EUROPEAN COMMISSION
HEALTH AND CONSUMERS DIRECTORATE-GENERAL

Directorate F - Food and Veterinary Office

Ares(2014)1890266

DG(SANCO) 2014-7089 - MR FINAL

# FINAL REPORT OF AN AUDIT

# CARRIED OUT IN

# SWAZILAND

# FROM 28 JANUARY TO 04 FEBRUARY 2014

# IN ORDER TO EVALUATE THE ANIMAL HEALTH CONTROL SYSTEM IN PLACE, IN PARTICULAR IN RELATION TO CONTROLS ON FOOT-AND-MOUTH DISEASE

***Executive Summary***

*The report describes the outcome of an audit carried out by the Food and Veterinary Office (FVO) in Swaziland from 28 January to 4 February 2014. The objective of the audit was to evaluate the effectiveness of the animal health controls relevant for export of fresh meat from bovine animals to the European Union (EU). The audit was combined with the audit DG(SANCO)/2014-7245 on controls over production of fresh bovine meat destined for export to the EU and certification procedures.*

*Overall, the report concludes that:*

*Despite resource constraints and incomplete monitoring of performance, the implementation of official animal health and movement controls of national cattle, and their documentation, gives the Competent Authority (CA) a good basis for foot-and-mouth (FMD) disease surveillance.*

*The standards for import of animals or products of animal origin, and surveillance in case of increased FMD threat, are inadequate. In particular, the actions taken to avoid or detect the introduction of FMD in 2011, when sub-clinical outbreaks were declared just on the other side of the border of the country, were insufficient. The flaws in the surveillance and controls following increased risks call into question the capacity of the CA to prevent and rapidly detect the introduction of FMD. The threat from the neighbouring countries has significantly decreased since then, but further evidence is required to demonstrate that the FMD status of Swaziland (free without vaccination) has been effectively maintained.*

*The system in place and verifications performed by the CA on the origin of cattle for export of bovine meat to the EU, were insufficient to ensure full compliance with EU requirements such as regionalisation requirements, the exclusion of holdings within 10 km of the 2011 outbreaks for 12 months, or the exclusion for 3 months of animals repatriated from neighbouring countries.*

*Although no immediate animal health risk has been identified, the shortcomings identified should be urgently addressed.*

*Recommendations are made to the Competent Authorities of Swaziland to address the shortcomings described in the report.*

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## Abbreviations and definitions used in this report

| Abbreviation | Explanation |
|---|---|
| CA | Competent authority |
| CCA | Central competent authority |
| CVL | Central veterinary laboratory |
| DG SANCO | Health and consumers Directorage General |
| DVLS | Department of Veterinary and Livestock Services |
| ELISA | Enzyme-linked immunoassay |
| EU | European Union |
| FMD | Foot and mouth disease |
| FVO | Food and Veterinary Office |
| NSP | Non structural proteins |
| OIE | World organisation for animal health |
| PCR | Polymerase chain reaction |
| RCA | Regional competent authority |
| SLITS | Swaziland Livestock Information and Traceability System |
| VA | Veterinary assistant |
| VNT | Virus neutralisation test |

## 1 Introduction

This audit took place in Swaziland from 28 January 2014 to 04 February 2014, as part of the planned audit programme of the Food and Veterinary office (FVO). The audit was combined with audit DG(SANCO)/2014-7245 on the controls over production of fresh bovine meat destined for export to the European Union (EU) and certification procedures. The combined audit team comprised 2 FVO auditors.

The FVO audit team was accompanied by representatives from the Central Competent Authority (CCA) within the scope of this mission: the Department of Veterinary and Livestock Services (DVLS).

The opening meeting was held on 28 January 2014 with the CCA in Mbabane. At this meeting, the audit team confirmed the objectives and itinerary of the audit, and additional information required for the satisfactory completion of the audit was requested.

## 2 Objectives

The objective of the audit was to evaluate the effectiveness of the animal health controls relevant for export of fresh meat from bovine animals to the EU. Particular attention was paid to reviewing the surveillance and control system in place for foot-and-mouth disease (FMD), and the system for the control and recording of animal movements, including those necessary for certification of the animal health requirements of Commission Regulation (EC) No 206/2010.

In pursuit of this objective, the audit itinerary included the following visits:

| | | Nb | Remarks |
|---|---|---|---|
| Competent authorities | Central | 2 | DVLS and National Trust Commission |
| | Regional | 4 | |
| | Local | 2 | |
| Laboratories | | 1 | Central Veterinary Laboratory |
| Border control posts | | 3 | 1 along the border with Mozambique, 2 along the border with South Africa |
| Quarantine stations | | 3 | 2 governmental, 1 private |
| Holdings | | 2 | 1 communal holding, 1 private holding |
| Veterinary pharmacy | | 1 | |

