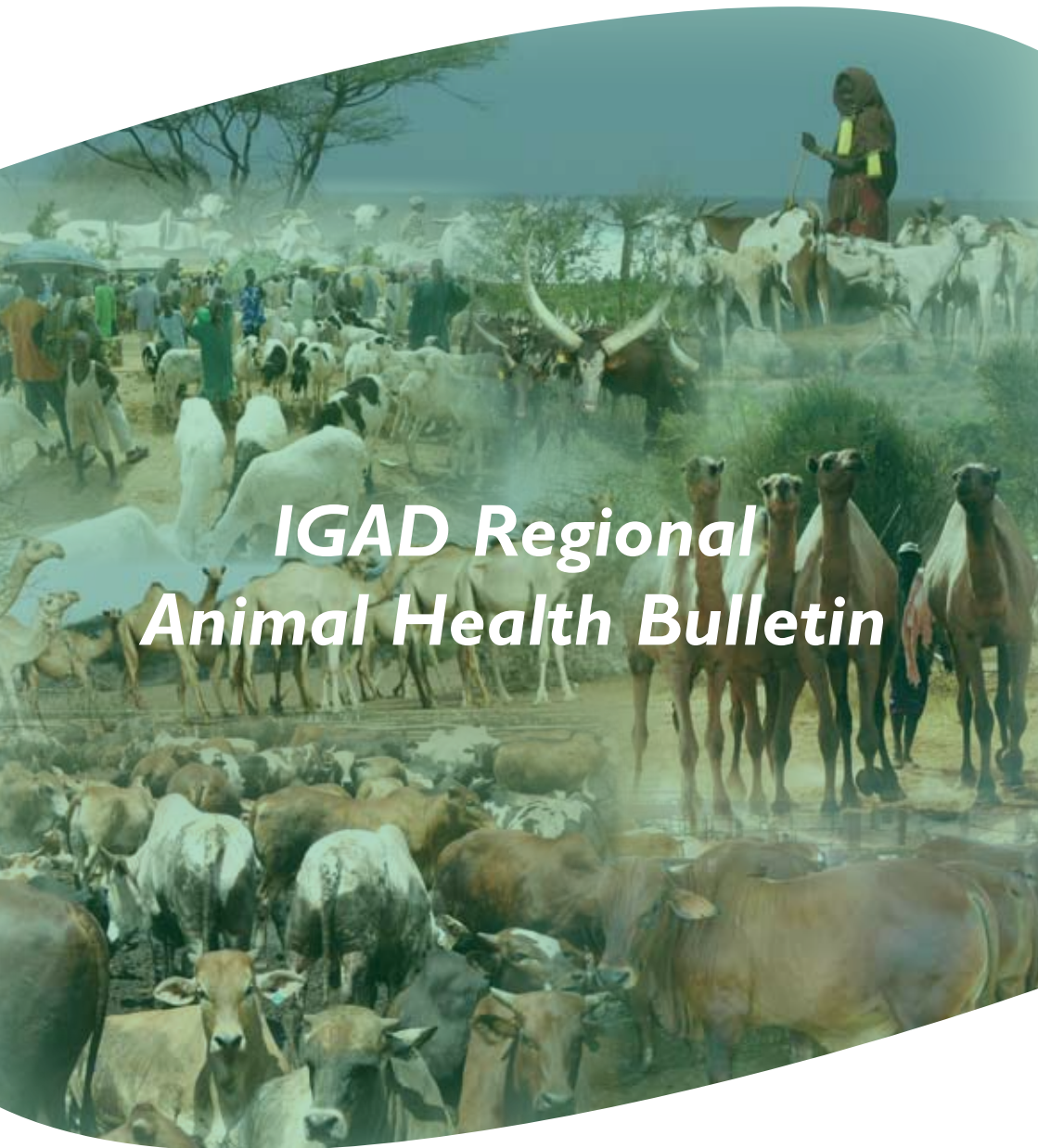




Intergovernmental  
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Development



# IGAD Regional Animal Health Bulletin



AFRICAN UNION  
INTERAFRICAN BUREAU  
FOR ANIMAL RESOURCES



USAID  
FROM THE AMERICAN PEOPLE

THIRD EDITION - JULY 2015



# ***IGAD Regional Animal Health Bulletin***

***Third Edition, July 2015***

An initiative of the Standard Methods and Procedures in Animal Health (SMP-AH) Project, a collaborative project spearheaded by African Union Interafrican Bureau for Animal Resources (AU-IBAR) in partnership with IGAD/IGAD Centre for Pastoral Areas and Livestock Development (ICPALD)

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## ACRONYMS

ARIS	Animal Resources Information System
AU-IBAR	African Union Interafrican Bureau for Animal Resources
CCPP	Contagious Caprine Pleuropneumonia
CBPP	Contagious Bovine Pleuropneumonia
CDC	Center for Disease Control
ECF	East Coast Fever
EPT2	Emerging Pandemic Threats
FAO	Food and Agriculture Organization
FAO-ECTAD	Food and Agriculture Organization-Emergence Center for Transboundary Animal diseases
FMD	Foot and Mouth Disease
GCC	Gulf Countries Cooperation
ICPALD	IGAD Centre for Pastoral Areas and Livestock Development
IGAD	Intergovernmental Authority on Development
ILRI	International Livestock Research Institute
KSA	Kingdom of Saudi Arabia
LSD	Lumpyskin Disease
MERS	Middle East Respiratory Syndrome
MERS COV	Middle East Respiratory Syndrome-Coronavirus
MoU	Memorandum of Understanding
NAHDIC	National Animal Health and Diagnostics Investigation Center
NCD	Newcastle Disease
PCR	Polymerase Chain Reaction
PPR	Peste des Petits Ruminants
RNA	Ribosomal Nucleic Acid
SGP	Sheep and Goat Pox
SMP-AH	Standard Methods and Procedures in Animal Health
SMPs	Standard Methods and Procedures
SOPs	Standard Operating Procedures

TADs	Transboundary Animal Diseases
TCP	Technical Cooperation Project
USAID	United States AID
WHO	World Health Organization

## **PREFACE**

Welcome to the third edition of the IGAD Regional Animal Health Bulletin, a regional bulletin for animal health reports and related issues. This is an initiative of the Standard Methods and Procedures in Animal Health (SMP-AH) Project, a collaborative project spearheaded by African Union Interafrican Bureau for Animal Resources (AU-IBAR) in partnership with IGAD/IGAD Centre for Pastoral Areas and Livestock Development. This edition of the regional bulletin focuses mainly on the disease status in the IGAD region during 2014, reports on emerging diseases such as the Middle East Respiratory Syndrome (MERS), inter-country cross-border meetings, and vaccinations campaigns within cross-border areas in the Greater Horn of Africa and promotion of livestock export trade through livestock quarantines.



