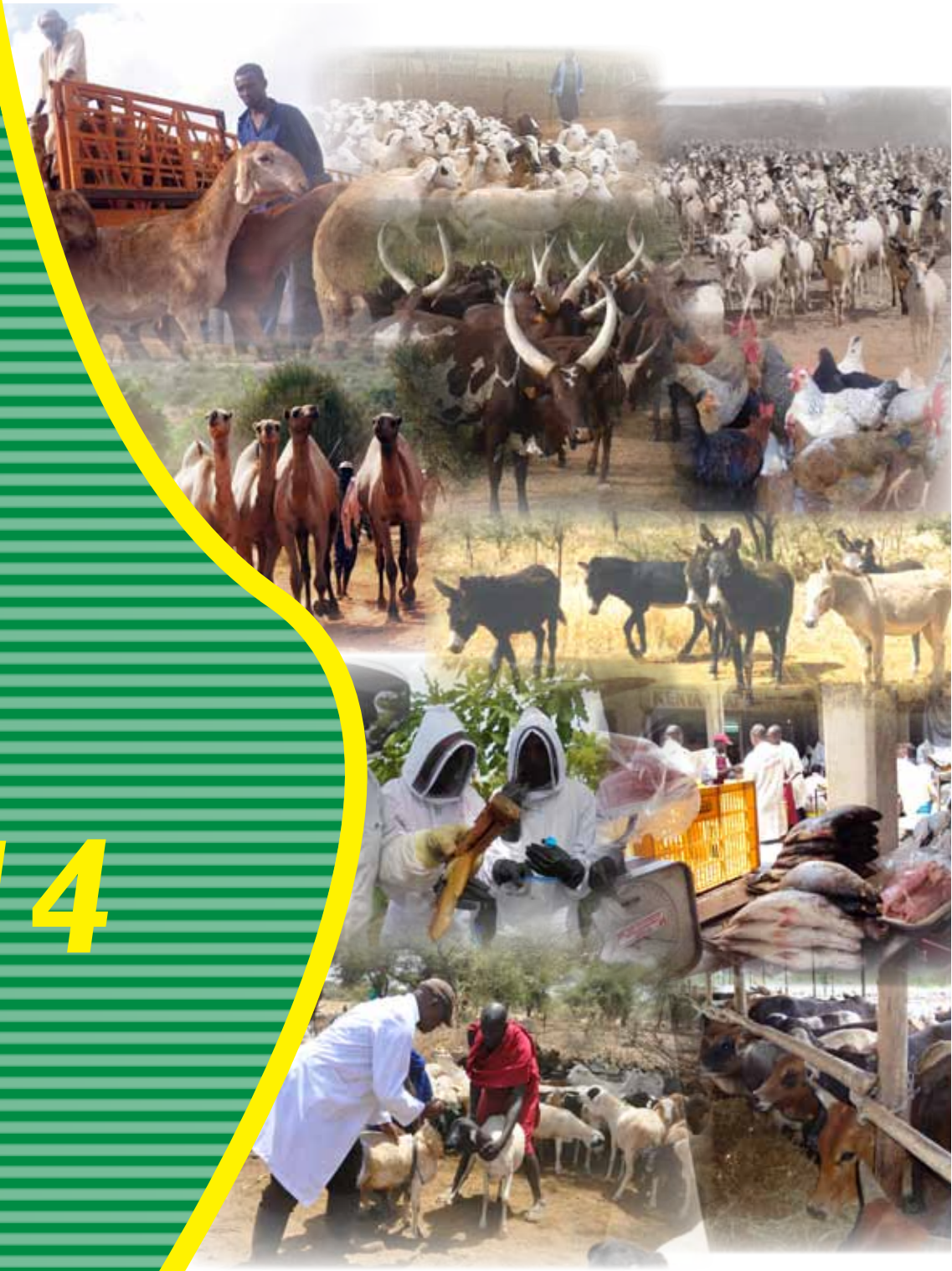
Pan African Animal Resources Yearbook



2014

AFRICAN UNION
INTERAFRICAN BUREAU
FOR ANIMAL RESOURCES

Pan African Animal Resources Yearbook
2014

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Pan African Animal Resources Yearbook

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TABLE OF CONTENTS

PREFACE

Since its creation in 1951, the African Union – Interafrican Bureau for animal resources (AU-IBAR), then known as Interafrican bureau of epizootic diseases (IBEC) - had published a yearbook to share sanitary information and promote transparency on animal health matters in Africa. The first edition of the "Bulletin of Epizootics in Africa", the precursor to the PARYB, which was published in March 1953 advocates for transparency in disease reporting in line with international standards, an obligation that is still being expounded to date. This demonstrates the concerted efforts and the commitment that Africa countries have been making towards supporting global transparency even during colonial era.

AU-IBAR has the mandate of coordinating the development and use of livestock, fisheries and wildlife as resources for human well-being and economic growth in the Member States of the African Union (AU). While the management of animal diseases is a pivotal has become even more pertinent in view of the ever increasing need for food of animal origin, and in realization of the challenges being faced with animal disease control in the face of the increasing global competition for trade in animals globally, AU-IBAR has increasingly expanded its area of operation to all aspects of animal resources development in line with its mandate.

One of the major approaches to achieving this mandate is through policy development support through the use of data and information as the lack of the lack of accurate and reliable data and information is identified as a major challenge to policy and decision making. The PARYB is aimed at breaching this gap and presents tacit evidence of the situation with regards to not only sanitary situation on the continent but the progress being made animal resourced development on the overall. This edition of the Yearbook attempts to present data and information on animal health, animal population and composition in the context of African animal genetic resources, as well as on fisheries production and trade. The book also presents available information on human resources as well as Infrastructure and Institutions that are dedicated to animal resources development on the continent.

Prof. Ahmed El-Sawalhy
Director AU-IBAR/Head of Mission

ACKNOWLEDGEMENT

The publication of this annual book of reference is made possible with active support, collaboration and contribution of African Union Member States through their untiring efforts in generating and sharing animal resources data regularly with AU-IBAR which forms the bulk of information used for the Animal Resources Yearbook. AU-IBAR commends their commitment in supporting transparency and mutual sharing of sanitary information to facilitate livestock development in the continent.

AU-IBAR also acknowledges the collaboration of partners, especially OIE and FAO from where some missing data and information (such as the Livestock population and Fisheries data) were sourced to complement the information provided to AU-IBAR directly by the AUC-MSs

ABBREVIATIONS AND ACRONYMS

AHS	African Horse Sickness
ASF	African Swine Fever
AUC	African Union Commission
AU-IBAR	African Union - Interafrican Bureau for Animal Resources
CAC	Codex Alimentarius Commission
CAP	Caprine
CAR	Central Africa Republic
CBPP	Contagious Bovine Pleuropneumonia
CCPP	Contagious Caprine Pleuropneumonia
DRC	Democratic Republic of Congo
ECF	East Coast Fever
FAO	Food and Agriculture Organization
FMD	Foot and Mouth Disease
GDP	Gross Domestic Product
HPAI	Highly Pathogenic Avian Influenza
IBD	Infectious Bursa Disease
ILRI	International Livestock Research Institute
INAP	Integrated National Action Plans
IPPC	International Plant Protection Convention
IRCM	Integrated Regional Coordination Mechanism
LIMS	Livestock information Management System
LEISOM	Livestock Emergency Interventions to Mitigate food crisis in Somalia
LSD	Lumpy Skin Disease
MCF	Malignant Catarrhal Fever
MS	Member States
ND	Newcastle Disease
OIE	World Organisation for Animal Health
PAAT	Program Against African Trypanosomiasis
PANVAC	Pan African Vaccine Center
PPR	Peste des Petits Ruminants
PATTEC	Pan African Tsetse and Trypanosomiasis Eradication Campaign
REC	Regional Economic Community
RVF	Rift Valley Fever
S&GP	Sheep and goat Pox
TADs	Trans-boundary Animal Diseases
TB	Tuberculosis
USAID	United States Agency for International Development
VSF	Vétérinaires Sans Frontières
WAHIS	World Animal Health Information System
WTO	World Trade Organization

DEFINITION OF TERMS

Wherever used in this book, these terms have the following meanings:-

- **Epidemiological Unit:** According to the OIE Terrestrial Code, [1]Epidemiological unit means a group of *animals* with a defined epidemiological relationship that share approximately the same likelihood of exposure to a pathogen. This may be because they share a common environment (e.g. *animals* in a pen), or because of common management practices. Usually, this is a *herd* or a *flock*. However, an *epidemiological unit* may also refer to groups such as *animals* belonging to residents of a village, or animals sharing a communal animal handling facility.
- **Outbreak[2]:** means the occurrence of one or more *cases* in an *epidemiological unit*.
- **Number of susceptible animals (population at risk) -** the number of *animals* that can be affected by a disease within an *epidemiological unit*.
- **Number of cases[3]:** the number of *animals* infected (diseased) by a pathogenic agent, with or without clinical signs.
- **Number of deaths:** the number of *animals* died from a disease within an epidemiological unit
- **Number of slaughtered animals -** means the number of sick or in-contact animals that are slaughtered to control a disease within an epidemiological unit, without restriction on the consumption of the meat by a human being.
- **Number of destroyed animals:** the number of animals destroyed and disposed in an epidemiological unit to control the spread of a disease.

[1] *Definition of Epidemiological Unit by OIE Terrestrial Code*
[2] *Definition by the OIE Terrestrial Code*
[3] *Definition of CASE by OIE Terrestrial Code*

EXECUTIVE SUMMARY

This year's edition of the PanAfrican Animal Resources Yearbook (PARYB), like that of the previous year, contains information from different areas of animal resources including not only animal health, but livestock population, genetic resources and Fisheries and aquaculture data as well as information on key policy decisions on animal resources in the continent, including such as the Ministerial decisions. A new feature added to this edition of the PARYBA is information on infrastructure and Institutions as well as human resources working in the animal resources sector in the continent. A summary of the interventions and/or projects being implemented by the African Union Interafrican Bureau for Animal Resources (AU-IBAR) in the year is also included. Finally an expanded contact list for Directors of Veterinary services, Directors of Animal production and Directors of Fisheries development is annexed to the yearbook.

In 2014 monthly disease situation reports in various forms were received from a total of 41 Member States (MSs) of the African Union (AU) almost similar to the 42 reports received during the previous year. The actual monthly reporting rate, which is a measure of the actual number of monthly reports received from each country during the year, has reduced from 84.75% in 2013 to 72.23% in 2014. Nevertheless the reporting rate to AU-IBAR is still higher than the 39MSs that submitted reports to the OIE during the same period. Also more countries (33) are now using the AU-IBAR/ARIS format to submit disease outbreak reports to AU-IBAR.

For animal population data, only 33 MSs reported the updated year 2014 data, while the Infrastructure and Institutions data was obtained from 42 countries as per the records available in the Animal Resources Information System (ARIS).

A total of 83 animal diseases were recorded in 2014 involving 23,581 outbreaks; and 1,275,032 cases. The total loss (deaths, slaughter and destruction) suffered in the year was 1,345,980 animals. The number of outbreaks, cases and total in 2014 is substantially lower than that of 2013 where the respective figures were 27,767 outbreaks, 2,303,277 cases and 1,278,880 total loses (deaths, slaughter and destruction). As far as species distribution is concerned, and similar to previous years, cattle is the most severely affected species in the continent accounting for 62% of outbreaks, followed by the Ovine/Caprine with 14%, Avian species with 11% and Canine 6%. There is an increase in the percentage of outbreaks that affected the avian species (from 8.97% to 11%) and the canine species (from 4.88% to 6%) because of the resurgence of avian influenza in some countries and increase in rabies cases. The highest loses in terms numerical number of deaths, slaughter and destruction were reported on the avian species due mainly to avian influenza. In terms of spatial distribution across the African continent, the most widely distributed animal disease(s) based on the number of countries affected are Rabies and Newcastle each of which were reported by 27 countries in the year 2014. Other diseases with significant spatial distribution in Africa which affected more than 20 countries are lumpy skin disease (24), Peste des Petits Ruminants (25), and Foot and Mouth Disease (26). This patter is almost similar to the situation in 2013 and previous years except for the reduction in the number of countries that reported Contagious Bovine Pleuropneumonia (19 MSs from 22).

The state of genetic biodiversity in Africa based on FAO estimates showed that the aggregate number of cattle is 304million, 347 million Goats, 328 million Sheep, 35 million Pigs, 6million horses and

23million camels among others. In terms of regional distribution, Northern Africa has the highest population of sheep; Western Africa has the highest Goat and Poultry population, while eastern Africa has the highest population of cattle. Pig population on the other hand is highest in western, eastern and central regions of the continent. Evidently there are data gaps regarding the numbers of non-conventional livestock such as grass cutter, cane rat and Guinea pigs though it is reported that the production and consumer preference for these species is increasing especially in the western and central African regions. In terms of individual country ownership, Ethiopia had the highest number of cattle outstandingly holding 25% (37.8 million) of the total cattle population in the continent based on 2013 estimates, while Nigeria was the continent's major Sheep and Goat keeper making up 28 % (16.7million) of the total small ruminant population

In general there are data gaps on livestock numbers on the continent and many countries base their livestock numbers on estimation and projections with no country reporting conducting an actual livestock census in the last 5 years.

The sourcing of data on Fisheries production and trade in Africa has remained a big challenge and most of the information for 2014 was sourced from the FAOStats. Available data suggests that the participation of African countries in Fisheries production and trade continues to lag behind compared to other continents. Regarding capture fisheries, Morocco continue to be the highest fish producing country on the continent (1,171, 496 metric tons) followed by South Africa (701,711 metric tons) and Nigeria (668,754 metric tons). In general terms the general fish production trend across these countries mirrors that of the global trend of stagnant capture fishery production while human population growth continues to increase portending serious implication for food security.The proposed solution is to promote good governance principles and strengthen institutional capacity for enhanced governance.

On aquaculture, Egypt continues to dominate production both in terms of volume and value (1017.74 tons) due to improved technology and sustainable culture practices as a result of Government assistance to private sector in the country. The catfish farming industry in Nigeria (254tons) is booming with increased private sector involvement and the African catfish, Clarias gariepinus, is the main cultured species. The aquaculture industry in Uganda and Ghana has also expanded tremendously over the years with increased cage culture development. The main challenge to commercial aquaculture development, particularly in African countries south of the Sahara, is weak regulatory frameworks and poor practices.

The small-scale fisheries plays crucial role in employment creation and food security in African coastal and riparian communities. Analysis of available data underscored the importance of small-scale fisheries in national development, especially the marine artisanal fisheries, being the subsector with highest contribution to national GDP (0.43 %) and agriculture GDP (1.82 %) in comparison to the highly mechanized industrial fisheries, inland fisheries and aquaculture. The employment number in the fisheries and aquaculture sector is estimated at about 12. 2 million people, with the highest employment from the inland fisheries (40.9 %) followed by the coastal (marine) fisheries (32.9 %). However in general it is important to note that total contribution of fisheries and aquaculture to the national GDP in most countries have been depressed in recent years by mining sector with the discovery of oil fields and minerals.

Regarding human resources involved in animal resource development on the continent, available data generated through ARIS showed that Egypt has the highest number of personnel involved in animal health in Africa, followed by Ethiopia, Nigeria, Algeria and Sudan. Some countries, such as South Africa have not provided data on private veterinarians and other personnel in this sector. Available data indicates that there is no clear pattern of the distribution of veterinary personnel between the public and private sectors in the different countries. In early assessments of veterinary services, it was suggested that the minimum requirement to deliver effective essential public sector veterinary services, expressed as a ratio of livestock units (LU) to veterinarians is 100,000:1 (FAO, 1993). However, in Africa this ratio is reportedly anywhere between 100,000 and over 1,000,000. This suggests a serious shortage of veterinarians in Africa in general though there ratio is a lot of variation between many of the countries.

There is a general trend in most African countries that there are more animal production personnel than veterinary professionals. They are generally involved in research, extension and development work, while those in the private sector tend to be employed in animal resources manufacturing sector, as well as dairy industry. In most African countries, there are more animal production, fisheries and wildlife personnel in the public than private sector. However, in some countries where private sector fisheries play a key role, for example, Uganda, there are more personnel in the private sector.

The data on training Institutions on the continent is not comprehensive to say the least. Training institutions comprise institutes, colleges or universities, offering training in animal resources-related fields such as veterinary and animal production. In 2011, a total of 80 veterinary training institutions (VTIs) were identified in Africa. Forty two (42) of these were in East and Southern Africa, 22 in North Africa, 12 in West Africa and 4 in the Central Africa (AU-IBAR, 2012). For animal production, many of the universities with faculties or departments of agriculture tend to offer animal science courses as part of BSc (Hons) degrees. It appears very few universities and training institutes offer courses specifically in fisheries and wildlife. Of these Uganda (fisheries), Zimbabwe (wildlife), Senegal (fisheries and aquaculture) and Kenya (fisheries and wildlife) are among the few providing these courses.

The lack of up to date data and the delay in submission of reports and poor quality of data have for many years remained a big challenge in Africa. Less than 5% of MSs submit reports on time, while the poor quality and technical details of the reports submitted by many countries coupled with plenty errors makes data analysis a big challenge at the continental level. This situation affects good planning of interventions and policy making on animal resource development in a coordinated manner. The rolling out and operationalization of the Animal Resource Information System (ARIS) since 2012 has helped improve the situation, but more needs to be done in terms of uptake of the system at the national level. AU–IBAR is also implementing a good number of projects and interventions to support MSs in advancement of animal resources development throughout the continent in line with its mandate. Some of these projects include the VETGOV project, PANSPSO, IRCM, ARIS, STSD, Fisheries Governance, Fisheries trade, Animal Genetics and development of a continental PPR and ASF control strategy as well as a hosting of the ISCTRC secretariat.

During 2014, AU-IBAR developed the "continental strategy for development of animal resources in Africa (LiDeSA)" in line with the recommendation of African Ministers responsible for livestock development on the continent.

1. INTRODUCTION

The new annual "PanAfrican Animal Resources Yearbook" continued along the expanded theme of the previous year's edition by providing data and information not only on the status animal diseases on the continent, but also on other areas of animal resources in the continent. The new chapters introduced are "Livestock population and Composition" in the context of African animal genetic resources, "African Fisheries production and International trade", "Human Resources", "Infrastructure and Institutions" as well as the "summary of the major decisions taken by Chief Veterinary offices and Ministers responsible for livestock development and Fisheries development" in the continent.

The chapter on the major recommendations of the CVOs – which is mainly a summary of the common positions adopted by national OIE delegates during the OIE general meetings – highlights the efforts being made by technical heads of veterinary services in promoting and sometimes enforcing the position of Africa during the standard setting processes at the global level which ensures the protection of trade and prevention of any unwholesome or barrier in trade against Africa. The chapter on the summary of the major decisions and recommendations of Ministerial meetings is on the other hand is aimed at demonstrating the political support being provided for animal resource development on the continent by the policy makers and even sharing the general thought process to promote animal resource development on the continent. In this edition of the book, the summary reports of two important Ministerial meetings were presented – the AU Joint Conference of Ministers of Agriculture, Rural Development, Fisheries and Aquaculture that took place at Addis Ababa Ethiopia from 1– 2 May 2014; and the High level Ministerial meeting on the Livestock Development strategy for Africa that took place at the AU-IBAR headquarters Nairobi, Kenya from 12 -14 November 2014.

The data analysis contained in this yearbook brings to light many of the issues and challenges associated with paucity of data and information to support policy making on the continent. These include the lack of effective animal health systems, animal production indices and trade and marketing data. Other challenges include the lack of capacity in transforming decisions into action including lack of adequate trained/skilled staff and poor record keeping, among others.

Perhaps the biggest challenge is that of lack of culture of record keeping and systems for ensuring such in many countries in Africa. The used for the publication of this books comes mainly from passive animal health data collection methods. Other data sources include the OIE/WAHIS the FAO stats. Therefore while the Yearbook contains some analysis of animal resources data as reported by or obtained from MSs, it is not a detailed academic study of the situation at national or the continent level. The Yearbook should therefore be viewed as the general reflection of the situation on the continent during the year and used as such. It is nevertheless a very good guide for decision making on animal resource matters at the country, regional and continental level, which is its main purpose.

An update of the interventions being carried out by AU-IBAR through its various projects in the area of animal resources development on the continent is also provided.

2. GENERAL STATUS OF MONTHLY ANIMAL DISEASE REPORTING

2.1. Trend of Disease Reporting by countries from 2000 to 2014

During the year 2014, 41 countries submitted animal disease reports to AU-IBAR out of the "realistic" 53 countries that are expected to share their sanitary information to the continental body. In essence the reporting number of MSs has marginally declined by one country; and the reporting rate on country basis for the year has decreased to 77.36% compared to the 79.25% achieved in 2013 and 87.04% in 2012 (Table 1 and figure 1). Although the quality of the reports has increased, the timeliness of reporting has remained stagnant over the years. This decline may be as a result of the shorter timeline for consolidation of the animal health reports from MSs compared to the previous year's and the absence of any direct support for reporting through projects and absence of any realistic sanction for defaulting by MSs. Nevertheless it is expected there will be gradual improvement in reporting as MSs take full ownership of the process. It is also expected that the roll out of the Animal Resource Information System (ARIS) and the operationalization of the VetGov policy hubs in member states will help to steadily improve disease report submission by all MSs of the African Union.

It is to be noted that countries have improved on the submission of "Immediate notification" of disease outbreaks to AU-IBAR using ARIS.

Table 1: *Trend of disease reports to AU-IBAR (2000-2014)*

Year	No. of countries that reported	Expected number of countries	% of countries reporting
2000	10	53	18.87
2001	11	53	20.75
2002	37	53	69.81
2003	40	53	75.47
2004	40	53	75.47
2005	37	53	69.81
2006	35	53	66.04
2007	37	53	69.81
2008	44	53	83.02
2009	47	53	88.68
2010	49	53	92.45
2011	42	53	80.77
2012	47	54	87.04
2013	42	54	79.25
2014	41	54	77.36

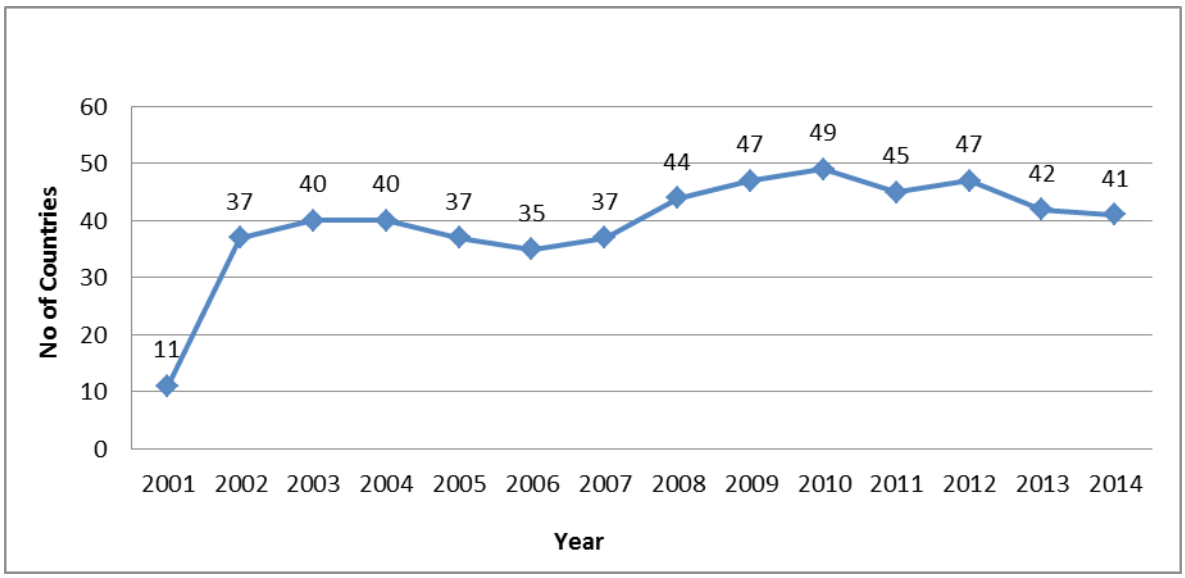


Figure 1: *Trend of disease reports to AU-IBAR (2000-2014)*

2.2. Status of monthly disease reporting in 2014

Although the number of countries that submitted reports to AU-IBAR in 2014 has only reduced by only one country in 2014 compared to the number in 2013, the actual monthly reporting rate in 2014 has further declined from 72.23% in 2013, and 84.75% in 2012 to 66.35% in 2014 (Annex 1). Although the greater majority of African countries submit disease reports to both AU-IBAR and OIE, since 2009 the submission rate to AU-IBAR has consistently been higher than to the OIE. During 2014, 39 African countries submitted reports to OIE compared to 41 countries that submitted reports to AU-IBAR. While there was decline in submission rate to AU-IBAR, reporting to the OIE by African countries to the OIE improved to 39 countries from 33 in 2013. Some countries submitted "zero reports", indicating the absence of disease outbreaks during the reporting periods. Even though the importance of zero reporting in situations where there are really no disease outbreaks is appreciated, this indicator should be interpreted and/or used with caution for in some instances it might be due to under-reporting.

As usual the main challenges associated with data analysis over the years has been the poor quality, inconsistency and lack of details of some important data components such as the population at risk, species, age and sex differentiation, details of laboratory diagnostic tests and results, geo-reference data, etc. Better analysis and interpretation of results will be done as the quality of reports and timeliness of submission improve.

2.3 Reporting formats

While MSs are encouraged to use the AU-IBAR report format, reports created in different format are still received which are then transferred into a central database and analyzed. In the year 2014, thirty three (33) countries (80.48%) – up from 27 countries in 2013 - used the standard ARIS/ AU-IBAR format to submit their animal health reports to AU-IBAR. Other formats used within the year include, OIE format (3 countries – 7.32%), FAO/TAD-Info format (1 countries –2.44%) and non-specific/country own format (4 countries – 9.76%). No country submitted reports to AU-IBAR using the SADC/LIMS format in 2014 (Figure 2).

It is expected that with gradual roll out of the ARIS interoperability feature possibly in 2015, the formats being used for reporting to AU-IBAR, OIE, TAD-Info and LIMS would be unified and the conflict of choice of the format to use will be completely eliminated.

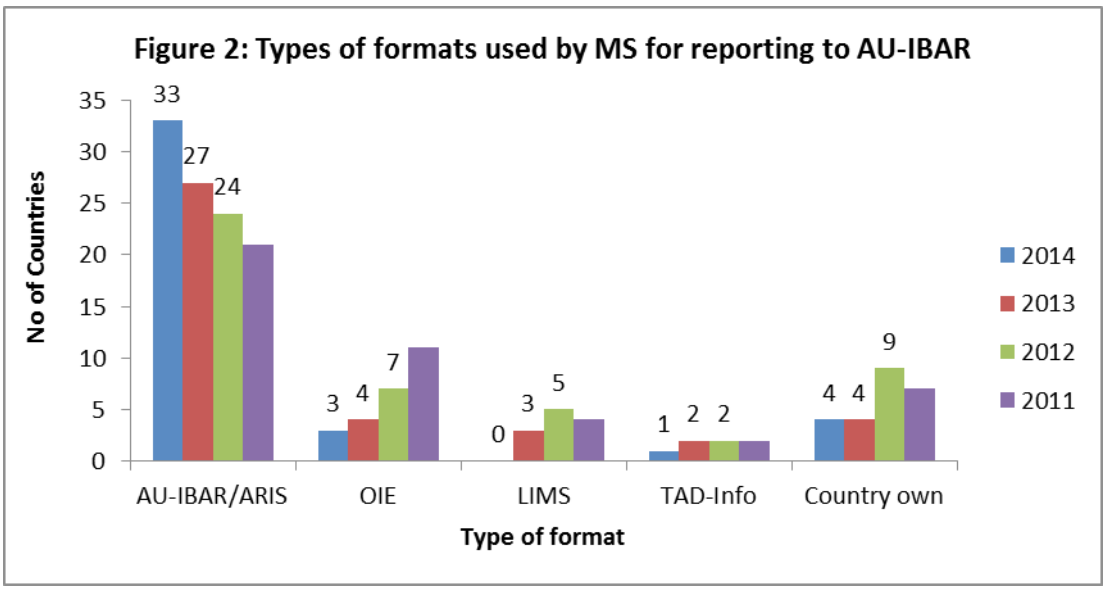


Figure 2: *Different types of formats used by countries for reporting to AU-IBAR*

3. GENERAL STATUS OF ANIMAL DISEASES IN AFRICA IN 2014

In 2014, there is no difference between the numbers of reported diseases in African countries compared to 2013. It is observed a significant difference between the numbers of outbreaks, cases and loses in terms of death, animals slaughtered and those destroyed as a result of occurrence of the selected major disease between the year 2014 and 2013. However it should also be recognized that quantity and quality of data available is inherently related to reporting capacities which may not have changed significantly.