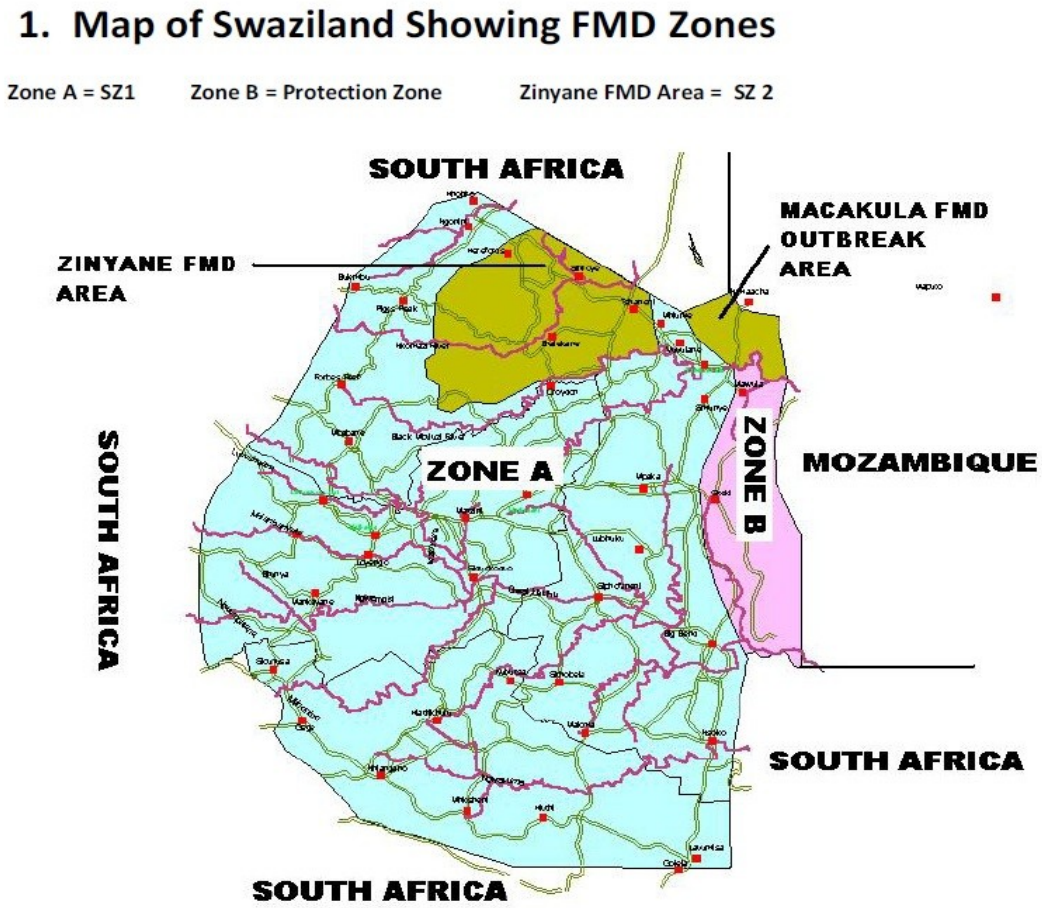
## 3 Legal Basis

The audit was carried out under the general provisions of EU legislation, and in particular Article 46 of Regulation (EC) No 882/2004 of the European Parliament and of the Council on official controls performed to ensure the verification of compliance with feed and food law, animal health and animal welfare rules.

Full legal references are provided in the Annex to this report. Legal acts quoted in this report refer, where applicable, to their last amended version.

## 4 BACKGROUND

Swaziland has been regionalised for the purpose of export to the EU of de-boned and matured meat from bovine as well as farmed and wild non-domestic ruminants. The country only exports bovine meat. The regionalisation described in Regulation (EU) No 206/2010 excludes the eastern region (close to Mozambique): this region is represented on the picture below, by "zone B" and "Macakula FMD outbreak (2001) area". The listed region for the purpose of export of meat are SZ2 (represented on the map below by "Zinyane FMD (2001) area", and SZ1 (Zone A, which also includes SZ2).




*Map 1: Regionalisation of Swaziland (source: CA)*

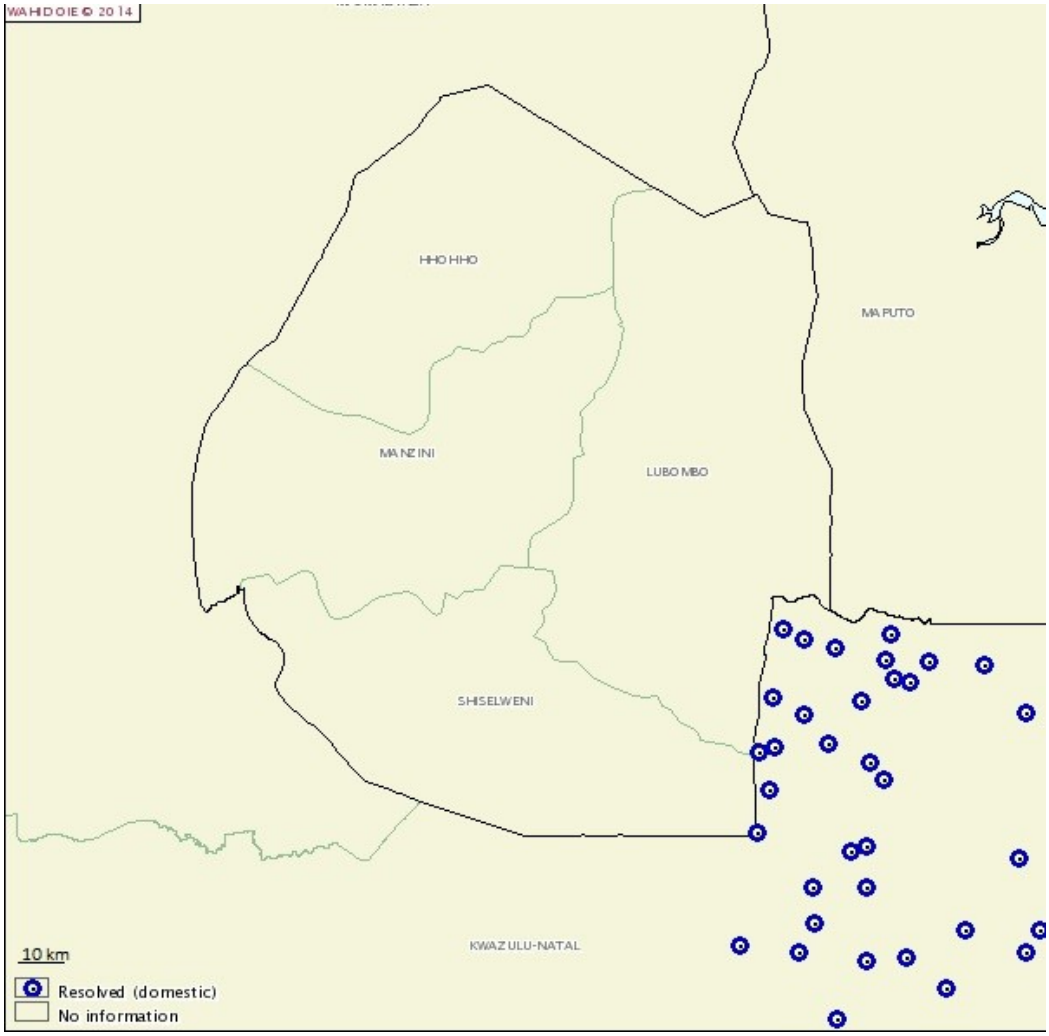
The animal health situation was last described in the FVO audit report DG(SANCO) 2007-7396, prior to the recognition by the OIE (*world organisation for animal health*) of the whole country as having FMD free status (without vaccination). This report is accessible at:

http://ec.europa.eu/food/fvo

Approximately 700 tonnes of bovine meat were exported annually from Swaziland into the European Economic Area in 2012 and 2013 (see report DG(SANCO) 2014-7245 for details).

