidemic, compensations for the 100% of animals` reproductive value or for the 100% of the market value of material and equipment destroyed are paid to the farmers.
Egypt	Not available	Funds are only directed for vaccine production but, there is no emergency fund for disease control
Iran	Available	Available
Iraq	The expenses for legal control of contagious animal diseases are financed by the SCVS. Money voted to the Ministry of Agriculture each year cover the cost of staff employed by SCVS. If additional personnel are required on a temporary basis their cost is borne by SCVS Fund for the Control of Contagious Diseases. The costs covered in this Fund include not only the pay but also personnel-related operating costs, e.g. travel and subsistence . The costs of equipment and consumable items are covered by the fund. Small equipment and consumable items are in stock. Costs for major capital items on call to hire or to buy from commercial firms are also covered by the fund	FMD disease is one of the major important disease in the controlling programs of the contagious diseases in Iraq , SCVS established the TADs Centre which is responsible for the planning and implementation of the transboundary disease especially FMD disease which have the major affect in the animal health and national economy in the country for that the SCVS voted money to use in case of emergency response .
Jordan	Not available, but the Ministry of Agriculture has the authority to take any action plan include funding to control any infectious disease outbreak.	There is no specific emergency fund for FMD, but the Ministry of Agriculture has the authority to take any action plan include funding to control any infectious disease outbreak.
Kuwait	Available	Available
Lebanon	Not available	Not available
Oman	Not available	Not available
PAT	Not available	Not available
Qatar	Available	Available
Sudan	Emergency funds for disease control were allocated from the Ministry of Finance and National Economy	In disease outbreaks investigation missions coverage, Vaccine and diagnostic facilities (reagents and equipment)
Syria	Available	Quarantine procedures, manpower, transportation and vaccine free of charge are available in case of having suspected cases in the field.
Turkey	Not available	Not available
UAE	Not available	Not available
Yemen	Not available	Not available. FMD is not one of the strategic disease of the government because the farmers are small holders and the economic impact is limited, vaccination control costly comparing to the economic impact.

Annex 7: Vaccine Emergency Stock and Antigen Bank

Country	Vaccine Emergency Stock	Antigen Bank	Agreement on Vaccine/Antigen Supply
Bahrain	emergency stock of vaccine is available for any outbreaks or any export animals coming without vaccination records	Not available	Not available
Cyprus	Not available, if vaccines are needed, these can be provided by the EU vaccine bank.	Not available	Not available, if vaccines are needed, these can be provided by the EU vaccine bank
Egypt	Not available, vaccine produced is used immediately to achieve the vaccination programme.	Not available. Recently proposed to establish an antigen bank by AHRI and VSVRI	Not available
Iran	Available	Not Available	Not Available
Iraq	Not available	Not available	Not available. In the last outbreaks of (A Iran 05) which occurred in the first and second months of 2009, FAO agreed with the assistance of EUFMD to provide Iraq donation of urgent vaccine (500.000 dose of A22,O1,Asia1 vaccine) which supplied by Merial .
Jordan	Routinely vaccination used as control tool for FMD disease and stock of vaccine stored in central veterinary department to be available in any active FMD outbreak.	Not available	There is agreement of coordination between the only private company (JOVAC) and World Reference Lab (Pirbright).
Kuwait	Available	Not available	Not available
Lebanon	Not available, vaccines are bought on a yearly basis	Not available – project for 2009	Not available
Oman	Not available	Not available	Not available
PAT	Not available	Not available	Not available
Qatar	Not available	Not available	Not available
Sudan	Not Available. The current policy of FMAR&F is to import FMD vaccine containing the following serotypes: O, A, SAT1 & SAT2 to vaccinate against the disease.	Not available	There is an on going process for a letter of agreement between CRVL and the reference laboratory Pirbright, UK concerning the Antigen Bank
Syria	Available	Not available	Not available
Turkey	Not available	Not available	Not available
UAE	Available – for 2 months vaccination	Not available	Available only for vaccination
Yemen	Not available. The vaccine only privately available.	Not available	Not available

