



Food and Agriculture  
Organization of the  
United Nations

**eofmd**  
european commission for the  
control of foot-and-mouth disease

FAO OF  
THE UN

## EuFMD/EC actions funded under MTF/INT/003/EC



MID TERM REPORT: 9/2009 to 9/2011  
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## SUMMARY

This mid-term Report is provided as part of the reporting arrangements to the DG-SANCO of the European Commission (EC) in fulfillment of the Contract between FAO and the EC relating to funding for the activities to be conducted by the EuFMD Commission. The current Contract was signed in September 2009 and has a term of 48 months. This narrative report accompanies the Financial Statement submitted to the EC as part of the agreed process for payment of the 2<sup>nd</sup> funding installment.

The EuFMD Commission, at the 38<sup>th</sup> General Session in April 2009, adopted a **four year Strategic Plan of Activities**, involving **six components**, with priorities for in-country actions being to support FMD control in Southeast Europe through greater management of the FMD risk in countries bordering to Turkey, in West Eurasia. These projects are coordinated with those of other Directorates of the EC and other funding agencies, to promote progressive control in the West Eurasian countries along a long term Roadmap.

Following signature of the financing agreement, specific activities of the EuFMD are initiated following response of the EC to proposals from the Secretariat or decisions of the Executive Committee at which the EC are represented.

The EC support is provided through a **Trust Fund (TF)**, MTF/INT/007/EEC, with a total funding of **8 m€** for the four year period of the current agreement. Since September 2009, the EC has agreed funding of actions in six of the Strategic Plan components, with by far the largest being for in-country programmes in the Trans-Caucasus and Iran, aimed at reducing the risk of new incursions of FMD into Turkey and Eastern Europe. Funding for Training of European veterinarians, for surveillance in the African proximity, for short technical studies, and for surveillance for FMD in Egypt have also been implemented in the period September 2009-September 2011. In response to FMD outbreaks in Bulgaria in 2011, the TF was used for emergency funding purposes for procurement of FMD vaccines for re-enforcement of immunity in Turkish Thrace, and thereby protection of the three countries with common borders.

At the 39<sup>th</sup> Session in April 2011, the EuFMD Commission recommended two additional components, for which expenditures or activities had not been committed before September 2011 and are therefore not included in this Mi-Term report.

The six components covered in this report are:

1. Risk reduction in South-East Europe through support to FMD control in West Eurasia;
2. Activities to reduce FMD risk in the South and East Mediterranean countries;
3. Field based FMD Training Program;
4. FMD surveillance in the African proximity;
5. Technical studies;
6. Response to FMD Emergencies.

The work under each component is scheduled for completion in 2012 or before completion of the term Funding Agreement.

## COMPONENT 1 : RISK REDUCTION IN SOUTH-EAST EUROPE THROUGH SUPPORT TO FMD WEST EURASIA

### Projects in this category:

1. Support to the West Eurasia Roadmap (Secretariat, surveillance and annual progress reviews);
2. Trans-Caucasus Countries;
3. Iran.

### PROJECT #1 : SUPPORT TO THE WEST EURASIA ROADMAP (SECRETARIAT, SURVEILLANCE AND ANNUAL PROGRESS REVIEWS)

*COUNTRIES: TURKEY, GEORGIA, ARMENIA, AZERBAIJAN, IRAN, SYRIA, IRAQ*

*Note: in total 14 endemic countries are involved in the Roadmap; seven countries in Central Asia had their involvement in the Roadmap meetings and activities supported by Italian funded project GTFS/ITA/907.*

### Reporting period: September 2009 to September 2011

The current Phase project started in 9/2009 and will continue until end of the current EC funding agreement (12/2012).

**Lead technical officer (LTO) and other main international experts:** Keith Sumption (Secretary, EuFMD) and Giancarlo Ferrari (FAO; supported by FAO/GTFS/ITA funding); Melissa McLaws (EuFMD).

### Project basis (background)

The West Eurasia FMD control Roadmap was developed in November 2008, at a meeting organized by EuFMD/FAO. In April 2009, the EuFMD 38<sup>th</sup> General Session adopted a four year strategic plan for 2009-12 with support to the West Eurasia Roadmap as priority, for the protection of member states in South-East Europe. Two major projects (Iran, Trans-Caucasus) for specific countries were agreed with EC for funding under this programme. The general support to the Roadmap involves an annual meeting and specific support for the West Eurasia Laboratory Network (WELNET) and Epidemiology and Informatics, in the form of requests arising from recommendations from the Annual Meeting which are represented to the EuFMD Executive.

In the reporting period, these were:

- Support to WELNET (training in FMDV typing);
- Epidemiology and Informatics support (improvement of information sharing for early detection of regional pandemics).

### **Summary of project, covering:**

The West Eurasia FMD Roadmap is a platform for progress, for countries in this region which are at common risk of FMD. Support for country programmes is mainly through national funds supported by multiple donors (EC, World Bank, US, FAO). The long term vision is for a West Eurasia free of clinical FMD by 2020.

Fourteen countries participated in the foundation event (2008) and at least 12 of these in subsequent, annual review of progress. The EC, European member states, OIE and some country donors (US) have participated and EC, OIE, EuFMD and FAO, with 3 regional countries and two technical network co-coordinators comprise the Advisory group.

The Roadmap strategy is to:

1. **Promote** improved FMD management at national level through application of the Progressive Control Pathway (PCP), with emphasis on national adoption of country FMD management strategies based on a comprehensive assessment of epidemiology and FMD management options.
2. **Increase** confidence in the FMD risk management programmes of countries in the region by regional ownership of the Roadmap and regular, independent review of progress.
3. **Build** regional capacity to manage the regional threats to animal health, particularly the emergence and rapid spread of FMD epidemics in the region and the management of animal and infection movements between countries.

### **Project implementation**

Annual progress review meetings have been organized jointly between EuFMD (Secretariat) and FAO/GTFS projects.

In country actions between the review meetings have been organized by the specific projects.

Roadmap support actions, such as WELNET, have been organized by EuFMD for the six countries that border Turkey.

Funds to support WELNET were managed by Contract (Letter of Agreement) with the SAP Institute, Ankara (to provide training and promote network activities).

### **Outcomes expected and main activities:**

Each of the 14 countries aligns activities in FMD management with the PCP principles and participates in the annual process of progress review.

1. FMD risk management practices in the 14 countries utilize the FMD risk information generated within the region and by the PCP and Roadmap actions.
2. FMD epidemic warnings provided to at-risk countries as a result of national PCP activities and regional support networks (including WELNET).

## **Specific outputs to date or other indicators that progress is being made**

### **1. Annual Roadmap progress reviews**

Annual Progress Meetings held in October 2009 and December 2010.;

At each meeting, PCP progress was reviewed for each of the participating countries (at least 12); Virus circulation and vaccine recommendations for the coming year were identified and provided; Support actions for early epidemic detection (surveillance and lab capacity) identified and actions plans generated.

### **2. WELNET reports and early warning of epidemics**

Each Roadmap review has developed action plans for the Lab and Epi-Networks. For WELNET, the proposals were partially funded through the EC programme (2010).

### **3. West Eurasia FMD vaccination database and informatics network**

Meetings were held on this and agreement reached with the three Trans-Caucasus countries (TCC) and Turkey, and partial agreement with Iran, on a system for data sharing on vaccination and outbreak information. For the TCC, the system was operational from 2009.

## **Events that have affected progress**

For the seven countries whose involvement is supported by EuFMD, only with Syria and Iraq has participation been limited.

Participation of Iraq in FMDV strain typing/lab networking has been difficult.

For Syria, there is apparent reluctance to share sero-monitoring information but they (and Iraq) benefit from the open information generated by the other West Eurasian countries.

## **Major types of expenditures** (e.g. supervisory missions, vaccines supplied...)

1. Travel associated costs for the Annual progress Meeting, for seven countries and technical experts from European reference laboratories.
2. Contract (*USD 21,050*) with SAP Institute, Ankara) to provide training for laboratories from Iran and TCC to use the multiplex PCR and Pirbright antigen detection ELISA for FMDV typing.