In February 2011, South Africa declared to the OIE a number of outbreaks in the vicinity of Swaziland (see map 2). Most of the cases reported were aclinical seropositive cases (with liquid-

phase ELISA (enzyme-linked immunosorbent assay); most non-structural protein (NSP) ELISA were negative). SAT1 virus was isolated from cattle and SAT3 virus from buffaloes in the outbreak area. Vaccination was performed, and the event was closed in July 2011.




*Map 2: 2011 FMD outbreaks declared in South Africa (source: OIE)*

## 5 Findings And Conclusions

### 5.1 Competent authorities performance

**Legal requirements:**

Article 46.1 of Regulation (EC) No 882/2004 stipulates that official controls by Commission experts in third countries shall verify compliance or equivalence of third country legislation and systems with EU animal health legislation. These controls shall have particular regard to points (a) to (e) and (g) of the aforementioned article.

Section 3 of the OIE terrestrial animal health code lays down standards for quality of veterinary services.

**Findings:**

*5.1.1 Legislation and enforcement powers*

The principal piece of legislation for control of animal disease is the Animal Disease Act 7/65. It grants power to the Competent Authority (CA) to formulate regulations and to impose measures in order to prevent the introduction or spread of diseases.

*Observations:*

- The Animal Disease Act 7/65 retains the provisions of the Stock Diseases Regulations of 1933. The sanction foreseen for movements without permit or illegal import of animals is a fine of about 4 Euros. In addition, slaughter of illegally imported animals can be ordered. Evidence of payment of such a fine was presented in a case where 48 cattle had been illegally imported from an infected FMD area in 2011. The CA admitted that this level of sanctions was not deterrent.

*5.1.2 Resources and organisation*

The organisation of the CA remains largely as described in previous FVO reports (2007-7396 and 2011-6122). Presence through the territory is ensured by the Veterinary Field Service, with four regional offices which supervise 28 local (sub-regional) offices.

*Observations:*

- Out of 44 posts established for (assistant/) animal health assistants, 24 were staffed, which would not even cover the requirement to have one of them in each of the 28 sub-regions. The CCA indicated that they recently promoted 16 Veterinary Assistants (VA) to these posts.

- Each sub-region is to be equipped with one motorbike, and each region with at least one car. Staff with no access to vehicles are to use other (private or public) means of transport. In one sub-region, staff explained that this limitation in means of transport had negative repercussions on the application of the required frequency of official controls at the holdings (dip-tanks). Some regions had no motorbike. The budget for vehicle charges dropped by about 30% since 2012, to around 450 000 Euros per year for the following 3 budget years.

- The deployment of the Swaziland Livestock Identification and Traceability System (SLITS) has led to the rolling out of information technologies equipment in most sub-regions. Computers and printers were available in the sub-regions visited, but some sub-regions had no connection to the remote server. The budgets for 2013 to 2015 had no provisions for purchase of durable equipment or "capital" projects.

- In some cases, analyses of samples for FMD were either not performed, or deferred due to budgetary constraints (lack of funds, or lengthy procedure for making funds available and unavailability of emergency funds) (see section 5.3.2).

*5.1.3 Coordination and collaboration*

Meetings are organised at least on a monthly basis between the CCA and the RCAs. The DVLS indicated that they were working in collaboration with the police for the control of illegal

movements. The police has a special "stock theft unit" in charge of such investigations. The CCA indicated that they also have collaboration with the authorities in charge of wildlife, the National Trust Commission (responsible for conservation areas) and a delegated body, the Big Game Parks.

Since the FMD outbreaks in South Africa in March 2011, annual meetings have been held between the veterinary services of South Africa and Swaziland, in order to improve collaboration between the two services. In the sub-region, the CA participates in a Committee gathering the directors of animal health of the Southern African Development Community.

*Observations:*

- The DVLS indicated that they received support from the police and Big Game Park (including helicopter search) in order to track buffaloes that had entered the territory.

- DVLS has limited access to activities of the stock theft unit, due to the confidentiality of data dealt with by them. It was not possible to have an account of the controls and results of this unit. As noted in section 5.2.4, the police did not systematically coordinate repatriation of stolen stock collected in neighbouring countries.

- Joint border patrols and controls were organised in 2011, in which the Army also participated. However, no collaboration had been organised with Big Game Park, the authority for surveillance and national movements of wild animals, despite the fact that 2 game reserves were located in the border area. As noted in section 5.3.2, coordination with wildlife authorities is not foreseen in the FMD contingency plan.

- Reports of the annual meetings with the South-African CA were available, showing the wide range of relevant technical issues discussed, and actions planned. However, the first report available dated from July 2011, when the event was closed by the South African CA. The report did not include information on the investigations and development of the 2011 FMD outbreaks at their borders, and DVLS could not present any other information received on the matter.

- The issues related to access to adequate diagnostic facilities in the Southern African Development Community (and the problems encountered by DVLS) had not been discussed at the meetings of the directors of animal health.

#### *5.1.4 Procedures, documentation of controls, supervision*

As noted in previous audits, a large range of procedures and guidelines have been developed, and are updated, by the CA. Monthly reports are still produced by the regions. One audit is performed every year by the CCA to each of the four regions, and the Regional CA (RCA) organises audits to sub-regions. For the latter type of audits, staff from other regions may be asked to join, in order to enhance consistency across regions.

*Observations:*

- Official controls are usually subject to very detailed records, multiple paper registers were available at all places visited where controls were taking place, and many reports of activities were available.

- Whereas the audit team accessed information easily in many places, filing of information was not adequately organised in one sub-region visited. In this region, the register of movements through the border inspection post closest to the location of the 2011 South African FMD outbreaks was not available for that year (the CA stated that there is a requirement to keep administrative records for 5 years).

- Supervisory visits were also recorded in the registers, making it possible to check their frequency. However, the depth of checks of records was questionable, as incorrect or missing information (such as records of import of animals without a health certificate) was not identified during these visits.