The general status of animal diseases described in this section and the details provided later for specific diseases are based on the reports received from countries. Where possible, the disease situation in 2014 is compared with that of the previous year. The spatial and monthly distributions of outbreaks are presented on shaded maps and graphics.

3.1. Diseases reported

A total of 83 animal diseases were recorded in 2014 compared to the 84 reported in 2013 (Annex 1). These diseases were reported by 39 countries against 42 in 2013. This include major known TADs and others important diseases with interest to countries. It is noted a significant decrease of the number of outbreaks 23,581 probably due to the decreased number of reporting countries (39) compared to 2013; 27,767 outbreaks for 42 reporting countries. The reported diseases were analyzed by number of reporting countries, outbreaks, cases, deaths including losses and by their transboundary nature.

3.2. Disease situation by number of countries affected

As in 2013, the most widely distributed TADs in Africa in 2014 remains ND (27) followed by FMD (26), PPR (25), LSD (24), CBPP (19) ASF (14) and SGP (13). There is no significant variation on major TADs distribution across the continent compared to 2013 and 2012. Figure 3 below provides details on the number of Member States affected by type of disease in 2014 in comparison to 2013.

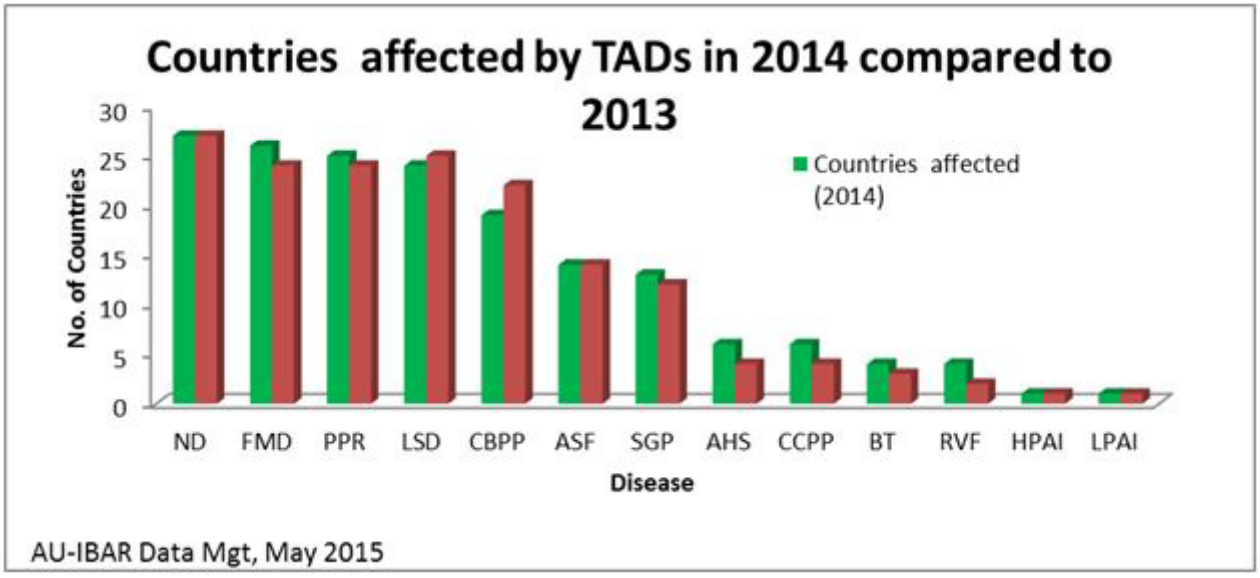


Figure 3: *Number of countries affected by TADs in 2014*

Among other important diseases, Rabies (27) as usual had the widest spatial followed by trypanosomosis (19), anthrax (18), blackleg (17); Brucellosis (15), Pasteullorosis (14), anaplasmosis (14) and tuberculosis (13). Figure 4 shows the number of countries affected by the other important diseases in 2014 in comparison with 2013.

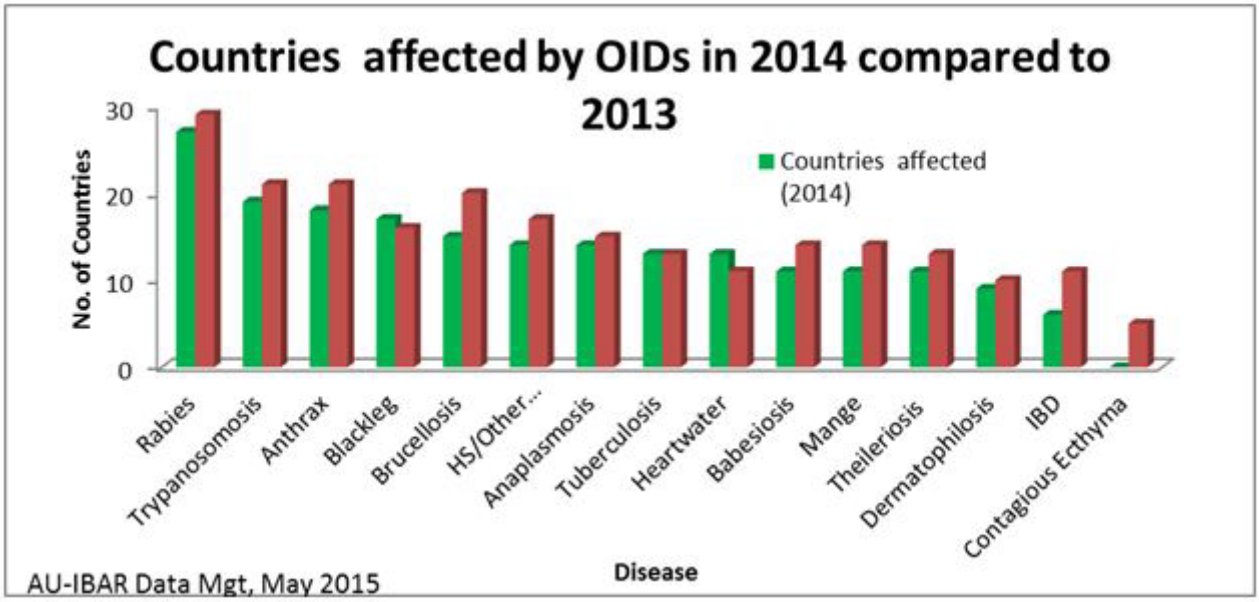


Figure 4: *Number of countries affected by other important diseases in 2014*

The status of the reported disease spatial distribution has not changed since 2010. This status showed that most the diseases in Africa are endemic as well as lack of coordinated and harmonized efforts and interventions in controlling animal diseases at both national and regional levels. The widely reported diseases on the continent are shown in figure 5 below.

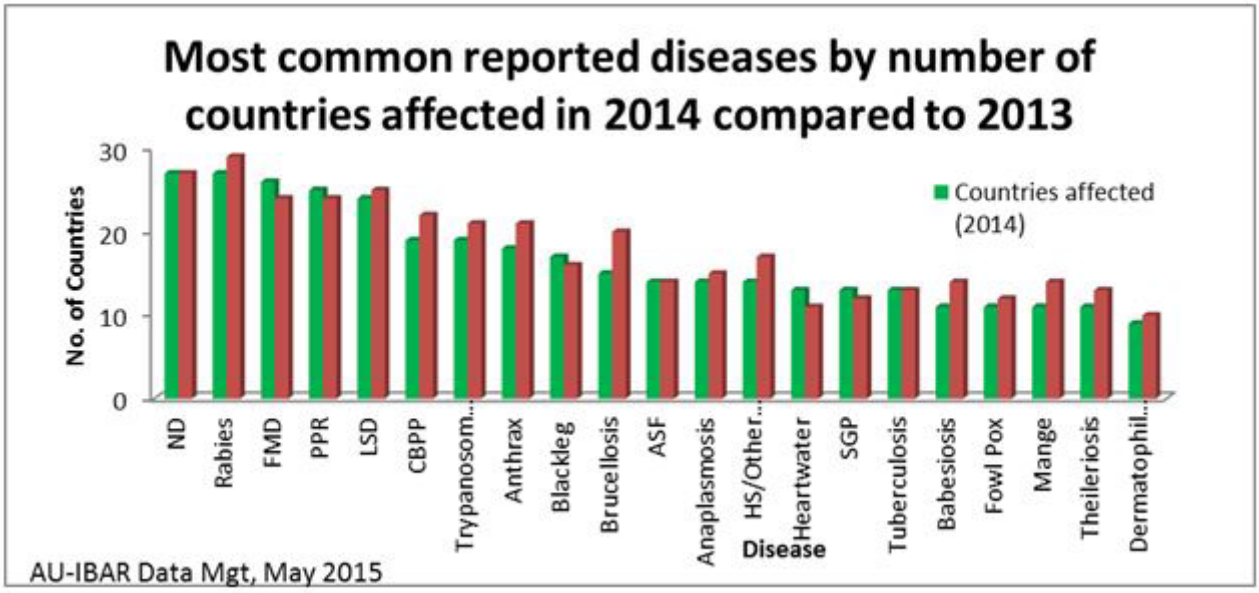


Figure 5: *Most common reported diseases by number of countries affected*

3.3. Disease situation by number of reported outbreaks

In 2014, a total of 23,581outbreaks were reported against 27,667 in 2013. It is noted a significant decreased number of outbreaks in 2014 compared to 2013 as consequence of the decreased number of reporting countries. As in 2014, LSD had the highest number of outbreaks with 2,758 followed by rabies (2,062), Anaplasmosis (1,646), Brucellosis (1,393),

heartwater (1,376) Babesiosis (1,273) and FMD (1,246). The number of reported outbreak for the other diseases is under 1,000 outbreaks. It is important to observe that the number of outbreaks of PPR has significantly reduced from 1,691 in 2013 to 596 in 2014 and the disease is endemic in most of African countries. The detailed number of outbreaks and other parameters for all the diseases is provided in Annex 2, while figure 6 shows the most common reported diseases in terms of reported number of outbreaks.

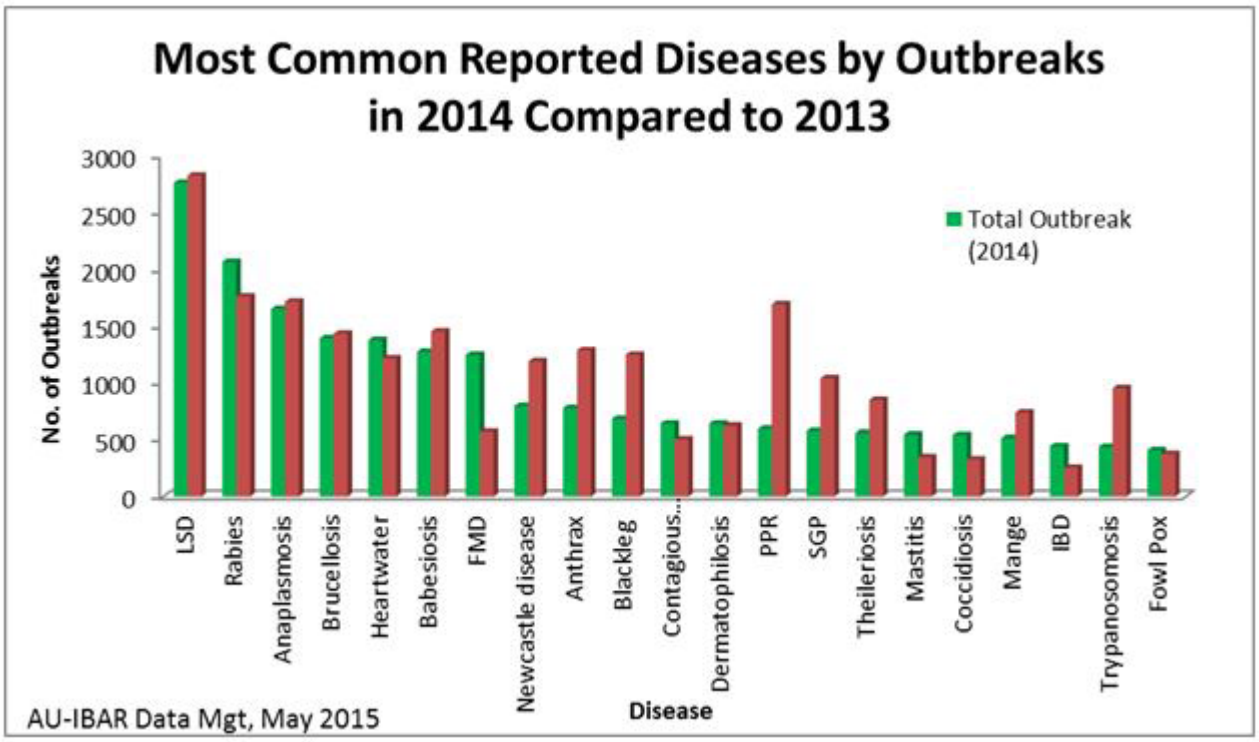


Figure 6: *Most common reported diseases by number of outbreaks in 2014*

In 2014, the number of outbreaks for major TADs has significantly decreased from 8,901 in 2013 to 7,019 in 2014 (Figure 8due probably to the decreased number of reporting countries. Idem for the OID from 15,731 in 2013 to 12,487 in 2014 as shown in figures 6, 7 8 and 9 respectively.

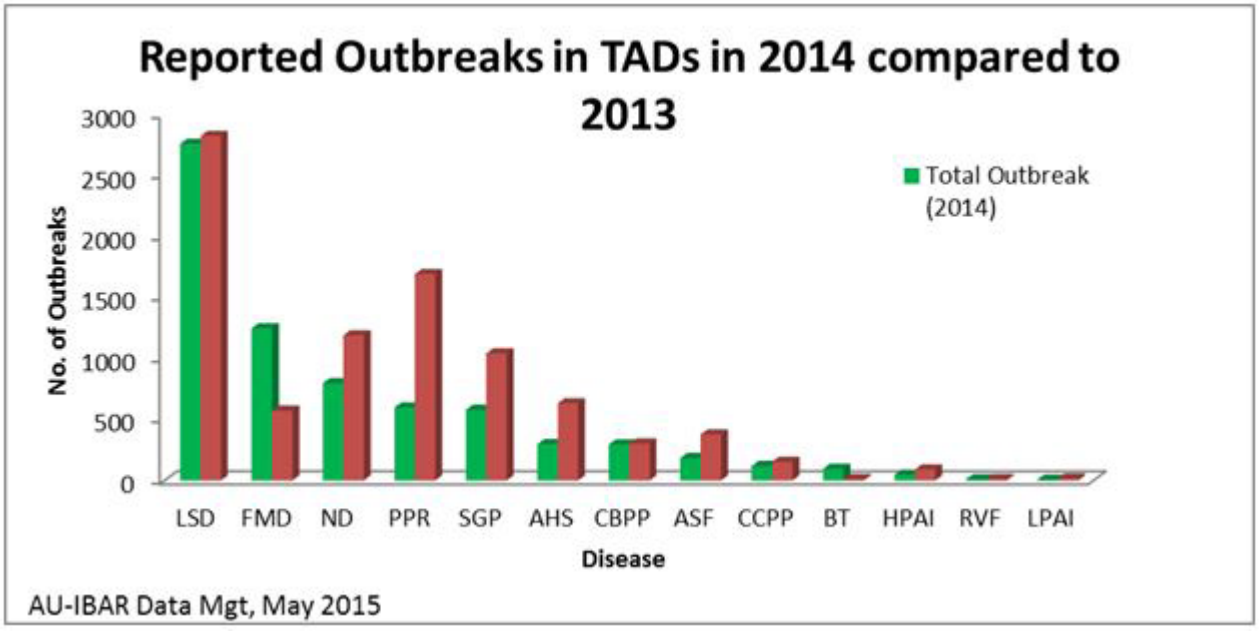


Figure 7: *Comparison of the number of outbreaks in TAD in 2014 and 2013*

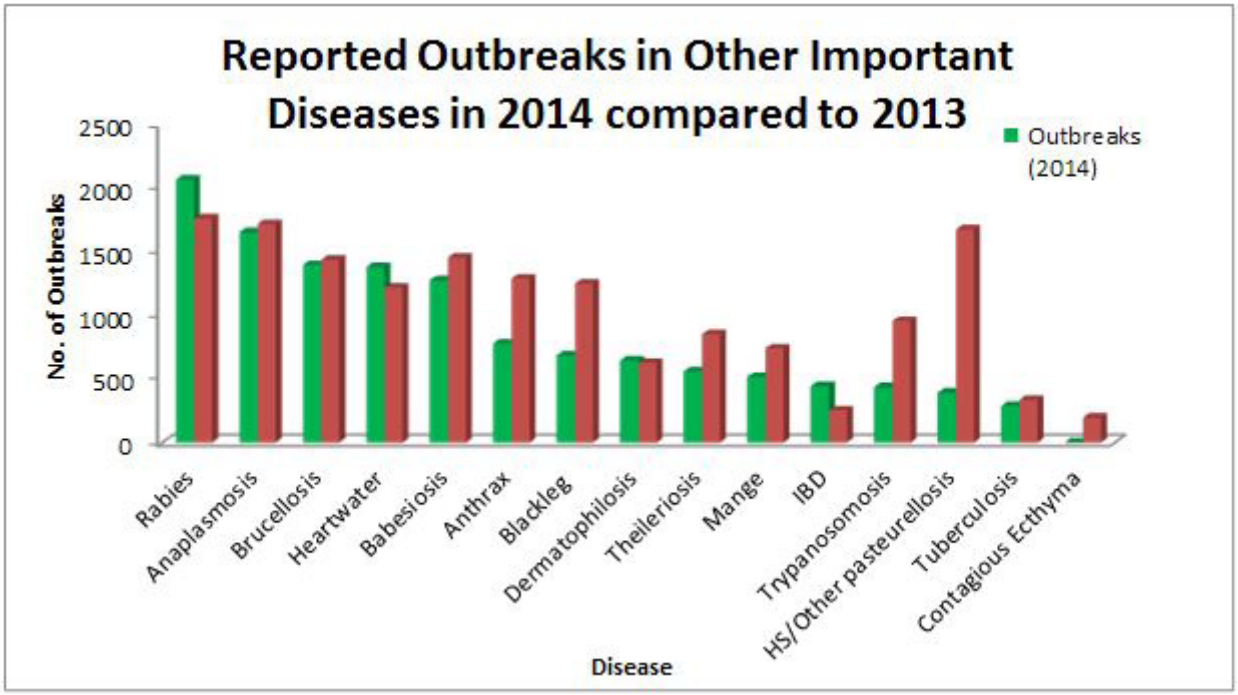


Figure 8: *Comparison of the number of outbreaks in other important diseases in 2014 and 2013*

3.4. Disease situation by number of cases in reported outbreaks in 2014

In 2014, a total of 32,891,541 susceptible animals were reported among them 1,275,032 cases were registered in 39 reporting countries in the continent. The numbers of cases still decreasing since 2010 cases were reported 5,286,686, against 2,025,190 in 2011and 1,572,614 in 2012, 2,303,277 in 2013 to 1,275,032 in 2014. There is a significant increase of the number cases during the reporting period despite the decreasing number of reported countries. The highest number of cases resulted from ND (701,703), FMD (56,042), PPR (36,193); ASF (31,413) and LSD (24,654) for TADs IBD (77,989), theileriosis (24,427) and Babesiosis (24,157) for the other important diseases (figures 10 and 11). Similar to the other years, the avian species recorded the highest number of cases (Figure 12).

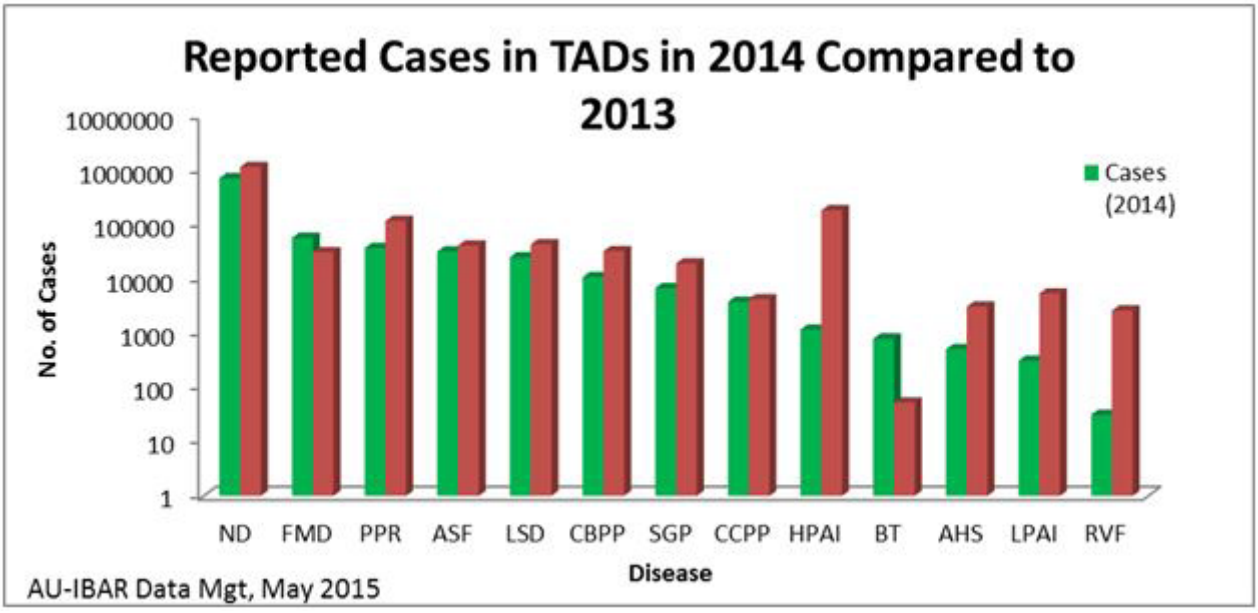


Figure 9: *Reported cases in TADs in 2014 compared to 2013*

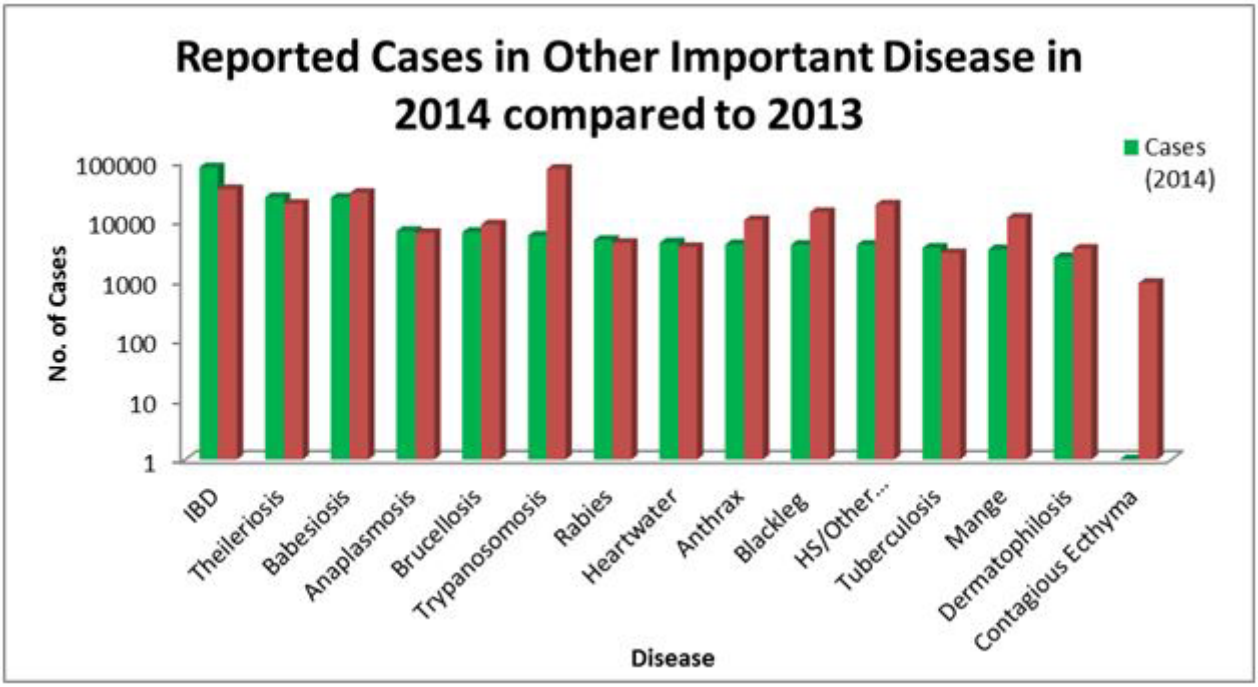


Figure 10: *Reported cases in other important diseases in 2014 compared to 2013*

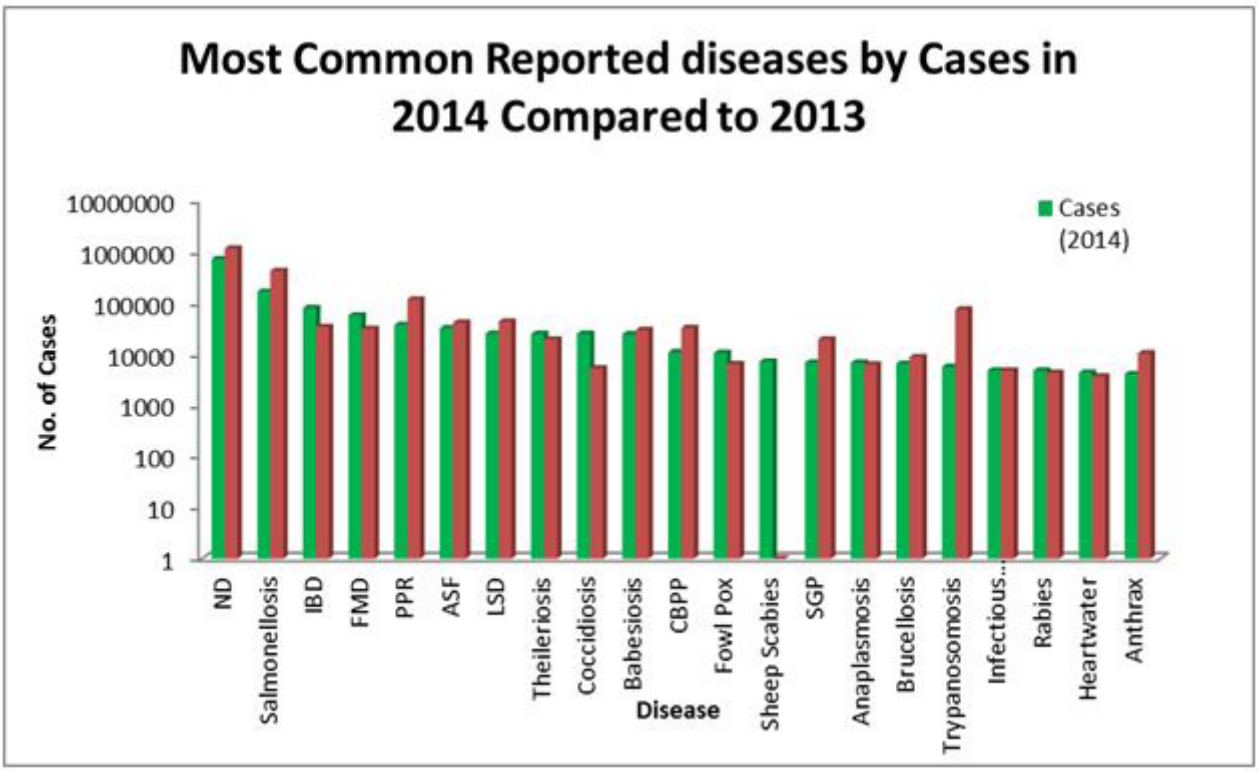


Figure 11: *Most common reported diseases by number of cases in reported outbreaks in 2014*

3.5. Disease situation by number of deaths in reported outbreaks in 2014

In 2014, a total of 597,212 mortalities were recorded as a result of reported diseases compared 1,230,377 mortalities in 2013. There is a significant decrease of mortalities probably due to the decreased number of reporting countries. As usual, the highest losses were recorded in the avian species as a result of ND outbreaks (4370), followed by ASF (17,012); PPR (14,979), and LSD (4,857). The total number of animals slaughtered and destroyed as a disease control measure during 2014 was 73,271 and 675,497 respectively. These figures indicate that significant numbers of

animals are being lost to diseases annually and give justification for greater investment in disease prevention and control across the continent. The significance of this recommendation will even become more apparent when monetary values are attached to indicate the value of loses being incurred annually by low income earners in the continent. Figures 13, 14 and 14 give the status of the reported mortalities due to diseases in 2014 as compared to 2013.