Annex 8: Awareness programmes

Country	Meeting with farmers	Publications Booklet....	Others
Bahrain	No	Yes	Usually in T.V, Newspaper or Radio, and poachers
Cyprus	Depend of country situation	Yes	TV and radio
Egypt	Depend of country situation	No answer	
Iran	Annually	Yes	Farmers training National seminars and workshops
Iraq	Depend of country situation	No	
Jordan	Depend of country situation	Yes	
Kuwait	Quarterly	Yes	TV and radio
Lebanon	No	No	
Oman	Depend of country situation	Yes	
PAT	Quarterly and depend of country situation	Yes	
Qatar	Monthly	Yes	Training courses and public lectures are frequently held by the Department of Animal Resources
Sudan	Depend of country situation	Yes	Awareness being practiced also through lectures and seminars among vets and livestock owners and through Media (Radio Programme) Awareness for the disease is a continuous process associated with disease investigations in the field and disease surveys and sero-monitoring and being practiced in coordination with, and some support of FAO
Syria	Depend of country	Yes	In the country, more than 1000 extension units and more than 4000 veterinarians and vet technicians are presents with daily

	situation		connection with farmers.
Turkey	Depend of country situation	Yes	An informative and educative spot film, a poster and a brochure were prepared by a Professional company on behalf of GDPC. Spot film was sent to all local Television Channels and broadcasted, posters and brochures were distributed through out Turkey with the help of Provincial Directorates of Agriculture
UAE	Annually	Yes	
Yemen	Depend of country situation	Yes	

Annex 4: The Progressive Control Pathway



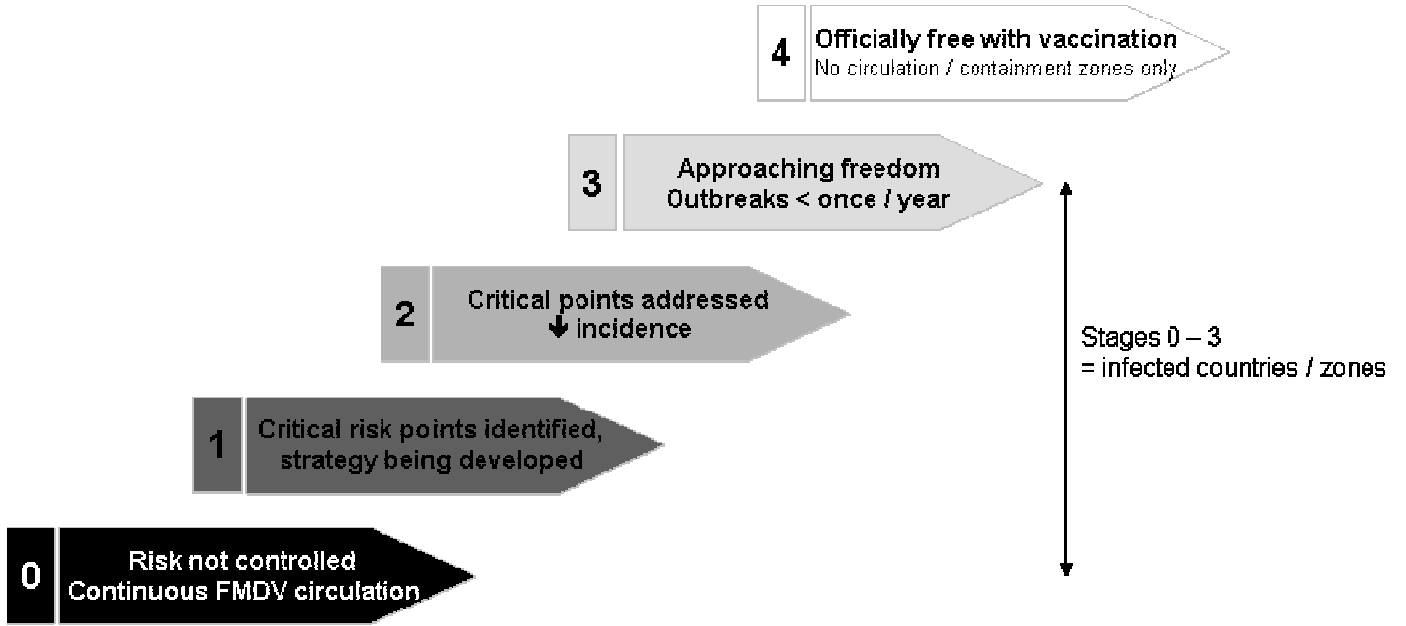
FAO/OIE
GF-TADs
GLOBAL FRAMEWORK FOR THE
PROGRESSIVE CONTROL OF
TRANSBOUNDARY ANIMAL DISEASES