## **Reporting in this period**

1. Annual Roadmap Meeting Reports for 2009 and 2010 (*2009 and 2010 Roadmaps are shown in Figure 1 and 2*);
2. WELNET report to the EuFMD Executive (every 6 months);
3. Epi-Network/Informatics –meeting reports (to EuFMD Executive);
4. FMD virus typing reported via WRL-Pirbright (online) and the Annual FAO/OIE FMD lab Network.

Major Reports online

- Roadmap Progress Review Report, for 2009  
[http://www.fao.org/ag/againfo/commissions/docs/Regional\\_FMD\\_meetings/West\\_EurAsia\\_Roadmap\\_Report.pdf](http://www.fao.org/ag/againfo/commissions/docs/Regional_FMD_meetings/West_EurAsia_Roadmap_Report.pdf)
- Roadmap Progress Review Report, for 2010  
[http://www.fao.org/ag/againfo/commissions/docs/Regional\\_FMD\\_meetings/2011/Report\\_Istanbul.pdf](http://www.fao.org/ag/againfo/commissions/docs/Regional_FMD_meetings/2011/Report_Istanbul.pdf)

		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Comment
Eur asi a  We st a	Kazakh														
	Kyrgyz		new												FMD seromonitoring system therefore Stage 0, assumed 2, 3 and 5 years to move through to
	Tajik		new												progress to stage 1
	Turkmen														
	Uzbek		new												progress to stage 1
	AFG		new												progress to stage 1
	IRN														
	PAK		new												2009: progress to stage 1. Progress to Stage 2 ex
	TURK		new												progress to stage 2
	Thrace (TR)			new											dossier to OIE in 2010
	added zones (TR)														
	Syria		new												Syria considered to be in Stage 1 in 2009 with reporting of seromonitoring expected in 2010,
	Iraq														
	Armenia														
	Azerbaijan														
	Georgia		pending	new											2009 : re-assessed as Stage 1, expect enter Stage 2 in 2011

Legend of colour codes:

Stage	0	1	2	3	4	5

**Figure 1.** Final assessment of country Stage position for 2009, together with the expected progression to 2020. Hatched boxes indicate presence of zones at a more advanced PCP Stage, with the colour of the hatched lines corresponding to the key for the national PCP Stage.

Countries'

PCP progress (12/2010)

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Kazakh			1 (NEW)	2	2	2	2	3	3	3	3	4	4
Kyrgyz			0	1	1	2	2	3	3	3	4	4	5
Turkmen			0 (NEW)	1	1	2	2	3	3	3	4	4	4
Uzbek			0 (NEW)	1	1	2	2	3	3	3	3	3	3
AFG			1	1	2	2	2	3	3	4	4	4	4
TRN			2	2	2	3	3	3	4	4	4	4	5
PAK			1	1	2	2	2	3	3	3	4	4	4
(TR)			2	2	2	2	2	2	2	2	3	3	3
Thrace (TR)			new	4	4	4	5	5	5	5	5	5	5
Marmara				2	2	3	3	3	4	4	4	4	4
Aegean (TR)													
Central Anatolia (TR)				2	2	2	2	2	3	3	3	3	4?
Syria			1	2	2	3	3	3	4	4	4	4	5
Iraq													
Armenia			2	2	2	2	3	3	3	4	4	4	4
Azerbaijan			2 (NEW)	2	2	2	3	3	3	3	4	4	4
Georgia	pending		1	2	2	2	2	3	3	3	4	4	5

2008 : 2010: **5 progressions, incl. 1 official freedom**  
**3 downgradings**

Figure 2. Final assessment of country Stage position for 2010, together with the expected progression to 2020. Hatched boxes indicate presence of zones at a more advanced PCP Stage, with the colour of the hatched lines corresponding to the key for the national PCP Stage.

**Projects in this category:**

1. Support to the West Eurasia Roadmap (Secretariat, surveillance and annual progress reviews);
2. Trans-Caucasus Countries;
3. Iran.

**PROJECT #2 : STRENGTHENING FOOT-AND-MOUTH DISEASE SURVEILLANCE AND CONTROL IN THE TRANS-CAUCASIAN COUNTRIES TO ASSIST PROGRESSION ON THE WEST EURASIA FMD PROGRESSIVE CONTROL PATHWAY**

**COUNTRIES:** GEORGIA, ARMENIA, AZERBAIJAN

**Lead technical officer (LTO) and other main international experts:** Carsten Potszch (LTO), Tsviatko Alexandrov.

**Reporting period : September 2009 to September 2011**

Project timeframe and expected date of finish (if single project)

The current Phase project started in 5/2010 and will be completed 12/2012.

**Project basis (background)**

Project document, with contribution agreed with the EC of *US\$ 1,997,640*, covering May 2010-December 2012. In period 9/2009 to April 2010, interim activities were approved by the General Session of EuFMD in April 2009 and Executive Committee to complete essential actions under the previous Phase and maintain awareness of the situation of FMD control in each country until the new financial TCC Project Document agreement with EC was reached.

**Summary of project, covering:**

The 3 year program is a continuation (Phase 2010-12) of the support provided under the European Commission/EUFMD program (MTF/INT/003/EEC) to reduce the risk of transboundary FMD movement across the eastern European borders, which includes the borders of the Caucasus countries with Turkey and Iran. The project is in line with the West EurAsia FMD Roadmap, in which risk reduction is achieved by each TCC undertaking actions to achieve and complete Stage 2 activities which have the aim of preventing virus circulation in the TCC, and, in Armenia and Azerbaijan, entering Stage 3.

The aim of the project is to reduce the risk of FMD entry, circulation and risk of onward spread in the TransCaucasus, and thereby strengthen regional bio-security.

Of note is the escalating meat import trade, and also export trade from some parts, which increases the risk related to this region over previous years. The risk of exotic FMDV entry into free range pig production exists since most pigs are kept on a scavenging basis, ASF probably entered through this mechanism, and FMD has frequently entered other countries by such a route.

The project strategy is to:

1. **Reinforce** preventive vaccination measures in high risk zones and populations, including the border regions with Turkey/Iran in spring 2010-2011, through the provision of a quality assured FMD vaccine containing the appropriate antigens.
2. **Identify** the impact of control measures upon FMDV circulation and incidence in the animals marketing chains, and to re-assess and guide the NVS on control measures to prevent virus circulation, in order to improve FMD risk management (in line with PCP Stage 2);
3. **Establish**, in each country and at regional level, sufficient access to quality assured laboratory services that will enable monitoring of the vaccination programs and achieve early confirmation of FMD if it occurs.

#### **Project implementation**

By EuFMD from FAO headquarters (for procurement, contracts with suppliers and consultants). FAO Country Representations assist in negotiation with Ministries if issues arise with implementation or where additional requests arise from the Ministry that are not covered by the project document.

#### **Outcomes expected and main activities:**

These are stated in the Project Document, and in the **Annex 1**.

#### **Component 1: Improved FMD monitoring and control to progress on the West Eurasia FMD Roadmap**

**Immediate objective:** TCCs consolidate the PCP stage 2 position for FMD control and monitoring and progress on the pathway to meet main criteria of stage 3 by 2012.

#### **Component 2: Enhance laboratory capacity to support FMD monitoring /surveillance and control programmes**

**Immediate objective:** Establish FMD serology for antibodies to structural and non-structural proteins and FMD virus diagnosis at the level of the field and confirmation and sero-typing at the national laboratories.

#### **Specific outputs to date or other indicators that progress is being made**

#### **Country position on the Progressive Control Pathway:**

Each country fully participated in the **PCP** reviews of December 2010 (and March 2012). The December 2010 review revealed issues with PCP activities progress in Georgia, and the Country Stage was downgraded from 2 to 1. Actions required in Stage include development of a comprehensive national strategy on basis of risk assessment

and national capacity to sustain the chosen FMD risk management. Armenia and Azerbaijan met PCP Stage 2 criteria, implementing FMD vaccination programmes with principally national funds, and the project actions have re-enforced vaccination in high risk populations and provided as basis of evidence from sero-monitoring to inform control measures.