- Monthly reports contained data on activities, but limited analysis of the performances reported. No evidence of monitoring of the performance (such as the frequency of visits to the holdings) was available.

- Audits from the central level were documented, and reports contained recommendations. However, no deadline was set for corrective actions, no action plan was required. At 2 regions where this was checked, many recommendations from 2012 were repeated in 2013.

**Conclusions:**

The detailed level of records and documentation of official controls provides a reliable basis for the assessment of activities of the CA in the animal health field. These elements were insufficiently exploited, and the CCA had not fully developed effective monitoring of activities and performance evaluation, which could allow full assessment of the impact of the obvious and serious resources constraints observed.

Collaboration with other authorities at national or international level was in place, but insufficient coordination meant that this cooperation was not fully effective.

The sanctions that the CA has access to in order to enforce animal health protection measures (including when activities exposed the national herd to serious animal health risk) are insufficiently dissuasive.

### 5.2 Holding registration, animal identification, movement controls

**Legal requirements:**

In line with Article 8 of Council Directive 2002/99/EC, particular account should be taken of the rules for the prevention and control of infectious or contagious diseases in force in the third country and their implementation, including rules for imports from other countries.

Part 1 of Annex II to Regulation (EU) No 206/2010 establishes a regionalisation of Swaziland for export of fresh meat from domestic bovine animals, and of certain farmed and wild non-domestic ruminants, which must come from the SZ1 or SZ2 regions.

Part 2 of the same Annex lists the model certificates and specific requirements for each type of meat. For bovine animals, the animal health requirements include that:

- the meat has been obtained from animals that have remained in the same territory since birth or for at least three months before slaughter (unless introduced from another territory

approved by the EU);

- the animals have remained for at least 40 days in holdings before dispatch. Dispatch to the slaughterhouse must be direct, without contact with animals of different health status.

Article 8.5.4 of the OIE Code lay down respectively, principles and guidance with regard to the definition of FMD free zones where vaccination is not practised. Susceptible animals in both types of FMD free zones should be protected from neighbouring infected countries by the application of animal health measures that effectively prevent the entry of the FMD virus, taking into consideration physical or geographical barriers.

### *5.2.1 Holding registration, animal identification*

The holding, as epidemiological unit, is defined in Swaziland as a dip-tank. These may gather a number of herds, kept in kraals. All these are registered by the CA; out of around 750 active dip-tanks, 75% are on communal-type land, and the remaining on private properties. Feed-lots are also managed as dip-tanks or kraals, depending on their size

Cattle are identified by hot branding (national mark on the left shoulder, dip-tank number on the left hind-leg), and an individually numbered double ear-tag. Ear-tagging must be performed before the age of 4 weeks or before first movement out of the dip-tank, whichever comes first. Hot-branding should be performed on all cattle before 6 months or age, but in practice is performed once a year at each dip-tank.

Ear-tagging started two years ago, and a first campaign of tagging, funded by the CA, has been performed, with animals ear-tagged at dipping tanks. Ear-tagging has been compulsory since January 2014. A central database keeps a register of all dip-tanks with geographic coordinates, their kraals, and individually identified animals. Movements can also be recorded in the database.

The CA considers that 85% of national cattle have been officially ear-tagged. The assessment of the animal identification system is included in audit report 2014-7245.

Annual census of other species (including small ruminants and pigs) are performed at each dip-tank. These animals are not individually identified, but small ruminants are checked by a VA at each dip-tank on a monthly basis.

### *5.2.2 Movements within the free zone*

All movements are subject to notification: movements between kraals at the same dip-tank need to be recorded by the VA, and movement between dip-tanks are subject to movement permit (“stock removal permit”). These movement permits are issued in advance by animal health inspectors at the sub-regional offices. They are completed by a VA, at the last dipping session before movement, with a record of the individual identification of the animals to be moved. The permits are then presented at the dipping tank of destination at the next dipping session.

The movement permits can be issued manually or electronically. In the latter case, information is thereafter entered into the SLITS database. In addition to the controls at the cordon gate, the police can perform controls on the roads. A special unit of the police (stock theft unit) deals with illegal movements of cattle.

The assessment of the movement control system, in relation to the guarantees it can provide regarding the 40 day residency in the holding of origin for cattle sent to slaughter with a view to export of meat to the EU, is included in audit report 2014-7245.

### *5.2.3 Regionalisation*

The country is divided by a sanitary cordon fence between the region SZ1 and the "protection zone", to the east of it. Specific movement controls and restrictions between these regions were lifted in October 2010, following the recognition of the whole country by the OIE as free from FMD. Controls of movements of live animals are still performed at cordon gates, during daytime.

The CCA informed the Commission in 2010 about the changes in national regionalisation rules, and asked for a revision of EU Regulation 206/2010. The communication was not pursued by the CCA after a request for clarification from the Commission.

A limited population of around 90 buffaloes in Swaziland are located in a single fenced game reserve, located in SZ1. This population is considered to be FMD-free (see section 5.5.3.). Movements of game animals are authorised by Big Game Parks.

All cattle coming from the authorised regions are declared in the export certificates of bovine meat as coming from SZ1.

*Observations:*

- Despite the absence of national movement restrictions, the CA and the operator of the sole slaughterhouse approved for export to the EU have agreed not to source any cattle from the protection zone, and this could be verified in the well-kept records of the slaughterhouse.

- No measure is in place to verify that animals coming from dip-tanks in the authorised regions to the EU export slaughterhouse, had not been in the protection zone in the previous 90 days.

### *5.2.4 Import controls*

Import rules are defined by the CA,on the basis of import risk assessment, OIE standards and any other relevant animal health information. Imports are regulated through the issuance of import permits and CA decisions. The only regional imports of animals and products from animal origin originate from South Africa; imports of such commodities from Mozambique are prohibited.

Each consignment to be imported needs to have been previously authorised through an import permit issued by the CA (the CCA for import of live cattle and products of animal origin, the RCA for small ruminants and pigs). Import permits and health certificates are checked together with the consignments (brought in sealed vehicles) at authorised border control posts. A derogation is in place for imports of certain products of animal origin for personal consumption from South Africa (below 10 kg), where no certificate is required.