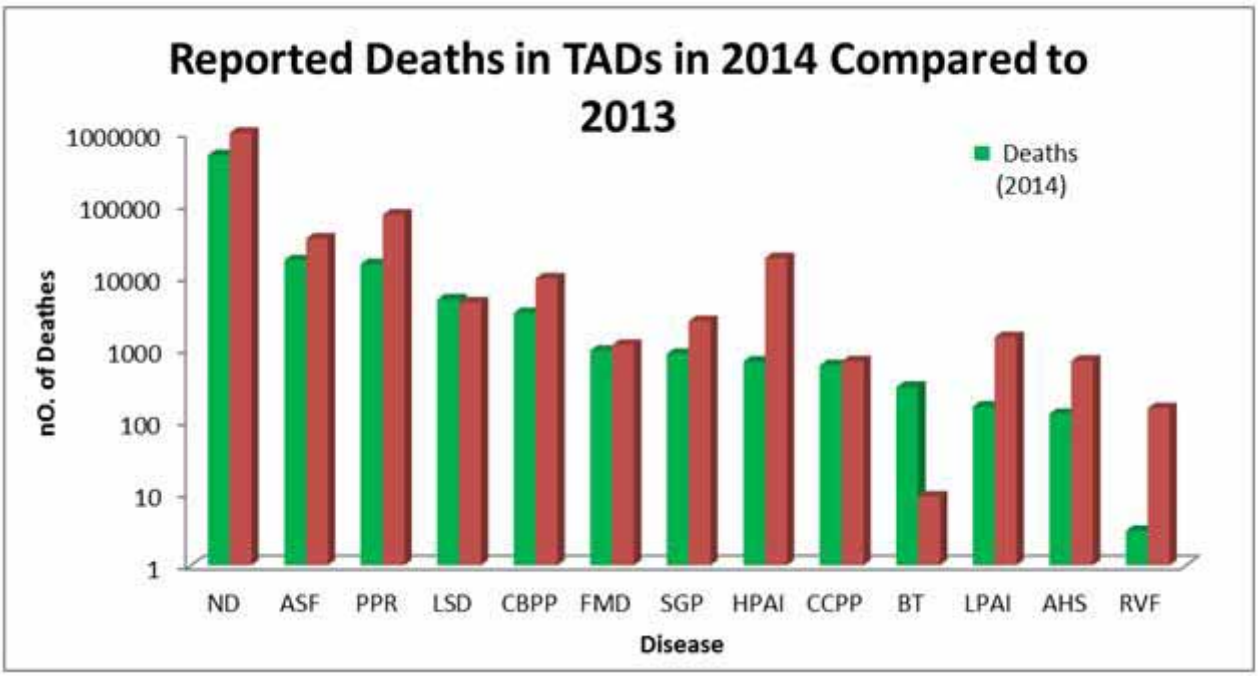


Figure 12: *Reported Deaths in TADs in 2014 compared to 2013*

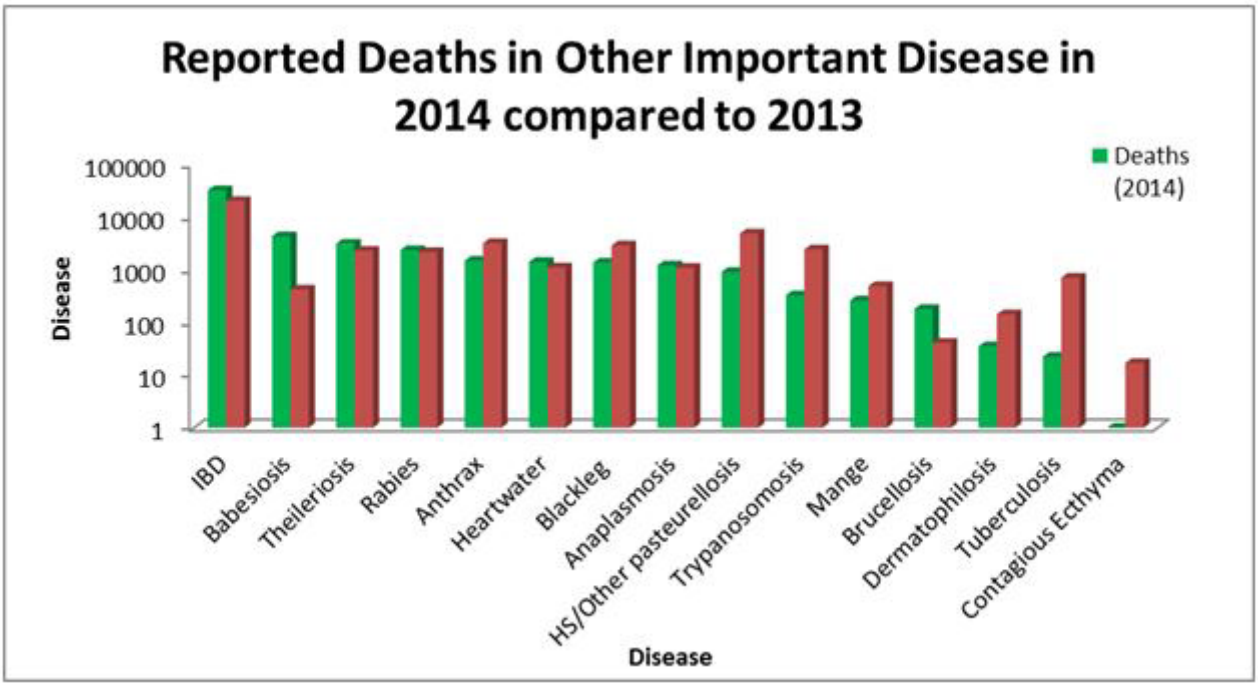


Figure 13: *Reported deaths in other important diseases in 2014 compared to 2013*

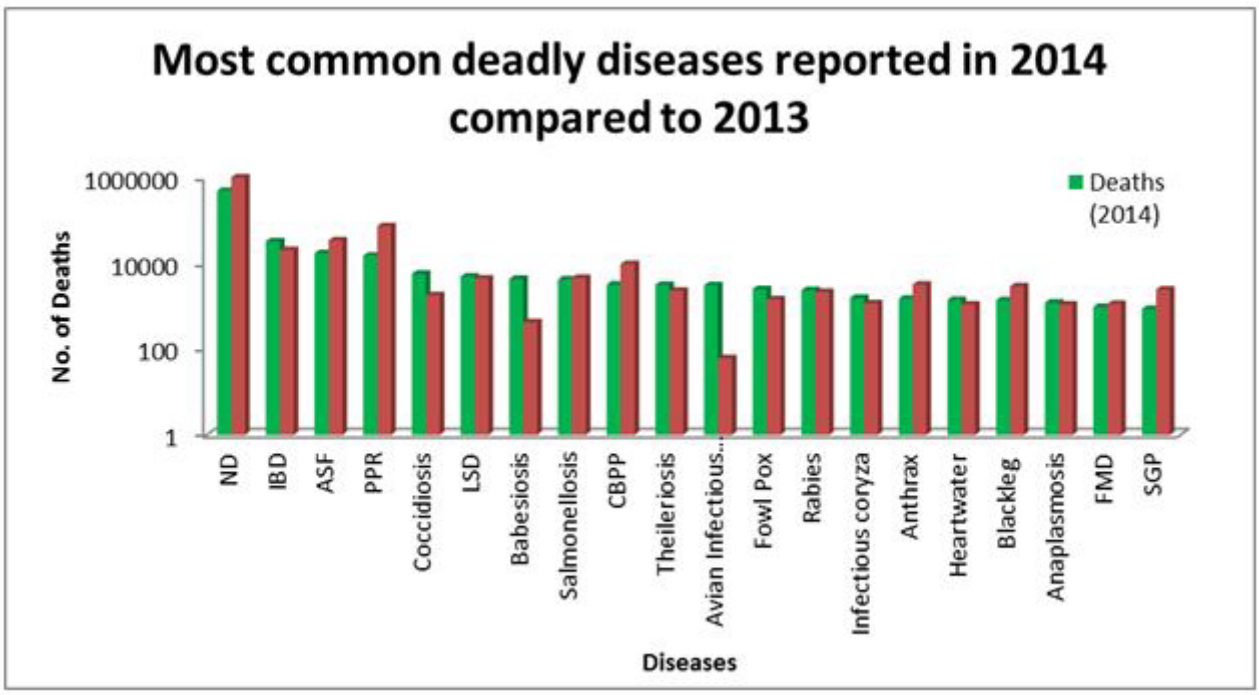


Figure 14: *Most common deadly diseases reported in 2014 compared to 2013*

3.6. Disease situation by species affected in the reported outbreaks in 2014

As for the previous years, Bovine is the most affected species in the continent accounting for 62% in 2014 followed by avian species 11%, Caprine 8%, canine 6% and ovine with 5% (Figure 16).

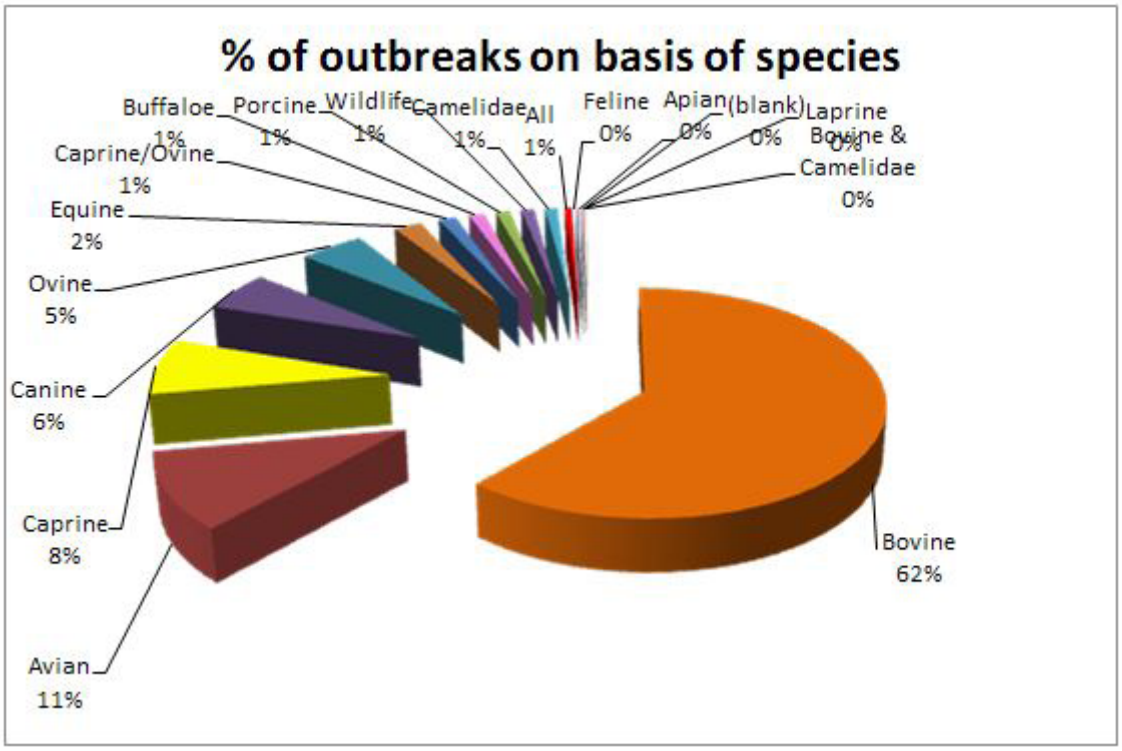


Figure 15: *Disease situation by species affected in the reported outbreaks in 2014*

Similar to the previous, the number of cases and deaths were recorded in avian species accounted for 77.% of cases and 90% of deaths followed by Bovine (13% and 4%) and Caprine (4% and 2%) and pigs (2% and 3%). Figure 18 gives the details of species involvement in cases during the reporting period. The proportion of animal species that died and the total loses suffered due to the reported diseases in 2014 is shown in figure 18.

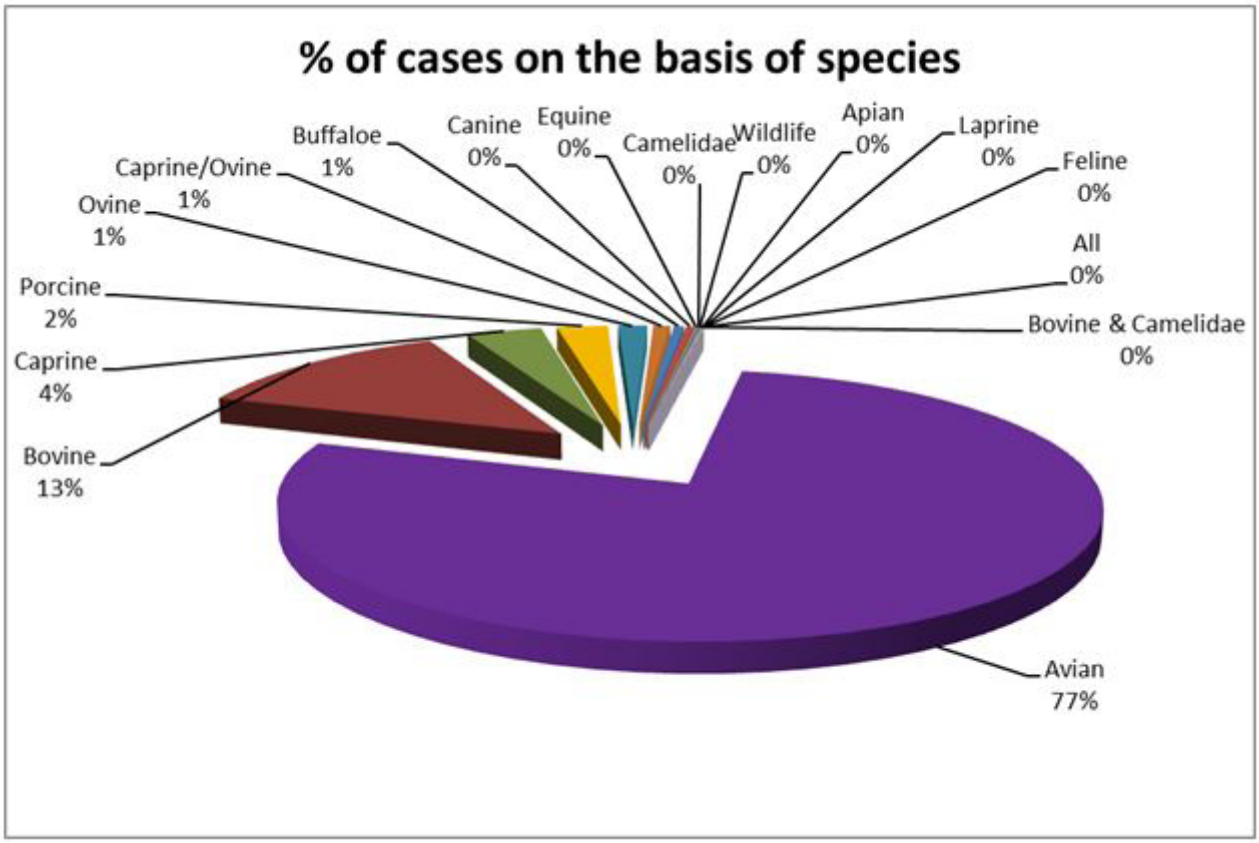


Figure 16: *Proportion of cases by species affected in the reported outbreaks in 2014*

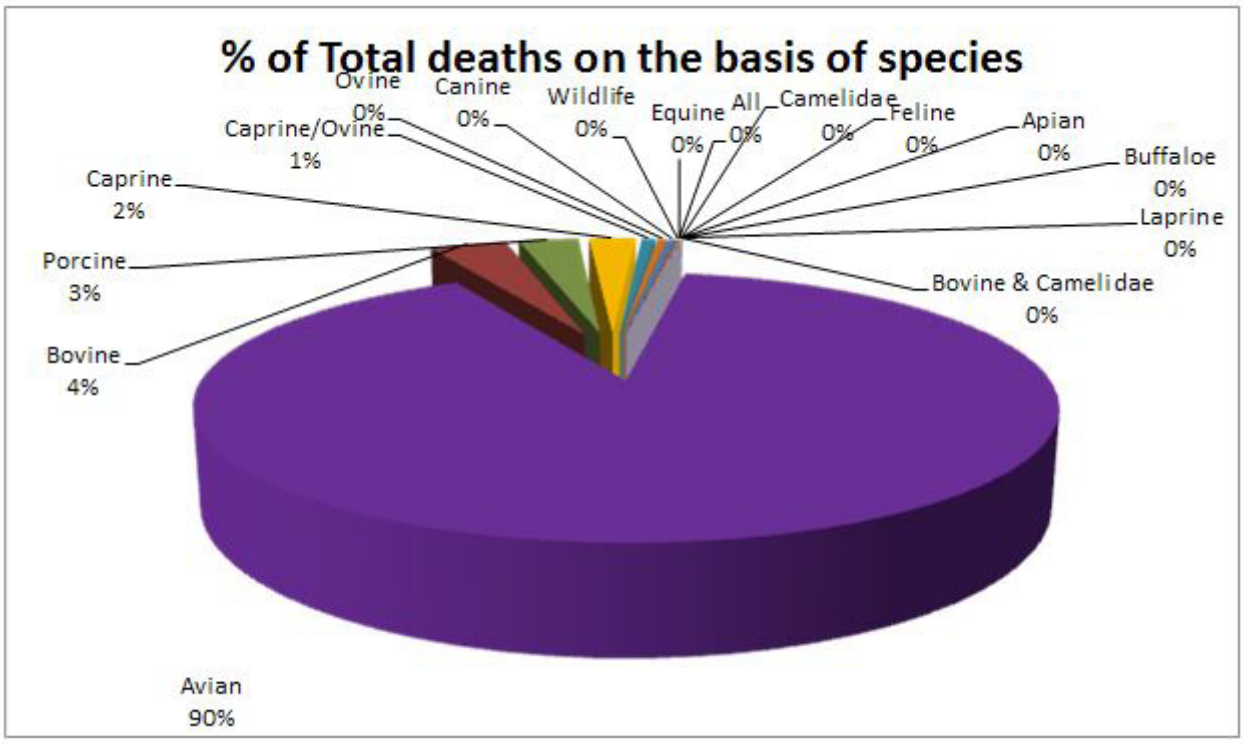


Figure 17: *Proportion of mortalities by species affected in the reported outbreaks in 2014*

An exceptional event that occurred in 2014 was the reported outbreak of Monkey pox that affected Chimpanzees in Cameroon which is reported as an emerging disease with significant morbidity or mortality, or zoonotic potential

3.7. Nature of disease outbreak investigation and confirmation by laboratory

Similar to the previous years, 43% of the reports received did not provide the diagnostic methods used to determine the disease involved in the outbreaks against 45% in 2013. Only 16% of reported outbreaks were confirmed by laboratory techniques as follows 2% by advanced laboratory techniques, 10% basic laboratory, 4% combined clinical signs and laboratory. This situation calls for the Veterinary Services of MS to put in extra efforts to strengthen the linkage between epidemiology units and diagnostic laboratories and to improve laboratory networking and diagnostic capacity in general.

The comparative data for methods of diagnosis used to confirm reported outbreaks are shown in Figure 19.

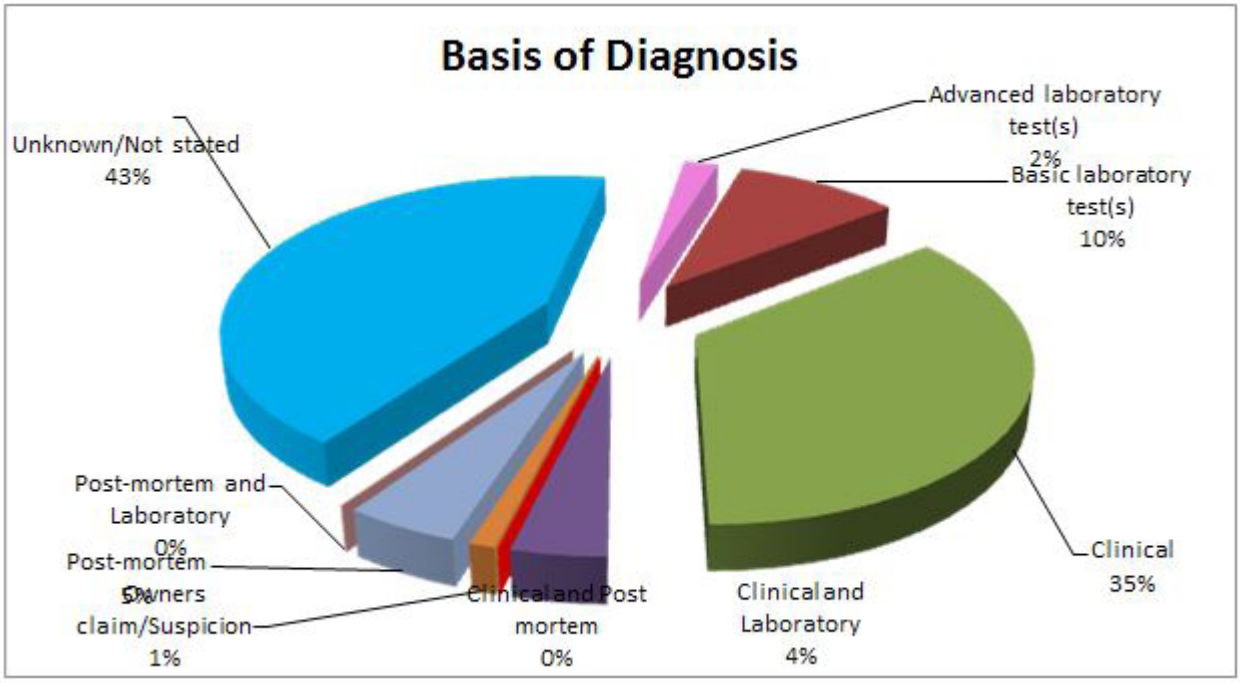


Figure 18: *Nature of disease outbreak investigation and confirmation by laboratory in 2014*

4. SITUATION OF MAJOR ANIMAL DISEASES IN 2014

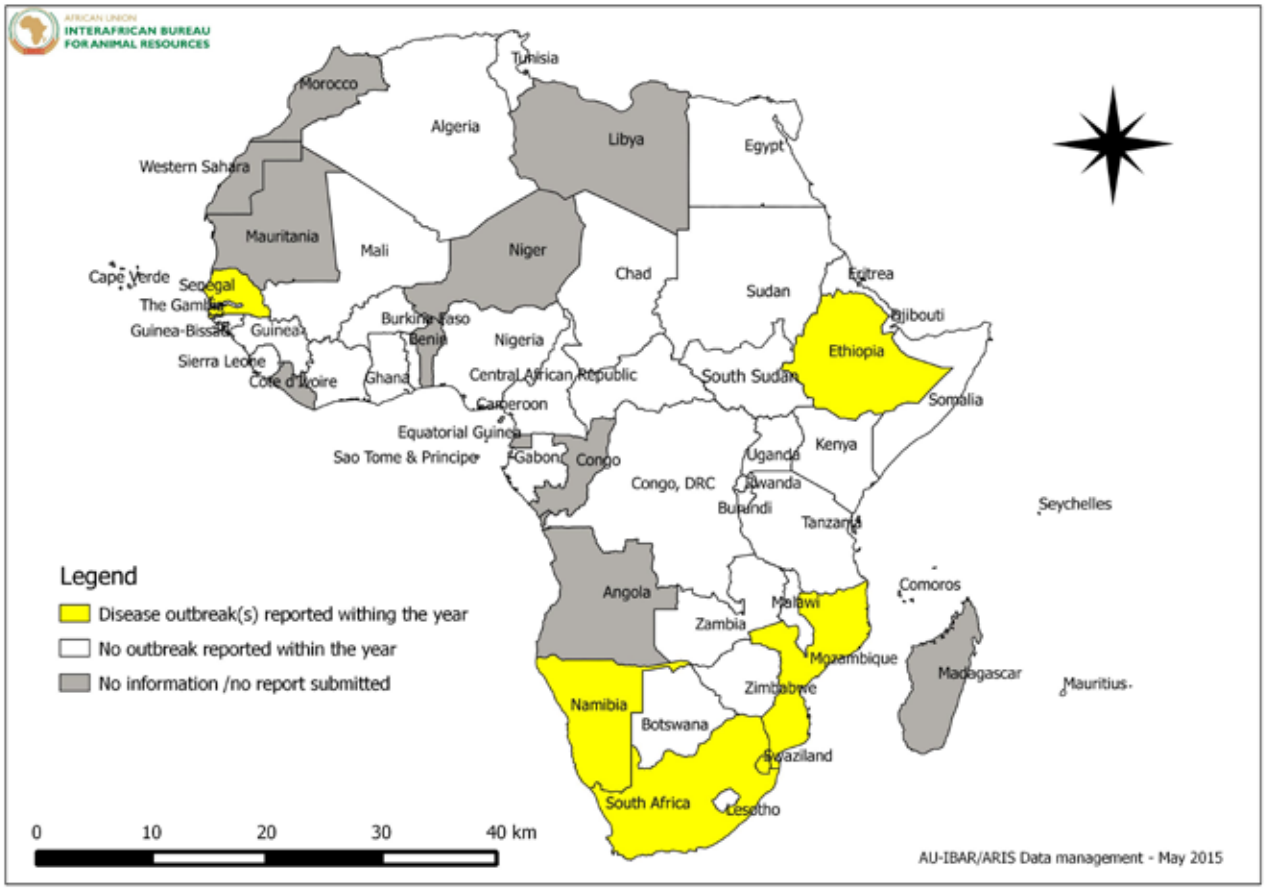
4.1. *African horse sickness (AHS)*

In 2014, a total of 296 AHS outbreaks were recorded in 6 countries, compared to 632 outbreaks from 4 countries in 2013 and 322 outbreaks from 6 countries in 2012. The affected countries in 2014 have been reporting ASF since 2008 underscoring the significance of the disease in those countries (see table 2 for the list of affected countries). Considering the importance of equine species for transportation, farming and racing, these countries need to step-up their efforts to reduce the impacts of AHS.

The highest number of AHS outbreaks was reported from South Africa with 258 (87.2%) outbreaks followed by Ethiopia with 29 (9.8%) reported outbreaks. Overall, during the period under report, ASF caused a fatality of 126 equines in the affected MS with mortality rate of 6.9% and case fatality rate of 25.3%.