#### **Other indicators:**

Indicators were agreed in the project log frame and in addition to the national, yearly review (PCP), include:

1. Vaccine delivered, applied, and sero-monitoring results;
2. Results of sero-monitoring conducted national level following training and supply of diagnostic kits;
3. Monthly reporting by each country (National Vet Service, through project national focal points/consultants); Consolidated monthly reports reviewed by EuFMD, and corrective or additional actions agreed.
4. Data entry to the Project Database on FMD vaccination (indicated below –from Report of September 2011); monthly data on vaccination includes national and project supported, enables co-ordination and risk assessment if suspicious events;
5. Sero-monitoring survey, reported at co-ordination meeting for the three countries (revision to risk assessment, and pre-vaccination campaign planning).

#### **Events that have affected progress**

Civil situation generally stable and national consultants remained in their posts throughout. Major epidemics of type A, type O and Asia-1 in Iran and Turkey in 2009-11, required trivalent vaccine procurement and given the low match with Asia-1 Shamir, high potency Asia-1 component (Intervet purchase) at higher than budgeted cost. Type O epidemic in South Ossetia (occupied territory) necessitated emergency assessment mission to Georgia in 9/2011. National Reference Laboratory (NRL) in Georgia had difficult relations with national Veterinary service throughout, limiting both NVS and project access to sero-monitoring data.

#### **Major types of expenditures** (e.g. supervisory missions, vaccines supplied..)

1. *1.04 million USD* for FMD vaccine procurement for the buffer zone; the project had budgeted *1.19m USD* for four campaigns of 850,000 doses in this period. The *1.04 m USD* includes purchase of Intervet Trivalent FMD vaccine as emergency reserve in 2011 for *151,000 USD*.
2. Other expenditures include circa *US\$ 58,000* for contracts with IZSLER laboratory, Italy, and FLI, Germany for laboratory training and testing of serum samples, and maintaining the EuFMD vaccination database.
3. The remaining expenditures were on diagnostic supplies, missions, and remuneration of national and international consultants (one per country and one per project, respectively).

#### **Reporting**

1. Monthly Reporting by the National Consultants, consolidated into a single Project Report, distributed to the EuFMD Executive Committee, Standing Technical Committee and Research Committee;
2. Six- month Report provided to the EuFMD executive and reported in the Session Reports;
3. Vaccination data submitted monthly to the EuFMD database enables tracking of vaccination campaign progress and enables each country to view progress of the others;

4. Annual Roadmap/Country PCP assessment reports ( December 2009 and 2010).

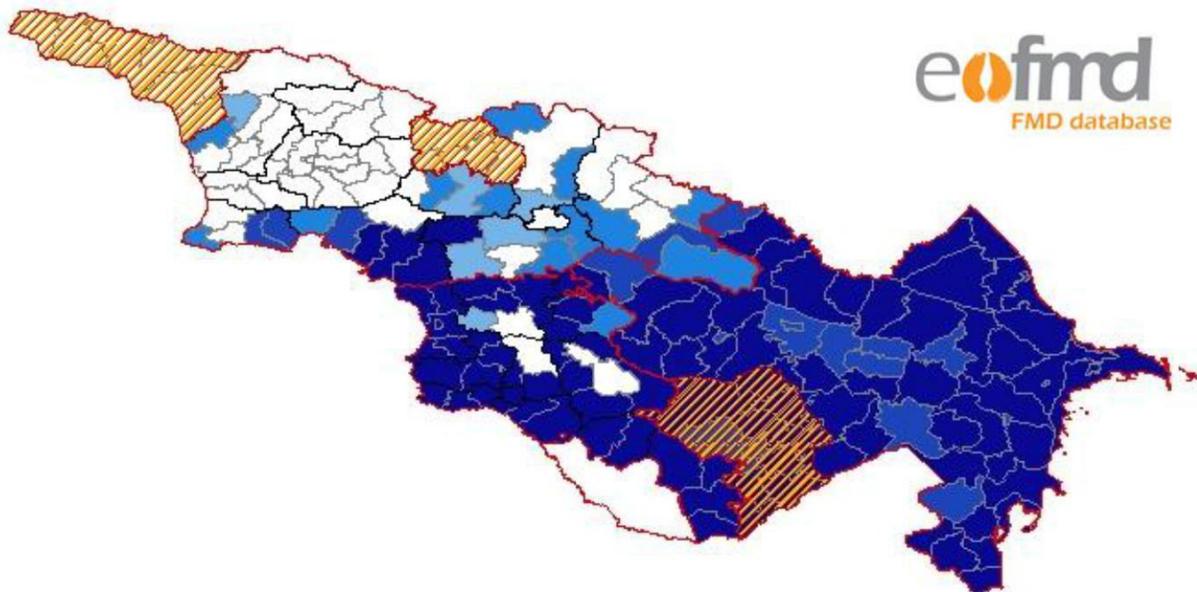
#### Major Reports

1. October 2009 ; Appendix 17 pp123-126 of the 78<sup>th</sup> Executive Committee Report.  
[http://www.fao.org/ag/againfo/commissions/docs/excom78/Report\\_78\\_Final.pdf](http://www.fao.org/ag/againfo/commissions/docs/excom78/Report_78_Final.pdf)
2. Six Monthly Project Progress Report, Oct 2010-March 2011
3. Six Monthly Project Progress Report, April 2011-Sept 2011.

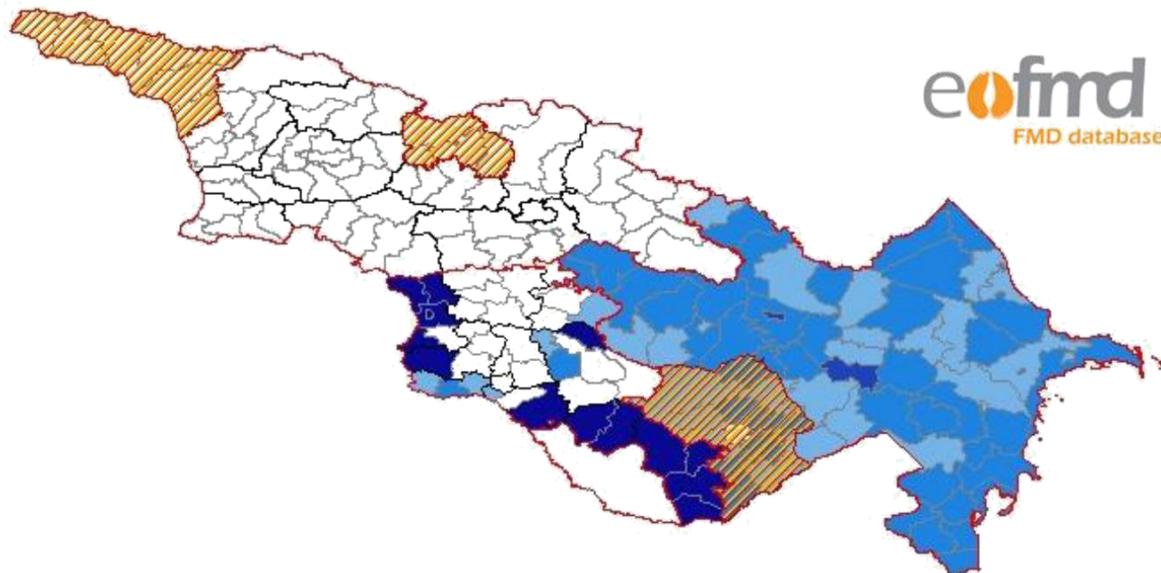
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#### MAPS OF FMD VACCINATION COVERAGE, SPRING 2011

##### Percent vaccination coverage (reported) per district in Armenia, Azerbaijan and Georgia

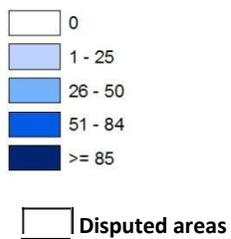


a) Map 1 (above) LR vaccination



b) map 2 : SR vaccination

**Legend (% vaccination coverage)**

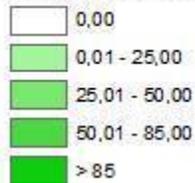


Percent vaccination coverage (reported) per district in Armenia and Azerbaijan



Map 3: FMD booster vaccination in large ruminants, Jan – Aug 2011

Legend (% revaccination coverage)



White box with border Disputed areas

**Projects in this category:**

1. Support to the West Eurasia Roadmap (Secretariat, surveillance and annual progress reviews);
2. Trans-Caucasus Countries;
3. Iran.