Following the outbreaks at its border in 2011, Swaziland banned all import of cloven hoofed animals and their meat from South Africa. The measures were then relaxed, with a regionalisation

in effect 5 months later (authorisation of imports from areas not under restrictions). The conditions for importation were agreed in collaboration with the South African CA, and include an official pre-export quarantine of 14 days, during which a sampling and testing for FMD of all or a representative sample of animals must be performed. Meat must come from an establishment where animals are subject to favourable ante- and post-mortem inspections. Raw milk and offal were prohibited.

Cattle, small ruminants and live pigs imported are sent to an approved (public or private) quarantine station for an observation period of 30 days. In quarantine, they must be identified within 48 hours with specific distinctive marks of identification (blue ear-tag and specific branding).

The number of live ungulates imported over the last three years is as follows:

| | 2011 | 2012 | 2013 |
|---|---|---|---|
| Cattle (breeding) | 210 | 251 | 586 |
| Cattle (slaughter) | 376 | 35 | 0 |
| Cattle (returned) | 31 | 56 | 86 |
| Small ruminants (breeding) | 63 | 9 | 177 |
| Small ruminants (slaughter) | 1 | 0 | 0 |
| Pigs (breeding | 78 | 799 | 245 |
| Pigs (slaughter) | 195 | 26 | 0 |
| Wild ungulates | 0 | 4 | 0 |

The category of "returned" cattle corresponds to animals from Swaziland found illegally in either of the neighbouring countries, and allowed to enter into Swaziland (around 30 cattle were returned from Mozambique, both in 2012 and 2013). These cattle must be quarantined at a public quarantine station for 21 days but they are not identified nor recorded in SLITS database as imported animals.

*Ad-hoc* import requirements are established for import or transit of wild ungulates. Very few imports of such animals were reported by the CCA over the last few years. An import permit for import of antelopes was established in 2013, and required a certification that FMD has not occurred in the area of origin for the last 6 months, and that they have been clinically examined. The animals are to be transported directly to the place of destination, where they must be inspected by the CA within 48 hours.

The controls required at the border control post include a documentary check (import permit and health certificate), and a check of the integrity of seals.

*Observations*:

- The agreement of import rules with South African CA lacked clarification on a number of issues, such as the definition of areas under restriction or the definition of a representative sample size, or the length of residency in the holding or region of origin. No agreement was established on an import model certificate or the required attachments (such as test results).

- Import permits and health certificates for import of offal and raw milk were issued during the last couple of years, while no official decision overruling the ban on such imports was published.

- The controls at border control posts were recorded in registers. Guidelines for controls were available, but in one inspection post these were not of the latest version.

- In one border control post, some records did not indicate the presence of health certificate for some consignments. The border control posts did not deliver a movement permit, nor did they record their checks on the import permits of the consignments. Quarantine stations were not informed of the entry of the consignments, and no system was in place to control that they had arrived at their destination.

- The responsibility to check the content of the certificates has not been clearly established. A number of certificates presented deviations from the import permit requirements (e.g. pigs certified as coming from "free compartment", an option not included in the import permit, and not authorised by any CA decision). No consignment had been rejected on this basis. The issue of standardisation and alignment of health certificates to the import permits had been identified by the CA, and was under discussion with the South African CA.

- Guidelines and minimum requirements are in place for the approval of private quarantine stations. The private quarantine station visited had been approved. Records of activities and supervision were available, with some inconsistencies between the operator's and supervisor's records.

- Both public quarantine stations visited were not working under all-in/all-out conditions. They contained several paddocks, but no procedure was in place to ensure adequate isolation between groups, and the paddock attribution to each group was not recorded. Records of activities were adequate for cattle, but not for small ruminants. The infrastructure did not allow proper enclosure of small ruminants.

- The procedures foresee that cattle under governmental quarantine are checked twice a day, with a record of the body temperature of each animal. This was followed to some extent at one station, not at the other one. The second station was inadequate for close control of quarantined animals: three animals of a batch could not be released at the end of the quarantine, because the veterinary services could not locate and catch the animals.

- The identification of imported cattle was not done within 48 hours. Records of identified animals were available at the governmental quarantine stations, whereas no record of identification was available at the private quarantine station.

- High mortalities were observed in two quarantine batches (more than 10% over the duration of quarantine). The batches were released at the end of the compulsory quarantine duration, without any testing in one case, and after one composite sample taken in the other case, for which no result was available at the station.

- No place or equipment for cleaning and disinfection of vehicles was available at the quarantine stations.

- DVLS was not necessarily informed of cattle returned from neighbouring countries: in some

cases, the police were driving the animals directly to the quarantine station. No movement permit was issued. Some of these animals had no identification at all (neither ear-tags nor branding), but were still admitted on the basis of the declaration of the claiming owner. The animals did not receive any additional identification mark before being released from quarantine. According to the records, one batch was released after 14 days of quarantine.

- During the 2011 outbreaks in South Africa, at least 15 cattle were returned from the infected area under the same procedure. They were not tested for FMD either.

- As a business decision, none of the imported animals for slaughter was brought to the EU-approved slaughterhouse.

**Conclusions:**

As described here and in report 2014-7245, the system of identification of cattle and the movements rules and controls, and their implementation, bring adequate traceability standard for general animal health purposes. This is completed by the registration of existence of other susceptible species.

Most movement rules giving effect to regionalisation were dropped in 2010, following a validated re-assessment of the risk. However, this assessment has not been endorsed by the European Commission: the rules for export of bovine meat to the EU still restrict the sourcing of cattle to a part of the country. This rule is respected for direct, but not for indirect sourcing. The main shortcoming in relation to this rule is however linked to the absence of traceability of cattle repatriated from neighbouring countries.

Import rules for live animals and product of animal origin were risk-based, but lacked clarity, leaving room for interpretation, and hampering the control of their effective application. They fell short of OIE recommendations of import from FMD infected zones or countries, and did not guarantee that they originated from FMD free zones. The weaker conditions and controls of cattle "repatriated" from neighbouring countries represent a significant risk for the introduction of FMD, risk under-evaluated by the CA.

The post-import quarantine imposed on live animals as an additional mitigation measure brought additional assurance which is limited due to the limited controls (clinical checks, even when the 2011 outbreaks reported from South Africa were mainly a-clinical). The structural and operational standards of quarantine presented significant weaknesses, which could have devastating consequences if infected animals were introduced.