## **DISEASE SITUATION IN IGAD COUNTRIES DURING 2014**

*Magona, J.W*

*IGAD Centre for Pastoral Areas and Livestock Development (ICPALD)*

This edition of the regional bulletin focuses mainly on the disease situation in IGAD Member States during 2014 as per reports submitted to the Animal Resources Information Systems (ARIS) between January and December 2014.

In summary, a total of 1640 records involving 29 diseases, were submitted by 7 member States (MS), namely, Djibouti, Eritrea, Ethiopia, Kenya, South Sudan, Sudan and Uganda during 2014. The bulk of the records were submitted by Uganda (12.5%), followed by Kenya (11.4%), South Sudan (11.4%), Sudan (10.2%), Djibouti (6.8%), Eritrea (6.8%) and Ethiopia (6.8%). Unfortunately, no records were submitted from Somalia during the period under review. Major species reported on included Avian, Bovine, Caprine, Ovine, Canine, Donkey, Equine, Porcine and Camelids.

The major challenges regarding submission of disease data were 1) incomplete submission with most countries submitting less 12 reports, and 2) none submission of data as in the case of Somalia. A regional ARIS workshop was held during 2015 with Country Administrators and it was discovered that report submission is severely affected by poor disease reporting in the countries from the grassroot to the national ARIS Office. Thereafter, Disease reporting missions were undertaken to Countries to strengthen disease reporting and subsequently Country submission of reports. It was also suggested that countries submitted reports directly to ICPALD. However, the promise has not been honoured by countries to date.

### **Reporting rate by Countries within the IGAD region**

Seven countries submitted reports during 2014. Djibouti, Eritrea and Ethiopia submitted each 6 reports, while Kenya and South Sudan each submitted 10 reports. Uganda submitted 11 reports and Sudan 9 reports. Unfortunately, Somalia did not submit any reports. Hence 58 reports were received out of the expected total of 96 reports, giving a reporting rate of 60.5% as illustrated in Table I. The disease status within IGAD region is presented while taking into consideration the above-mentioned limitations.

**Table I:** Reporting rate of IGAD Member States during 2014

Countries	Number of reports	Rate (%)
Djibouti	6	50%
Eritrea	6	50%
Ethiopia	6	50%
Kenya	10	83%
Somalia	0	0%
South Sudan	10	83%
Sudan	9	75%
Uganda	11	92%
<b>Total</b>	<b>58</b>	<b>60.5%</b>

### **Disease outbreak situation in the IGAD region during 2014**

Overall, a total of 1067 disease outbreaks were reported, consisting of 231 new and 736 follow-ups among 29 diseases. As summarized in Table 2, diseases with the highest number of outbreaks, included Haemorrhagic Septicaemia (225), Anthrax (206), Blackleg (107), Sheep and Goat pox (107), PPR (65), Lumpyskin Disease (58), Anaplasmosis (35), Rabies (30), CBPP (27) and Theileriosis (26).

Diseases with the widest spread in the region as per the number of countries reporting included, Anthrax and CBPP (6), followed by Blackleg, FMD, Rabies and PPR (5), and then LSD, SGP, Anaplasmosis, CCPP, Theileriosis, Trypanosomosis and NCD (4).

All major transboundary animal diseases (TADs) were reported within the IGAD region apart from Rift Valley fever. Haemorrhagic Septicaemia, Anthrax, Blackleg, and Sheep and Goat Pox had the largest number of outbreaks, while Anthrax, CBPP, Blackleg, FMD, Rabies, PPR, LSD, SGP, Anaplasmosis, CCPP, Theileriosis, Trypanosomosis and NCD had the widest spread, having been reported in the highest number of countries in the IGAD region. Rabies and Anthrax were the major zoonoses reported in terms of number of outbreaks and spread. This implies that regional disease control programs within IGAD region including Tanzania should focus more on diseases such as Haemorrhagic Septicaemia, Anthrax, Blackleg, Sheep and Goat Pox, CBPP, FMD, Rabies, PPR, LSD, SGP, Anaplasmosis, CCPP, Theileriosis, Trypanosomosis and NCD. The reports suggested that there might be inadequate control measures or complete lack of control programs for diseases with the highest number of outbreaks. Conducting of a detailed risk analysis is recommended for such diseases in order to ascertain factors maintaining their spread in affected countries.

### ***Losses by species during 2014***

In terms of losses, a total of 12,402 animals died, while 844 were slaughtered and 208 destroyed as a control measure against disease outbreaks (see Table 3). Therefore the total number of animals lost during 2014 from IGAD region was 13,454. Salmonellosis (100%), Botulism (83%), Babesiosis (73%), Infectious Laryngo Tracheitis (60%), Rabies (48%), Heartwater (43%), Anthrax (42%), Newcastle Disease (42%) and Streptotricose (41%) had high case fatality rates. The highest losses were registered among Avian species (6612) followed by Bovine (2606), then Ovine (1789) and caprine (1404). This suggests that more efforts should be directed towards controlling poultry diseases (Salmonellosis, Infectious Laryngo Tracheitis and New Castle Disease), followed by cattle diseases (Botulism, Babesiosis and Streptotricose), then Small ruminant diseases (Heartwater) and Rabies, a zoonotic disease.