**PROJECT #3: COMBATING FOOT-AND-MOUTH DISEASE THROUGH ENHANCED AND CO-ORDINATED SURVEILLANCE ACTIVITIES; PHASE III OF THE FMD SURVEILLANCE CENTRE INITIATIVE**

***COUNTRIES: IRAN***

**Lead technical officer (LTO) and other main international experts:** Melissa McLaws (LTO). Chris Bartels, principal international expert/epidemiologist. Labib Bakkali (France), FMD diagnostic laboratory expert.

**Reporting period: September 2009 to September 2011**

The current project was formally agreed in July 2010 and should run for three years. Project activities effectively commenced in October 2010.

**Project basis (background)**

Based on the complex epidemiological situation with respect to FMD in Iran and its importance to the region, the EuFMD Commission initiated a project named "Combating Foot-and-mouth Disease through enhanced and co-ordinated surveillance activities; the Central Asia FMD Surveillance Centre initiative" in January 2006. Phase II of this project was signed in September 2008 and aimed to consolidate the improvements to technical capacity introduced under the first phase. Progress was reviewed through a mission in February 2010.

In November 2009, the Iranian Veterinary Organization (IVO) requested a Third Phase of the programme be developed, and this was done following the mission of the EuFMD Secretary in November 2009, a meeting (IVO with GDPC, Turkey) in Ankara in January 2010, and a Review mission to Iran in February 2010. The project document was signed in July 2010.

## Summary of project:

### *How the project is implemented:*

The Iran Veterinary Organization (IVO) is the national body responsible for the project activities. The project activities are implemented under the close monitoring and supervision of a Project Steering Committee (PSC) lead by the Head of Iran Veterinary Organization (CVO). A National Project Coordinator (NPC) was recruited, without honorarium, by FAO to assist with the management and timely delivery of FAO inputs as per detailed TORs reflected in the MOU. A full-time Operations Clerk was recruited and is based at the FAO-IR Office in Tehran, providing administrative/operational support for implementation and monitoring of the project activities under the direct supervision of the FAO Representative. Supervisory and backstopping epidemiologists have been recruited internationally and conduct regular missions to Iran, as well as providing ongoing technical support and monitoring of project activities between missions. Other consultants are recruited on an *ad hoc* basis.

### *Outcomes expected and main activities:*

The project seeks to reduce the risk of FMD circulation in Iran through the support to achieve the stage 2 of the progressive control pathway (PCP) at national level and entry into stage 3 in at least one high control zone, in Western Iran. To do so the project will improve early threat detection through a network of subnational laboratories in priority areas for FMD control, and upgrade, through training programmes, the national epidemiology unit and national reference laboratory. The project consists of five components, each with detailed activities specified in the project document to achieve these goals.

### *Specific outputs to date or other indicators that progress is being made:*

- A written FMD control strategy has been developed, largely based on principles imparted through the training sessions, value chain workshop and related discussions that have taken place during the first year of the project. This is the **first written FMD control strategy** that Iran has produced, and will be a valuable tool to communicate and guide strategy development, both within Iran and also internationally. This strategy recognizes that vaccination is one of the important components of FMD control strategy but needs to be supported with other control options such as animal movement restriction, biosecurity measures (at epi-unit level, district, province and national (such as quarantine of imported animals) level).

During the mission in September 2011, a national FMD task force was appointed. The primary objective for this task force is to convert the FMD strategy plan into actions for implementation in the field. This appointment emphasizes IVO's commitment to institutionalize FMD control rather than FMD control being one of its staff's many tasks. Additionally, the FMD task force will ensure FMD strategy development and implementation beyond the duration of the project.

- Through the project activities, Iran remains committed to the regional approach to FMD control and the PCP-FMD. They have attended regional meetings, including the Regional Roadmap meeting in Istanbul in Dec 2010 (and March 2012) and provided information openly regarding the FMD situation. Samples have been submitted regularly to the WRL. They (along with Turkey) have also committed to a regional data sharing agreement, organized through FAO, that arose from the data analysis workshop in Ankara in March 2011.
- A large serosurvey (9000 samples) has been carried out in W. Azerbaijan province. The results demonstrated a very high prevalence of NSP antibodies at the epidemiology unit level (80%), and also at the animal level (40%). Risk factors for seroconversion included increased age, more than one prior vaccination, commercial farms (versus villages) and trading. Despite the fact that the survey targeted young animals (under 18

months), it is not possible to assess with certainty the amount of seroconversion due to use of the non-purified vaccine versus infection.

- Capacity of the subnational laboratories has been enhanced through
  - a. Two IVO laboratory personnel attended a training course at IZLER in Brescia, Italy in November 2010 that covered the use of FMDV serotyping ELISAs, NSP Ab ELISA and SP Ab ELISA;
  - b. Training provided to lab staff in W. Azerbaijan and Khoresan SNLs by those trained in Brescia, and these labs have commenced initial serosurveys;
  - c. Procurement of kits sufficient to test: 30,000 NSP samples, 850 SP samples (serotype O) and 2500 serotyping ELISAs. for use in SNLs.

#### *Events that have affected progress*

There are many questions regarding the quality and purity of the FMD vaccines used. This impacts our ability to interpret the results of the serosurvey. More importantly, a good understanding of vaccine quality is absolutely fundamental to the design and implantation of an effective vaccination policy to control FMD. To address this, an expert mission to review vaccine quality assessment by IVO is planned, and serological studies will be undertaken to assess NSP and SP seroconversion resulting from vaccination.

Serotype Asia-1 was detected in Iran, with laboratory results being received roughly the same time as the April 2011 mission. Therefore, a rapid assessment and outbreak investigations were included in this mission. Further, it was arranged to send samples to Turkey to allow for further virus characterization and vaccine development (a regional early warning response).

#### *Major types of expenditures*

**Missions:** In the reporting period, three missions have been undertaken to Iran involving international expert epidemiologists to provide technical support to the project and epidemiology training to IVO staff (Nov 2010, April 2011, Sept 2011). IVO staff attended a training and working group on data analysis held in Ankara in March 2011. Two IVO laboratory personnel attended a training course at IZLER in Brescia, Italy, in November 2010 that covered the use of FMDV serotyping ELISAs, NSP Ab ELISA and SP Ab ELISA. A delegation from Iran also participated in the W. Eurasia Roadmap meeting in Istanbul in Dec 2010.

**Procurement:** During the project, kits sufficient to test 30,000 NSP samples, 850 SP samples (serotype O) and 2500 serotyping ELISAs have been procured for use in SNLs. There was also procurement of laboratory equipment and diagnostic kits prior to the initiation of this project (Dec 09: diagnostic kits from IAH, Prionics; Svanova, Qiagen)

#### **Reporting**

1. Reports on the FMD situation and response (vaccination) have been submitted on a monthly basis since the beginning of the project: distributed to EuFMD Executive, EC, Standing Technical Committee.
2. Project activities have been documented and monitored through weekly teleconferences involving the NPC and international epidemiologists, six-monthly reports, mission reports and a project review following the first year of the project. Six-monthly Report submitted providing a summary of project progress and actions for subsequent 6 months. (**Annex IV**-October 2011-March 2012).
3. Annual Progress Report to the West Eurasia Roadmap Review meetings in 2009 and 2010.