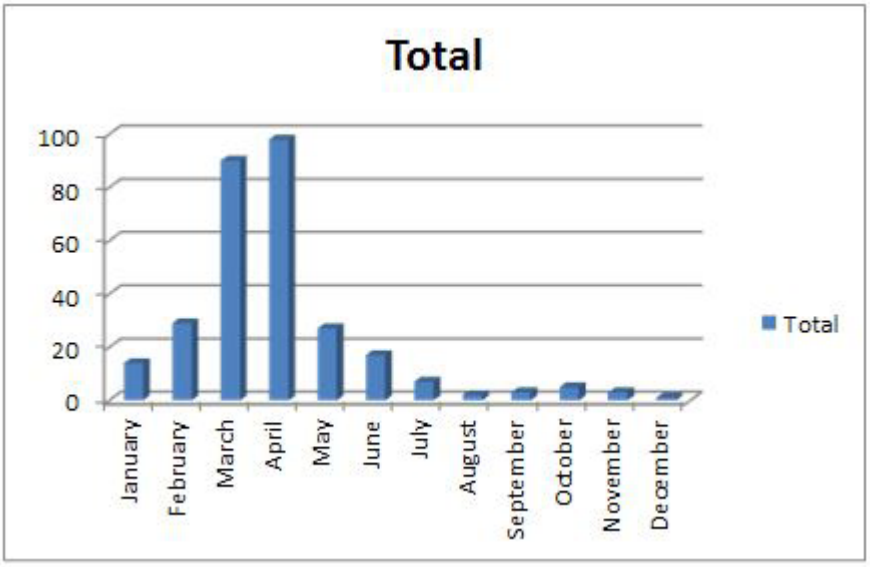
Table 2: *Countries reporting African horse sickness*

Country	Outbreak	Susceptible	Cases	Deaths	Slaughtered	Destroyed
Ethiopia	29	162	96	16	0	
Mozambique	2	61	2	2		
Namibia	4	35	6	2	0	0
Senegal	1	10	4	4	0	
South Africa	258	1546	387	100		2
Swaziland	2	13	4	2	0	0
Total	**296**	**1827**	**499**	**126**	**0**	**2**



Map 1: *Spatial distribution of African Horse Sickness in Africa in 2014*

In terms of temporal distribution, the highest number of outbreaks was reported in the month of April with 98 outbreaks (33.1%) followed by March with 90 (30.4%) outbreaks, a trend similar to the previous years (Chart 1 below). This trend may point out that the favorable predisposing factors that underpin occurrence and transmission of ASF in the affected MS are more prevalent in the months of March and April, especially in South Africa that represents 87.2% of the total reported outbreaks, Understanding such a temporal trend is extremely useful as it enables the affected MS to launch preventive measures before the season of high ASF incidence.



Month	Outbreaks
January	14
February	29
March	90
April	98
May	27
June	17
July	7
August	2
September	3
October	5
November	3
December	1
Total	**296**

Chart 1: *Monthly Distribution of AHS Outbreaks in the Affected Countries*

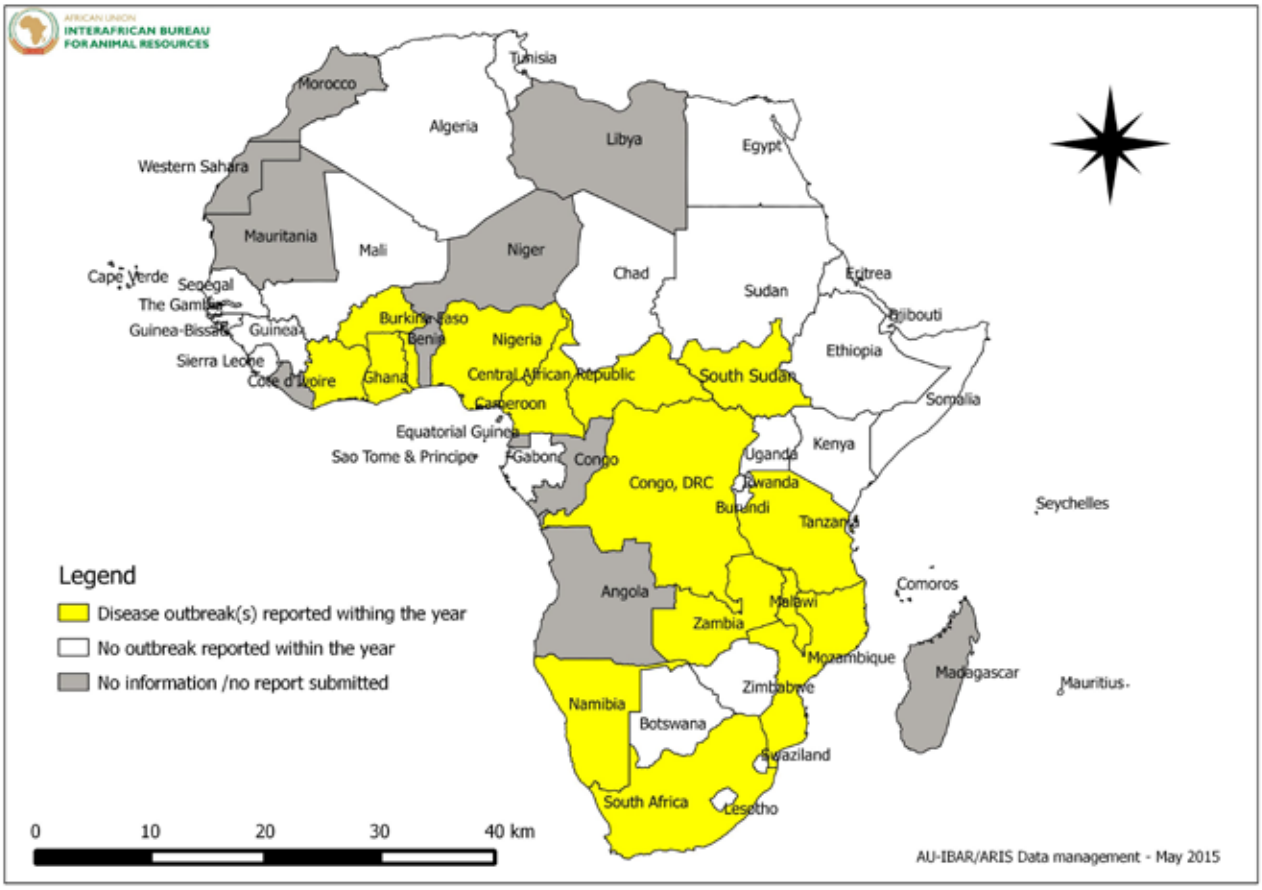
4.2. African swine fever

During the reporting period, ASF was reported in 14 countries affecting a total of 183 epidemiological units, a record less than by 49.3% from the previous year. The outbreaks caused 31,413 cases and 17,012 deaths, representing a case fatality rate of 54.2%. Except Benin and Uganda, all the MS that reported the disease in 2013 also reported in 2014 implying that ASF is entrenched in the pig population of those MS and little is being done to stop the impact of the disease. Exactly with similar trends as of the previous three years, the Democratic Republic of Congo registered the highest number of outbreaks (71) accounting for 38.8% of the total reported ASF outbreaks and 31.1% mortalities on the Continent underscoring the importance of the disease in the country.

Table 3: *Countries reporting African swine fever*

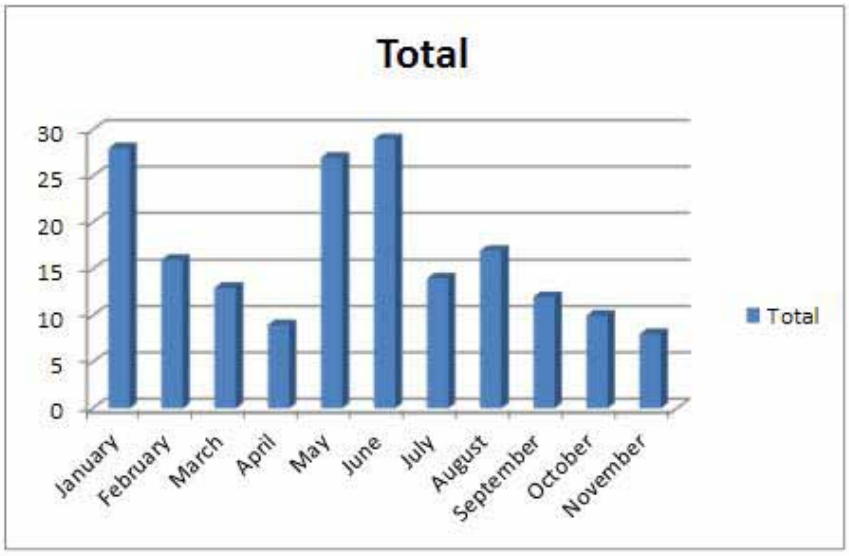
Country	Outbreak	Susceptible	Cases	Deaths	Slaughtered	Destroyed
Burkina Faso	7	7850	1168	751		
Cameroon	31	1453	1483	1042	411	
Central African Republic	4	6920	1110	975	0	0
Cote d'Ivoire	2	4649	2658	2658	1991	1991
Democratic Republic of Congo (DRC)	71	183655	9777	7768	240	2
Ghana	6	4585	943	943	0	204
Malawi	8	10626	4276	1091	6	4
Mozambique	3	284	36	30	0	
Namibia	1	707	707	700	0	0
Nigeria	5	707	301	185	88	0
South Africa	2	195	58	50		0

Country	Outbreak	Susceptible	Cases	Deaths	Slaughtered	Destroyed
Tanzania	13	32018	8015	174	0	0
Togo	17	1550	436	308	29	499
Zambia	13	5057	445	337	0	0
Total (14)	**183**	**260256**	**31413**	**17012**	**2765**	**2700**



Map 2: *Spatial distribution of African swine fever*

Unlike the situation in the previous years with ASF occurrence showing no special temporal trend, the monthly distribution of reported ASF outbreaks in 2014 showed highest number of ASF outbreaks in the months of January (15.3%), May (14.8%) and June (15.8%) suggesting the factors that determine occurrence of ASF are more prevalent in these months, especially in those MS with highest number of outbreaks (Cameroun and DRC).(see Chart 2).



Month	Outbreaks
January	28
February	16
March	13
April	9
May	27
June	29
July	14
August	17
September	12
October	10
November	8
Total	**183**

Chart 2: *Monthly Distribution of ASF Outbreaks in the Affected Countries*

4.3. Avian Influenza

Both highly pathogenic and low pathogenic avian influenza occurred in Africa during the reporting period. Egypt is the only country on the Continent that has been reporting highly pathogenic avian influenza (HPAI) due to H5N1 since 2009, whereas low pathogenic avian influenza (LPAI) has been reported in South Africa for the last four years in a row since 2011.

Egypt reported a total of 46 outbreaks of HPAI involving 1147 cases and 668 deaths of birds, representing a significant reduction in the number of outbreaks by 48.9% and 99.4% of cases from the previous year. Except for its apparent entrenchment in Egypt, the risk of HPAI occurrence has significantly reduced on the continent. The countries that reported occurrence of HPAI on the continent include Egypt (2009, 2010, 2011, 2012, 2013 and 2014), South Africa (2010, 2012) and Togo (2008).

Furthermore, 6 outbreaks of LPAI were reported in South Africa in 2014 involving a total of 306 cases and 159 mortalities of birds, representing a case fatality rate of 51.9%. The number of cases and deaths due to LPAI in South Africa also showed reduction by 94.2% and 89.1%, respectively from the previous year.

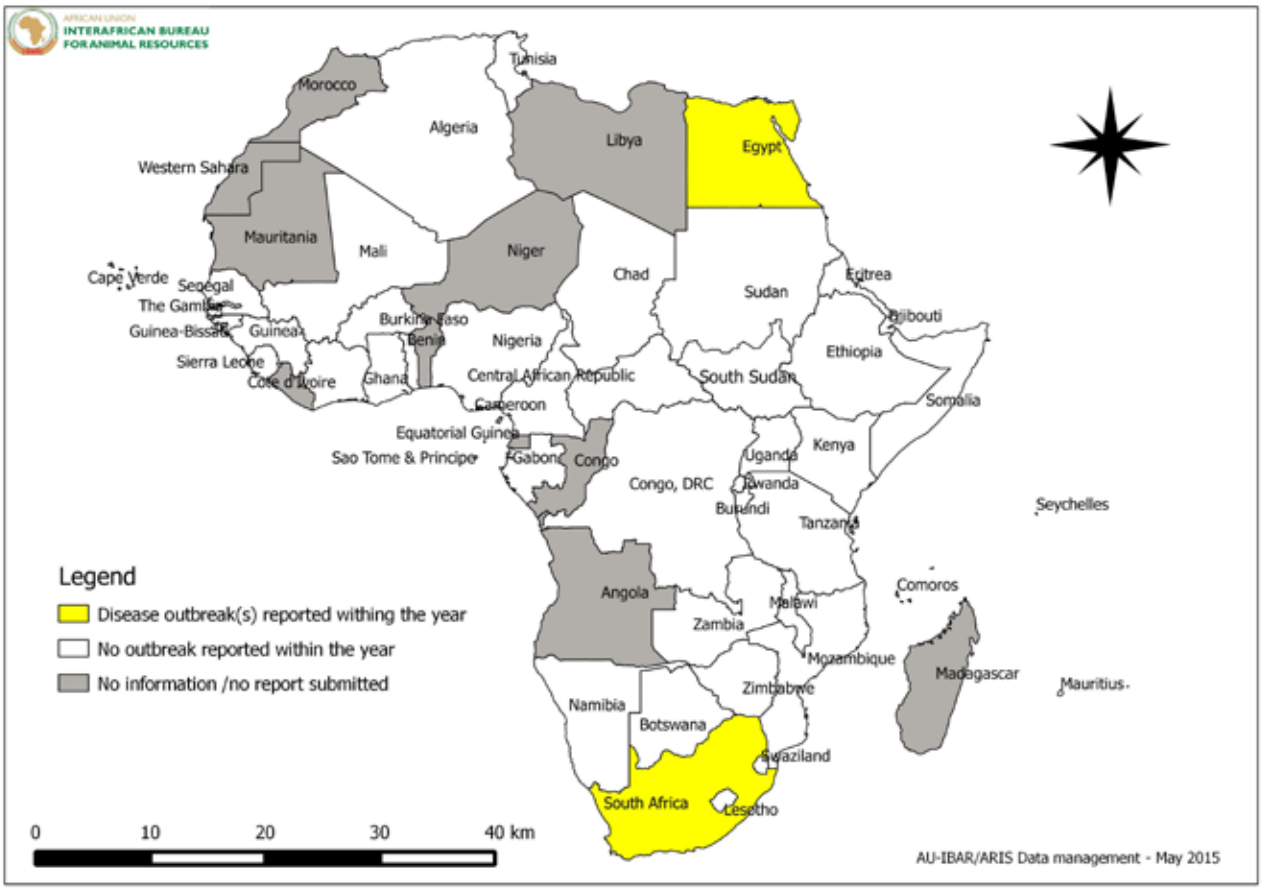
Table 4: *Countries reporting Avian Influenza (HPAI and LPAI respectively*

HPAI

Country	Outbreak	Susceptible	Cases	Deaths	Slaughtered	Destroyed
Egypt	46	24894	1147	668		24225
Total	**46**	**24894**	**1147**	**668**		**24225**

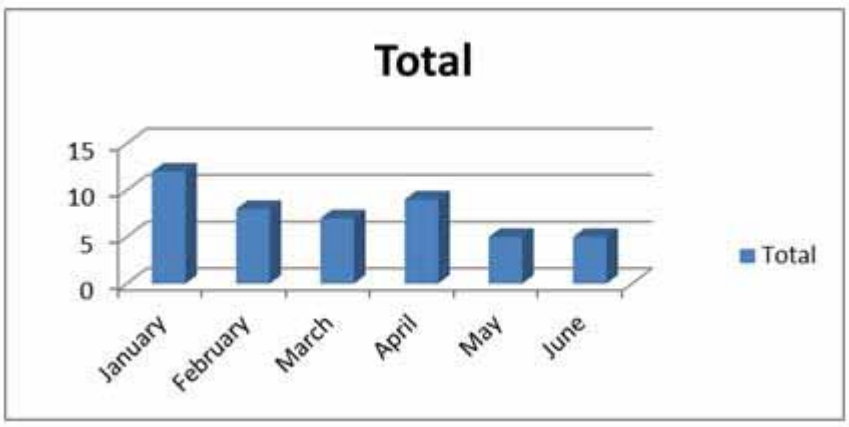
LPAI

Country	Outbreak	Susceptible	Cases	Deaths	Slaughtered	Destroyed
South Africa	6	1104	306	159		41
Total	**6**	**1104**	**306**	**159**		**41**



Map 2: *Spatial distribution of HPAI and LPAI in Africa in 2014*

The monthly distribution of HPAI outbreaks in Egypt showed that all the outbreaks occurred in the 1st semester of the year pointing perhaps to a relatively mild temperature experienced during this period (especially from November to April) as a favorable factor for the occurrence and distribution of the disease in the country.



Month	Outbreaks
January	12
February	8
March	7
April	9
May	5
June	5
Total	**46**

Chart 3: *Monthly Distribution of HPAI Outbreaks in Egypt*

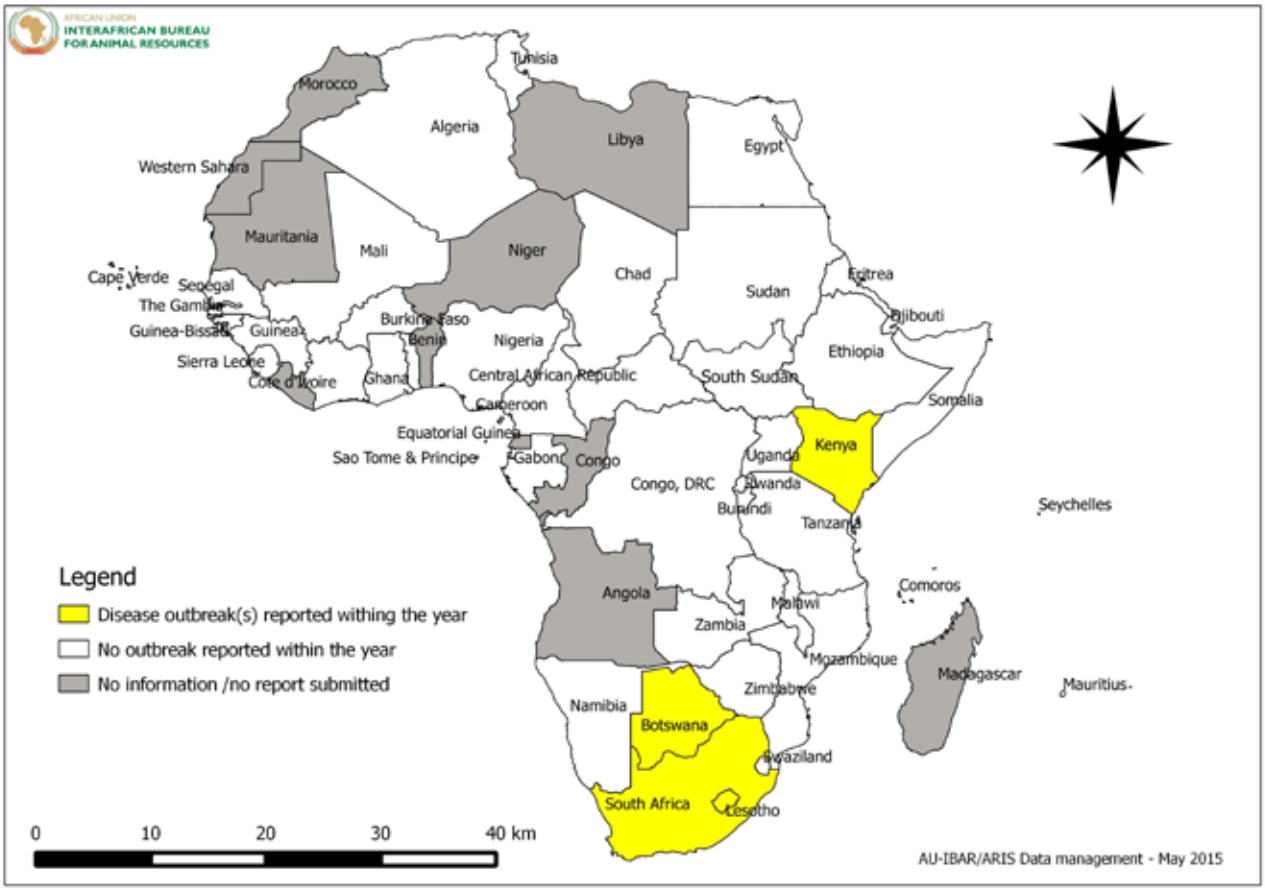
4.4 Bluetongue (BT)

Bluetongue was reported in four countries during the reporting period including Botswana, Kenya, Lesotho and South Africa. Three countries reported bluetongue in 2013, which include Lesotho, Namibia and Tunisia. Although bluetongue has been reported mainly in the Northern and Southern Africa regions since 2008, Kenya reported the disease in 2014 implying that bluetongue virus also circulates in the Eastern part of Africa.. Nine countries reported bluetongue since 2008 including Algeria, Botswana, Comoros, Kenya, Lesotho, Namibia, Tunisia, South Africa and Zimbabwe.

In 2014, the highest number of bluetongue outbreaks were reported by South Africa with 83 outbreaks (88.3%) followed by Lesotho (table 5).

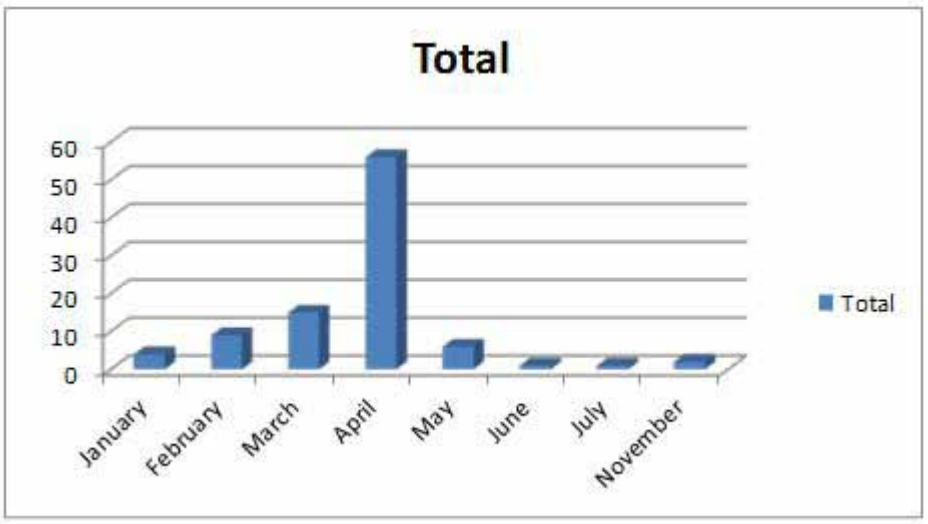
Table 5: *Countries reporting Bluetongue*

Country	Outbreak	Susceptible	Cases	Deaths	Slaughtered	Destroyed
Botswana	1	40	1	0		
Kenya	1	300	20	35	0	0
Lesotho	9	7229	48	0	0	0
South Africa	83	59094	711	261		0
Total	**94**	**66663**	**780**	**296**	**0**	**0**



Map 4: *Spatial distribution of Bluetongue*

The occurrence and distribution of bluetongue is underpinned by ecological factors (i.e. high rainfall, temperature, humidity and soil characteristics), hence occurrence of the disease has seasonal patterns. According to the reports submitted by Member States in 2014, the peak season for BT occurrence seems to be during the months of February to April with 85% of the total outbreaks occurring during this season (chart 4). This phenomenon can be attributed to the high shower experienced from December to April in the Southern Africa region, where 93% of the total outbreaks were reported.



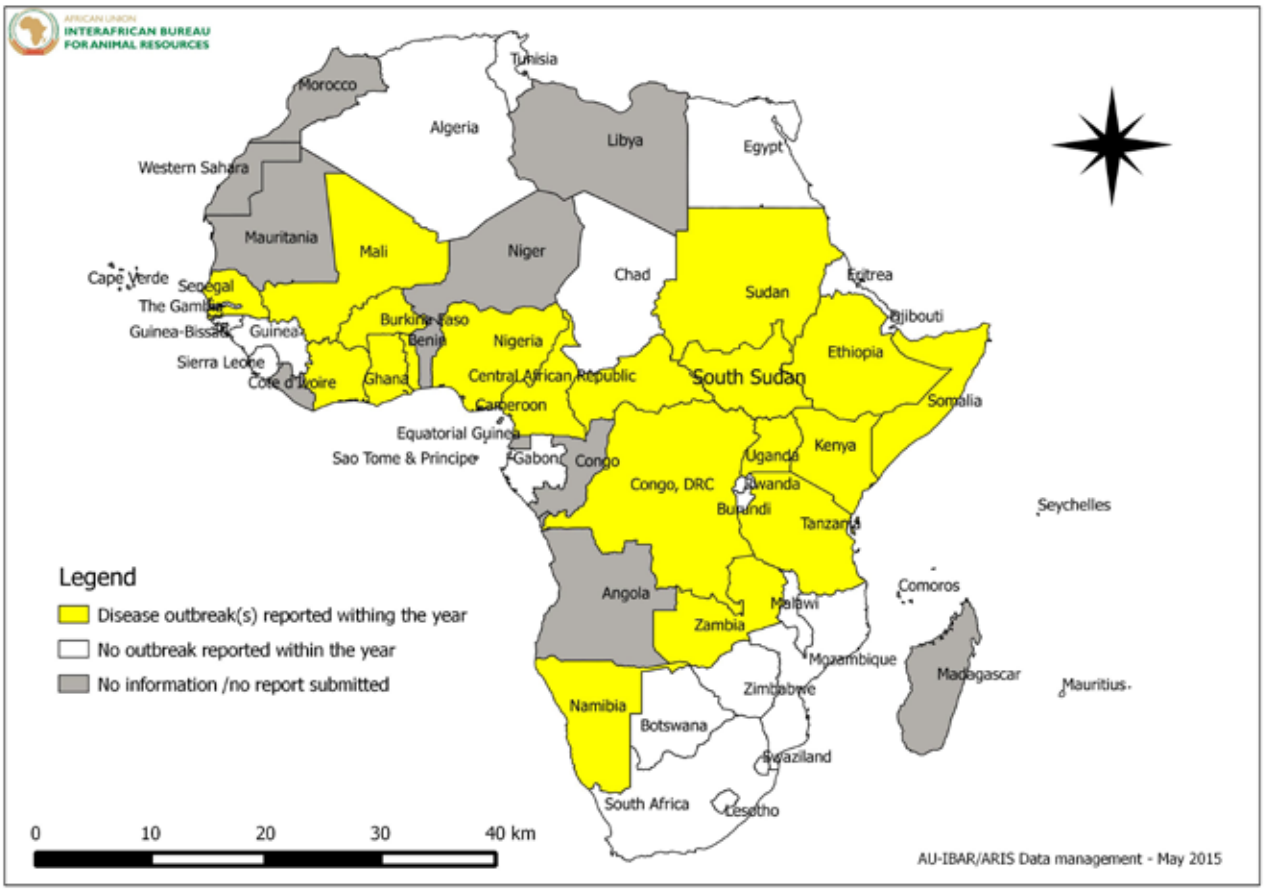
Month	Outbreaks
January	4
February	9
March	15
April	56
May	6
June	1
July	1
November	2
Total	**94**

4.5. Contagious Bovine Pleuropneumonia

The situation of CBPP in 2014 is not different from the previous years characterized by wide geographical distribution and large number of reported outbreaks. During the reporting period, CBPP was reported in nineteen countries involving mainly west and eastern Africa regions (map 5). In the year under report, 294 epidemiological units were affected by CBPP causing 10,569 cases and 3164 deaths, with an estimated case fatality rate of 29.9% (table 6). In comparison with the previous year, a decrease has been observed for the second time in the number of CBPP cases and deaths by 66.7% and 66.8%, respectively. The highest number of CBPP outbreaks were reported in Ghana with 104 (35.4%), followed by Cote d'Ivoire with 40 (13.6%) and Tanzania with 33 (11.2%) outbreaks, respectively. After experiencing CBPP in nearly four decades in 2012, Senegal continued reporting the disease in 2013 and 2014. Out the 22 countries that had reported in the previous year, only four including Benin, Guinea Conakry, Niger and Rwanda didn't report CBPP in 2014.