**Table 2:** Disease outbreak situation in IGAD region during 2014

Disease	Countries	Outbreaks	Susceptible	Cases	Death	Morbidity	Mortality	Fatality rate
Actinomycosis	1	1	3137	11	2	0.4%	0.1%	18%
African Horse sickness	1	17	69	69	16	100%	23%	23%
African swine fever	1	6	28843	7990	173	28%	1%	2%
Anaplasmosis	4	35	19798	642	57	3.2%	0.3%	8.9%
Anthrax	6	206	15264	1163	483	8%	3%	42%
Babesiosis	3	19	22083	5107	3713	23%	17%	73%
Blackleg	5	107	23688	1071	189	5%	1%	18%
Botulism	1	7	9618	931	771	10%	8%	83%
Brucellosis	3	17	5081	110	0	2%	0%	0%
Contagious bovine pleuro-pneumonia	6	27	46007	390	104	1%	0%	27%
Contagious caprine pleuro-pneumonia	4	19	29439	1125	271	4%	1%	24%
Equine Herpes virus	1	3	60	60	22	100%	37%	37%
Foot and mouth disease	5	18	13593	1386	8	10%	0.1%	0.6%
Fowl pox	1	2	5600	60	5	1%	0.1%	8.3%
Goat Pox	1	2	246	50	12	20%	5%	24%

Disease	Countries	Outbreaks	Susceptible	Cases	Death	Morbidity	Mortality	Fatality rate
Haemorrhagic Septicaemia	2	225	6636	2097	447	32%	7%	21%
Heartwater	2	3	3574	28	12	1%	0%	43%
Infectious Laryngo Tracheitis	1	1	4000	500	300	13%	8%	60%
Lumpy skin disease	4	58	14605	1645	285	11%	2%	17%
Malignant Catarrhal fever	1	3	40	40	16	100%	40%	40%
Newcastle disease	4	39	54013	3768	1574	7%	3%	42%
Peste des Petits ruminants	5	65	129586	2590	687	2%	1%	27%
Rabies	5	30	23339	238	117	1%	1%	49%
Salmonellosis	1	1	227	1	1	0.4%	0.4%	100%
Sheep Pox	1	9	24957	316	31	1%	0%	10%
Sheep pox and goat pox	4	107	13009	2224	347	17%	3%	16%
Streptotricose	1	1	17	17	7	100%	41%	41%
Theileriosis	4	26	32832	666	174	2%	1%	26%
Trypanosomosis	4	13	22632	293	57	1%	0%	19%
	82	1067	551993	34588	9881	20.8%	6.9%	31.0%

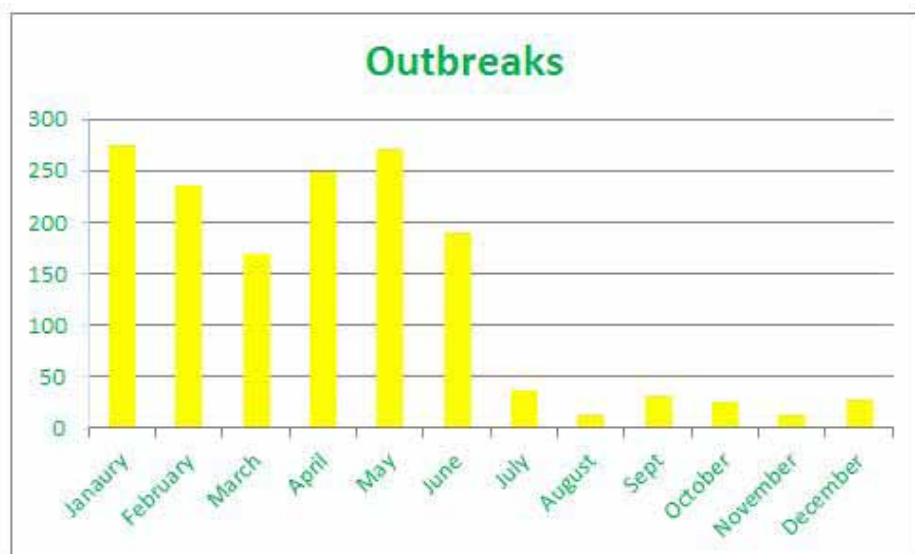
**Table 3:** Losses by species during 2014

Species	Deaths	Slaughtered	Destroyed	Total Losses
Avian	5704	708	200	6612
Camelidae	37	0	3	40
Bovine	2543	61	2	2606
Canine	130	0	1	131
Donkey	1	0	1	2
Caprine	1378	25	1	1404
Equine	182	0	0	182
Porcine	39	0	0	39
Ovine	1742	47	0	1789
Caprine & Ovine	646	3	0	649
<b>Total</b>	<b>12402</b>	<b>844</b>	<b>208</b>	<b>13454</b>

### ***Distribution according to months during 2014***

The monthly trend in total outbreaks IGAD region is elaborated in Figure 1. The outbreaks started with a peak (approx. 270) in January and decline to about 160 in March 2014 and rose again up to 270 in May. Thereafter dropped in June and July and fluctuated below 50 per month from July to December 2014. This suggests that occurrence of disease outbreaks in the region exhibits seasonality. Disease control programs should therefore target seasons with the highest occurrence of outbreaks, especially between January to June.

Monthly distribution of animal losses reported in IGAD region during 2014 is illustrated in Figure 2. The trend started with about 1000 animals lost in January gradually increased to 2,000 by March and peaked in April (about 6,000). Then declined to 1,000 in May and slightly rose to 1,500 in June. From July to December animals lost remained far below 1,000 per month.

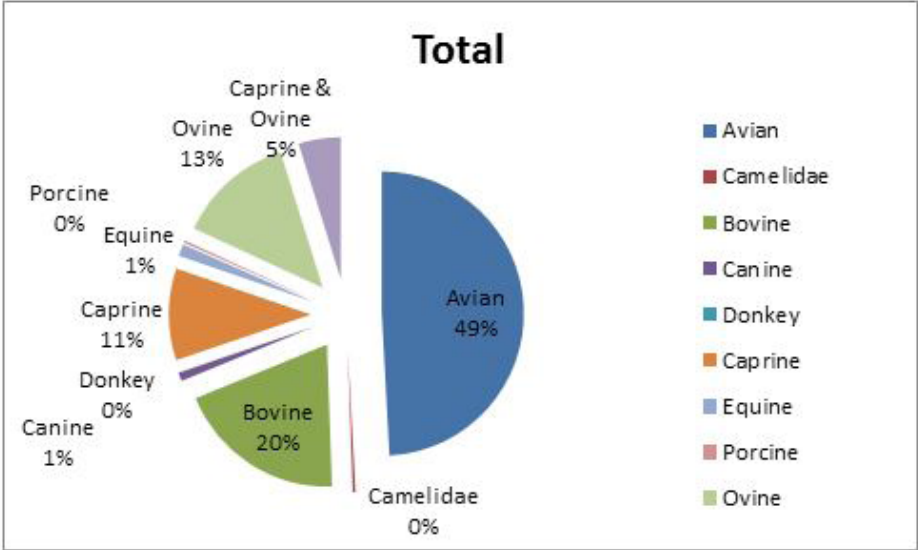


**Figure 1:** Monthly distribution of disease outbreaks in IGAD region during 2014



**Figure 2:** Monthly distribution of total animal losses in IGAD region during 2014

The percentage outbreaks distributed by species in IGAD region during 2014 is showed in Figure 3. The highest number of outbreaks was reported among avian, followed by bovine, ovine, caprine, canine, equine and last but not least Porcine and Camelidae.