- ② Roadmap Progress Review Report for 2009.  
[http://www.fao.org/ag/againfo/commissions/docs/Regional\\_FMD\\_meetings/West\\_EurAsia\\_Roadmap\\_Report.pdf](http://www.fao.org/ag/againfo/commissions/docs/Regional_FMD_meetings/West_EurAsia_Roadmap_Report.pdf)
  - ② Roadmap Progress Review Report, for 2010  
[http://www.fao.org/ag/againfo/commissions/docs/Regional\\_FMD\\_meetings/2011/Report\\_Istanbul.pdf](http://www.fao.org/ag/againfo/commissions/docs/Regional_FMD_meetings/2011/Report_Istanbul.pdf)
4. A summary of the February 2010 mission to Iran to review the previous project and plan the current project was presented to the EuFMD 79<sup>th</sup> Executive committee (<http://www.fao.org/ag/againfo/commissions/docs/excom79/App19.pdf>).
  5. The results from the data analysis workshop held in Ankara and involving epidemiologists from both Turkey and Iran was presented at the 39<sup>th</sup> General Session in Rome in 2011 (<http://www.fao.org/ag/againfo/commissions/docs/genses39/App04.pdf>)

**Projects in this category:**

**PROJECT #1: STRENGTHENING FOOT-AND-MOUTH DISEASE SURVEILLANCE AND CONTROL IN EGYPT TO ASSIST PROGRESSION ON THE FMD PROGRESSIVE CONTROL PATHWAY**

**Agreed funding:** *USD\$150,000*

At 9/2011, total expenditure had been circa USD\$ 77,000.

**Lead technical officer (LTO) and other main international experts:** Keith Sumption (LTO). Dr Yilma Jobre, ECTAD Team leader, Egypt. Dr Kees van Maanen and Dr Chris Bartels, FMD laboratory and vaccine quality control expert and project epidemiologist, respectively.

**COUNTRIES:** EGYPT (GENERAL ORGANIZATION OF VETERINARY SERVICES, GOVS).

**Reporting period: September 2009 to September 2011**

The project started in 9/2010 and was planned as a nine month Phase to be followed by a second nine month Phase if agreed by the Executive Committee/EC. At 9/2011 the Phase had not been completed because of difficulties of the revolution/post-revolution period.

**Project basis (background)**

FAO had supported a Technical Co-operation Project (TCP) in Egypt, following FMD outbreaks in 2006 and 2007, and EuFMD had provided the Lead Technical Inputs. The TCP finished in 2009, but given the weakness in surveillance and the evidence of continued African type A outbreaks, the EuFMD Executive agreed at the 79<sup>th</sup> Session that further support be given, to a maximum of *USD\$150,000* for a project in March 2010. A nine month project was agreed with the EC, and through FAO signed with Ministry of Agriculture and Land Reclamation (MoALR), Egypt, and commenced 15/9/2010.

**Summary of project, covering:**

The first (9 month) Phase of support had the following aims to:

1. **Promote** improved FMD management at national level through application of the Progressive Control Pathway (PCP), with emphasis on PCP Stage 1 actions including a national sero-survey for FMD to identify risk factors for infection in small and large species;
2. **Develop** understanding of why FMD circulates in Egypt, with emphasis on actions to monitor FMDV circulating in the animal population and support to diagnostic capacity building in AHRI (national reference laboratory).

As these activities would not complete PCP Stage1, and funding was limited, a second set of activities would follow to complete PCP Stage 1 by development of a revised national strategy for FMD based on a comprehensive assessment of FMD epidemiology, risk management options and public/private responsibilities for protection of animal health.

### **Project implementation**

The project was implemented by the FAO Cairo Unit of the Emergency Center for Transboundary Animal Disease (ECTAD), under budgetary control by EuFMD.

### **Outcomes expected and main activities:**

**Outcome** (Immediate objective/s): The project is composed of three main components, each of them having a related immediate objective as shown below:

***Component 1:*** *Increased passive surveillance in Egypt with isolation of field viruses, vaccine matching, and further characterization of field isolates by WRL Pirbright.*

Immediate objective 1: Egypt reaches the PCP stage 1 position for FMD control and monitoring and makes progress on the pathway to meet some criteria of stage 2 by 2012.

***Component 2:*** *Increased active surveillance in Egypt consisting of two campaigns with one year interval to establish baseline data about FMD (sero) prevalence, and identify high and low risk areas. Only the first campaign will be planned and executed in the context of this project*

Immediate objective 2: Egypt reaches the PCP stage 1 position for FMD control and monitoring and makes progress on the pathway to meet some criteria of stage 2 by 2012.

***Component 3:*** Laboratory

Immediate objective 3: Establish unambiguous FMD serology for structural and non-structural antibodies and FMD virus diagnosis and serotyping at the national laboratory.

Objectives for laboratory twinning, to be carried out in collaboration with the Technical Backstopping Officer with back-up of WRL Pirbright, are described below. The main outputs and activities are also summarized below. Under this first nine months project about half of the activities can be carried out.

### **Specific outputs to date or other indicators that progress is being made**

1. National sero-survey planned, and training provided, and sampling had begun (9/2011) - in large and small ruminants to identify risk factors for FMD infection at herd, village, Governorate level;
2. Capacity building at the NRL to undertake the sero-survey and to rapidly type FMDV samples submitted, to identify the FMDV strains circulating in Egypt.
3. At time of this financial/narrative report (September 2011) missions have taken place to train staff for the national sero-survey, but both sample collection and testing were delayed by post-revolutionary situation (it was completed 12/2011).

4. Upgrading of AHRI procedures had occurred during training missions of the EuFMD consultant and new tests (multiplex PCR, antigen detection ELISA) had been successfully introduced. Sample shipment to WRL had been blocked by the incoming CVO after the revolution, and the project team had then focused on NRL capacity to serotype (sample shipments were finally achieved in 3/2012). FMD circulation in Egypt was therefore partially known (as a result of training missions) by EuFMD/EC.

#### **Events that have affected progress**

The Egyptian revolution in February and March 2011 and post-revolution changes in personnel in key institutions have impacted progress. The incoming CVO took decisions to block shipments of FMDV samples from before his term of office, and of those during his term. The FAO National Consultant in place pre-revolution (agreed with Government pre-revolution) found it extremely difficult to work in the post –revolution situation. A very good level of contact between technical staff at GOVS and AHRI was maintained by EuFMD consultants throughout - and this enabled the project activities to be completed in 12/2011.

#### **Major types of expenditures** (e.g. supervisory missions, vaccines supplied...)

1. Training and supervision missions of the consultants;
2. Laboratory diagnostic kits and materials for FMDV typing, sero-surveillance.

#### **Reporting in this period**

1. 39<sup>th</sup> General Session of the EuFMD, April 2011, Rome.
2. Mission reports of Dr Bartels (epidemiology) and Dr Van Maanen (laboratory capacity building and vaccine quality).

**Projects in this category:**

**PROJECT #1: REAL-TIME FMD TRAINING PROGRAMME**

**Agreed funding:**

At 9/2011, total expenditure had been circa *USD\$ 290,000*.

**Lead technical officer (LTO) and other main international experts:** Keith Sumption (LTO). Nadia Rumich, Communications Officer and Training Course manager. Naci Bulut, Turkey, and Eunice Chepkwony (Kenya), principal in country focal points for course management. Eoin Ryan (Ireland), Kees van Maanen (NL), and around six others, provided training inputs in the first two years.

**COUNTRIES:** ALL EUROPEAN (EC, EFTA, WESTERN BALKAN ) AND EUFMD MEMBER STATES.

**Reporting period: September 2009 to September 2011**

The Real-Time training programme began in May 2009 within funding carried over from the 2005-8 financial agreement from EC. This reporting period covers the period of the current EC agreement (9/2009-).

**Project basis (background)**

The 38<sup>th</sup> EuFMD General Session in April 2009 called for a **field-based training programme** for Member States in FMD recognition, outbreak investigation and local area response. Funding was agreed with the EC and the first nine courses were organized in Turkey, with subsequent courses in Kenya. The program was very positively reviewed at the 39<sup>th</sup> Session in April 2011, and continued support of the EC was agreed for the period of the funding agreement.

**Summary of project, covering:**

The first (24 month) Phase of Real-Time Training, after the 38<sup>th</sup> Session, had the following aims:

1. To provide experience of investigating FMD suspect cases in the field, for 3 front-line veterinarians from each Member State of the EU and/or EuFMD;
2. To develop training materials appropriate for trainer or trainers approach, to improve the access, quality of training on FMD recognition and investigation within each Member State (MS).