### 5.3 Disease surveillance and control

**Legal requirements:**

In line with Article 8 of Council Directive 2002/99/EC, particular account should be taken of the health status of livestock, other domestic animals and wildlife in the third country, with particular regard to exotic diseases.

Part 2 of Annex II to Regulation (EU) No 206/2010 establishes a regionalisation of Swaziland for export of fresh meat from domestic bovine animals, which must come from the SZ-1 or SZ-2 region. The territory must have been free from FMD without any vaccination for 12 months. The animals must have remained in holdings where no FMD vaccination has been performed, are not

under official restriction, and within a perimeter of 10 km where no case or outbreak of FMD has occurred in the previous 12 months. They must be transported in vehicles cleaned and disinfected before loading, without contact with other animals of different status, to a slaughterhouse around which no FMD case/outbreak was identified during the previous 30 days, and be submitted to ante-mortem inspection, with particular check for FMD signs.

EU standards concerning notification of FMD suspect cases are laid down in Article 3 of Council Directive 2003/85/EC.

Articles 8.5.42 to 8.5.47 of the OIE Code lay down principles and guidance with regard to general conditions and methods for surveillance of FMD.

**Findings:**

*5.3.1 FMD passive surveillance*

One of the main activities of the DVLS is to implement and control the regular presentation of cattle at dipping tanks. Herds must be presented at dipping tanks, at a frequency that varies from once every week (or 2 weeks) in Summer to once every 2 (or 4) weeks in winter, depending on the tick pressure. At these dipping sessions, the number of cattle from each kraal is recorded, and the general health status is assessed by a VA. If an animal is not presented because of a clinical ailment which may suggest FMD, the VA must visit the kraal and examine the animal. Some herds are exempted from presentation at dip-tanks (small dairy herds and small fattening units): these must be visited by the VA after the dipping session. Bigger dairy or fattening herds have their own dip-tanks and are also attended by VAs.

Dead cattle must be declared to the VA, which keeps records and takes samples for surveillance of tick-borne diseases, and invalidates the ear-tag. Small stock must also be presented for clinical check at dip-tanks, at a lower frequency.

Within the "protection zone", the frequency of dipping has been maintained to once a week all year long, in order to ensure a tighter surveillance.

*Ante-* and *post-mortem* inspections are to be performed at all slaughter places, except smaller slaughter slabs. They are performed by VAs in the export slaughterhouse (see section 5.5.2.3. of report 2014-7245), and by staff from the city councils or Ministry of Health in other abattoirs. The new Veterinary Public Health legislation (in force since January 2014) foresees that all abattoirs be under the supervision of the SVLS.

*Observations:*

- Adequate records were kept at holdings visited, allowing monitoring of activities.
- The required frequency of supervised dipping activities was not necessarily respected. An analysis at a dipping tank over 2 years showed that on average, the frequency of dipping was half of the one required: this was explained by resources constraints. Respect of frequency is not monitored by the CA.
- Despite the high level of clinical controls, very few suspect cases are reported from routine controls (2 suspect cases reported over the last three years, from passive routine surveillance).
- The mortality declarations are recorded but statistics are not monitored or subject to

explanations in reports.

- According to data provided by the CA, more than 55% of cattle are slaughtered for home consumption. An additional portion of the remaining ones is slaughtered at butchery slaughter slabs, without veterinary supervision.

### *5.3.2 FMD active surveillance and control*

During the last three years, the CA has reinforced surveillance and control measures on various occasions, following the declaration of outbreaks of FMD in South Africa in 2011 at the south-eastern border with Swaziland (with some outbreaks located at the very border), or following incursions of wild buffaloes from the north (2012 and 2013) or the south (2012). Following these identified threats, the CA increased surveillance measures, including active search for FMD symptoms ("mouthing"), and/or sero-surveillance, and imposed movement restrictions.

In March 2011, following the first declarations of FMD by South Africa, the CCA issued immediately a prohibition order for import of susceptible animals and products of animal origin from that country. Three weeks later, the CCA issued a movement restriction order (except for slaughter) for 7 holdings situated at the border at risk (situated at a distance of up to 5 to 8 km). Following the identification in April 2011 of 48 cattle from the infected FMD area of South Africa which had entered illegally into Swaziland and had contact with local cattle, a strict movement ban was issued for the same holdings, and intensive surveillance, including sero-survey was ordered. The movement ban from the border holdings was lifted in August 2011.

Vaccination against FMD is not prohibited by law. During the last outbreak in Swaziland (in 2001), a modified stamping-out policy was applied, including vaccination of cattle. Vaccinated animals were branded with a specific mark.

In addition to the fences between the protection zone and the rest of the country, (double) game-proof fences are maintained in some international border areas. DVLS keeps teams of cordon guards and cordon inspectors in charge of this maintenance.

*Observations:*

- At a region were the FVO team checked it, detailed maps of the region, including location of dip-tanks, were available. The RCA admitted that these maps were not necessarily updated, and that geo-references of these dip-tanks, included in the movement database, were not necessarily correct. The RCA also admitted that the maps did not define the boundaries of each holding, which triggered in one case a delay in the implementation of surveillance and control measures following the incursion of a buffalo.
- Reports of surveillance activities were available for each episode, with a detailed account of the events, justification for the set of activities, and report on their implementation, including the number of animals presented for inspection compared to the number of animals registered. However, none of the reports included a critical analysis of the actions taken, and in particular the reasons for the delays, partial, or non-implementation of measures initially planned.
- The report on activities performed following the 2011 FMD outbreaks in South Africa, showed that a first sero-survey was performed in border holdings in March 2011. A total of 140 results, all negative, was received from the testing laboratory. The clinical examination and sero-survey ordered in April, following the incursion of 48 cattle from the FMD infected

area, was performed in November 2011. Thirty eight samples were taken from 3 holdings. No official results were available for these samples.