اجتماع المائدة المستديرة الخامس للمراقبة والسيطرة على مرض الحمى القلاعية
بيروت 7-9 أبريل 2009
استبيان حول السيطرة المتدرجة في الشرق الأوسط
الاستبيان

منظمة الأغذية والزراعة والمنظمة العالمية للصحة الحيوانية حاليا بصدد وضع استراتيجية عالمية لوقاية ومكافحة مرض الحمى القلاعية التي ستقدم بالباراجواي رسميا خلال المؤتمر الدولي حول مرض الحمى القلاعية في حزيران / يونيو 2009. الأبعاد الإقليمية والوطنية لهذه الاستراتيجية يجري حاليا تناولها ومناقشتها في حلقات العمل الإقليمية ، والنتائج والاستنتاجات سيتم دمجها في الاستراتيجية العالمية من أجل البرهنة لصانعي القرار على الحاجة الملحة للتمويل وتنفيذ هذه الاستراتيجية ، وضعنا أداة للتقييم الذاتي لمستوى إدارة مخاطر مرض الحمى القلاعية في المناطق التي ليست خالية رسميا من مرض الحمى القلاعية. استخدام هذه الأداة ينبغي أن يفضي إلى معلومات مرجعية عن الوضع الحالي لإدارة مخاطر المرض لاستخدامها في الإدارة الإقليمية والعالمية في مجال التأثير

وقد أنشأت منظمة الأغذية والزراعة هذه الأداة، كجزء من منهجية السيطرة المتدرجة على مرض الحمى القلاعية القائم على قياس عدوى المرض و تنقلها في الحيوانات المعرضة للخطر ، و على مدى السيطرة على انتقال المرض وعلى المخاطر. ولذلك فقد تم تحديد خمس مراحل مختلفة (انظر الرسم البياني أدناه) ، ابتداء من المرحلة 0 لا سيطرة على الخطر على الإطلاق (مع الحركة المستمرة في هذا البلد لفيروس مرض الحمى القلاعية) إلى المرحلة 4 إدارة فعلية للمخاطر (البلد / المنطقة خالية رسميا من فيروس مرض الحمى القلاعية مع إمكانية التلقيح (بحسب المنظمة العالمية للصحة الحيوانية). المرحلة 5 موجودة أيضا ، وتنطبق على أي بلد / منطقة حرة رسميا (بحسب المنظمة العالمية لصحة الحيوان) من فيروس مرض الحمى القلاعية دون التلقيح. ما عدا المرحلتين 4 و 5 اللتين تشيران إلى الوضع الرسمي وفقا للتعريف الوارد في قانون المنظمة العالمية للصحة الحيوانية الأراضية. 0 إلى 3 مراحل وضعت فقط لغرض هذه الدراسة

Progressive risk reduction approach



الأسئلة الأربعة المذكورة أدناه تهدف إلى (1) تحديد مستوى بلدكم (مقارنة مع مراحل 0 إلى 5) بالنسبة للنهج التدريجي للحد من مخاطر مرض الحمى القلاعية ، والمذكورة أعلاه ، (2) تحديد الإجراءات التي من شأنها تسهيل التقدم نحو مراحل أعلى ، (3) إقامة جدول زمني مؤقت للوصول إلى هذه الأهداف. وأخيرا ، مسألة (4) تسمح لك بالتعبير عن نوع السند الذي يترقبه بلدكم من المجتمع الدولي للوفاء بالجدول الزمني المقترح

البيانات التي يتم جمعها وسوف تعرض في إطار الشكل التالي:

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
بلد 1	1		2			3Z?		3N					
بلد 2	1		2			3							
بلد 3	0			1		2					3		

Z = منطقة, N= وطني

إن هذه المنهجية لا تنوي في أي حال ترتيب البلدان ، ولكن المقارنة لإعطاء مؤشر للأنشطة الجارية في ما يتصل بإدارة مخاطر مرض الحمى القلاعية. وتعتبر الفاو أن دخول جميع الدول في أنشطة المرحلة 1 أمر واقعي ، وذلك مع الاعتراف بأن الموارد اللازمة ومنافع الدخول مراحل 2-5 تختلف من بلد إلى آخر