**Figure 3:** Percentage of outbreaks distributed by species in IGAD region during 2014



## **MIDDLE EAST RESPIRATORY SYNDROME (MERS): AN EMERGING ZONOSIS IMPORTANT FOR A CAMEL EXPORTING REGION SUCH AS IGAD**

*Joseph Magona and Ameha Sebsibe*

*IGAD Centre for Pastoral Areas and Livestock Development (ICPALD)*

### **Introduction**

Middle East respiratory syndrome (MERS) is a viral respiratory illness caused by a coronavirus called MERSCoV. Middle East Respiratory Syndrome coronavirus or EMC/2012, is a novel positive-sense, single-stranded RNA virus of the genus Beta coronavirus.

### **Disease Occurrence and Epidemiology**

Regarding disease occurrence, MERS was first reported in Saudi Arabia in June 2012 in humans. Since then, it has been reported in other countries in the Middle East, Africa, Europe, Asia and the USA. According to WHO, there have been 1,368 laboratory-confirmed cases of infection with MERS CoV including 487 related deaths worldwide. The majority of cases have been reported in the Kingdom of Saudi Arabia (KSA) but cases have also been reported in the United Arab Emirates, Qatar, Jordan, Oman, Kuwait, Yemen, Lebanon and Iran. Imported cases have also been reported by several countries including France, Germany, Italy, Tunisia, the United Kingdom, Greece, the Philippines, Malaysia, Egypt, the United States of America, and the Netherlands. Human MERS As of 25th September 2015: 1,583 confirmed human cases of MERS have been reported with 566 deaths, giving mortality rate of 36%. The reported case fatality rate of MERS is about 40%.

The epidemiology of the disease is yet to be well known. However, in a study conducted in Egypt, nasal swabs taken from 110 camels tested positive for MERS-CoV RNA. The camels were shipped from Ethiopia

and Sudan. Furthermore, a survey on camels in the Kingdom of Saudi Arabia revealed that MERS-CoV has been circulating since at least 1992. Samples from camels taken in 2003 in the UAE had antibodies against MERS-CoV.

### ***Mode of Transmission, Symptoms and Prevention***

Regarding its transmission, MERS is believed to spread from an infected person's respiratory secretion such as through coughing. However, there is no evidence of transmission from asymptomatic cases. Transmission risk factors also include exposure to camel and camel products.

Regarding its symptoms in humans, they range from asymptomatic disease to severe pneumonia. Common symptoms include fever, cough and shortness of breath. Diarrhoea, nausea, and vomiting have been reported as well. No specific treatment is currently available for MERS but it is only supportive based on the patient's clinical condition. In addition, currently, there is no vaccine available to protect against MERS and the WHO does not recommend any travel or trade restrictions at this point.

### ***Update on Mers in Mena Region***

KSA has undertaken the following studies:

- Prevalence study on MERS CoV in 5,720 farm animals (camel, cattle, goat and sheep). Findings revealed that only camels were sero-positive, ranging from 73% to 89% in camels in different regions.
- Prevalence study on MERS CoV in 10% of camels imported into Saudi Arabia (n=253) from Somalia, Sudan and Djibouti showed that 77% to 92% of camels were sero-positive. However, testing by PCR no camels were detected with MERS CoV RNA. This suggested that the camels though sero-positive were not carrying MERS corona virus;
- Study on risk factors which expose camels to MERS infection;
- Study to determine the degree of similarity between the virus strains in different camel populations and with that detected in man.

- Two longitudinal MERS transmission studies are underway

Likewise, in UAE all imported camels are tested by PCR. This has been going on since May 2014. According to a recent publication 7,803 nasal swabs from camels in Abu Dhabi were tested in an epidemiological survey and MERS-CoV RNA was detected by PCR in a total of 126 (1.6 %) camels. These positive camels had been sampled at the borders with Saudi Arabia, with Oman and at Abu Dhabi slaughter houses.

### ***Plans for the IGAD Region and Horn of Africa in General***



*Camel export feedlots at Adama, Ethiopia*

IGAD/ICPALD in collaboration with AU-IBAR with financial support from USAID organized a regional consultative meeting on Middle East Respiratory Syndrome (MERS) to update relevant information on risks posed by the Middle East Respiratory Syndrome Corona Virus (MERS CoV) to public health and to livestock trade of IGAD member states. The meeting attracted veterinary and public health professionals from Djibouti, Ethiopia, Kenya, Tanzania, Uganda, South Sudan and Sudan, including the Directors of Veterinary Services, the Heads of Veterinary Epidemiology

Units, Public Health representatives, the Regional Support Laboratory for Eastern Africa (NAHDIC), Managers of quarantine stations, camel traders and one public health representative from Somaliland. Also in attendance were representatives from AU-IBAR, FAO-ECTAD Eastern Africa, ILRI, the IGAD Centre for Pastoral Areas & Livestock Development, IGAD Economic Cooperation and Social Development and the OIE.

The camel population in the Greater Horn of Africa is kept by pastoralists and agro-pastoralists in Arid and Semi-Arid lands. Annually, IGAD countries export up to 304,681 camels to Middle East and North African Countries, fetching approximately USD 365,000,000.

### **Current MERS Research at ILRI**

ILRI publications on MERS so far:

- Corman VM, **Jores J**, Meyer B, Younan M, Liljander A, et al. (2014) Antibodies against MERS coronavirus in dromedary camels, **Kenya, 1992–2013**. Emerg Infect Dis 20: 1319–1322 doi:10.3201/eid2008.140596 ← **774 camel sera tested**
- Müller MA, Corman VM, **Jores J**, Meyer B, Younan M, Liljander A, Bosch BJ, Lattwein E, Hilali M, Musa BE, Bornstein S, Drosten C. (2014). MERS coronavirus neutralizing antibodies in camels, **Eastern Africa, 1983–1997**. Emerg Infect Dis. 20(12):2093-5
- Deem, S.L., **Fèvre, E.M.**, Kinnaird, M., Springer Browne, A., Muloi, D., Godeke, G-J., Koopmans, M., Reusken, C.B. (2015). Serological evidence of MERS-CoV antibodies in dromedary camels (*Camelus dromedarius*) in **Laikipia**, County, Kenya. PLoS ONE. ← **335 camel sera tested**

To date all African camel populations tested have antibodies that cross-react strongly with MERS-CoV spike proteins. However, there are no known human MERS cases in Kenya and in Eastern Africa. This raises so many questions: Is it the same virus? Or is this due to lack of reporting?