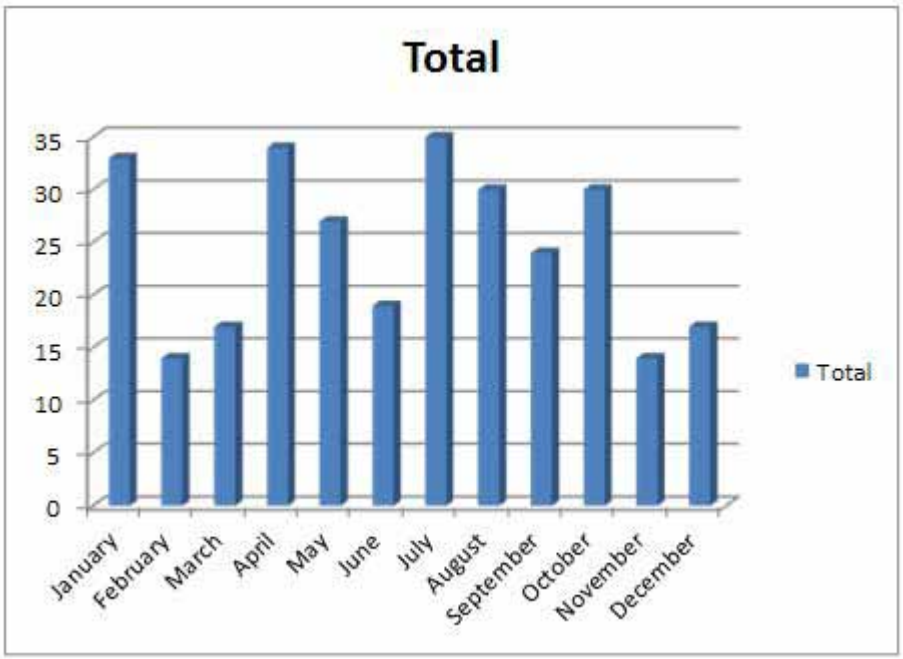
Table 6: *Countries reporting CBPP*

Country	Outbreak	Susceptible	Cases	Deaths	Slaughtered	Destroyed
Burkina Faso	2	9000	17	6		
Cameroon	2	126	3	0	0	
Central African Republic	12	31825	5975	1730	0	0
Cote d'Ivoire	40	4344	626	467		
Democratic Republic of Congo	16	39095	1161	448	567	0
Ethiopia	16	519	199	50	0	
Ghana	104	6093	224	3	429	0
Kenya	5	163	29	1	0	0
Mali	5	1724	90	59	17	
Namibia	1	10	3	2	0	0
Nigeria	4	7880	49	3	10	0
Senegal	4	808	78	36	0	
Somalia	3	363	7	2	2	2
South Sudan	15					
Sudan	2	550	43	13	6	0
Tanzania	33	85698	1692	261	0	0
Togo	8	289	88	18	30	5
Uganda	10	11982	135	0	0	0
Zambia	12	1126	150	65		
Total	**294**	**201595**	**10569**	**3164**	**1061**	**7**



Map 5: *Spatial distribution of CBPP*

In terms of seasonality, CBPP appears to have occurred throughout the year without significant variability among the different months, which was also more or less a similar trend in 2013. (chart 5).



Month	Outbreaks
January	33
February	14
March	17
April	34
May	27
June	19
July	35
August	30
September	24
October	30
November	14
December	17
Total	**294**

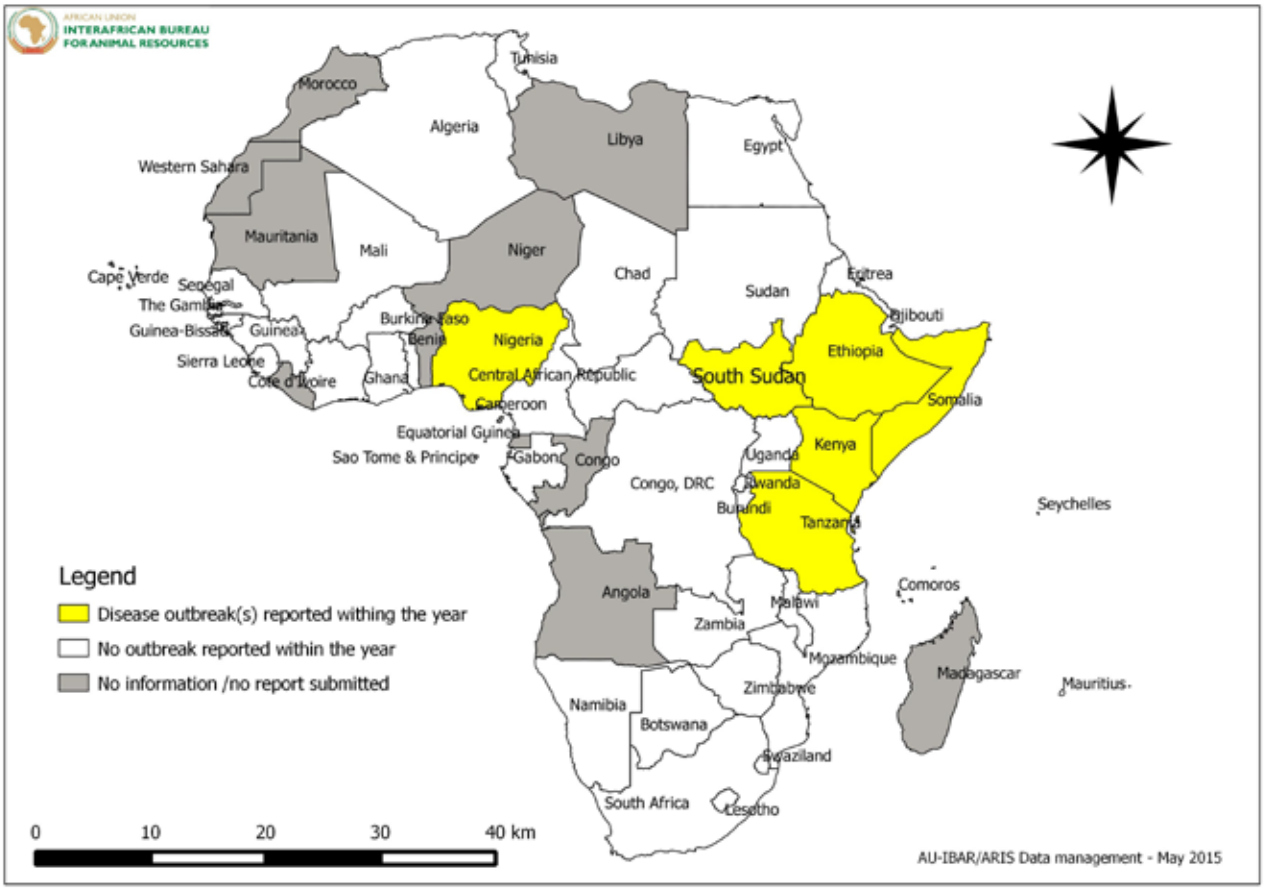
Chart 5: *Monthly Distribution of CBPP Outbreaks*

4.6. Contagious Caprine Pleuropneumonia

In 2014, CCPP was reported in six countries affecting 117 epidemiological units. Except Nigeria in West Africa, all the other CCPP affected countries are from East Africa including Ethiopia, Kenya, Somalia, South Sudan and Tanzania.(Map 6). The East Africa region seems to be the hotspot of CCPP occurrence on the Continent as most reported outbreaks over the past several years originated from this region. It is ;however, difficult to rule out the presence of CCPP in other parts of the continent as cases of under-reporting and adequate laboratory capacity may not be present to correctly diagnose the disease in many countries. On the other hand, misclassification of cases maybe a possible scenario if the basis of diagnosis for reported outbreaks is observation of clinical manifestations. Overall, CCPP caused 3729 cases and 594 mortalities of goats with a case fatality rate of 15.9% (table 7). The highest number of fatalities was reported in Kenya (41.1%) followed by Tanzania (28.4%) and Somalia (22.9%).

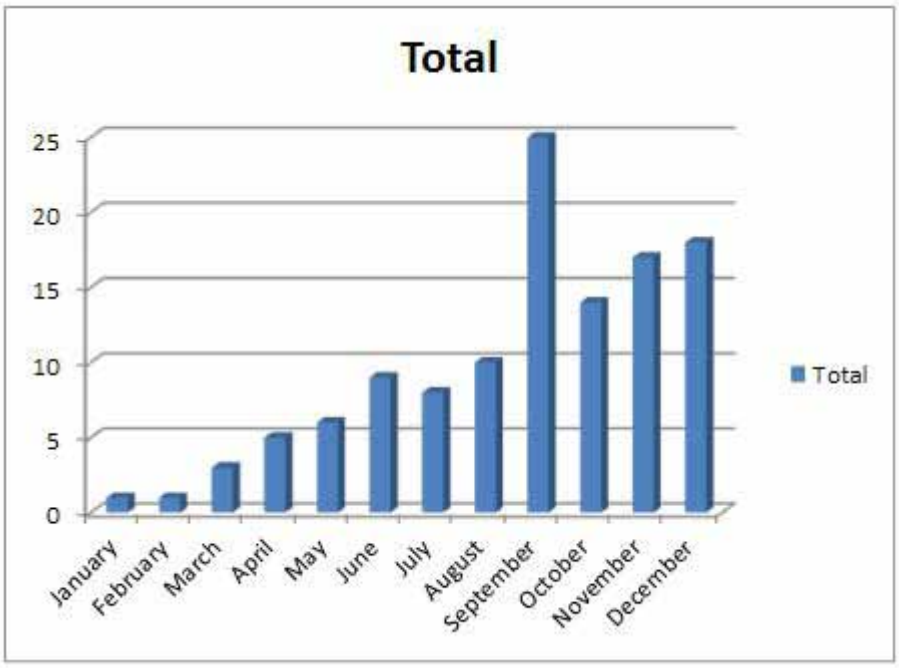
Table 7: *Countries reporting CCPP*

Country	Outbreak	Susceptible	Cases	Deaths	Slaughtered	Destroyed
Ethiopia	5	38	239	44	5	
Kenya	15	26494	974	244	0	0
Nigeria	1	40	8	1	4	
Somalia	74	23793	1690	136	46	22
South Sudan	16					
Tanzania	6	15519	818	169	0	0
Total	**117**	**65884**	**3729**	**594**	**55**	**22**



Map 6: *Spatial distribution of CCPP*

During the year under report, outbreaks of CCPP in the affected countries appeared to be higher in the months of September to December (Chart 6), a similar trend that was observed in 2012. However, reports from the same affected countries in 2013 showed higher incidence of CCPP outbreaks from January to March. . However, it should be noted that understanding the multiple risk factors that underpin occurrence of diseases couldn't be extrapolated from passive disease reports; rather would require structured longitudinal studies and application of multi-variant analytical tools.



Month	Outbreaks
January	1
February	1
March	3
April	5
May	6
June	9
July	8
August	10
September	25
October	14
November	17
December	18
Total	**117**

Chart 6: *Monthly Distribution of CCPP Outbreaks*

4.7. Foot and Mouth Disease

Foot and Mouth Disease occurred in 26 countries in 2014 representing a 13% increase in the number of affected countries from the previous year. FMD is the second most widely distributed TAD on the African continent after ND (map 7).

A total of 1246 outbreaks of FMD were reported from 26 countries in 2014, marking a 118.6% increase in the number of outbreaks from the previous year. During the year under report, a total of 56,042 cases leading to 948 deaths were reported from the infected countries, with an estimated case fatality rate of 1.77%. Burkina Faso (350) followed by DRC (189) and Algeria (162) reported the highest number of fatalities (Table 8).

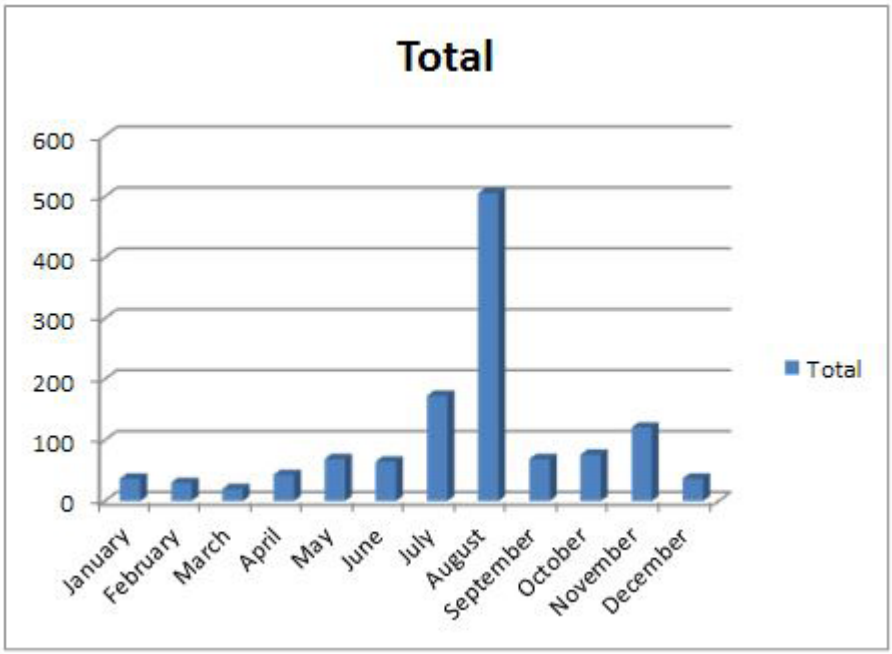
Table 8: *Countries reporting FMD*

Country	Outbreak	Susceptible	Cases	Deaths	Slaughtered	Destroyed
Algeria	414	7083	2755	162	6508	413
Botswana	3	4130	114	0	0	0
Burkina Faso	194	397760	29565	350		
Burundi	1	1000	12	7	1	
Cameroon	9	623	236	12	2	
Central African Republic	1	2600	450	20	0	0
Cote d'Ivoire	5	311	42	8		
Democratic Republic of Congo	6	16535	1993	189	777	0
Egypt	53	5707	1071	33		
Eritrea	2	1000	5	2		

Country	Outbreak	Susceptible	Cases	Deaths	Slaughtered	Destroyed
Ethiopia	7	11	127	2	2	
Ghana	9	2756	146	4	3	0
Kenya	48	474563	3058	25	0	0
Mali	7	7361	216	11	0	0
Namibia	3	2537	38	0	0	0
Nigeria	9	629	132	4	25	0
Senegal	4	187	17	0	0	
Somalia	24	1254	247	5	0	0
South Africa	5	0	42	0		2
South Sudan	5	750000	95	29	0	0
Sudan	6	6043	1254	15	0	0
Tanzania	14	38350	1414	41	0	0
Togo	14	4028	249	5	46	
Tunisia	142	7925	1162	1	9	0
Uganda	8	10993	65	0	0	0
Zimbabwe	253	325567	11537	23	0	0

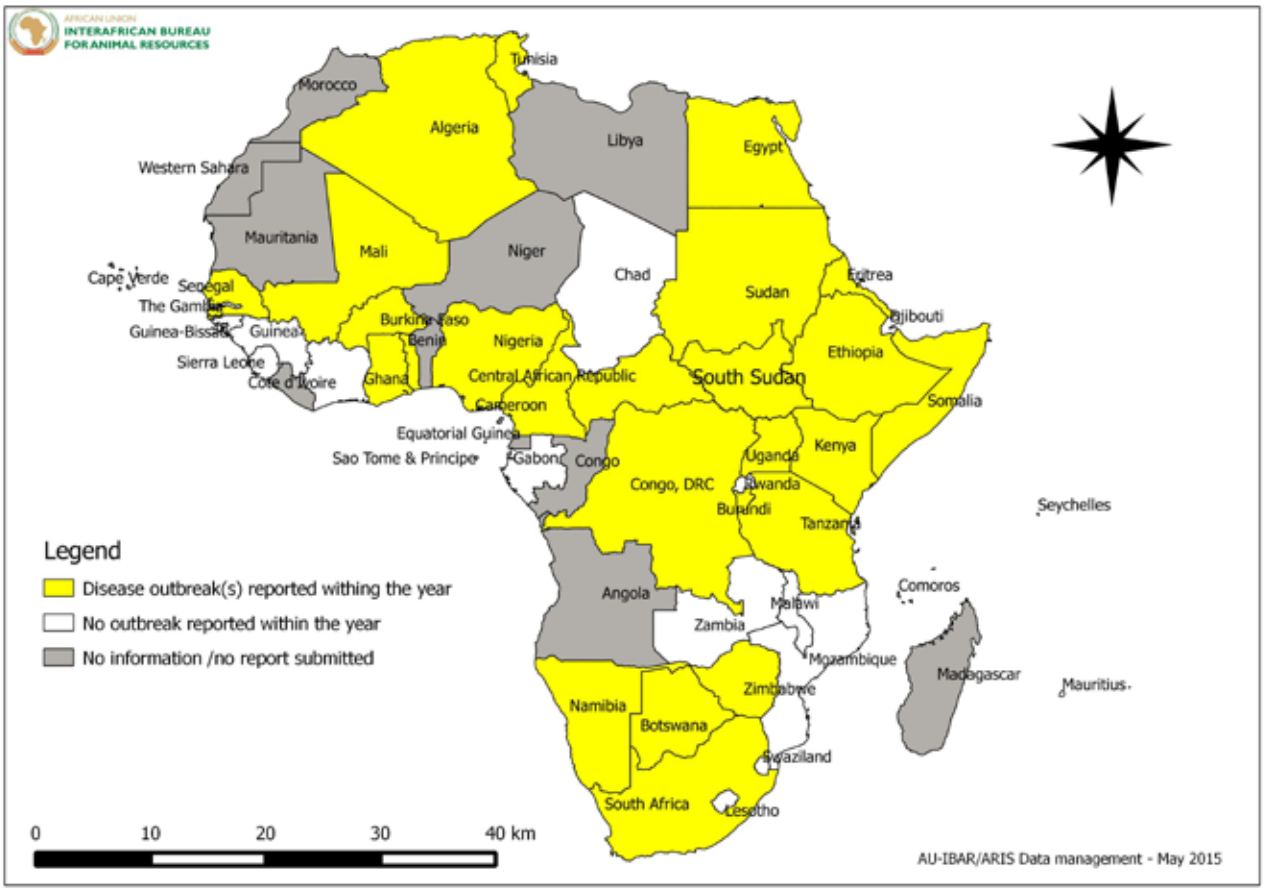
In the year under report, FMD outbreaks were reported in different species of animals including bovine, buffaloes, caprine, ovine and porcine.

Based on the reports received from the affected MS, the highest number of FMD outbreaks was reported in August followed by July and November (Chart 7). It is difficult to explain this kind of trend and draw plausible conclusion unless a comprehensive study is undertaken to understand the main risk factors underpinning FMD's temporal distribution in the affected countries.



Month	Outbreaks
January	37
February	30
March	20
April	43
May	69
June	65
July	173
August	506
September	69
October	76
November	121
December	37
Total	**1246**

Chart 7: *Monthly Distribution of FMD Outbreaks*



Map 7: *Spatial distribution of FMD*

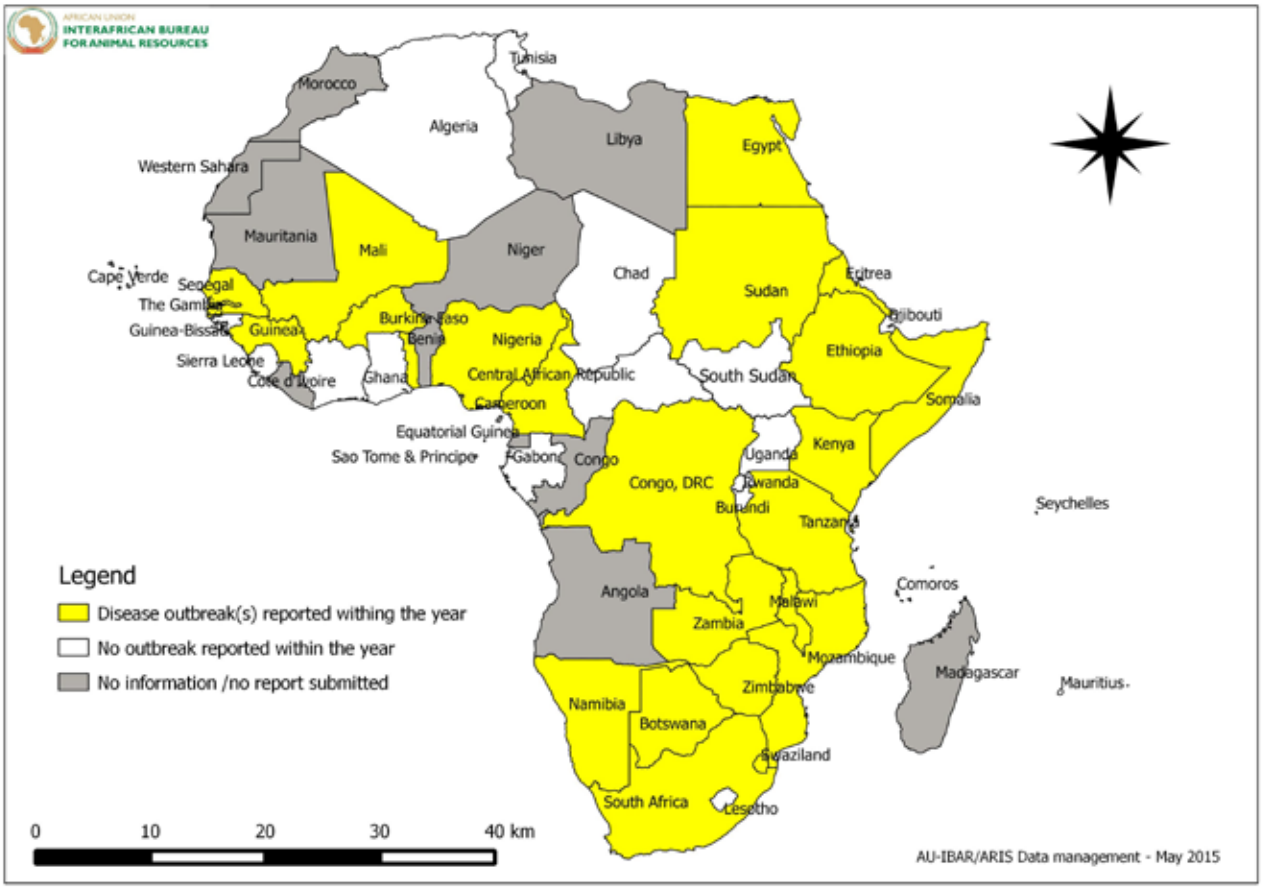
4.8 Lumpy Skin Disease

Lumpy skin disease was reported by 24 African countries in 2014, representing a 4% decrease from the previous year (table 10). The disease covered all the geographical regions of Africa, making it as the fourth most widely distributed TAD on the continent after ND, FMD and PPR (map 8). A total of 2758 epidemiological units were affected by LSD involving 24,654cases and 4857 deaths. Zimbabwe reported the he highest number of outbreaks (75%) followed by Ethiopia (4.75%) and South Africa (4.4%). However, the highest number of fatalities was recorded in Swaziland (73.4%) from only 76 outbreaks (2.76% of total outbreaks) while Zimbabwe reported only 587 mortalities (12.1%) from 2069 outbreaks (75% of total outbreaks) highlighting variability in the severity of the disease in different populations.

Table 10: *Countries reporting LSD*

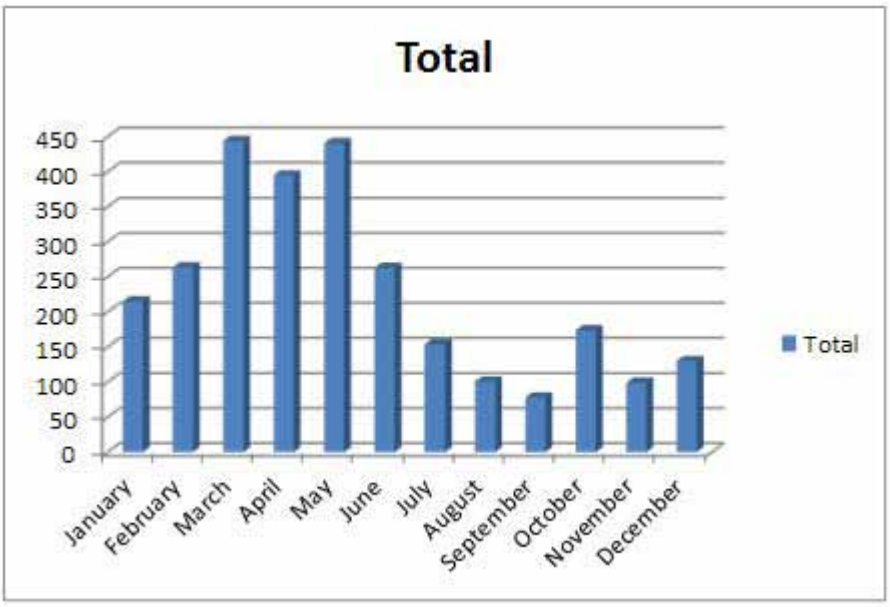
Country	Outbreak	Susceptible	Cases	Deaths	Slaughtered	Destroyed
Botswana	1	26	1	0		
Burkina Faso	52	95300	1388	62		
Cameroon	3	68	30	0	0	
Democratic Republic of Congo	22	38442	648	0	615	3
Egypt	12	139	27	1		
Eritrea	1	1340	440	205		
Ethiopia	131	4292	1600	158	2	
Guinea	7	382	42	16		
Kenya	19	134280	189	6	0	6
Malawi	2	6437	43	0	0	
Mali	1	350	7	0	1	

Country	Outbreak	Susceptible	Cases	Deaths	Slaughtered	Destroyed
Mozambique	1	3228	12	0		
Namibia	3	299	6	0	0	0
Nigeria	80	352	80	5	11	0
Senegal	4	800	212	7	0	
Somalia	28	1390	126	11	0	0
South Africa	122	31169	629	11		0
Sudan	3	1353	33	3	0	0
Swaziland	76	76766	5492	3563	0	1
Tanzania	30	151998	1218	202	0	0
The Gambia	3	145				
Togo	8	352	29	0	9	
Zambia	80	8698	837	20	0	0
Zimbabwe	2069	1528580	11565	587	8	0
Total	**2758**	**2086186**	**24654**	**4857**	**646**	**10**



Map 8: *Spatial distribution of LSD in 2014 in Africa.*

Although LSD seems to have occurred throughout the year, a higher incidence of outbreaks was observed during the months of January to June consistent with the trend during the previous three years, which may be attributed to high vector activity in the severly affected countries during this period (Chart 8).