- The movement ban imposed on the border holdings was part of the national strategy; the CA did not check whether it was sufficient to comply with the animal health requirements for export of bovine meat to the EU. Following the lifting of the movement ban from the border holdings in August 2011, no measure was put in place to ensure that no animal coming from these holdings would be sent to slaughter for EU export in a period of 12 months. The audit team identified two occurrences of cattle originating from these border holdings, sent for slaughter for EU export in January 2012.
- Reports on buffalo incursions indicated that these buffaloes were swiftly killed or chased back to the country of origin. In two cases, serum and tissue samples of killed buffaloes were taken and sent to a laboratory; the results were available, except for the serum samples in one case.
- In April and June 2012, following buffalo incursions, surveillance including sero-surveys were initiated. During this survey, one epithelium of a clinically suspect animal was taken, but was lost before arriving at the testing laboratory. 184 serum samples were taken. Of them, 64 samples taken from animals located at the dip-tanks closest to the incursion of buffaloes, were not sent for analysis. The others were sent for analysis in October, and results were received two months later: all except a couple of suspect samples were negative. No follow-up was performed on the suspect results. In 2013, a decision not to perform any sero-survey was taken on the basis that one of the two buffaloes which had entered the country had been shot, and tested negative.
- A contingency plan has been drafted. It does not contain any indication of financial issues, such as the possible access to emergency funds. No chapter deals with the actions to be taken in case of incursion of buffaloes into the national territory. While the plan acknowledges that it is essential to consider wild animals in the eradication and control of FMD, the plan does not include provisions for cooperation with the authorities in charge of wildlife.
- The contingency plan indicated that veterinary officers from the laboratory and epidemiology departments are responsible for taking epithelium and vesicular fluid, in phosphate buffer solution. The laboratory had only a procedure to produce generic transport medium for viral analysis (without antibiotics but with glycerol; the procedure flow did not foresee the check and adjustment of pH). A sample of epithelium of a clinical suspect cow was taken by the emergency team in 2012. The sample was lost in the circuit, and was never sent to a testing laboratory.
- A veterinary pharmacy visited by the audit team indicated that they had no FMD vaccine and that they would only import it with a permit from the CA.
- The audit team asked but did not receive evidence of the FMD-free status of the buffaloes kept in the game reserve in Swaziland.
- No overview was available of the areas where fences for animal health purpose have been erected. The CCA indicated that in some places, natural barriers made such fences unnecessary, but that in some other places, fences would be necessary but were not present or maintained. This topic had been discussed with the South African CA in order to develop collaboration for the maintenance of the fences.
- The cordon guards send monthly reports to the RCA; the reports from the RCA to the CCA do not include a section on the fences. In one region where the FVO audit team checked it, the cordon inspector had complained for 2 years about the lack of equipment for

maintenance of the fences.

**Conclusions:**

The intense routine official presence in the field, aiming at inspecting frequently all cattle, despite obvious resource constraints, compensates for the partial controls performed at slaughter for FMD surveillance. However, the intense surveillance induces very few suspicions reported to official veterinarians for investigations, raising doubts about the efficiency of the clinical checks.

The cordon fence maintained in border areas is an additional tool to prevent introduction of FMD from neighbouring countries. Weaknesses have been identified by the CA, and confirmed by several incursions of (potentially FMD carrier) buffaloes into the country, but no complete overview of its extension and maintenance was available.

Enhanced surveillance measures have been organised following incursions of buffaloes; the measures included testing for FMD when possible, giving a good indication of the level of risk represented by these events. However, the surveillance measures ordered were not always relevant in an epidemiological point of view, and their implementation was partial or delayed and samples were lost, which significantly reduced the value of the surveillance efforts.

The level of preparedness and investigations in case of suspicion of introduction of FMD is insufficient, as proved by the shortcomings in the contingency plan and in the implementation of the various enhanced surveillance campaigns. This would delay the detection of the disease.

The CA imposed a series of measures to control and monitor the risk of introduction of FMD in 2011, when outbreaks were declared at its borders. The surveillance was not adapted to the atypical manifestation of the disease at its border: despite most of outbreaks being reported as being a-clinical, very limited sero-surveillance was performed. No system was organised to comply with the EU requirement of excluding cattle from holdings situated within 10 km of an outbreak having occurred during the 12 previous months.

### 5.4 Laboratories

**Legal requirements:**

Article 46 of Regulation (EC) No 882/2004 provides for the verification of compliance or equivalence of third countries legislation and systems with EU animal health legislation. Particular account should be taken of the diagnostic facilities available to Competent authorities.

Article 12 of Regulation (EC) No 882/2004 lays down the standards for EU laboratories performing analyses of samples taken during official controls: these laboratories must be designated by the competent authorities, and operate and be certified according to ISO/IEC 17025 standard.

Chapter 2.1.5 of the OIE Manual lays down the diagnostic techniques.

**Findings:**

The field service of the DVLS is responsible for the central veterinary laboratory (CVL). The CVL has developed expertise and has been equipped with a view to performing FMD serology, but is not

operational yet, as it has no reagents to perform such tests. It does not perform virological or PCR testing. All samples to be tested for FMD are sent to either of the regional OIE laboratories, in South Africa, or in Botswana.

*Observations*:

- The staff from CVL received training from the Botswana OIE reference laboratory for ELISA testing in 2010, and had been subject to proficiency testing. They did not pass the test. No corrective action has been taken since.
- No contract has been established with either foreign laboratory, which could guarantee access to testing capacities and rapid results. The CVL did not have specific criteria of choice for sending samples to one or the other laboratory. ISO accreditation or quality assurance was not considered as a factor of selection. The vast majority of serological samples were sent to OIE reference laboratory in Botswana.
- The CVL kept written records of arrival of samples. Shipments of the samples to the foreign laboratories could be traced, but no record of such shipments were kept. Some samples taken in the framework of active sero-surveillance were not sent by the CVL for testing. This decision was not documented;
- Samples from buffaloes were transported by courier to South Africa; results were obtained rapidly.
- The official results (one in 2011, one in 2012) sent from the OIE reference laboratory in Botswana were not signed by the laboratory but instead by the Botswana CVO. They did not contain indications of the date of reception of samples, or date of analysis. Contradicting information on the methods used were presented on one result sheet (summary indicating virus neutralisation test (VNT), detailed results indicating liquid phase ELISA). The CVL indicated that they were informed that, although they had requested the samples to be tested for ELISA, the reference laboratory reported results for VNT, as they had run out of stock of reagents for ELISA.
- A delay of 3 months between sampling and shipment of serological samples (serological surveillance following incursion of a buffalo in 2012) to the testing laboratory was explained by the delays incurred by the national procurement procedures, and the demand of the laboratory to be paid in advance. The further delay of one and a half months by the testing laboratory to send the results, could not be explained.
- The CA indicated that they never received official results for many samples taken in the wake of the FMD outbreaks in South Africa in 2011: a spreadsheet table was presented to the audit team as the only results received from the testing laboratory.