To understand the zoonotic implications we need to understand how the MERS virus in Kenya compares to others by:

- Placing virus diversity in a regional context is vital
- Isolating virus and undertaking molecular epidemiological analysis

While no human cases have been established in IGAD region and the Horn of Africa generally, a trade ban on camel export could have significant economic consequences. In the interim, the following measures are underway:

- With the support of USAID, FAO is planning to implement projects to create a better understanding:
  - » What animals serve as hosts for MERS-CoV and other closely-related Corona viruses
  - » In what geographic locations are these viruses present in animal populations
  - » Are all camels at high-risk for infection with MERS-CoV or only some sub-populations associated with specific practices
  - » Dynamics associated with transmission, maintenance, and elimination of the virus in animal populations.
- Conduct risk assessment on MERS-CoV occurrence in dromedary camels and other animal populations
- Develop and implement risk-based longitudinal surveillance plans for MERS-CoV in target countries
- Support laboratory diagnostic capacity for virological surveillance and genetic characterization of circulating MERS-CoV viruses
- Facilitate national and regional stakeholder discussions on MERS-CoV/meetings on risk assessment and epidemiological findings.
- Map dromedary camel production systems, husbandry and marketing practices and trade dynamics in the Horn of Africa
- Conduct national and cross-border dromedary camel value chain studies and identify critical risk points

- Conduct joint risk assessment at the human/livestock/wildlife interface and risk modelling in target zones
- Conduct joint studies with CDC and the national OH platforms in target countries to better understand cross infection risks between camels and humans
- Initiate collaboration with relevant research institutions and universities to lay the ground for controlled experimental infections to characterise the mechanisms of MERS-CoV infection in animals,

### **Ongoing Initiatives**

- **MUSCAT DECLARATION:** A regional technical consultation meeting took place in Muscat, Oman from 20 to 21 May 2015 between FAO, its global partners and regional stakeholders.
- **DOHA DECLARATION:** a regional Meeting on MERS CoV and One Health was held in Doha, Qatar from 27 to 29 April 2015.

### **Doha Declaration**

- *Surveillance*
  - » Need for establishment of targeted laboratory- based surveillance in camels based on risk of exposure
  - » Gulf Cooperation Countries (GCC) need to agree on a common MERS CoV surveillance system of testing of imported camels into the region
  - » For farm surveillance within countries, if an animal is PCR positive, regardless of its epidemiologic link to human cases, there is need for immediate notification followed by tracking forward (or backward) and testing and isolation
  - » Appropriate protective measures must be used
  - » In case of a positive human case, the Public Health Authorities need to inform Veterinary authorities accordingly.
  - » Public health authorities need to carry out joint investigations with veterinary authorities.

- *Research*
  - » More longitudinal investigations should be undertaken in naturally-infected camels in different production systems
  - » Joint research on risk factors for transmissions of MERS CoV between camels, from camels to humans and from human to camels
  - » Continue characterisation of the identified viruses including genome sequencing
  - » Validate diagnostic tests assays that are both sensitive and specific
  - » Characterisation and mapping of camels production system and value chain analysis

- *Food safety & Environment*

Implement studies to assess:

- Persistence and inactivation of MERS CoV in the environment
- Infectivity of the milk, meat and hides of infected animals
- Transmissibility of the MERS CoV to human by consumption of camel products
- Traditional practices for the production, processing and consumption of camel products
- Risk communication
- Inter-sectoral collaboration
- Regional Coordination
- FAO is collaborating with EPT 2 partners in particular PREDICT 2 and IGAD, ILRI and other partners to better understand the situation regarding MERS CoV
- Through a TCP, FAO is supporting studies in Kenya to establish risk and prevalence of MERS-CoV in camels and the socio-economic impact of the disease, among others.
- A survey will be conducted at the Mavoko slaughter house in Athi River, targeting camels from North-East and East Kenya.

*WHO statement on the 10th meeting of the IHR Emergency Committee regarding MERS, 3 Sept 2015*

- Moreover, the current outbreak is occurring close to the start of the Hajj and many pilgrims will return to countries with weak surveillance and health systems.
- The recent outbreak in the Republic of Korea demonstrated that when the MERS virus appears in a new setting, there is great potential for widespread transmission and severe disruption to the health system and to society.
- The Committee further noted that its advice has not been completely followed.
- Asymptomatic cases that have tested positive for the virus are not always being reported as required.
- Timely sharing of detailed information of public health importance, including from research studies conducted in the affected countries, and virological surveillance, remains limited and has fallen short of expectations.
- Inadequate progress has been made regarding understanding how the virus is transmitted from animals to people, and between people, in a variety of settings.
- The Committee was disappointed at the lack of information from the animal sector.



## RECENT CROSS-BORDER INITIATIVES IN THE IGAD REGION

*Joseph Magona and Ameha Sebsibe*

*IGAD Centre for Pastoral Areas and Livestock Development (ICPALD)*



*Participants at the bilateral cross-border meeting between Kenya and Ethiopia held at Nanyuki from 18th to 21st May 2015*

### **Introduction**

The Standard Methods and Procedures in Animal Health (SMP-AH) project recently organized a couple of bilateral cross-border meetings aimed at strengthening cooperation and collaboration between several countries within the IGAD region. The bilateral cross-border meetings also served as avenues for implementation of action plans developed during key regional cross-border meeting held at Mwanza, Gulu and Dire Dawa in 2014. The activities were mainly in the areas of active disease surveillance, exchange of animal health information, vaccination campaigns on key Transboundary Animal Diseases (TADs) in cross-border areas and development and signing of Memoranda of Understanding (MoU) for key bilateral borders within the region. Of major interest is (1) the bilateral cross-border meeting held at Nanyuki by Kenya and Ethiopia and (2) the bilateral cross-border meeting held at Moroto by Uganda and Kenya with South Sudan brought on-board.

## **Kenya and Ethiopia Cross-border Meeting**

Kenya and Ethiopia held a cross-border meeting at Nanyuki from 16th to 18th May 2015. The two countries exchanged information relating to occurrence of transboundary animal diseases, ongoing vaccination campaigns and animal health human resource distribution in cross-border areas along the Kenya-Ethiopia Border.