Month	Outbreaks
January	215
February	264
March	444
April	395
May	441
June	263
July	154
August	101
September	78
October	174
November	99
December	130
Total	**2758**

Chart 8: *Monthly Distribution of LSD Outbreaks*

4.9. Newcastle Disease

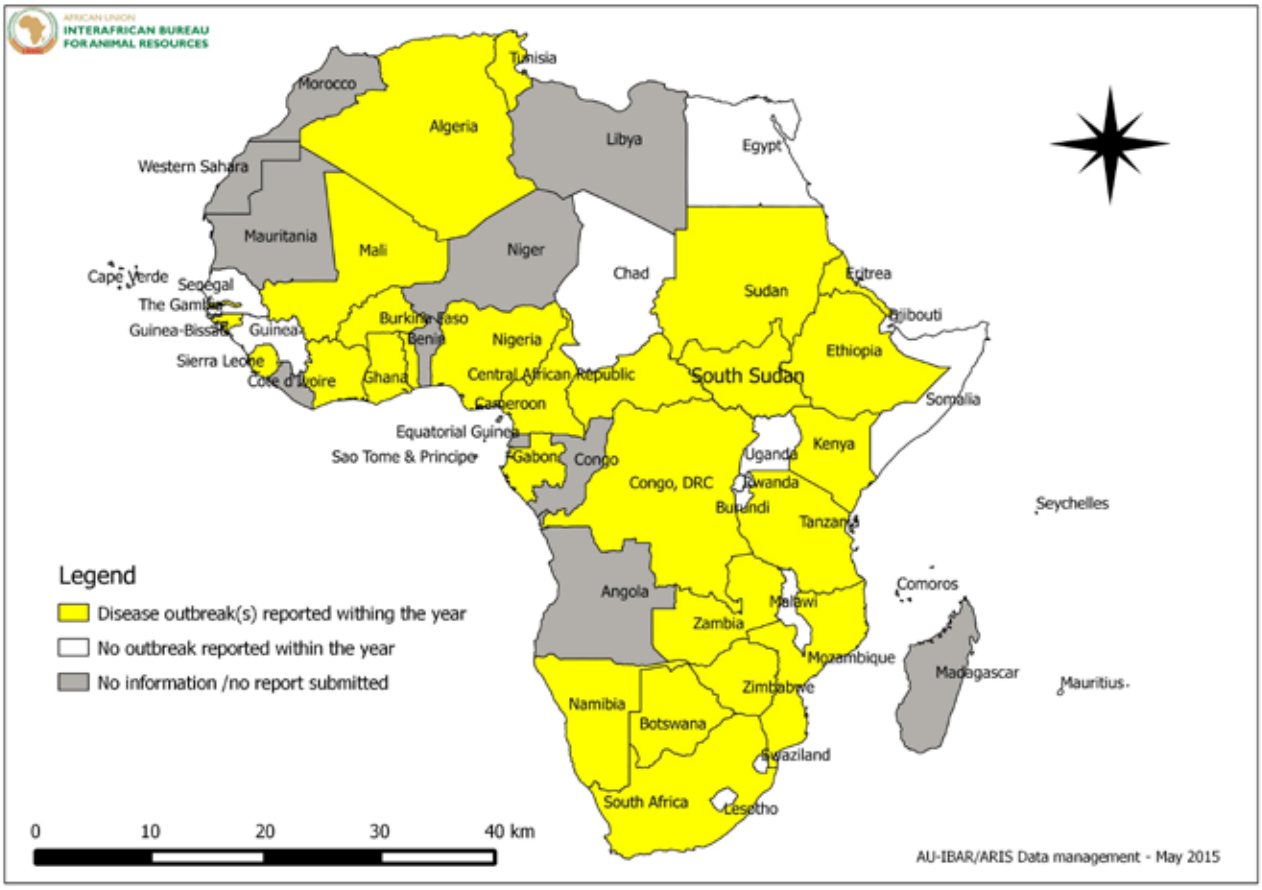
Newcastle disease is the most widely distributed TAD on the continent reported by 27 African countries covering the west, central, east and southern Africa regions in 2014, a trend similar to the previous years (Map 9). Overall, the disease affected a total of 797 epidemiological units, representing a 32.9% reduction from last year. During the year under report, ND caused 701703 cases and 484911 deaths with an estimated case fatality rate (CFR) of 69.1%, which represents a 38% and 51.1% reduction in the number of cases and deaths, respectively from the previous year.

The four countries with the highest number of reported ND outbreaks include Zambia (137), Ghana (127), South Africa (86) and Botswana (82).

Table 11: *Countries reporting ND*

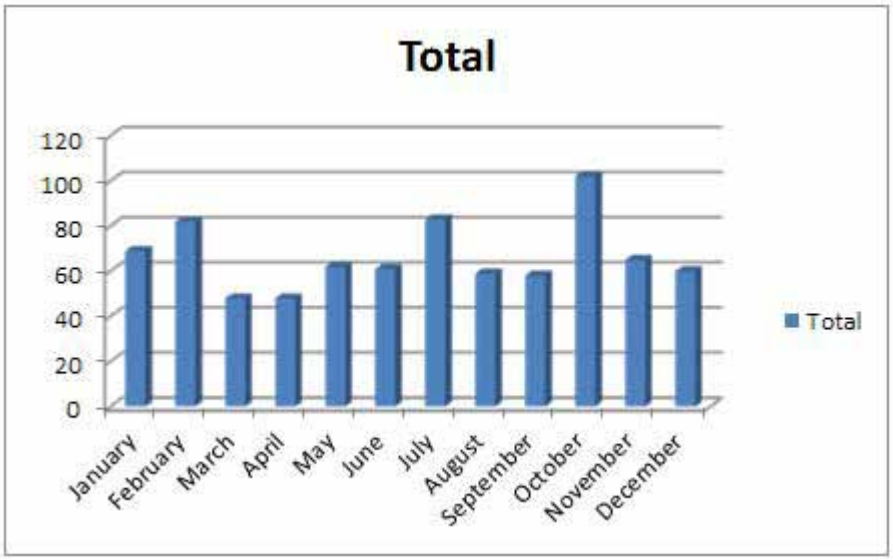
Country	Outbreak	Susceptible	Cases	Deaths	Slaughtered	Destroyed
Algeria	4	200100	416200	273458	580	73845
Botswana	82	62327	6454	2661	0	0
Burkina Faso	60	90610	7216	3916		
Cameroon	11	2093	1786	500	2	
Central African Republic	15	44658	12775	7700	0	0
Cote d'Ivoire	6	675	197	197		
Democratic Republic of Congo	26	76240	7438	6585	107	91
Eritrea	3	47000	1220	300		
Ethiopia	46	590	2976	1236	6	
Gabon	1	1075	85	4	0	0
Ghana	127	571696	28797	6555	442	0
Guinea Bissau	2	86	46	42	0	
Kenya	2	1600	205	39	0	0
Mali	1	5400	270	198	12	
Mozambique	8	30340	1430	541	264	625
Namibia	3	138	138	108	0	0
Nigeria	38	98939	1629	562	112	5
Sierra Leone	3	115	421	97	0	0
South Africa	86	2106662	89876	121250		248863

Country	Outbreak	Susceptible	Cases	Deaths	Slaughtered	Destroyed
South Sudan	20	195	155	72	52	0
Sudan	2	3267	2	1	0	0
Tanzania	11	56081	1431	971	0	0
The Gambia	6	206				
Togo	8	12055	1283	198	63	1082
Tunisia	24	245414	64388	42259	2730	0
Zambia	137	171145	50304	10921	0	0
Zimbabwe	65	42442	4981	4540	0	0
Total	797	3871149	701703	484911	4370	324511



Map 9: *Spatial distribution of ND during 2011*

Although the highest number of outbreaks was reported in October (12.8%), ND occurred throughout the year without significant monthly variability and temporal pattern. This may point to the lack of seasonality for the risk factors that underpin the occurrence and maintenance of the disease (Chart 9).



Month	Outbreaks
January	69
February	82
March	48
April	48
May	62
June	61
July	83
August	59
September	58
October	102
November	65
December	60
Total	**797**

Chart 9: *Monthly Distribution of ND Outbreaks*

4.10. Peste des Petits Ruminants

In 2014, PPR was reported from 25 MS making it the third widely distributed TAD on the continent. Most of the reporting countries in 2014 also recorded the disease in the previous years (Map 10).

The disease has affected a total of 596 epidemiological units, which is lower by 53.3% from the previous year. Concurrently, the number of cases and deaths caused by PPR was also reduced by 68.4% (36193) and 79.3% (14979), respectively The three countries with the highest number of fatalities due to PPR are Central African Republic (6150), DRC (5812) and Burkina Faso (582). (table 12).

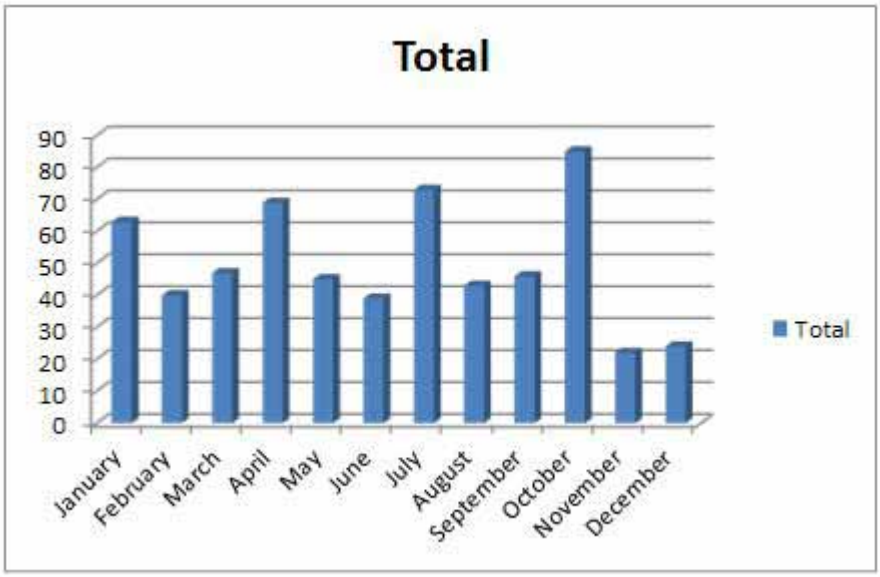
Table 12: *Countries reporting PPR*

Country	Outbreak	Susceptible	Cases	Deaths	Slaughtered	Destroyed
Burkina Faso	17	29710	1707	582		
Cameroon	18	446	263	38	5	
Central African Republic	25	58002	19515	6150	0	0
Cote d'Ivoire	24	1266	512	320		
Democratic Republic of Congo	67	155187	6298	5812	48	0
Egypt	8	715	144	4		
Eritrea	6	41162	680	295		
Ethiopia	83	1044	1281	359	4	
Gabon	10	1075	85	0	0	0
Ghana	37	6387	479	105	4	0
Guinea	25	6772	382	174	37	1
Guinea Bissau	4	720	380	149	0	0
Kenya	9	9895	468	128	0	0
Mali	1	105	19	13	2	
Nigeria	144	9447	756	92	90	11
Senegal	4	794	86	35	0	
Sierra Leone	3	56	45	25	0	0
Somalia	32	14860	353	75	47	34
South Sudan	23	3746	153	95	0	0
Sudan	14	110796	605	300	3	0
Tanzania	2	4474	35	12	0	0

Country	Outbreak	Susceptible	Cases	Deaths	Slaughtered	Destroyed
The Gambia	8	172				
Togo	10	2156	245	112	141	10
Tunisia	20	47432	929	14	824	68
Uganda	2	1321	773	90	0	0
Total	596	507740	36193	14979	1205	124

Map 10: Spatial distribution of PPR

Based on the monthly reports submitted by MS, PPR didn't show any defined temporal trend in the monthly incidence of outbreaks having occurred throughout the year without significant variability (Chart 10).



Month	Outbreaks
January	63
February	40
March	47
April	69
May	45
June	39
July	73
August	43
September	46
October	85
November	22
December	24
Total	**596**

Chart 10: *Monthly Distribution of PPR Outbreaks*

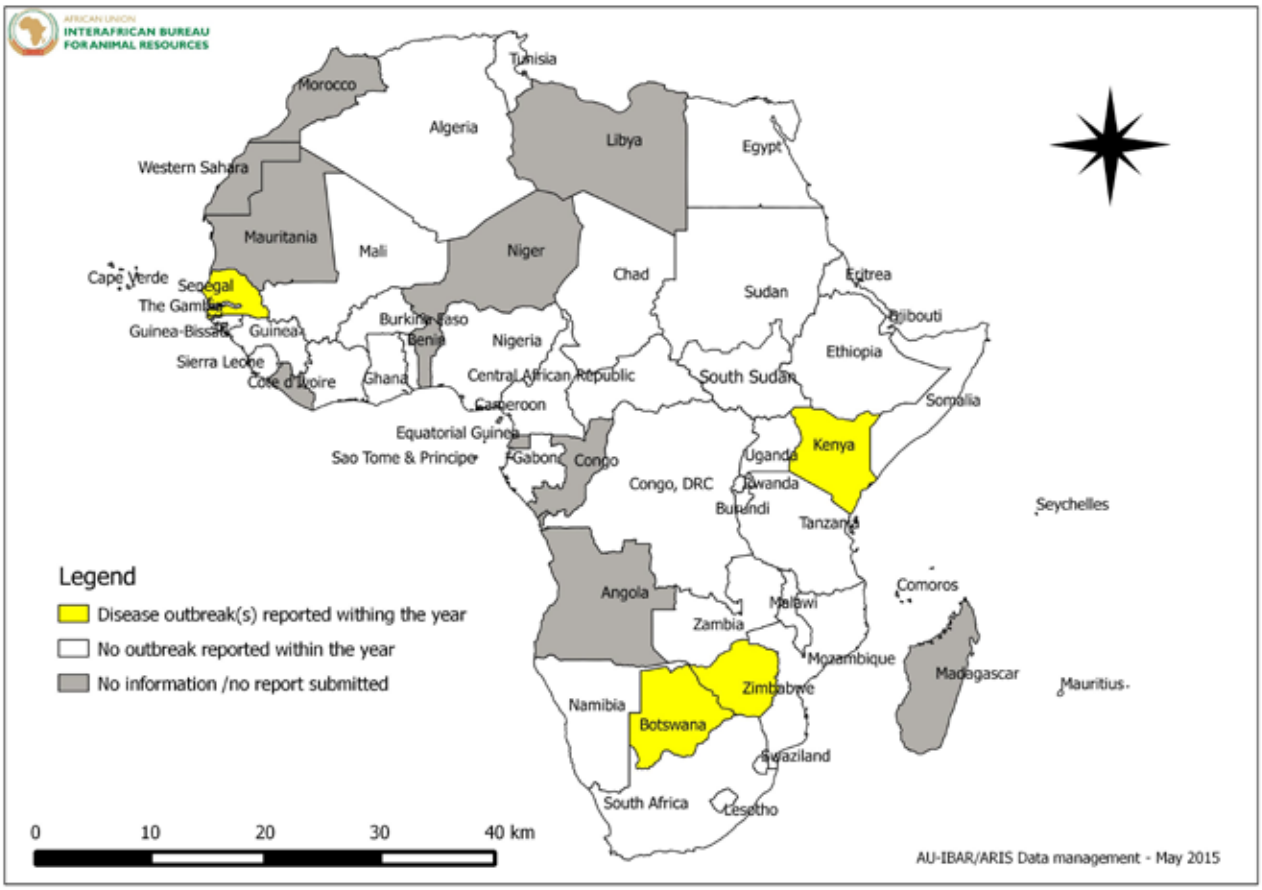
4.11. Rift Valley fever

During the year under report, four countries including Botswana, Kenya, Senegal and Zimbabwe reported RVF. Kenya has been reporting the disease in the last three years since 2012..

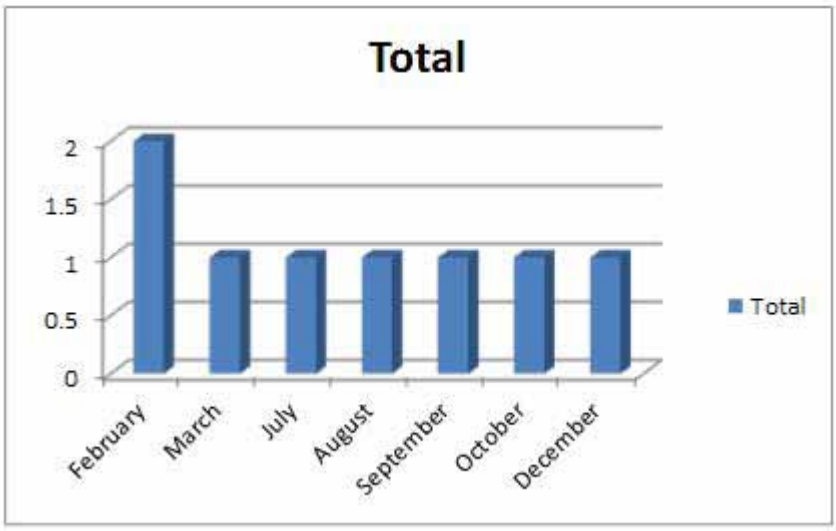
During the reporting period, a total of 8 outbreaks involving 31 cases and 3 deaths were reported in the four affected countries.

Table 13: *Countries reporting RVF*

Country	Outbreak	Susceptible	Cases	Deaths	Slaughtered	Destroyed
Botswana	3	51	8	1		
Kenya	2	229	19	2	0	0
Senegal	1	65	1	0		
Zimbabwe	2	5	3	0	0	0
Total	**8**	**350**	**31**	**3**	**0**	**0**



Map 11: *Spatial distribution of RVF*



Month	Outbreaks
February	2
March	1
July	1
August	1
September	1
October	1
December	1
Total	**8**

Chart 11: *Monthly Distribution of RVF Outbreaks*

RVF occurrence is associated with exceptional environmental phenomenon such as sustained above normal rainfall and flooding. The last major outbreak of RVF in Kenya was experienced in 2006 following the occurrence of El Nino – ENSO in the Greater Horn of Africa. However, it's not clear what environmental factors triggered the outbreaks of RVF in Kenya in 2012, 2013 and 2014.

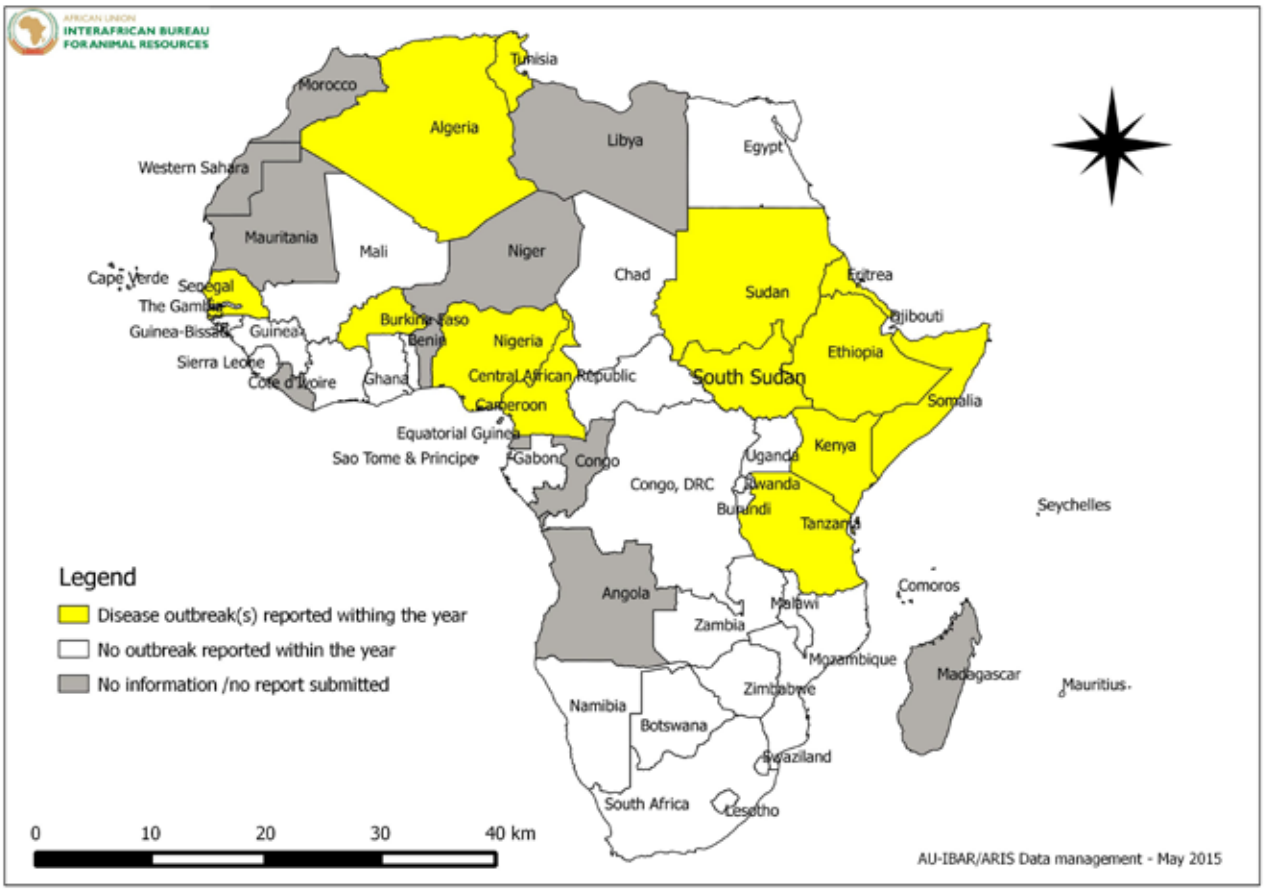
4.12. Sheep Pox and Goat Pox

In 2014, thirteen countries reported occurrence of SGP in their territories with 8.3% increase from the previous. (Table13 and Map 11). The three countries that recorded the highest number of outbreaks in 2014 include Tunisia (245), Ethiopia (139) and Algeria (79). Overall, a total of 578 epidemiological units were affected on the continent causing 6698 cases and 857

deaths during the year under report. The disease caused less direct losses than the previous year with reported number of cases and deaths both reduced by 64.8%.

Table 14: *Countries reporting sheep pox and goat pox*

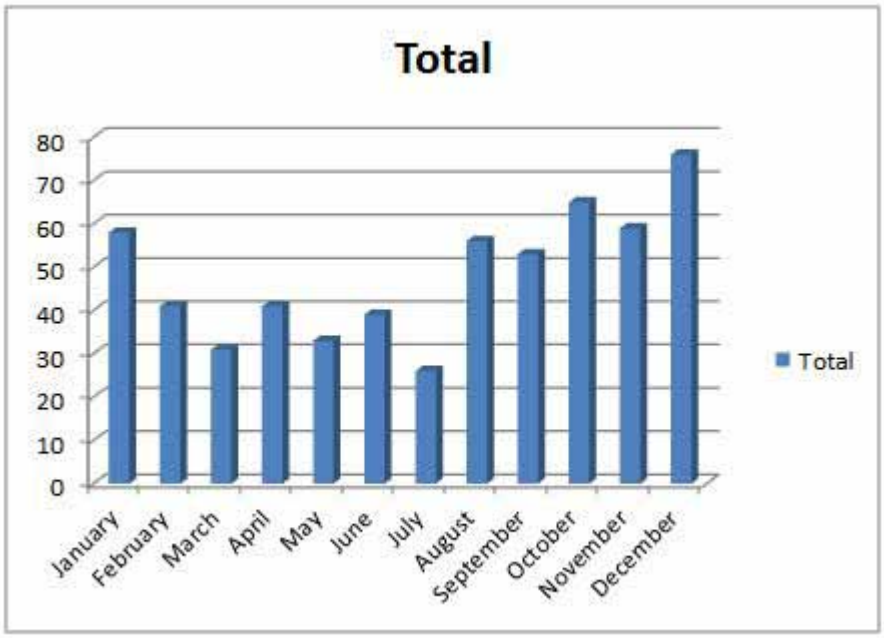
Country	Outbreak	Susceptible	Cases	Deaths	Slaughtered	Destroyed
Algeria	79	13531	888	65	0	4
Burkina Faso	6	4400	191	13		
Cameroon	8	2348	124	15	0	
Eritrea	3	11200	807	142		
Ethiopia	139	647	2094	312	25	
Kenya	4	50544	43	3	0	0
Nigeria	1	367	50	2	1	0
Senegal	2	4173	110	23		
Somalia	64	15016	921	123	44	18
South Sudan	5					
Sudan	20	43603	471	95	0	0
Tanzania	2	865	4	0	0	0
Tunisia	245	29446	995	64	0	0
Total	**578**	**176140**	**6698**	**857**	**70**	**22**



Map 12: *Spatial distribution of SGP during 2014 in Africa.*

The highest number of SGP outbreaks was recorded in the months of August to January. However, like many other TADs, the monthly SGP incidence did not show a significant temporal pattern with outbreaks reported throughout the year with no marked seasonal variability (Chart 11). It is difficult to extrapolate patterns of diseases and provide plausible explanation for observed

trends using passive reports. Understanding of temporal and spatial distribution of infectious diseases requires in-depth and structured longitudinal and cross-sectional studies.



Month	Outbreaks
January	58
February	41
March	31
April	41
May	33
June	39
July	26
August	56
September	53
October	65
November	59
December	76
Total	**578**

Chart 12: *Monthly Distribution of SGP Outbreaks*

5. SITUATION OF OTHER IMPORTANT DISEASES IN AFRICA IN 2014

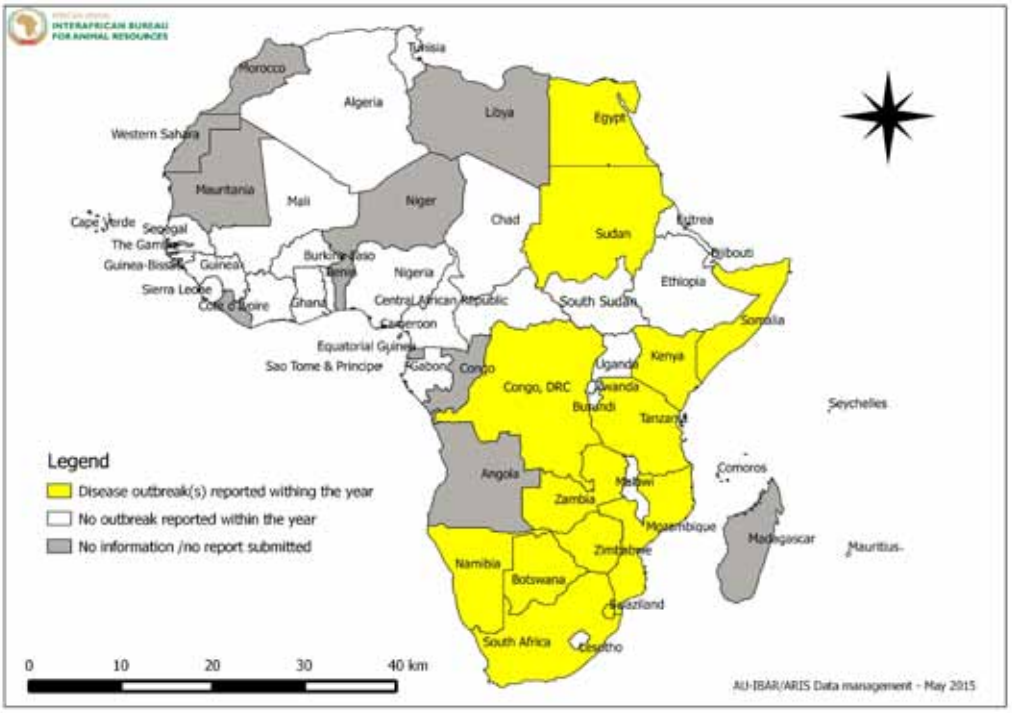
5.1 Anaplasmosis

Similar to the previous year 2013, Anaplasmosis was exactly reported in 14 countries in Africa in 2014 -down from 16 countries in 2012-with 1649 outbreaks involving 15,929,943 susceptible animals, 6673 cases and 1199 mortalities. As in 2013, Zimbabwe reported the highest number of outbreaks 81.50% followed by Zambia 7,4% and Egypt 4.67%The geographical distribution of the disease (Map 13) showed that it was mainly recorded in the eastern and southern parts of the continent. The monthly distribution of the disease indicated that major outbreaks are mainly recorded in March, May-June and November (Chart 13).