Questions

الأسئلة

البلد :

1. Which Stage of progressive control most accurately describes your position? Tick and comment the box whose description fits your situation

ما هو مستوى السيطرة المتدرجة الذي يتوافق مع الوضع في بلدكم؟ ضع علامة في المربع المقابل إلى الوضع الحالي

Stage	Characteristics ¹	ضع علامة	تعليقات
Stage 0 الدرجة 0	Level of virus circulation (seroprevalence - NSP ² positives) has not been studied in past 12 months مستوى تنقل فيروس مرض الحمى القلاعية لم يدرس طوال الاثنا عشر شهرا الماضية (seroprevalence - NSP ³ positives)	إذا وقع اختيار هذا المربع ، يعني أن بلدك هو في مستوى 0 ، إلا إذا كان بلدكم رسميا خاليا من مرض الحمى القلاعية	
	and/or: outbreaks occur every year و / أو : يؤر تحدث كل سنة		
	and/or: the impact of control measures (vaccination, quarantines) on virus circulation is not studied or measured و / أو : تأثير تدابير الرقابة (التلقيح ، والحجر الصحي) على تنقل فيروس لا يدرس أو لا يقاس		
Stage 1 الدرجة 1	Level of virus circulation (seroprevalence - NSP positives) has been studied in past 12 months, and indicates virus circulation has occurred مستوى تنقل فيروس مرض الحمى القلاعية درس أثناء الإثنا عشر شهرا الماضية ويشير أن جريان الفيروس قد حدث		
	and the critical risk points associated with the major husbandry/marketing chains are being identified ; ويجري تحديد النقاط الحرجة الرئيسية المرتبطة بالتربية / سلاسل التسويق		
	and a strategy is under development to address the CRP ويجري وضع استراتيجية لمعالجة النقاط الحرجة		
Stage 2 الدرجة 2	Each new outbreak(s) is investigated and potential sources identified لكل بؤرة جديدة يقع تحقيق وتحديد المصادر المحتملة		
	and level of virus circulation (seroprevalence - NSP positives) has been studied repeatedly for at least 24 months, and evidence of FMDV exposure found in each survey قد درس بشكل متكرر لمدة لا تقل عن 24 شهرا ، seroprevalence - NSP positives ومستوى تنقل الفيروس والدليل على التعرض للفيروس وجد في كل دراسة استقصائية		

¹ Rules:

- Stage 0: if you checked the first criterion, it automatically ranks your country in Stage 0 unless your country is officially FMD free (OIE status)
- Stages 1 to 4: to be ranked in Stage X, you have to complete all proposed activities for the Stage below (X-1) and be currently implementing at least one activity of Stage X.