The conventional structure of an MoU was adopted outlining the various articles and the key content. The meeting agreed on the following areas of collaboration:

- Control of trans-boundary animal diseases (TADs) through surveillance, vaccination, reporting, information sharing, livestock movement control, awareness creation for communities
- Mapping of stock routes and natural resources (water and pasture), including control of invasive weeds
- Enforcement of regulations on veterinary drug use
- Facilitation of livestock trade through quality control and certification
- Access to Livestock related infrastructure including Diagnostic Laboratories, Cold Chain, and Holding Grounds (Quarantines).
- Joint promotion of Livestock Identification and Traceability
- Cross-border networking among communities
- Joint capacity building of stakeholders

Regarding the scope of cooperation, Members identified areas of Counties of Mandera, Wajir, Marsabit and Turkana in the Republic of Kenya and the identified areas of Somali, Oromia and Southern Nations, Nationalities and Peoples' Regional States of the Federal Democratic Republic of Ethiopia for implementing Animal Health and Sanitary measures.

The Cross-border Task Force for the Kenya-Ethiopia Border was defined as a Technical committee that would advance issues and complete developing the MoU. It was composed of a Multidisciplinary Technical

Team of Officers from each of the Countries, comprising up to 10 from both countries. Members of the Multidisciplinary Technical Team were to be selected by the Steering Committee.

The Terms of Reference developed for the Cross-border Task Force included the following:

- The team would be responsible for drawing up the MOU implementation framework and Strategic action plans
- The team would develop cross-border workplans
- The team would supervise implementation of activities in cross-border areas cascading their work from County or Regional State level to the lowest administrative areas
- The team would undertake the Technical Advisory role to the Steering Committee
- The team would submit progressive reports to Steering Committee
- The team would follow-up and monitor implementation of cross-border activities
- The team would supervise implementation frontline teams
- The team would coordinate and harmonize of implementation of cross-border activities
- The team would undertake resource mobilization
- The team would plan for sharing learning and exchange visits

Ultimately the MoU was drafted, edited and submitted to Ministries in the respective Governments.

### ***Kenya and Uganda Cross-border Meeting with South Sudan***

Uganda, Kenya and South Sudan organized a cross-border meeting in partnership with IGAD, AU-IBAR and FAO at Moroto, Uganda from 16th to 18th June 2015. The main aim of the meeting was to enhance the cross-border collaboration and coordination of animal health programs among the three countries.



*Cross-border meeting for Uganda, Kenya and South Sudan in the Karamoja Cluster, held at Moroto, Uganda from 16th to 18th June 2015*

The cross border animal health initiative in the Karamoja Cluster was intended to encompass and synchronize animal health legislation and policy enforcement interventions. The main objectives of the Cross Border Animal Health Coordination Program were (1) to establish and operationalize the institutional and legislative environment to enable improved cross border animal health services, (2) to strengthen cross border animal disease surveillance, early warning, preparedness and response, (3) to enhance cross border evidence-based decision making through research, and (4) to improve animal health knowledge attitudes and practices among the cross border population and stakeholders in the participating countries.

Areas of collaboration, challenges and opportunities on cross border joint activities on animal health certification for animal crossing border

were discussed. Joint vaccination in coordinated manner for diseases like FMD, PPR was intended to be less costly. Collaboration among the two countries would be strengthened. Grazing of animals in either side, diseases surveillance on special TADs, and sharing of animal health information would be enhanced. As well, periodic formal or informal meetings among the veterinary authorities in the borders towns would enhance collaboration.



*Participants at the cross-border meeting held at Moroto, Uganda from 16th to 18th June 2015*

The meeting adopted the idea to include South Sudan as a new member in the cross border animal health collaboration. South Sudan shares a common border with Uganda and Kenya and with which it trades, especially in livestock and livestock products. It was further recommended that South Sudan maps out the operational area/zone for the MoU to allow for updating and review of the MoU before the initial agreement is circulated to South Sudan (Eastern & central Equatorial regions), Kenya (Turkana and Pokot counties) and Uganda districts in Karamoja for review.

The meeting recommended the focus on the cross-border interventions to invest more on hardware rather than software. It was also recommended that other projects within the cross-border working area complement but not duplicate the cross border initiatives in order to foster collaboration and partnerships.

The meeting jointly agreed that for Cattle: FMD, CBPP, LSD, for Sheep & Goats: sheep and goat pox, PPR, CCPP and for Poultry: NCD were the priority diseases to be addressed. It was recommended that the issue of ECF to be addressed through extension agents within County and Local Governments.

Ultimately, the MoU document was to be revised to include South Sudan and circulated among members

## **VACCINATION CAMPAIGNS IN CROSS-BORDER AREAS IN KAJIADO AND NAROK COUNTIES, KENYA**

*Harry Oyas*

*SMPAH Focal Person for Kenya*

*State Department of Livestock, Kenya*

### **Introduction**

Following a cross-border harmonization meeting for Kenya, Tanzania and Uganda held at Mwanza in Tanzania from 25th -27th August 2014, officials Narok, Kajiado and Migori counties of Kenya together with their counterparts from the cross border region of Ngorongoro district and Mara region in Tanzania held a series of meetings and developed joint work plans, mainly targeting regular cross-border meetings, disease surveillance, cross-border disease control, community awareness, and implementation of livestock identification and traceability systems as priority activities. Joint meetings revealed that the region experiences droughts triggering livestock movement across the border leading to disease outbreaks. Common among which are outbreaks of sheep and goats pox, CCPP and enterotoxaemia in sheep and goats and Foot and Mouth disease and CBPP in cattle.

Given that vaccination of cattle against CBPP and FMD is ongoing, overstressing county resources, and making it impossible to carry out vaccination for sheep and goats, the meetings between Narok County and Ngorongoro decided that vaccination against priority diseases affecting sheep and goats constitute the main target for cross border disease control.

Kajiado and Narok counties went ahead and made proposals for vaccination in cross-border areas and submitted to AU-IBAR under the SMPAH project. Accordingly, AU-IBAR accepted to facilitate logistics





*Vaccination of cattle in Kajiado County*

and allowances for personnel while the Government of Kenya procured vaccines for the vaccination campaign.

### ***Vaccination campaign in Kajiado County***

Kajiado County is a Semi-Arid County and is inhabited by the Masaai pastoral community whose livelihoods revolve around livestock production activities. The pastoralists therefore draw their livelihoods livestock rearing. The livestock sector plays a vital role in the economy of the country. It provides food; more specifically animal protein in human diets, income and employment. For low income producers, livestock also serves as a source of wealth; provide draught power, and organic fertilizer for crop production, pride and a sense of well-being.