Table 14: *Anaplasmosis reported Countries*

Country	Outbreak	Susceptible	Cases	Deaths	Slaughtered	Destroyed
Botswana	1	6	1	0	0	0
Democratic Republic of Congo	4	2539	280	0	0	0
Egypt	77	1314	453	0	NS	NS
Kenya	9	164	76	0	0	0
Mozambique	5	838	33	12	0	0
Namibia	2	428	4	3	0	0
Somalia	11	669	64	4	0	0
South Africa	15	135	33	4	NS	0
Sudan	5	2767	87	26	1	0
Swaziland	5	3153	21	1	0	0
Tanzania	47	53974	1025	104	0	0
Uganda	2	120	7	0	0	
Zambia	122	18897	1916	595	0	0
Zimbabwe	1344	15844939	2673	450	5	3
Total (14)	**1649**	**15929943**	**6673**	**1199**	**6**	**3**

NS: Not specified



Map 13: *Spatial distribution of Anaplasmosis*

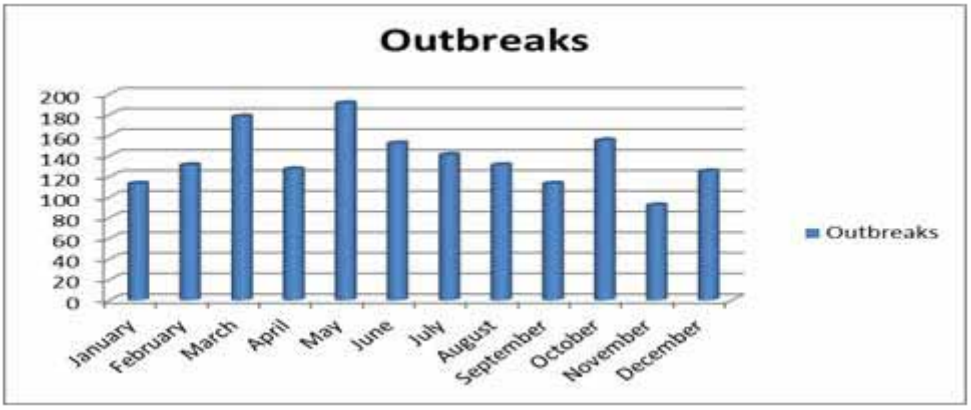


Chart 13: *Monthly Distribution of Anaplasmosis Outbreaks*

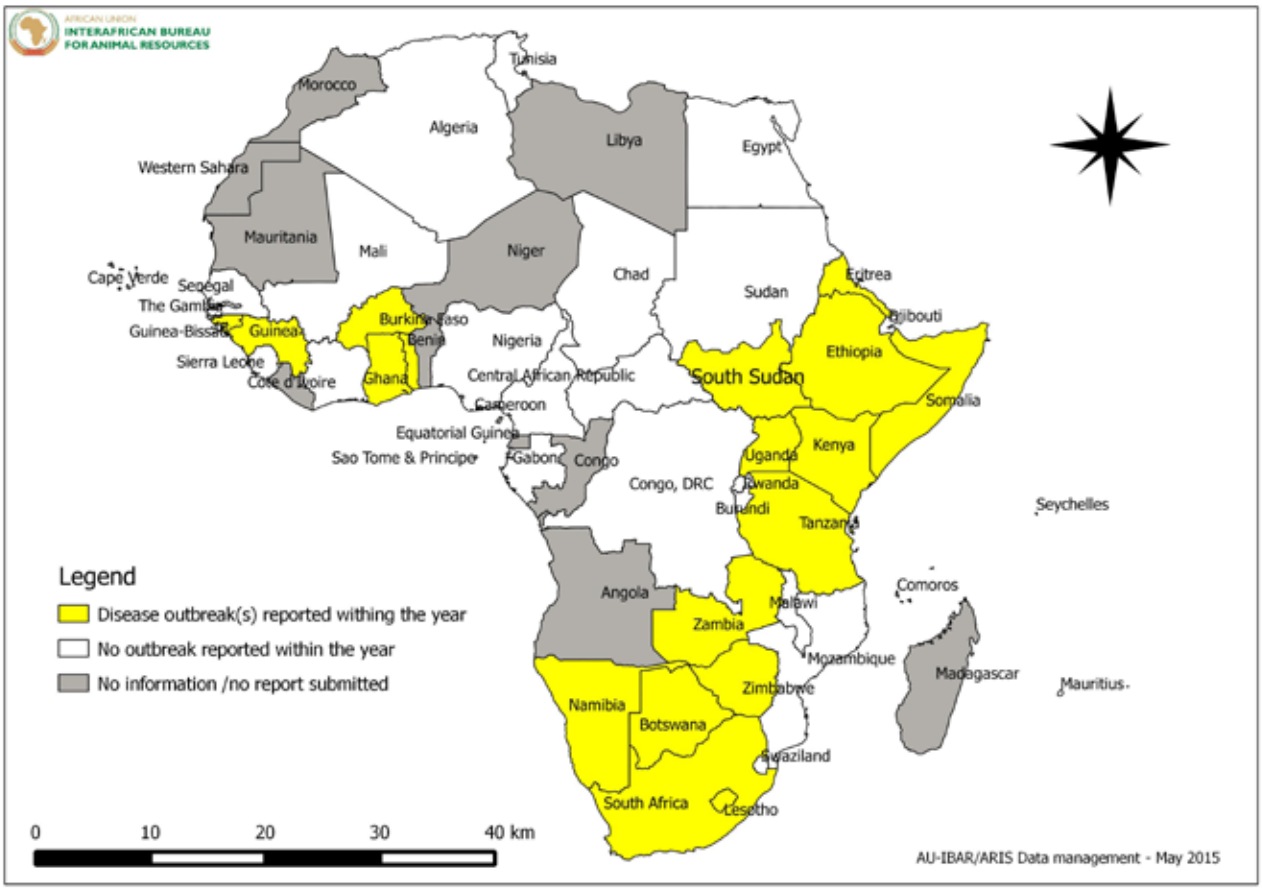
5.2 Anthrax

In 2014, 18 Member States reported outbreaks of anthrax with a total 744 outbreaks, 199,912 susceptible animals, 4,004 cases and 1,477 mortalities compared to 1287 outbreaks, 10140 cases and 3179 deaths were recorded in 2013. Similar to 2012, the highest number of outbreaks were reported by Ethiopia (498;), , South Africa (145) and Zimbabwe (23). Most of the outbreaks were reported from March to May (chart 14).

Table 15: Anthrax reporting Countries

Country	Outbreak	Susceptible	Cases	Deaths	Slaughtered	Destroyed
Botswana	3	80026	18	7	NS	NS
Burkina Faso	3	4500	6	6	NS	NS
Eritrea	3	11300	209	39	NS	NS
Ethiopia	498	1218	2893	860	11	NS
Ghana	6	2027	6	5	1	0
Guinea	19	5262	232	167	NS	11
Guinea Bissau	1	42	5	2	0	NS
Kenya	20	45027	206	70	7	1
Lesotho	2	2689	10	0	0	0
Namibia	8	1020	18	8	0	0
Somalia	20	1014	74	18	1	1
South Africa	145	80	162	160	NS	0
South Sudan	8	1921	17	14	0	0
Tanzania	1	12	1	1	0	NS
Togo	5	4650	22	12	NS	NS
Uganda	2	3200	2	1	0	1
Zambia	1	80	1	1	NS	NS
Zimbabwe	33	35844	122	106	0	0
Total (18)	778	199912	4004	1477	20	14

NS: Not specified



Map 14: *Spatial distribution of Anthrax*

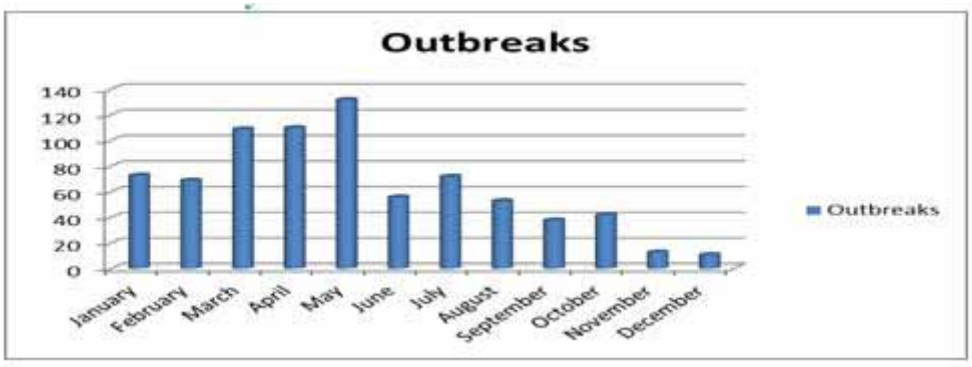


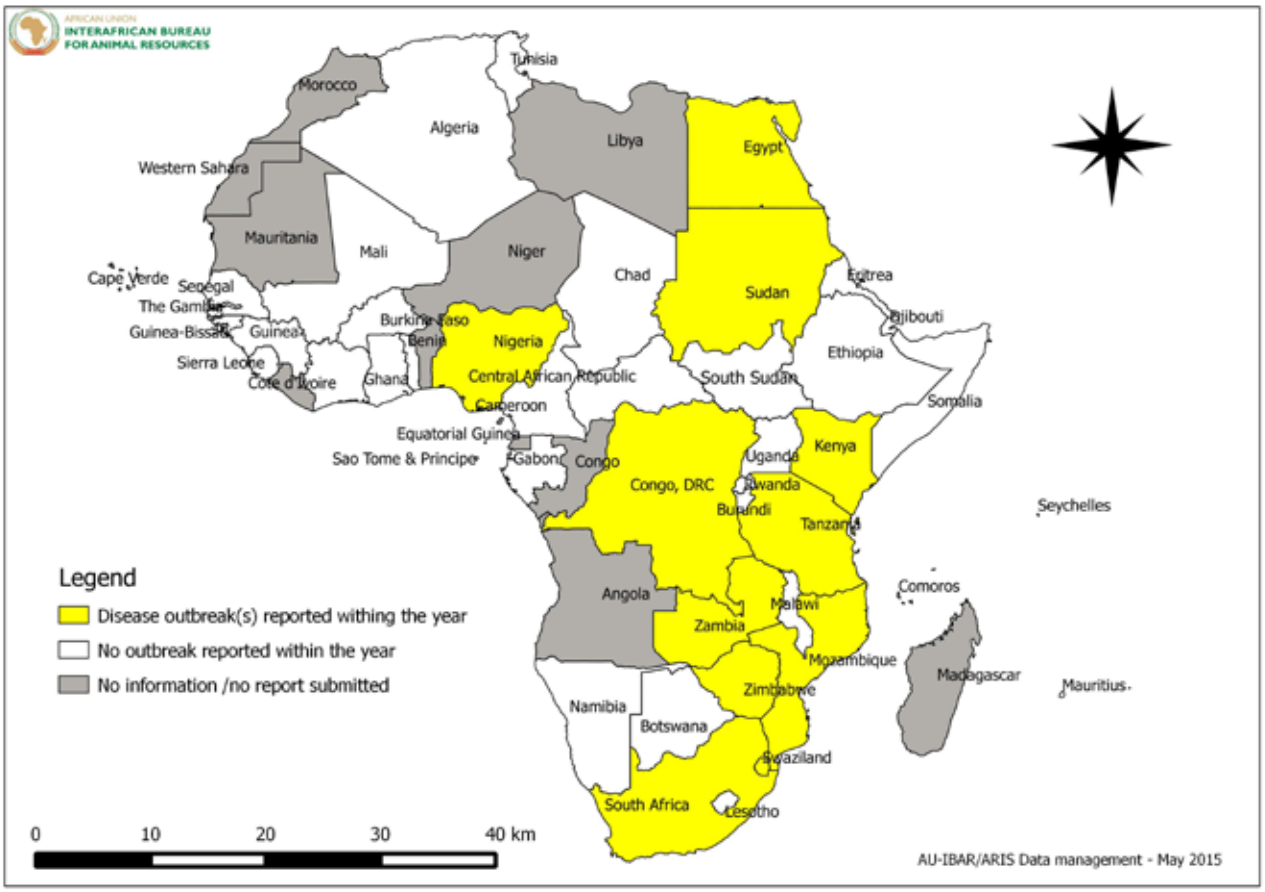
Chart 14: *Monthly Distribution of Anthrax Outbreaks*

5.3 Babesiosis

In 2014, Babesiosis was reported by 11 countries against 14 countries in 2013. . A total of 1,273 outbreaks, 677,346 susceptible animals, 24,157 cases and 4,291 mortalities against 1452 outbreaks, 28944 cases and 419 deaths in 2013 (Table 17). Zimbabwe recorded the highest number of outbreaks (746; followed by Egypt (388). The corresponding number of cases was highest in Egypt and cases (15,451) followed by Sudan (5,073). The highest number of outbreaks was reported in the month of May and the lowest in September.

Table 16: *Babesiosis reporting countries*

Country	Outbreak	Susceptible	Cases	Deaths	Slaughtered	Destroyed
Democratic Republic of Congo	1	514	34	11	0	0
Egypt	338	29841	15451	0	NS	NS
Kenya	5	232	22	2	0	0
Mozambique	2	379	4	4	0	NS
Nigeria	2	3	3	0	0	0
South Africa	42	2607	108	34	NS	4
Sudan	12	17297	5073	3672	651	200
Swaziland	11	14500	251	39	0	0
Tanzania	22	44065	1308	154	0	0
Zambia	92	25168	749	170	0	0
Zimbabwe	746	542740	1154	205	0	1
Total (11)	**1273**	**677346**	**24157**	**4291**	**651**	**205**



Map 15: *Spatial distribution of Babesiosis in Africa 2014*

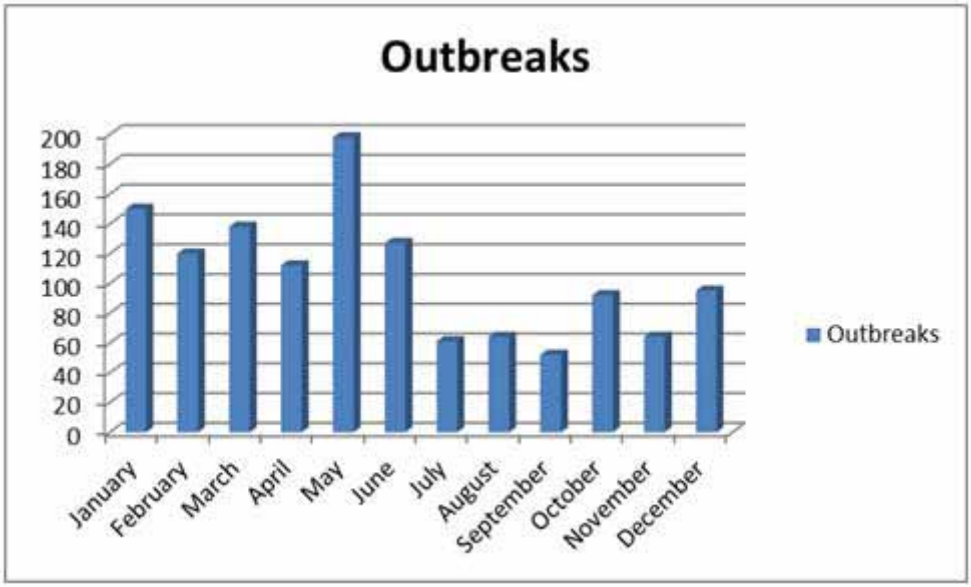


Chart 15: *Monthly Distribution of Babesiosis Outbreaks*

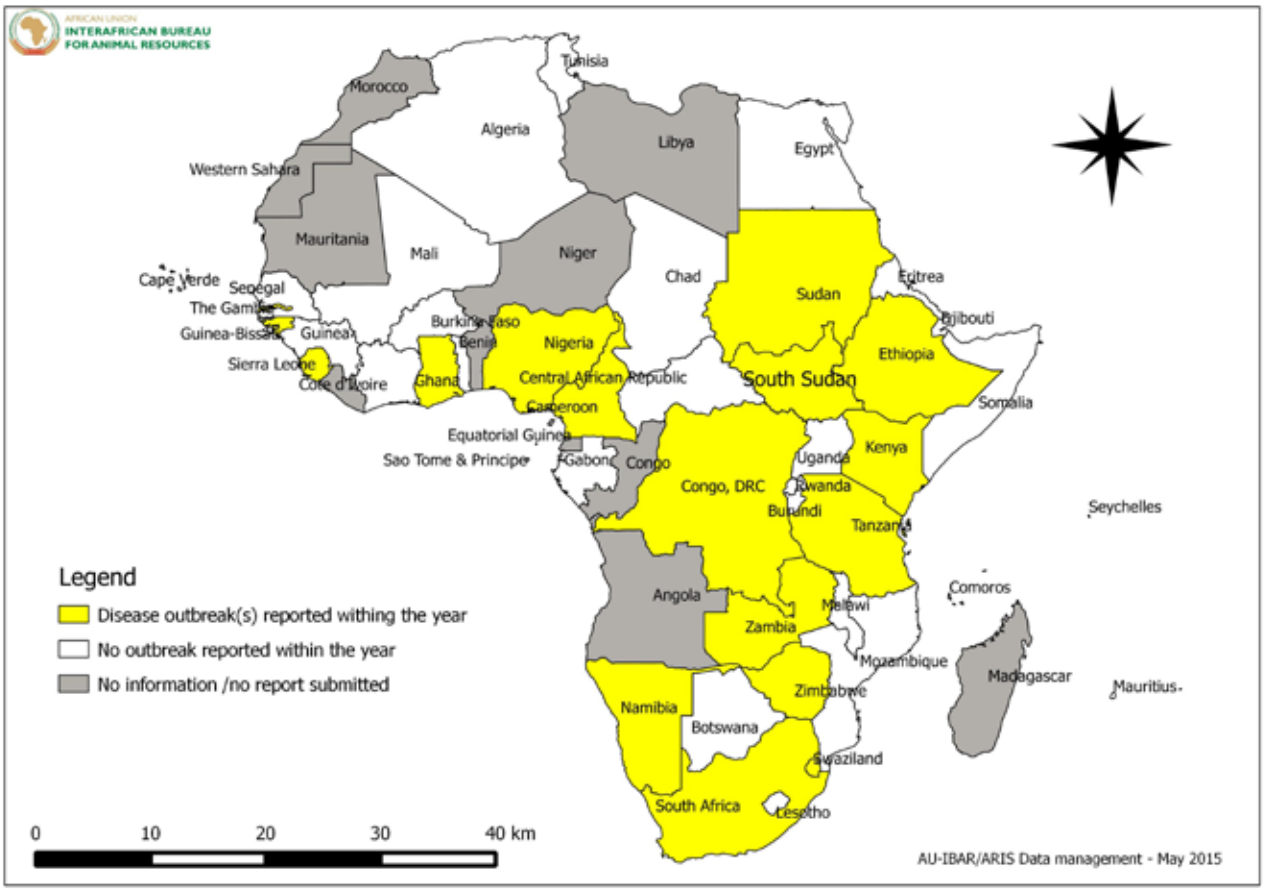
5.4 Blackleg

Blackleg was reported by 17 countries with 684 outbreaks involving; 365872 susceptible animals; 3939 cases, 1366 mortalities and 238 slaugthered (Table 17). Zimbabwe reported the highest number of outbreaks (356) followed by Ethiopia (148). Only DRC and Ethiopia recorded the highest number of cases 1,120 and 1,032 respectively. There is no significant difference between the months in term of outbreak occurrence of black leg (chart 15).

Table 17: *Blackleg reporting Countries*

Country	Outbreak	Susceptible	Cases	Deaths	Slaughtered	Destroyed
Cameroon	4	242	26	6	0	
Democratic Republic of Congo	12	34743	1120	331	83	28
Ethiopia	148	1454	1032	142	12	NS
Ghana	5	1659	29	23	15	0
Guinea Bissau	3	403	37	34	0	NS
Kenya	5	10519	143	55	0	0
Namibia	5	708	49	39	0	0
Nigeria	5	310	64	22	127	8
Sierra Leone	2	159	15	6	0	0
South Africa	9	274	22	5	NS	0
South Sudan	17	NS	NS	NS	NS	NS
Sudan	2	5181	24	7	0	0
Swaziland	36	27062	197	100	0	1
Tanzania	8	17993	47	9	0	0
The Gambia	1	10	2	NS	NS	NS
Zambia	66	5700	430	118	0	0
Zimbabwe	356	259455	702	469	1	4
Total (17)	**684**	**365872**	**3939**	**1366**	**238**	**41**

NS: Not specified



Map 21: *Spatial distribution of Blackleg*

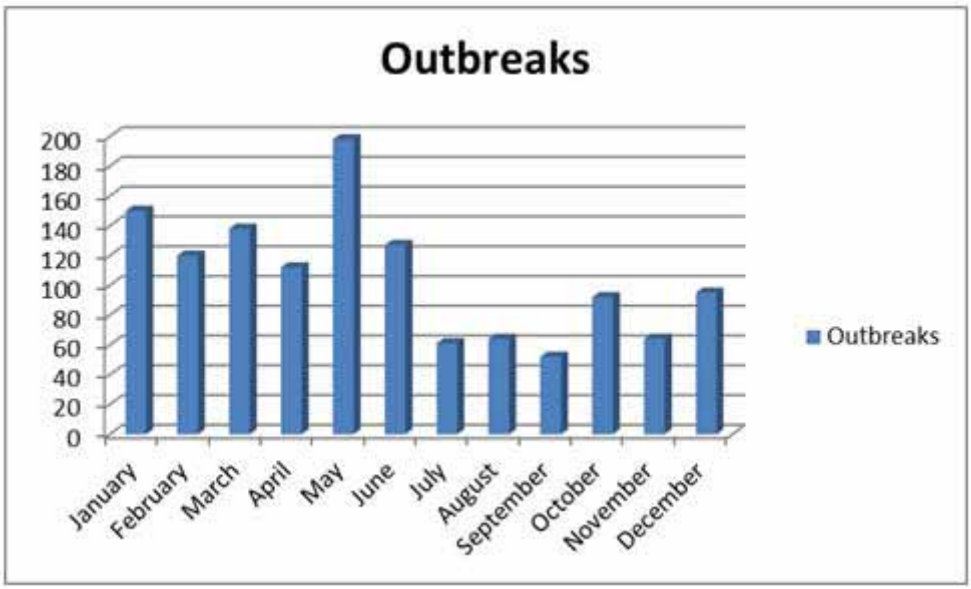


Chart 15: *Monthly Distribution of Blackleg Outbreaks*

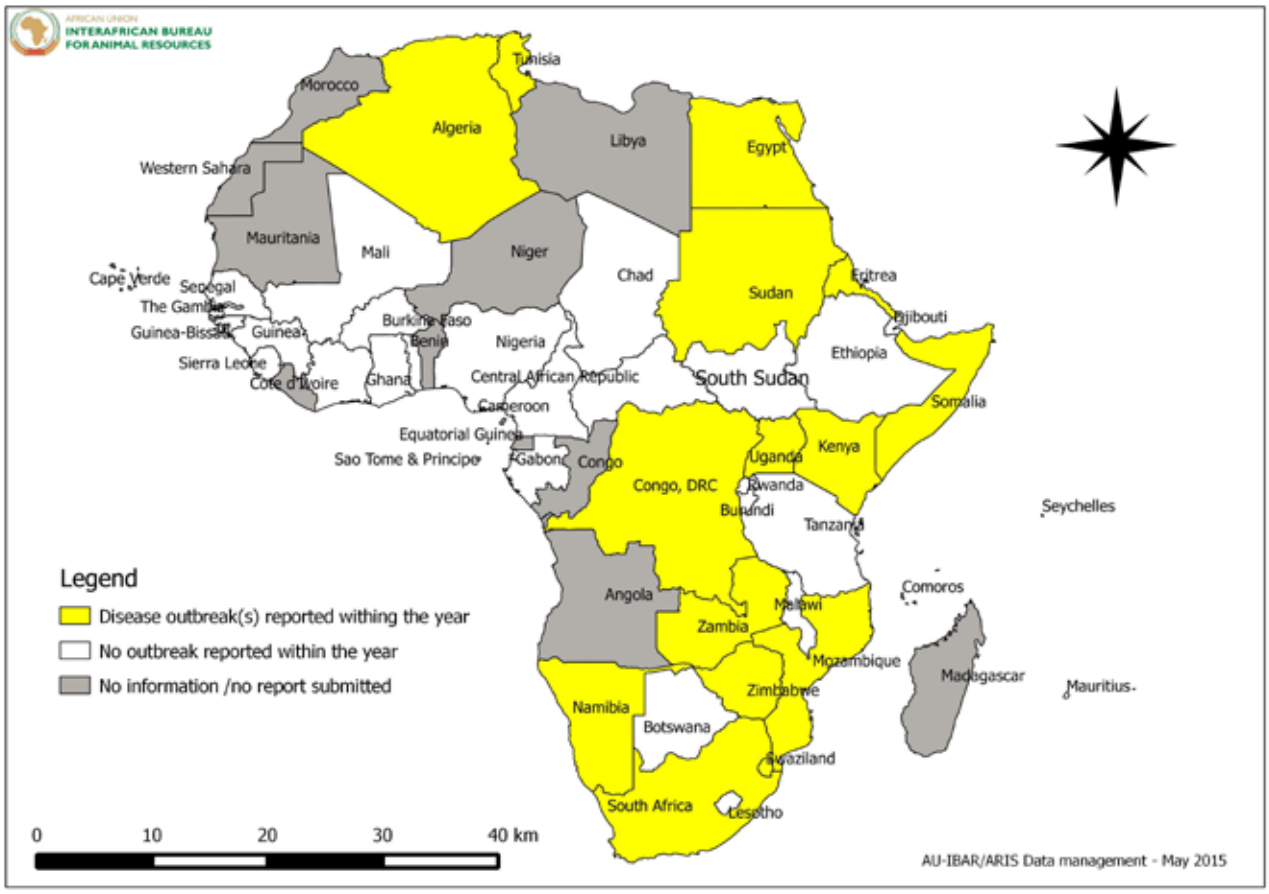
5.5 Brucellosis

Brucellosis was reported by 15 countries against 20 countries in 2013 (Table 18) A total of 1,393 outbreaks were recorded involving 86595 susceptible animals; 6382 cases; 178 mortalities; 1,377 slaughtered and 445 destroyed animals against 1,433 outbreaks, 8,582 cases and 41 deaths in 2013. Similar to the previous, the countries reporting the highest number of outbreaks remained the same namely Algeria (611), South Africa (560) and Egypt (76). Chart 16 showed that the disease do occurs throughout the year therefore is no significant season effect on the distribution of the disease.