² NSP = viral non structural proteins

	<p>and the risk associated with the major husbandry/marketing chains identified, and strategies implemented for each</p> <p>و وقع تحديد النقاط الحرجة الرئيسية المرتبطة بالتربية / سلاسل التسويق واستراتيجيات منفذة لكل منها</p>		
	<p>and the impact of control measures (vaccination, quarantines, measures at borders) on virus circulation is being measured</p> <p>ويقاس تأثير تدابير الرقابة (التلقيح، والحجر الصحي، وتدابير على الحدود) على تنقل الفيروس</p>		
<p>Stage 3</p> <p>الدرجة 3</p>	<p>Each new outbreak(s) is shown to originate outside of the country or zone, not originate within</p> <p>كل بؤرة جديدة تأتي من خارج البلد أو المنطقة، لا تأتي من الداخل</p>		
	<p>and level of virus circulation (seroprevalence - NSP positives) has been studied repeatedly for at least 24 months, and evidence of FMDV exposure found but being restricted to limited foci or limited time periods</p> <p>ومستوى تحرك الفيروس قد درس بشكل متكرر لمدة لا تقل عن 24 شهرا، (seroprevalence - NSP positives) والأدلة حول التعرض لفيروس FMDV وجدت لكن التعرض محدود ويقتصر على بؤر أو فترات زمنية محدودة،</p>		
	<p>and each outbreak or evidence of infection is followed up by immediate measures and post-outbreak surveillance, and review of the impact of control measures (vaccination, quarantines, measures at borders)</p> <p>وكل بؤرة أو أدلة على تفشي العدوى تتم متابعتها باتخاذ تدابير فورية و المراقبة بعد اندلاع البؤرة، و مراجعة أثر تدابير الرقابة (التلقيح، والحجر الصحي، وتدابير على الحدود)</p>		
<p>Stage 4</p> <p>الدرجة 4</p>	<p>Record of regular and prompt animal disease reporting is available;</p> <p>التسجيلات المنتظمة و الفورية لأمراض الحيوان متوفرة</p>		
	<p>and declaration are sent to the OIE that there has been no <u>outbreak</u> of FMD for the past 2 years and no evidence of FMDV circulation for the past 12 months,</p> <p>وترسل تصريحات إلى المنظمة العالمية لصحة الحيوان انه لا يوجد انتشار لمرض الحمى القلاعية خلال السنتين الماضيتين وليس هناك دليل لتحرك الفيروس ال 12 شهرا الماضية،</p>		
	<p>and documented evidence shows that <u>surveillance</u> for FMD and FMDV circulation in accordance with Articles 8.5.40. to 8.5.46. is in operation, and that regulatory measures for the prevention and control of FMD have been implemented</p> <p>والدلائل الموثقة تشير إلى أن مراقبة مرض الحمى القلاعية و تحرك الفيروس وفقا للمادتين 8.5.40. و 8.5.46. في حيز التنفيذ، والتدابير التنظيمية للوقاية والسيطرة على مرض الحمى القلاعية قد نفذت</p>		

<p>and documented evidence shows that routine vaccination is carried out for the purpose of the prevention of FMD</p> <p>والدلائل الموثقة تبين أن التلقيح الروتيني يتم لغرض الوقاية من مرض الحمى القلاعية</p>		
<p>and documented evidence shows that the vaccine used complies with the standards described in the Terrestrial Manual.</p> <p>والدلائل الموثقة تشير إلى أن اللقاح المستخدم يتفق مع المعايير التي ورد وصفها في دليل الأراضية للمنظمة العالمية لصحة الحيوان Terrestrial Manual</p>		

صف الإجراءات التي يلزم اتخاذها للتقدم من المرحلة الحالية إلى المرحلتين القادمتين 2.

Describe the actions that are needed to progress from your current Stage to the next 1 and 2 stages

Actions required	Problems/difficulties to be solved
الإجراءات المطلوبة	المشاكل / الصعوبات التي يتعين حلها
1.	
2.	
3.	
4.	
5.	

3. Realistically, when do you think it possible to progress to the next 1 and 2 stages (for each of the actions required mentioned above, please indicate how long this would take to complete)

واقعيًا ، متى تعتقد أنه من الممكن التقدم إلى المرحلة أو المرحلتين القادمتين . لكل واحد من الإجراءات المطلوبة المذكورة أعلاه ، يرجى الإشارة إلى كم من الوقت سيستغرق ذلك لتحقيق الهدف

4. What should be the priority of international projects/assistance on FMD for your country?

ما ينبغي أن يكون من أولويات المشاريع الدولية / للمساعدة بلدكم على مكافحة مرض الحمى القلاعية



FAO/OIE
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GLOBAL FRAMEWORK FOR THE
PROGRESSIVE CONTROL OF
TRANSBOUNDARY ANIMAL DISEASES