*Vaccination of goats in Kajiado County*

Transboundary animal diseases (TAD's) e.g. FMD, PPR, CCPP among others are permanent threat to the livestock industry in the country, most affected are the pastoral counties. These diseases have major social economic implications i.e. both private and public costs of the outbreak and cost of measures taken at individual and collective levels in order to prevent and/or control infection and disease outbreaks. These significant losses impact heavily on the livelihoods of communities residing in these pastoral counties. The occurrence of the TADs is further complicated by the pastoral nature of livestock movement in search of pasture and water especially during the time of drought. The County normally experiences incidence of outbreaks of TADs especially FMD virtually every year. Disease outbreaks coupled with the drought episodes often result into high losses of livestock.

SMPAH project supported a vaccination exercise on Foot and Mouth Disease (FMD), Contagious Caprine Pleuro-Pneumonia (CCPP) and PPR along Kenya – Tanzania border from 4th March 2015 to 13th March 2015. The programme was officially launched by the Governor of Kajiado County, H. E. Dr David Nkedianye on 4th March 2015 at Olgugului vaccination site in Kajiado South Sub County. A total of 47,259 cattle were vaccinated against FMD, 95,915 sheep against PPR and 46,906 goats against CCPP belonging to 865 households (see Table 4).



*The Governor, Kajiado County launching the vaccination campaign on 4th March 2015 at Olgugului Village, Kajiado County*

**Table 4:** Summary of number of animals vaccinated and households who benefited in Kajiado County

Vaccination Sites	Cattle	Sheep	Goats	Beneficiary households
	FMD	PPR	CCPP	
Noolsiti	14	233	126	2
Nkiito	3,225	3,445	1,821	12
Water tank/Nursery	950	2000	816	11
Olgulului	1958	1900	1124	17
Parkase	0	815	218	9
Shompole	825	725	555	17
Njukini	721	4,631	2,974	10
Samaria Borehole	665	934	729	17
Chief Malei	874	1375	819	28
Oldonyolasho	191	3,480	2,280	23
Oloika	397	3,182	333	10
Olgira	333	1,262	865	8
Enterekesi	218	1,184	548	9
Ngatatoek	974	699	299	17
Lumbwa (Norsikitok)	800	1296	1448	16
Lenkobe	8	1,748	978	11
Olkaramatian	238	235	178	5
Lemongo	688	2,412	1,190	11
Mailwa	184	697	321	11
Sere	178	1048	467	12
Daraja	290	149	410	14
Entasopia	781	1,461	690	29
Entarara	357	1,422	798	18
Rombo Sale Yard	471	542	308	12
Ormanie	656	617	218	7
Embugani	1314	552	182	8
Musenge	6	1,250	1,050	10
Mbirika	100	1,939	1,116	8

Vaccination Sites	Cattle	Sheep	Goats	Beneficiary households
	<b>FMD</b>	<b>PPR</b>	<b>CCPP</b>	
Oltiasika	1,733	462	138	9
Olbiri	577	2,772	683	13
Torosei	1000	1000	300	20
Olomurktan	1785	2857	1053	34
Oldoroko	0	1,200	660	4
Magadi	2,133	3,389	2,547	18
Olorika	148	265	184	5
Enkutoto	412	1,373	697	14
Oloolonyamuk	3150	5800	1958	35
KMQ	3607	1889	931	27
Murantawa	150	4,070	610	8
Oldonyonyoike	107	2,916	873	11
Kora	1,587	1,718	759	16
Ilkisanjani	262	326	168	9
Nalepo	220	410	200	6
M46	3024	1546	2009	43
Oltepesi	3580	4934	1810	65
Esonorua	0	648	584	11
Kamukuru	1,304	1,162	515	16
Olodona	161	619	852	6
Samai	53	517	182	2
Kuku	441	709	205	14
Oltinga	0	1,447	674	8
Embolei	78	2,375	1,064	14
Kilonito	1,181	4,967	2,238	56
Sinkiraine	3,150	5,311	2,151	39
<b>Total</b>	<b>47,259</b>	<b>95,915</b>	<b>46,906</b>	<b>865</b>



*Animal watering trough in Kajiado County*

## **Conclusion**

It was recognized that the control of TADs is an extremely expensive exercise and therefore requires massive resources. The limited resources available to the County to control TADs are insufficient to effectively control the TADs in any meaningful way. It was recommended that AU-IBAR under SMPAH continues supporting the vaccination campaigns in cross-border areas until such a time that TADs have been sufficiently controlled to ensure safe and stable livestock trade among the counties along common borders with other countries in the region.



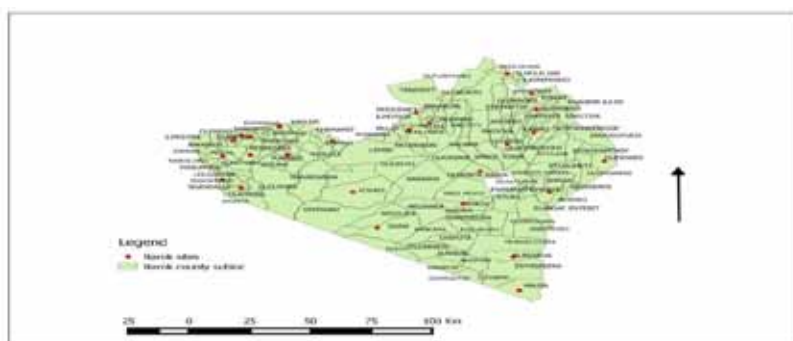


*Cattle at a vaccination site in Kajiado County*

### **Vaccination campaign in Narok County**

Narok County is a Semi-Arid County inhabited by the Masaai pastoral community whose livelihoods revolve around livestock production activities. FMD, PPR, Blue tongue, Sheep and Goats pox, and CCPP and Blackquarter are the major diseases affecting livestock in Narok County.

Livestock movement in search for pastures and water is normally triggered by drought. Uncontrolled livestock movement leads to easy spread of diseases from one area to another and also causes conflict between various community settlements. It has been observed that sheep and goats remain the most resilient livestock for the Maasai Pastoral communities given that they are able to browse and also accumulate a lot of fat that helps to see them through the difficult drought situation.



Map of Narok County



Families express joy over protection of livestock from disease through vaccination in Narok County

AU-IBAR under SMP-AH Project supported a vaccination campaign in Narok County from 17th of February to 30th March 2015. The campaign was carried out in cross-border areas along the Kenyan side. However, Maasai livestock owners from the Tanzania side of the border that brought livestock for vaccination were allowed to have them vaccination in the spirit of enhance cooperation and collaboration in disease control. Goats and sheep alone were vaccinated in Narok County against PPR, Blue Tongue, CCPP and Sheep and Goat Pox. A total of 217,370 animals were vaccinated in Narok County.