## **Project implementation**

The project was implemented by EuFMD from FAO-HQ, with field arrangements and disbursements through the FAO offices in Turkey and Kenya.

### **Outcomes expected and main activities:**

The first (24 month) Phase of Real-Time Training, after the 38<sup>th</sup> Session, had the following expected outcomes:

1. To provide a cadre of trained veterinarians by 2012; all EU/EuFMD MS should have at least three (front-line) veterinarians who have taken the course (or have equivalent experience, assuming some MS opt out) and contribute to the European pool of trained expertise in FMD investigation, by mid 2012;
2. To establish a network of trainees with access to a bank of online FMD outbreak investigation resources; using web-based tools for peer-review and updating on the training course materials, reports, and encouraging debates to keep the experience of trainees alive. In addition, there should be permanently available materials, and expanding data availability on test performance. This will include at least the ten Training Course reports, in the form of a jointly produced outbreak investigation report with all associated photographs and videos in a catalogued form that can be used by MS for training.

The main activities were to organize Real-Time Training Courses in Turkey (Erzurum Training Courses, 9 in total) and Kenya (Nakuru Training Courses, 6 courses by end of September 2011).

### **Specific outputs to date or other indicators that progress is being made**

1. 100 Trainees from 30 MS trained by the end of September 2011. Turkey is not included in the count as the LOA signed with Turkey for the training courses included training of 3 local veterinarians per course.
2. Network of Trainers from MS, who have taught on at least one course.
3. Online training materials, guidelines, resources created (Real-Time Training wikispace and associated multimedia).
4. Network of trainees and trainers, with over 164 members of the Training Wikispace who are kept up to date with Training Progress
5. Requests from MS to place additional trainees at their own cost, recognizing the unique experience gained during the courses.

### **Events that have affected progress**

An issue arose after which the General Directorate of Protection and Control, GDPC Turkey, decided that it was unwilling to offer to host training courses in 2011. This necessitated a move of the location to Kenya, where likelihood of FMD in European breeds is similar or higher than in Turkey, but costs of travel (flights) are higher.

### **Major types of expenditures (e.g. supervisory missions, vaccines supplied...)**

1. Travel costs (flights and accommodation) of trainees and trainers;

2. Payment of field allowances and travel of local staff for FMD case finding in advance of training course;
3. Diagnostic laboratory support to ensure FMD is rapidly typed and NSP tests performed during the timetable of each course.

#### **Reporting in this period**

1. Progress summaries to each EuFMD Executive Committee;
2. Review at the 39<sup>th</sup> General Session of the EuFMD, April 2011, Rome.  
<http://www.fao.org/ag/againfo/commissions/docs/genses39/App23.pdf>
3. Training Course reports placed online after each course on the common, online network training site:  
<https://etcrealtimefmdtraining.wikispaces.com/>

### COUNTRIES:

As per agreement with the Executive and EC, focus is upon countries with close proximity to north-Africa and Middle-east in distance and trading connections, with support provided on a Network basis (Eastern and Western Africa).

**Reporting period : September 2009 to September 2011**

**Lead technical officer (LTO) and other main international experts:** Keith Sumption (LTO). Sabenzia Wekesa (Kenya), Joseph Awuni (Ghana), Abdullah Traore (Mali), Network Coordinators for Eastern and West/Central Africa Networks. Joseph Litamoi and Bouabcar Seck for FAO-EARLN and FAO-Resolab networks linkages, respectively. Kees van Maanen (NL), for technical guidance and leadership of the Eastern African Lab network in 2010-11. Jef Hammond, WRL-Pirbright, for linkages to the OIE/FAO Lab network and to WRL support services.

### Project basis (background)

At the 37<sup>th</sup> General Session a recommendation was made to improve FMD threat detection in Africa following the devastating 2006 incursion of an FMDV African serotype A into Egypt. This led to support actions to increase ample submission to the WRL from African countries through a mix of direct support for sample shipment and small in-country projects to collect and submit samples from priority countries where information on strains circulation was lacking. The 38<sup>th</sup> Session (2009) supported the continuation of this approach, as an important Component of the EuFMD 4 years strategic plan. In July 2010 the Executive Committee<sup>1</sup> decided that the EuFMD actions should focus on improving surveillance through regional laboratory networks and not through in-country projects as before. Since this point, the EuFMD has supported:

- (a) The establishment of the East African FMD Network as subnetwork under the East African Regional Laboratory Network (EARLN);
- (b) The establishment of an FMD network in West Africa as subnetwork of the West African Regional Laboratory Network (RESOLAB).

In addition, sample shipments were supported which addressed gaps in surveillance in African proximity countries.

### Summary of project:

For both Networks, the scope of activities were described in the document submitted to the Executive Committee in July 2010. Yearly plans of action for both networks were developed at annual meetings (Feb 2011 for EARLN-FMD, and annual meeting funded by FAO for RESOLAB).

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<sup>1</sup> *Decision of the Executive Committee on supporting Networks for improved surveillance in the African proximity, : <http://www.fao.org/ag/againfo/commissions/docs/excom80/App18.pdf>*

The subsequent activities were supported either directly from EuFMD (workshops, training, missions) or through contracts to the Regional coordinating Laboratories (West Africa, francophone and Anglophone coordinators), or with elected regional leaders/animators to conduct network activities, coordinate actions and plan meetings. Both sets of network leaders are now in close contact with European RLs (Pirbright, Lindholm, ANSES-France) and have developed research studies on FMD that will provide important regional information.

For both networks, the expected outcomes were to:

- (a) **Provide** information on FMD diagnostic and surveillance results in the network areas to the EuFMD, for public dissemination through the EuFMD reports;
- (b) **Promote** the use of reference laboratory services in their regions, and where needed to for this provide training on FMD typing and technical assistance to member laboratories;
- (c) **Increase** the flow of relevant and informative FMDV samples to the WRL for characterization, sequencing and vaccine matching, to improve the information base on current FMDV circulation in each virus pool/region.

The main activities for the East African FMD Network were notifying the EuFMD of diagnostic results from field samples and serosurveillance programmes; sending samples for characterization to the WRL; providing laboratory and epidemiology training courses; development of a Manual for FMD investigation for Eastern Africa to improve the collection of relevant samples for FMD typing.

For the RESOLAB West African FMD network, the main activities were notifying the EuFMD of diagnostic results; obtaining information on laboratory capacity of the member states; and sending a person from the network to the WRL for the Annual FAO/OIE Lab Network and for training.

The main activities of the two stand-alone projects were:

### **Reporting**

Reporting of network activities is by

1. regular communication from the network animators (schedules defined in their contracts);
2. Annual Meeting reports from the East African network and the Resolab (West/Central Africa FMD subnetwork);
3. The Network Coordinators report into the OIE/FAO Ref Lab Network Annual Report on FMD surveillance, for their respective regions: [http://www.fao.org/ag/againfo/commissions/docs/events/FAO\\_OIE\\_FMD\\_report.pdf](http://www.fao.org/ag/againfo/commissions/docs/events/FAO_OIE_FMD_report.pdf)

**Links to reports:**

1. *West/Central Africa (Resolab FMD subnetwork):* <http://www.fao-ectad-bamako.org/fr/-FMD-Sub-Network->  
[http://www.fao.org/ag/againfo/commissions/docs/Workshop/RESOLAB\\_report\\_2010.pdf](http://www.fao.org/ag/againfo/commissions/docs/Workshop/RESOLAB_report_2010.pdf)
2. *Eastern Africa FMD network:* <https://fmdlaboratorynetwork.wikispaces.com/>  
[http://www.fao.org/ag/againfo/commissions/docs/Workshop/nakuru\\_2010/EA\\_report.pdf](http://www.fao.org/ag/againfo/commissions/docs/Workshop/nakuru_2010/EA_report.pdf)  
[http://www.fao.org/ag/againfo/commissions/docs/Workshop/Workshop\\_Burundi\\_Aug2011/BURUNDI TRAINING\\_REPORT-1.pdf](http://www.fao.org/ag/againfo/commissions/docs/Workshop/Workshop_Burundi_Aug2011/BURUNDI_TRAINING_REPORT-1.pdf)  
[http://www.fao.org/ag/againfo/commissions/docs/Regional FMD meetings/2012/EastAfrica Roadmap Nairobi2012.pdf](http://www.fao.org/ag/againfo/commissions/docs/Regional_FMD_meetings/2012/EastAfrica_Roadmap_Nairobi2012.pdf)  
[http://www.fao.org/ag/againfo/commissions/docs/Workshop/Workshop\\_Ethiopia\\_Feb2011\\_report.pdf](http://www.fao.org/ag/againfo/commissions/docs/Workshop/Workshop_Ethiopia_Feb2011_report.pdf)