5TH ROUND TABLE FOR THE SURVEILLANCE AND CONTROL OF FMD IN THE MIDDLE EAST

Le Bristol Hotel - Hamra - Beirut - Lebanon
7 - 9 April 2009

COUNTRY SURVEY

Introductory Note

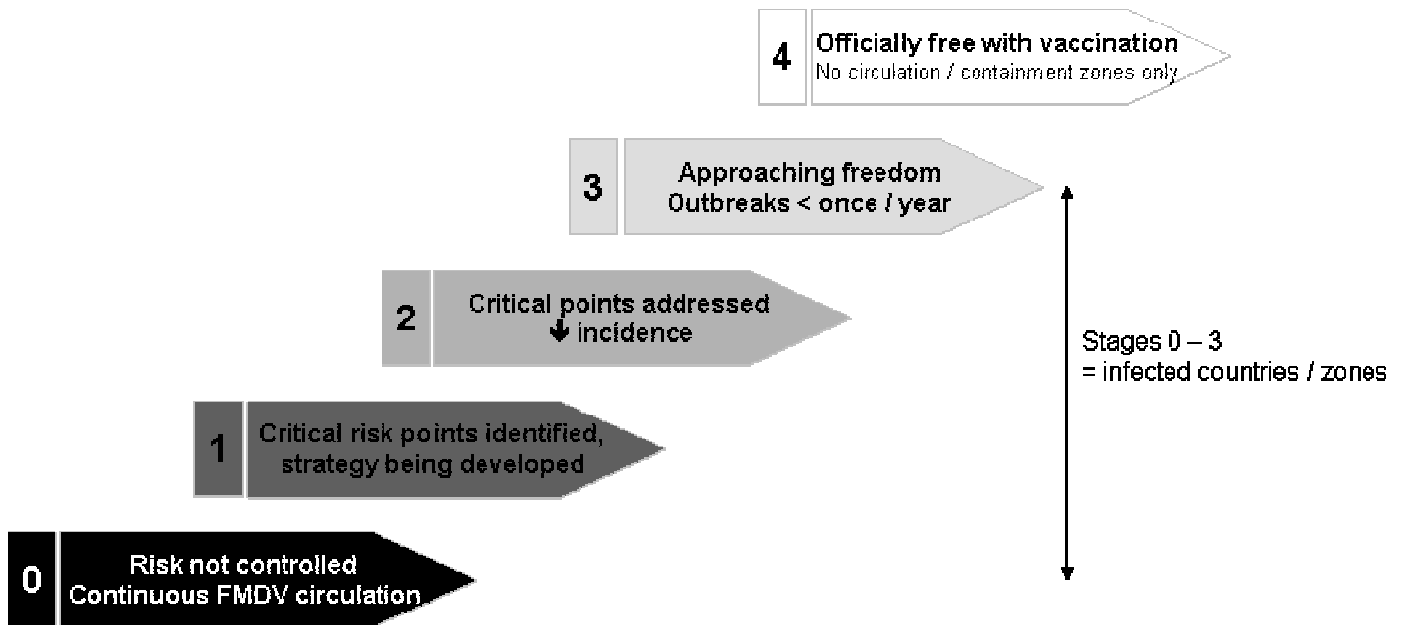
FAO and OIE are developing a Global Strategy for the prevention and control of FMD to be presented officially during the Paraguay international conference on FMD in June 2009. The regional and national dimensions of this Strategy are currently being addressed and discussed in regional workshops⁴, the findings and conclusions of which will be integrated in the Global Strategy.

To demonstrate to decision makers the urgency to invest in, and implement such a strategy, we have developed a tool for self-assessment of the level of FMD risk management in regions that are not officially free of FMD. The use of the tool should result in baseline information on the current situation of FMD management for use in regional and global advocacy.

The tool has been developed by FAO, as part of a **progressive FMD risk reduction approach**, based on both the measurement of FMD infection/circulation in the population at risk and the level of control of transmission/risk. Five different stages have therefore been identified (see chart below), ranging from Stage 0 → risk not controlled at all (with continuous FMD virus circulation in the country) to Stage 4 → risk effectively managed (with country / zone officially free (OIE-status) of FMD virus, with vaccination). An ultimate Stage 5 also exists, applicable to a country / zone officially free (OIE-status) of FMD virus without vaccination. Only Stages 4 and 5 refer to an official status as defined in the OIE Terrestrial Code. Stages 0 to 3 have been created for the specific purpose of this survey.

⁴ Central Asia and the Middle-East: Shiraz workshop (9-13 November 2008)
Africa: Nairobi workshop (26-30 January 2009)
Asia - Tentatively April 2009

Progressive risk reduction approach



The four questions listed below aim to (i) place your country (Stages 0 to 5) with regard to FMD progressive risk reduction approach, described above, (ii) identify the actions that would facilitate progress towards higher stages, and (iii) establish a tentative timetable to reach these targets. Finally, question (iv) will allow you to express which kind of support your country is expecting from the international community to meet the proposed timetable.