**Conclusions:**

The national laboratory is not yet operational and has not developed full competence to perform FMD testing. The absence of agreement with an external laboratory providing such service proved damaging in terms of securing rapid and reliable access to testing capacity.

Whereas samples from suspect buffaloes were swiftly transported and analysed, serious weaknesses were observed in the analysis and reporting of serological tests from the external testing laboratory, indicating management of the laboratory under a very poor quality system, and significantly hampering the value of the sero-surveillance performed.

## 6 Overall Conclusions

Despite resource constraints and incomplete monitoring of performance, the implementation of official animal health and movement controls of national cattle, and their documentation, gives the CA a good basis for foot-and-mouth (FMD) disease surveillance.

The standards for import of animals or products of animal origin, and surveillance in case of increased FMD threat, are inadequate. In particular, the actions taken to avoid or detect the introduction of FMD in 2011, when sub-clinical outbreaks were declared just on the other side of the border of the country, were insufficient. The flaws in the surveillance and controls following increased risks call into question the capacity of the CA to prevent and rapidly detect the introduction of FMD. The threat from the neighbouring countries has significantly decreased since then, but further evidence is required to demonstrate that the FMD status of Swaziland (free without vaccination) has been effectively maintained.

The system in place and verifications performed by the CA on the origin of cattle for export of bovine meat to the EU, were insufficient to ensure full compliance with EU requirements such as regionalisation requirements, the exclusion of holdings within 10 km of the 2011 outbreaks for 12 months, or the exclusion for 3 months of animals repatriated from neighbouring countries.

Although no immediate animal health risk has been identified, the shortcomings identified should be urgently addressed.

## 7 Closing Meeting

A closing meeting was held on 04 February 2014 with the CCA. At this meeting, the FVO audit team presented the findings and preliminary conclusions of the audit.

The representatives of the CCA acknowledged the findings and conclusions, accepting them as being a fair representation of the situation.

## 8 Recommendations

The CA of Swaziland are invited to submit an action plan describing the actions taken or planned in response to the recommendations of the report, and setting out a timetable for their completion,within 25 working days of receipt of the report.

| N°. | Recommendation |
|---|---|
| 1. | To establish mechanisms of coordination and cooperation with other competent authorities which ensure:adequate management of illegal movements of livestock; control of movements and surveillance of wildlife;updated knowledge of the epidemiological situation in neighbouring countries;access to reliable diagnostic facilities in the region. (Article 4(3) and (5) of Regulation No 882/2004, article 3.5.5 of OIE terrestrial code) |
| 2. | To ensure that the verification of the documentation system targets the availability and |

| N°. | Recommendation |
|---|---|
| | quality of records, and to perform effective monitoring (achievement against goals) of performances.(Article 3.1.2. (11) and (12) of the OIE terrestrial code, article 8(3) of Regulation (EC) No 882/2004) |
| 3. | To ensure that health certificates are signed only when officers can ascertain the data, in particular in relation to residency of animals in the territory of origin (point II.2.2. of the certificate) and the distance of holdings from previous FMD outbreaks (point II.2.3.(b) of the certificate).(Article 3(2) of Directive 96/93/EC, article 5.2.3.(5) of the OIE terrestrial code) |
| 4. | To increase sero-surveillance in order to demonstrate that the FMD status of the country has not been affected by the weaknesses in the control system.(Article 8 (1)(d) and (g) of Directive 2002/99/EC, article 8.6.2 (3)(a) and 9.1.3(1)(a) of the OIE terrestrial code)) |
| 5. | To ensure that the animal health import conditions for animals and products of animal origin are clearly and adequately established and consistently verified, in order to protect the FMD status of the country.(Article 8(1)(i) of Directive 2002/99/EC, article 8.6.2 of OIE terrestrial code) |
| 6. | To review and revise the conditions, operations and controls performed during quarantine of imported animals, with particular emphasis on full traceability, adequate isolation and examination of animals, in order to provide effective protection against the introduction of exotic diseases, and in particular FMD. (Article 5.6.2. of OIE terrestrial code) |
| 7. | To ensure rapid access to reliable and adequate diagnostic capacities for FMD.(Article 4(2)(c) of Regulation (EC) No 882/2004, article 3.2.6(3)(b) of OIE terrestrial code) |
| 8. | To ensure adequate design and preparedness for surveillance activities in case of increased threat, and that such surveillance is implemented in a timely and adequate manner. (Article 8(1)(g) of Directive 99/2002/EC, articles 8.6.42. and 8.6.43(2)(b) of the OIE terrestrial code) |

The competent authority's response to the recommendations can be found at:

http://ec.europa.eu/food/fvo/rep_details_en.cfm?rep_inspection_ref=2014-7089

## Annex 1 - Legal References

| Legal Reference | Official Journal | Title |
|---|---|---|
| Reg. 882/2004 | OJ L 165, 30.4.2004, p. 1, Corrected and re-published in OJ L 191, 28.5.2004, p. 1 | Regulation (EC) No 882/2004 of the European Parliament and of the Council of 29 April 2004 on official controls performed to ensure the verification of compliance with feed and food law, animal health and animal welfare rules |
| Reg. 206/2010 | OJ L 73, 20.3.2010, p. 1–121 | Commission Regulation (EU) No 206/2010 of 12 March 2010 laying down lists of third countries, territories or parts thereof authorised for the introduction into the European Union of certain animals and fresh meat and the veterinary certification requirements |
| Dir. 96/93/EC | OJ L 13, 16.1.1997, p. 28-30 | Council Directive 96/93/EC of 17 December 1996 on the certification of animals and animal products |
| Dir. 2002/99/EC | OJ L 18, 23.1.2003, p. 11-20 | Council Directive 2002/99/EC of 16 December 2002 laying down the animal health rules governing the production, processing, distribution and introduction of products of animal origin for human consumption |