### Reporting period : September 2009 to September 2011

**Lead technical officer (LTO) and other main international experts:** Keith Sumption (LTO). Dr Aldo Dekker, (NL), Chairman of the EuFMD Research Group, 2009-11, and Kris de Clercq, Vice-President. David Paton, IAH Pirbright, Chairman of the EuFMD Standing Technical Committee from April 2011. Members of the Research subcommittee of the Executive (Nigel Gibbens, UK, and Alf Füssel, EC). From 4/2011, the **Standing Technical Committee (STC)** took responsibility for review of proposed CN, and comprised Professors Paton (UK) and Willeberg (DK), Drs C Brusckhe (NL) and Matthias Kramer (DE).

### Project basis (background)

This component forms part of the overall four year Strategic Plan of the EuFMD to ensure that technical gaps to implementing FMD control actions by the MS are identified, and where urgently required, are supported through a Research procurement Process.

The EuFMD has a research group of FMD experts /scientists in FMD that meets at least annually. In 2008 it was recognized that activities identified as priorities often had no source of funding other than through the EuFMD, and a procedure for managing research funding was agreed in June 2008 at the Terceira 76<sup>th</sup> Session of the Executive (Azores).

Technical issues are identified at the EuFMD Executive Committee meetings and General Sessions, or by activities of the Secretariat, and the latter is responsible to manage the process with the Chairman and members of the EuFMD Research Group to ensure relevant, high quality proposals (Concept Notes – CN) are developed for low budget (maximum circa 50,000 USD), short technical studies to address technical gaps. These CN are reviewed by a subgroup of the Executive Committee, and if supported, the Secretariat would proceed to fund via Letters of Agreement with the appropriate Institute.

In the reporting period, several research-related projects were funded, covering the areas of:

- Research Co-ordination; supporting the GFRA to produce Annual “State of FMD research “ reviews;
- Application of high-resolution molecular epidemiology of FMD in West Eurasia;
- Development of methods for detection and characterization of FMDV from live animal markets (field studies in Pakistan, Afghanistan and Tajikistan);
- Post-vaccination monitoring (PVM) methods for SAT1 and SAT2, through the Southern African FMD lab network;
- Validation of NSP tests and use of antigenic cartography with comprehensive range of topotypes of SAT2 viruses;
- Validation of methods for identification of persistent infection in domesticated buffalo (*Bubalis bubalis*);

- Role of the European wild boar in FMD epidemiology.

In addition, travel to support attendance at research-related meetings was supported, including training meetings, a meeting on FMD in wild boar, and a meeting on FMD in buffalo.

#### **Summary of projects:**

A project in support of the Global FMD Research Alliance (GFRA) was funded with the expected outcomes of summary reports on global FMD research produced regularly. The first Annual, Global State of FMD research was produced in April 2011.

The project on high-resolution molecular epidemiology was of direct benefit as it generated methods used in the 2011 FMD outbreak in Bulgaria, enabling tracing of links between outbreaks and identification of undetected transmission events that probably involve wildlife. The specific activities were training of a Turkish scientist in IAH Pribright, technology and knowledge transfer to the SAP Institute in Turkey, and sequencing and analysis of viruses. The outputs were regular project reports and presentations at research group meetings, including Vienna Open Session (2010) and 39<sup>th</sup> Session of the Commission (April, 2011), and direct evidence for the EFSA enquiry on Bulgarian outbreaks.

The project on improved methods for detection and characterization of FMDV from live animal markets, and for replacement of live virus transport with RNA transportation, involved Lindholm Laboratory in Denmark, and field work funded by FAO (GTFS) in Pakistan, Afghanistan and Tajikistan.

The new methods appear extremely useful since sampling at markets is easier than finding FMD cases in some situations, and the transport of RNA may potentially replace live virus shipments (and transfection can rescue live virus so that vaccine matching could follow). This is a breakthrough of international value.

The project on developing post-vaccination monitoring in Southern Africa involved a training course, followed by in-country serosurveillance and a proficiency trial. The output was a report on the proficiency trial results presented to the research group. It also generated large quantity of antisera to vaccine viruses that has been delivered to WRL to support their vaccine matching

The project on antigenic cartography and NSP testing for SAT2 viruses involved validation of NSP tests, cross-analysis with antigenic cartography and generation of phenotypic and genotypic data on each virus studied. The outputs were regular reports at research group meetings and scientific seminars.

## Reporting

For each project, reports were generated and sent to the EuFMD; and each project leader required to report to the next Open or Closed Session of the EuFMD research group.

<http://www.fao.org/ag/againfo/commissions/docs/genses39/App32.pdf>

<http://www.fao.org/ag/againfo/commissions/docs/excom80/App20.pdf>

[http://www.fao.org/ag/againfo/commissions/docs/reference\\_documents/journal/2011\\_FMD\\_Asia.pdf](http://www.fao.org/ag/againfo/commissions/docs/reference_documents/journal/2011_FMD_Asia.pdf)

[http://www.fao.org/ag/againfo/commissions/docs/reference\\_documents/journal/2011\\_FMD\\_O.pdf](http://www.fao.org/ag/againfo/commissions/docs/reference_documents/journal/2011_FMD_O.pdf)

[http://www.fao.org/ag/againfo/commissions/docs/reference\\_documents/journal/2011\\_FMD\\_O.pdf](http://www.fao.org/ag/againfo/commissions/docs/reference_documents/journal/2011_FMD_O.pdf)

[http://www.fao.org/ag/againfo/commissions/docs/Workshop/Workshop\\_berlin\\_2011/report.pdf](http://www.fao.org/ag/againfo/commissions/docs/Workshop/Workshop_berlin_2011/report.pdf)

## COMPONENT 6: FMD EMERGENCY RESPONSES

**COUNTRIES:** AS AGREED WITH EC

**Reporting period:** September 2009 to September 2011

**Lead technical officer (LTO) and other main international experts:** Keith Sumption (LTO).

### **Project basis (background)**

In response to situation arising, and to requests either from the Secretary, EuFMD, or from the EC focal point; the scope of each emergency action is agreed with the EC and communicated by letter of EC to the Chairman, EuFMD Executive Committee.

### **Summary of actions funded under the emergency response category:**

1. In response to request from Lebanon, for assistance to type suspect FMD outbreaks:
  - a. Provision of diagnostic kit from IAH Pirbright (*US\$5292*).
2. In response to FMD outbreaks in Bulgaria:
  - a. Supply of 850,000 doses of FMD vaccine from Intervet (*USD \$733,850*), following request from the CVO Turkey in January 2011 for immediate supply of FMD vaccine to achieve re-vaccination of ruminants in Thrace with the earliest timeframe;
  - b. Mission travel to Brussels for SCOFCAH meeting;
  - c. Tripartite Meeting (GRE/BUL/TUR) with FAO-EuFMD/EC/OIE, Plovdiv, March 2011;
  - d. In response to request from the CVO Bulgaria for protective clothing (PPE) and disinfectant (Virkon) for FMD control campaigns in March 2011 (*US\$95,010*).

### **How actions are implemented** (through EuFMD, ECTAD, country offices)

By EuFMD from FAO-HQ.

Vaccine procurement by direct purchase under emergency procedures; delivered to Turkish authorities who were responsible for delivery and the management of the vaccination programme.