The data collected will be presented under the following format:

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Country 1	1		2			3Z?		3N					
Country 2	1		2			3							
Country 3	0			1		2					3		

Z = Zone, N= national

This methodology does not intend to rank countries in anyway, but to give a comparative indicator of ongoing activities involved in FMD risk management. FAO considers it realistic that all countries enter into stage 1 activities, recognising that the resources and benefits of entering stages 2-5 will vary from country to country.

Questions

Country:

5. Which Stage of progressive control most accurately describes your position? Tick and comment the box whose description fits your situation

Stage	Characteristics ⁵	Tick	Comments
Stage 0	Level of virus circulation (seroprevalence - NSP⁶ positives) has not been studied in past 12 months	If ticked this automatically places your status as Stage 0, unless your country is officially FMD free	
	<u>and/or</u> : outbreaks occur every year		
	<u>and/or</u> : the impact of control measures (vaccination, quarantines) on virus circulation is not studied or measured		
Stage 1	Level of virus circulation (seroprevalence - NSP positives) has been studied in past 12 months, and indicates virus circulation has occurred		
	<u>and</u> the critical risk points associated with the major husbandry/marketing chains are being identified ;		
	<u>and</u> a strategy is under development to address the CRP		
Stage 2	Each new outbreak(s) is investigated and potential sources identified		
	<u>and</u> level of virus circulation (seroprevalence - NSP positives) has been studied <u>repeatedly</u> for at least 24 months, and evidence of FMDV exposure found in each survey		

⁵ Rules:

- Stage 0: if you checked the first criterion, it automatically ranks your country in Stage 0 unless your country is officially FMD free (OIE status)
- Stages 1 to 4: to be ranked in Stage X, you have to complete all proposed activities for the Stage below (X-1) and be currently implementing at least one activity of Stage X.

⁶ NSP = viral non structural proteins

	<u>and</u> the risk associated with the major husbandry/marketing chains identified, and strategies implemented for each		
	<u>and</u> the impact of control measures (vaccination, quarantines, measures at borders) on virus circulation is being measured		
Stage 3	Each new outbreak(s) is shown to originate outside of the country or zone, not originate within		
	<u>and</u> level of virus circulation (seroprevalence - NSP positives) has been studied <u>repeatedly</u> for at least 24 months, and evidence of FMDV exposure found but being restricted to limited foci or limited time periods		
	<u>and</u> each outbreak or evidence of infection is followed up by immediate measures and post-outbreak surveillance , and review of the impact of control measures (vaccination, quarantines, measures at borders)		
Stage 4	Record of regular and prompt animal disease reporting is available;		
	<u>and</u> declaration are sent to the OIE that there has been no outbreak of FMD for the past 2 years and no evidence of FMDV circulation for the past 12 months,		
	<u>and</u> documented evidence shows that surveillance for FMD and FMDV circulation in accordance with Articles 8.5.40. to 8.5.46. is in operation, and that regulatory measures for the prevention and control of FMD have been implemented		
	<u>and</u> documented evidence shows that routine vaccination is carried out for the purpose of the prevention of FMD		
	<u>and</u> documented evidence shows that the vaccine used complies with the standards described in the Terrestrial Manual .		

6. Describe the actions that are needed to progress from your current Stage to the next 1 and 2 stages

Actions required	Problems/difficulties to be solved
6.	
7.	
8.	
9.	
10.	

7. Realistically, when do you think it possible to progress to the next 1 and 2 stages (for each of the actions required mentioned above, please indicate how long this would take to complete)

8. What should be the priority of international projects/assistance on FMD for your country?

Annex 5: List of Participants



FAO/OIE
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GLOBAL FRAMEWORK FOR THE
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TRANSBOUNDARY ANIMAL DISEASES

1



**OFFICIAL INAUGURATION OF THE OIE-FAO REGIONAL ANIMAL HEALTH CENTRE
4TH REGIONAL STEERING COMMITTEE OF THE GF-TADS
5TH ROUND TABLE FOR THE SURVEILLANCE AND CONTROL OF FMD IN THE MIDDLE EAST**

**Le Bristol Hotel – Hamra – Beirut - Lebanon
7 - 9 April 2009**

Provisional List of Participants

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