**Table 5:** Summary of number of animals vaccinated in cross-border areas in Narok County

Vaccination Site	Diseases Targeted	Number vaccinated
Loita	PPR	64,000
	Blue Tongue	15,000
	CCPP	12,600
	Sheep and goats pox	58,500
	Sub total	150,100
Mara	PPR	17,217
	Blue Tongue	25,123
	CCPP	7,550
	Sheep and goats pox	16,500
	Black quarter/anthrax	880
	Sub Total	67,270
<b>Total animals vaccinated</b>		<b>217,370</b>



*A livestock market in Narok County*

## Conclusion

It was recommended that SMP-AH further supports continued vaccination on both the Kenyan and Tanzanian sides of the border in an effort to protect these livelihood assets for the Maasai communities. The Narok County was willing to continue with the procurement of the vaccines.



## PROMOTING LIVESTOCK EXPORT TRADE IN THE GREATER HORN OF AFRICA THROUGH LIVESTOCK QUARANTINES

Dr.Ahmed Issa

*Prima International Company Djibouti Regional Livestock quarantine*



### **Introduction**

The Greater Horn of Africa contains a large livestock resource estimated at 127,240,000 cattle, 119,900,000 sheep, 125,100,000 goats, 16,350,000 camels, 3,200,000 pigs and 72,000,000 poultry. Livestock marketing is largely carried out through in-country gazetted livestock markets located along the livestock value-chains. This marketing channel satisfactorily serves the livestock internal markets within countries but might not enable countries to access the lucrative export markets especially in the Middle East and North Africa.

Sale of livestock through livestock quarantines, a practice common in Djibouti, Ethiopia, Somalia and Sudan, has greatly revolutionized livestock marketing in the Greater Horn of Africa.



## **Prima International Company Djibouti Regional Livestock Quarantine**

A case in point is the Djibouti Regional Livestock Quarantine that is operated by Prima international Company. The quarantine was opened on 22nd November 2006. It is located in Bab Almandab Gate covering an area of 605 hectares. The quarantine facility is well-fenced and has well-built shaded pens with sufficient water supply connected in a hygienic manner. Different batches of animals are kept in separate pens, well-identified with number and pens locked to avoid animal mixing. The quarantine facility is located about 12 km from Djibouti City with no residential areas nearby. The quarantine is the largest of its kind in the Middle East and Africa, with a capacity to handle 500,000 sheep, 40,000 cattle and camels simultaneously. It was constructed by a private Developer, Abu-Yaser International Establishment. However, the quarantine facility is regulated, supervised and certified by the Government of Djibouti through the Ministry of Agriculture, Livestock and Fisheries Department.



The main objectives of the quarantine facility is to (1) apply sanitary requirements for export of disease-free livestock, (2) conduct research on livestock disease and trade in the horn of Africa, (3) Promote livestock production in the region by opening market opportunities (partnership with Ethiopian, Djiboutian and Somali livestock traders, (4) serve as source of livestock market information center in East Africa, (5) maintain sustainable livestock trade, (6) provide fodder and concentrate feed for traders in the region and (7) Provide Short-term training of veterinarians and laboratory technicians.

The quarantine components include, (1) Diagnostic Laboratory, (2) Pre-quarantine, (3) Station A and B, (4) Station C, (5) Administrative Office, (6) Post mortem hall, (7) Slaughter House, (8) Incinerator, (9) General store and (10) Garage



During the period January to September 2015, the quarantine facility handled 310,109 animals destined for export trade, composed of 235,109 shoats, 39,421 cattle and 34,778 camels (see Table 6). Regarding the export destinations, 100% of the sheep and 1% of the cattle were exported to the Kingdom of Saudi Arabia (KSA), then 100% of the camels and 8% of the cattle to Egypt, and 89% of the cattle to Yemen and 2% of the cattle to Oman.

### ***Future prospects***

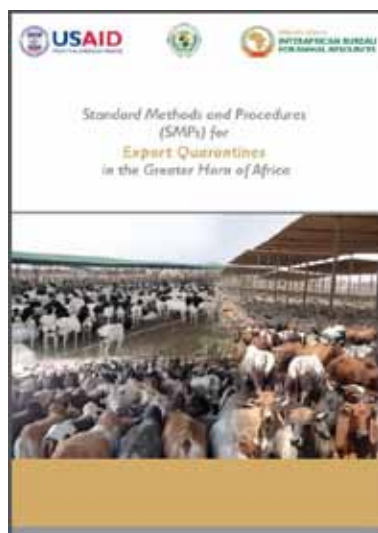
More countries in the region have picked interest in having such quarantine facilities for promoting livestock trade. The SMP-AH project has in the recent past encouraged other countries in region such as Kenya, Uganda, Tanzania and South Sudan to set up quarantine facilities especially at border or entry ports to promote livestock export trade. The project also drafted SMP for export quarantine to guide implementation of sanitary standards in the quarantines. Underway is the development of SOP for quarantines. The Regional Network for Quarantines was also launched in Khartoum on 1st October 2015 to bring together private and public operators of quarantine facilities and experts in quarantine systems to help strengthen quarantine systems in the region.

In terms of progress countries have picked interest in livestock quarantines. For example Kenya is constructing one at Bachuma. South Sudan is considering constructing one near Nimule along the South Sudan-Uganda border. Tanzania is considering constructing a quarantine

**Table 6:** Total number of shoats, cattle and camels exported through Djibouti Regional Livestock Quarantine between January and September 2015

Month	Shoats	Cattle	Camel	Total
Jan	22412	2596	0	25008
Feb	18800	4049	5560	28409
Mar	0	4968	3500	8468
April	25000	1658	1187	27845
May	30190	3239	4456	37885
June	21200	6228	9637	37065
July	16318	3841	4757	24916
Aug	45070	4633	5681	55384
Sep	56920	8209	0	65129
<b>Total</b>	<b>235910</b>	<b>39421</b>	<b>34778</b>	<b>310109</b>

facility at Kagera Region. Uganda is considering setting up a quarantine facility at Mpondwe along the Uganda-DRC border. The projects are at various levels of implementation. Some countries are still incubating the idea, others are at planning stage and for some countries project implementation has commenced.



*SMP for Export quarantine*





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