### **Outcomes expected and main activities:**

#### Support to Bulgaria and Turkey

Vaccine used in Thrace to re-enforce population immunity against possible entry of infection from wildlife in the Strandzha ecosystem. Vaccine fully utilized in spring 2011 in revaccination programme. No outbreaks of FMD in domestic animals in Thrace in 2011; and sero-monitoring programme in Thrace region undertaken by Turkish authorities in spring and summer 2011 indicated no evidence of virus circulation in 2011 despite evidence for infection in wildlife. This indicates a successful outcome for use of emergency vaccination.

The clothing and disinfectant supplied to BFSA (Bulgaria) was utilized (documented use where and when) in the veterinary surveillance visits in the surveillance zone.

**Specific outputs to date or other indicators that progress is being made**

1. Reports of Turkey and Bulgaria on FMD surveillance and control, to the EuFMD General Session (April 2011) and Executive Committee in October 2011, and December 2011 (Tripartite).

**Events that have affected progress, or changes to programme**

Inputs delivered as per emergency response requests.

**Reporting**

Reports of emergency actions are given in the 6 monthly reports to the Executive Committee.

Emergency responses are closely co-ordinated with EC with usually daily contact until items delivered.

**Reference to reports/appendices online in the Exec or General Session reports**

1. Tripartite Meeting, March 2011  
[http://www.fao.org/ag/againfo/commissions/docs/Regional\\_FMD\\_meetings/2011/Report\\_Tripartite-bulgaria.pdf](http://www.fao.org/ag/againfo/commissions/docs/Regional_FMD_meetings/2011/Report_Tripartite-bulgaria.pdf)
2. Report of Bulgaria, April 2011  
<http://www.fao.org/ag/againfo/commissions/docs/genses39/App03.pdf>
3. Report of Turkey, April 2011  
<http://www.fao.org/ag/againfo/commissions/docs/genses39/App19.pdf>

**TRANS-CAUCASUS PROJECT - PROJECT IMMEDIATE OBJECTIVES, OUTPUTS AND PROJECT DOCUMENT)****West Eurasia Project #2 : Strengthening Foot-and-Mouth Disease surveillance and control in the Trans-Caucasian countries to assist progression on the West Eurasia FMD Progressive Control Pathway****PROJECT IMMEDIATE OBJECTIVES, OUTPUTS AND ACTIVITIES (from the Project Document)****Component 1: Improved FMD monitoring and control to progress on the West Eurasia FMD Roadmap**

**Immediate objective:** TCCs consolidate the PCP stage 2 positions for FMD control and monitoring and progress on the pathway to meet main criteria of stage 3 by 2012.

**Outputs:**

1. Armenia (ARM) and Azerbaijan (AZB) fully meet PCP stage 2 requirements in 2010-11, and Georgia (GEO) Stage 1, in respect of an implemented control strategy based on vaccination that targets the main points for entry and spread of FMDV in each country, with an associated monitoring system, information/reporting system, and progress assessment system that meets the needs of the Stage;
2. ARM and AZB progress to meet main criteria of stage 3 by 2012, and GEO Stage 2, in respect of monitoring system, implemented control policy and establishment of emergency response capacity;
3. TCC participate in West EurAsia PCP activities, actively share information using the regional FMD database and contribute to regional early warning.

**Activities:**

The project provides support for TCC to:

- implement risk based vaccination campaigns (4), with support to assess impact on virus circulation;
- meet the PCP requirements in FMD control and monitoring;
- participate annually in regional roadmap strategy meetings;
- provide all relevant data on animal demographics, vaccination and FMD monitoring and surveillance for entering in the regional FMD database timely and in good quality;
- participate in regional common borders FMD control programs as agreed in the regional roadmap strategy meetings; vaccination and surveillance for these programs will be supported by the project.

### *FMD vaccination*

1.1 NVS to implement twice a year a program of vaccination (with project supplied and national vaccines) in high risk animal populations, in 2010 and 2011. (Decision on 2012 will be made after mid-term review of project in 2011).

1.2 Preceding each campaign, the use of the vaccine and vaccination campaign logistics are agreed following an assessment of the FMD risk situation in each country and a review of the most recent monitoring results, in meetings between NVS and FAO at least 2 months before the planned vaccine delivery date.

### *Reporting*

1.3 Monthly reporting by the NPCs to FAO (EuFMD Secretariat and agreed list, includes database entry);

1.4 Monthly or more frequent entry of data into the FAO/EuFMD project (regional) FMD database on vaccination information, including national and project supplied vaccine use.

### *Monitoring program*

1.5 NVS will conduct three (one per year) national NSP serosurveys with approximately 3000 samples per country to estimate the level of virus circulation in risk populations and on background level, incl. all species of susceptible animals;

1.6 NVS will monitor the efficiency of each campaign (six) including testing a set of sera for SP titres for assessing vaccination coverage, immunity and duration of protection, in areas where vaccination has been carried using project and nationally purchased vaccine.

### *Assess Impact of Control Measures and revise National Strategy*

1.7 Revise national and regional TCC FMD control strategies once per year and adjust FMD vaccination, contingency plans, other control measures and serosurveys according to findings.

### *Performance and capacity for emergency response*

1.8 Carry out two field simulation exercises during the project, one in the first and one in the last year;

1.9 Training to central veterinary staff and project staff in risk assessment and FMD epidemiology; additionally central and district veterinarians will be trained in disease recognition and control.

### *Participation in the West Eurasia Roadmap*

1.9 TCC countries participate in the annual self-evaluation and international PCP progress comparison, and in the Annual progress review Workshop, in order to assess progress along the West EurAsia Roadmap.

### **Component 2: Enhance laboratory capacity to support FMD monitoring /surveillance and control programmes)**

**Immediate objective:** Establish FMD serology for antibodies to structural and non-structural proteins and FMD virus diagnosis at the level of the field and confirmation and sero-typing at the national laboratories.

### **Outputs:**

1. Rapid FMD virus confirmation at field level and FMD virus typing at the level of national laboratories are established and functioning;
2. National reference laboratories operate to a performance level that will enable FMD virus confirmation and

have the capacity to monitor virus circulation (NSP) and the impact of vaccination (SP) programmes upon the virus circulation;

3. NRLs performance in external quality assurance is similar to those of European NRLs, for FMDV detection and for NSP antibody detection.

**Activities:**

*Establishment of capacity for FMD identification/typing from acute cases and recovered animals*

- 2.1.1 Establish antigen detection ELISA and/or PCR (multiplex PCR and real-time PCR) capacity in each NRL; training for two persons per lab will be conducted, at the NRL or an external lab (if required);
- 2.1.2 Training in follow-up sampling and test procedures applicable to NSP positive epidemiological units , with development of a standard procedure for probang, swab sampling of NSP positive animals, and arrangements for sequencing PCR products or positive swabs;
- 2.1.3 Training in rapid field diagnosis and outbreak investigation, in a real-time investigation of an outbreak (location: Turkey or Iran);
- 2.1.4 Sample management procedures, including a decision tree on testing/reporting of results and on shipment procedures to international laboratories will be improved and established as routine procedure in the first project year.

*Serology services and studies on response to vaccination*

2.2.1 Training in methods for SP ELISA for 2 persons per laboratory, by Month 6 of project;

2.2.2 Serology: approximately 4-3000 sera per year NSP antibody and at least 600 for SP titres in NRLs, and sending, a subset of samples to be tested in an international reference lab. The main sero-survey will be carried out in autumn each year.

2.2.3 NRLs will assist the NVS to identify and follow-up spatial clusters of NSP positive test results on an urgent basis, according to the PCP requirements: for PCP stage 2 such clusters are investigated and for stage 3 each positive cluster needs to be followed up and explained (FMDV identification for evidence of incursion).

2.2.4 Each NRL will agree and implement a yearly work program to improve the monitoring of vaccination performance, including:

- **investigation** of the duration of immunity in defined sub-populations;
- **induction** of NSP antibodies of vaccines;
- **reporting** will be to the EuFMD research group as well as National/Regional project meetings.

*Laboratory performance and External quality assurance (EQA)*

2.3.1 National reference laboratories participate at least annually in external quality assurance on virological and serological tests (PCR typing, ag-detection ELISA, NSP and SP), such as organized by FAO with the WRL, Pirbright (proficiency tests).