Table 18: *Brucellosis reporting countries*

Country	Outbreak	Susceptible	Cases	Deaths	Slaughtered	Destroyed
Algeria	611	7315	1436	0	1298	0
Democratic Republic of Congo	2	550	32	0	8	0
Egypt	76	792	339	0	NS	NS
Eritrea	1	200	4	0	NS	NS
Kenya	4	42	5	2	0	0
Mozambique	21	4561	174	2	28	0
Namibia	22	1068	172	12	0	0
Somalia	10	1018	28	6	3	2
South Africa	560	30858	3733	91	NS	434
Sudan	2	215	13	0	13	0
Swaziland	21	22375	147	58	0	0
Tunisia	10	985	100	0	26	0
Uganda	15	4916	95	0	0	9
Zambia	12	3743	68	3	0	0
Zimbabwe	26	7957	36	4	1	0
Total (15)	**1393**	**86595**	**6382**	**178**	**1377**	**445**

NS: Not specified



Map 22: *Spatial distribution of Brucellosis*

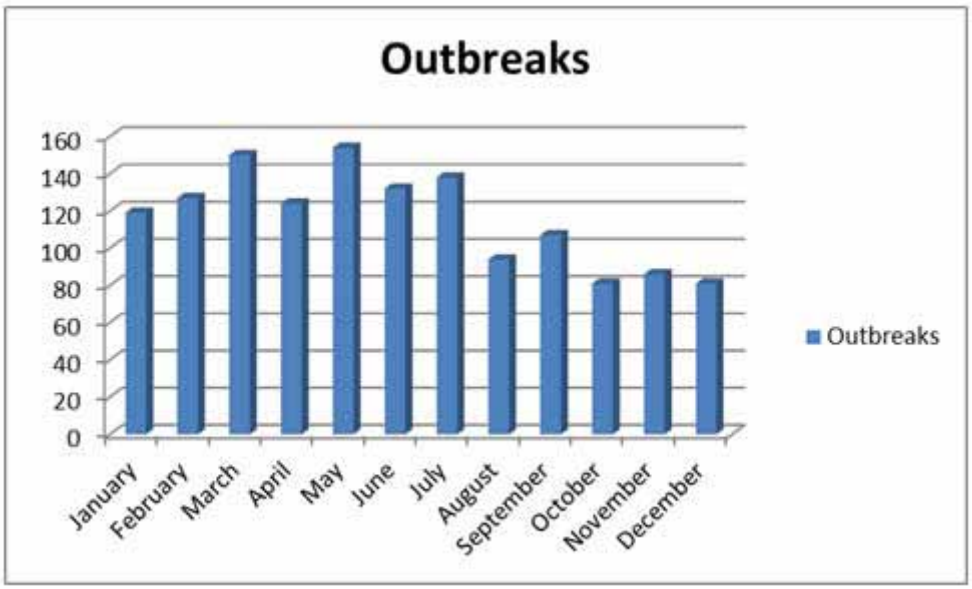


Chart 16: *Monthly Distribution of Brucellosis Outbreaks*

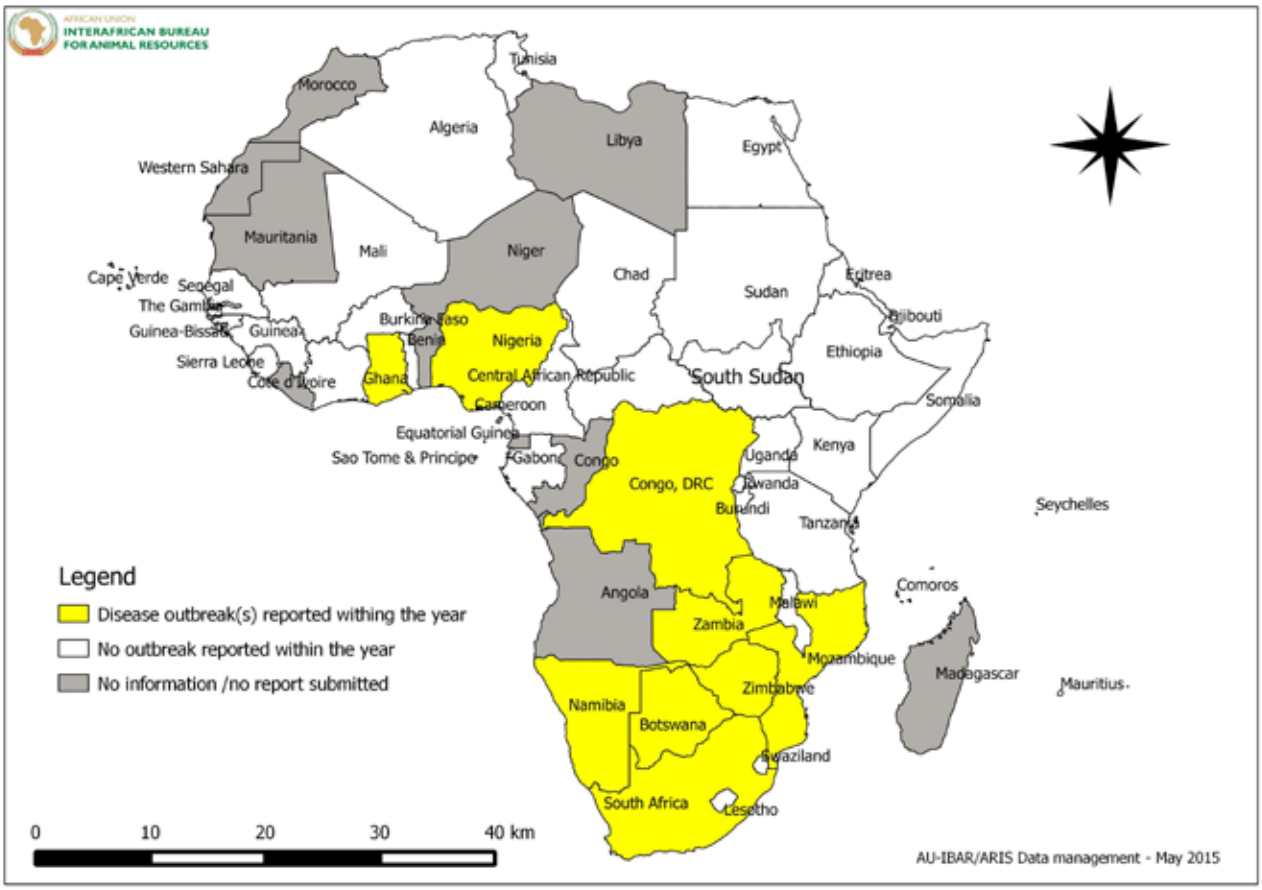
5.6 Dermatophilosis

Similar to the previous year, dermatophilosis also known as streptothrichosis was reported by 10 countries in 2014 (Table 19). A total of 646 outbreaks were recorded involving 680,548 susceptible animals; 2,453 cases, 42 deaths against 624 outbreaks, 3396 cases and 142 deaths in 2013. Like previous years Zimbabwe reported the highest number of outbreaks 539 with 1,533 cases. The highest number of cases was reported in April-July with a significant peak in May-June (chart 17).

Table 19: *Dermatophilosis reporting countries*

Country	Outbreak	Susceptible	Cases	Deaths	Slaughtered	Destroyed
Botswana	1	50	2	2	NS	NS
Democratic Republic of Congo	4	1,737	33	0	8	0
Ethiopia	1	NS	17	7	0	
Ghana	4	117	15	0	1	0
Mozambique	2	48	12	0	0	0
Namibia	1	63	1	0	0	0
Nigeria	3	144	15	0	0	0
South Africa	1	1	1	0	NS	0
Zambia	90	9835	824	15	0	0
Zimbabwe	539	668,553	1,533	18	0	0
Total (10)	**646**	**680,548**	**2453**	**42**	**9**	**0**

NS: Not specified



Map 19: *Spatial distribution of Dermatophilosis*

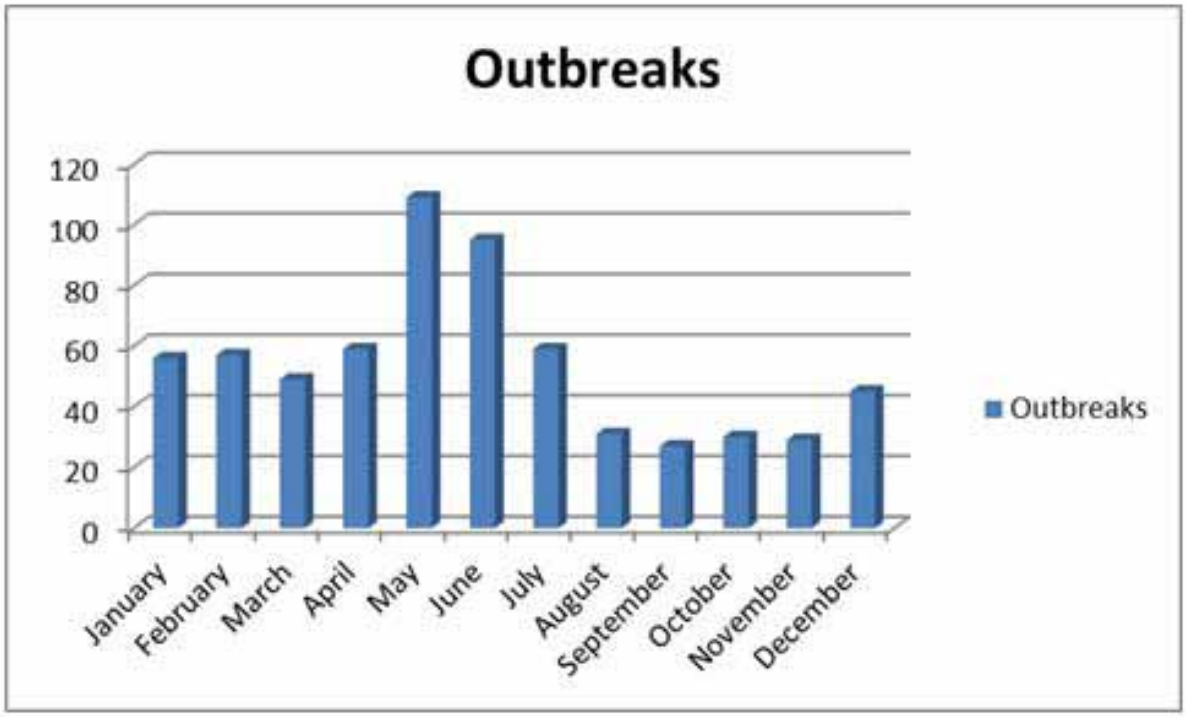


Chart 17: *Monthly Distribution of Dermatophilosis Outbreaks*

5.7 Gumboro disease (Infectious Bursal disease)

The situation of Gumboro disease on the continent in 2014 in terms of the number of outbreaks and deaths, increased from 252 outbreaks and 20,003 deaths in 2013 to 443 outbreaks and 32,005 deaths (Table 22). A total of 6 countries were affected with 77,989 cases reported. Ghana recorded the highest number of outbreaks, cases as well as deaths like in the previous year. Regarding the monthly distribution of outbreaks, outbreaks rose from January and peaked in May then declined upto December.

Table 22: *Countries reporting Gumboro disease (2014)*

Country	Outbreak	Susceptible	Cases	Deaths	Slaughtered	Destroyed
Botswana	6	236	88	53	0	0
Ghana	187	1359083	67728	26091	0	0
Kenya	5	1950	247	135	0	0
Nigeria	41	51073	1881	789	10	0
Zambia	51	63577	4448	2669	0	0
Zimbabwe	153	67734	3597	2268	0	0
Total (6)	**443**	**1543653**	**77989**	**32005**	**10**	**0**

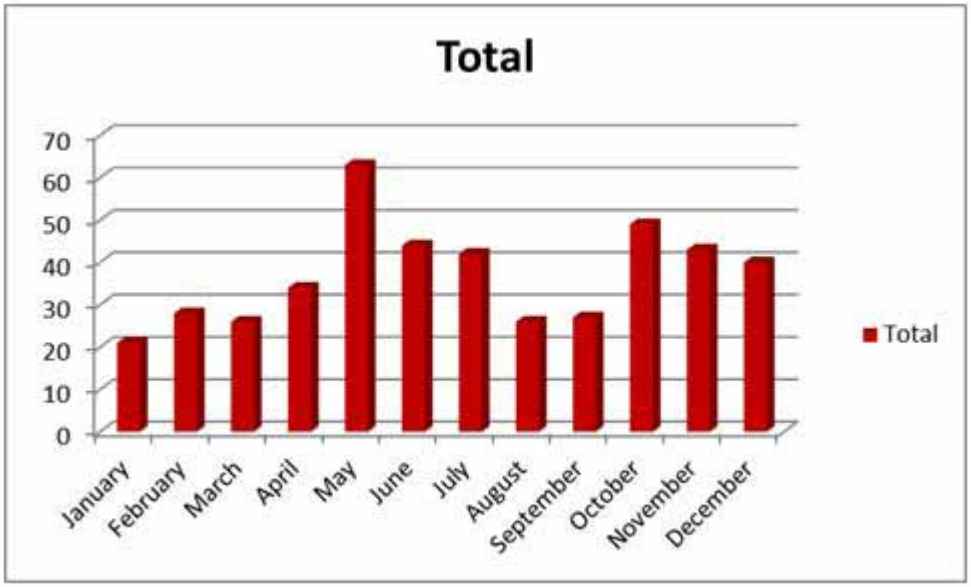


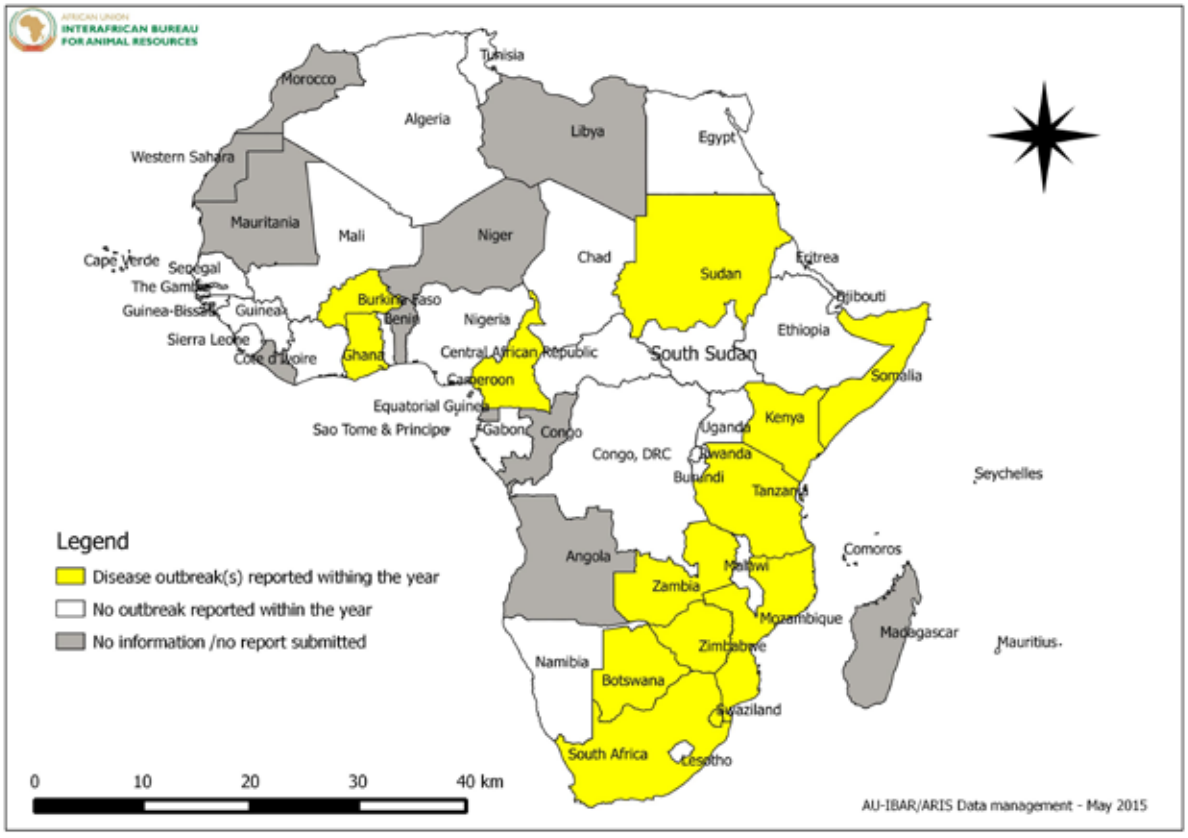
Chart 18: *Monthly Distribution of Gumboror Outbreaks (2014)*

5.8. Heartwater

Heartwater or Cowdriosis a rickettsial disease of ruminants caused by Ehrlichia ruminantium was reported by 13 countries in 2014 with a total of 1376 outbreaks, 4250 cases and 1395 deaths (Table 23). Zimbabwe reported the highest number of outbreaks, 1059 followed by Botswana (102), Zambia (97) and South Africa (60). The corresponding number of cases were highest in Zimbabwe (2368), followed by Zambia (501), Botswana (368) and South Africa (116). The trend of reporting on this disease has remained the same with the same countries reporting the disease suggesting that tick vector suitable and unsustainable disease control measures in these countries still persists.

Table 23: *Countries reporting Heartwater (2014)*

Country	Outbreak	Susceptible	Cases	Deaths	Slaughtered	Destroyed
Botswana	102	5212	368	249	0	0
Burkina Faso	1	150	1	0		
Cameroon	1	2	2	0	0	
Ghana	6	56	10	0	5	0
Kenya	2	23	5	0	0	0
Mozambique	4	116	6	5	0	
Somalia	7	719	24	4	2	2
South Africa	60	532	116	38		0
Sudan	1	80	14	4		
Swaziland	22	15690	393	144	10	0
Tanzania	14	39441	442	86	0	0
Zambia	97	9976	501	98	0	0
Zimbabwe	1059	627570	2368	767	12	26
Total (13)	**1376**	**699567**	**4250**	**1395**	**29**	**28**



Map 20: *Spatial distribution of Heartwater*

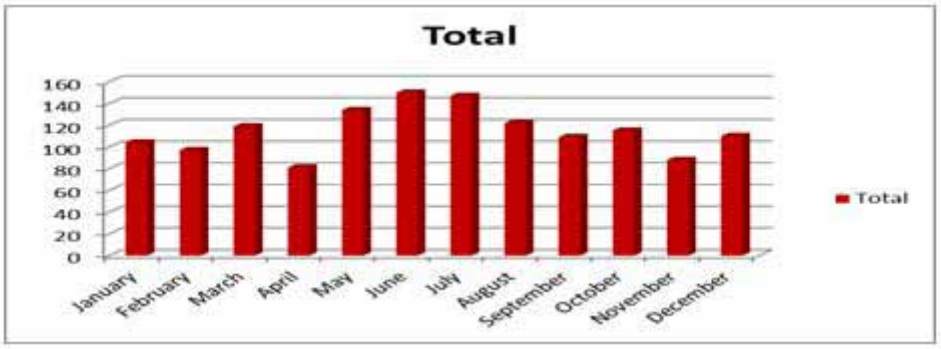


Chart 19: *Monthly Distribution of Heartwater Outbreaks (2014)*

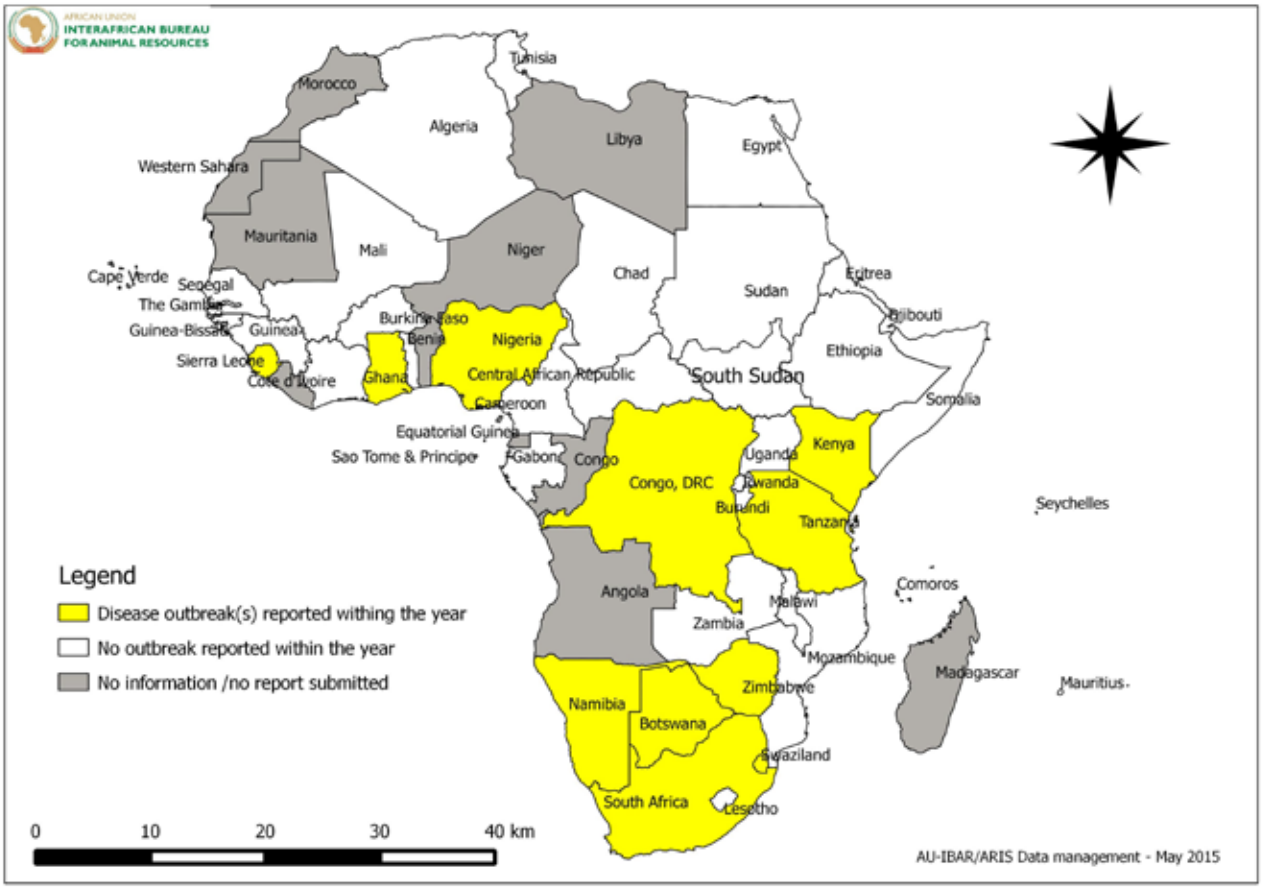
5.9 Mange

Mange is a skin disease of mammals caused by a tissue-burrowing arthropod, the mange mite. Mange is not associated with heavy mortalities but is a serious cause of skin defects and economic loss in term of loss of productivity of affected animals and spoilage of hides which affects export trade in the commodity.

During 2014, 11 countries reported 514 outbreaks with 3281 cases, and 261 deaths (Table 24), a decline from 13 countries that reported 1016 outbreaks with 29530 cases, and 442 deaths in 2013. This suggests an improvement in the control measures implemented in the countries regarding mange.

Table 24: *Countries reporting Mange (2014)*

Country	Outbreak	Susceptible	Cases	Deaths	Slaughtered	Destroyed
Botswana	19	645	172	72	0	0
Democratic Republic of Congo	6	2794	311	34	111	0
Ghana	118	16447	845	23	5	0
Kenya	6	237	53	0	0	0
Namibia	4	2181	48	0	0	0
Nigeria	127	1248	274	0	0	2
Sierra Leone	2	25	74	23	0	0
South Africa	4	39	16	0		0
Swaziland	9	6598	126	11	0	0
Tanzania	1	30	13	0	0	0
Zimbabwe	218	65528	1349	98	0	0
Total (11)	**514**	**95772**	**3281**	**261**	**116**	**2**



Map 21: *Spatial distribution of Mange*

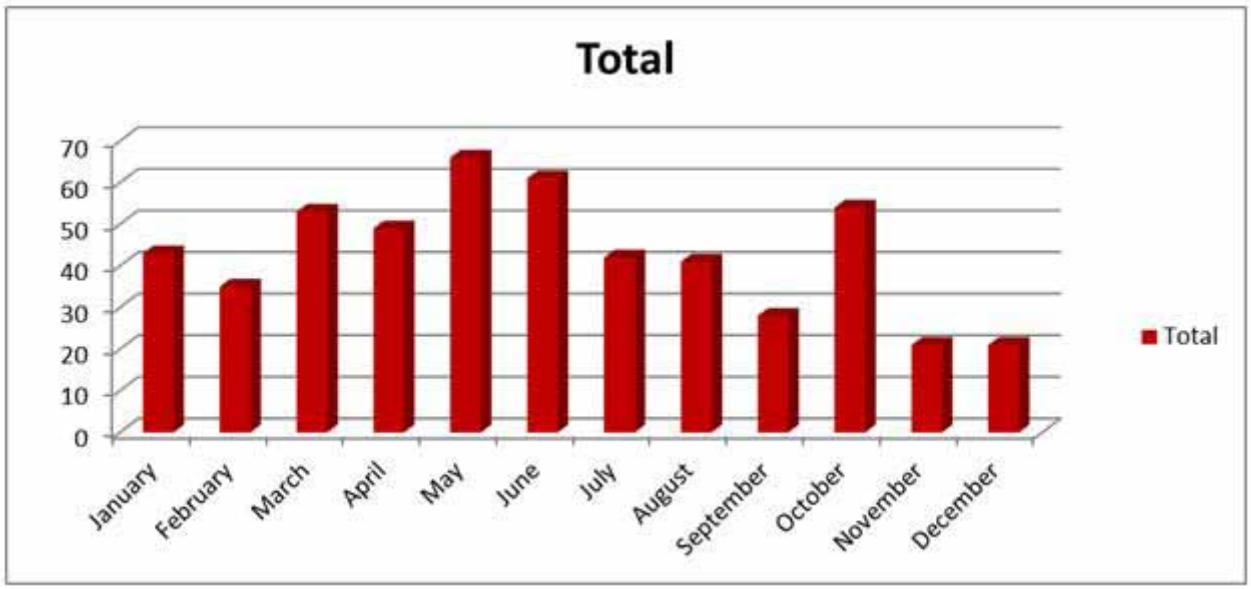


Chart 20: *Monthly Distribution of Mange Outbreaks (2014)*

5.10 Haemorrhagic Septicaemia and other Pasteurellosis

During 2014, 14 countries reported Haemorhagic septicaemia and other pasteurellosis with a total of 391 outbreaks, 3916 cases and 906 deaths (Table 25). This shows a reduction from 18 countries reporting Haemorhagic septicaemia and other pasteurellosis 2013 with 1257 outbreaks, 23219 cases and 4845 deaths. Ethiopia recorded the highest number of outbreaks (292) followed by Zambia (21), Burkina Faso (18), South Sudan (18), and Sudan (13). Ethiopia reported also the

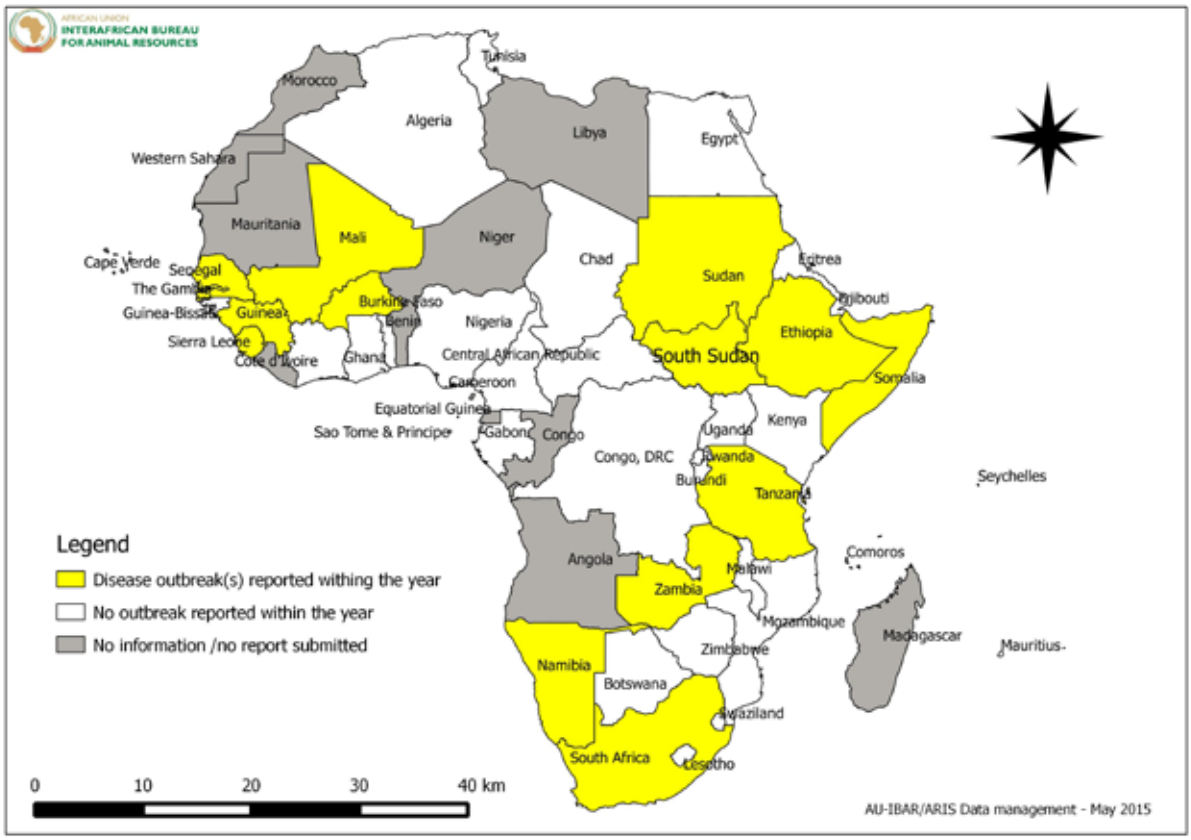
highest number of cases and deaths (2629 and 587) followed by Sudan (444 and 71), Burkina Faso (272 and 54), Sierra Leone (127 and 26), Senegal (120 and 45) and South Sudan (112 and 26) respectively.

Table 25: *Countries reporting HS and other Pasteurellosis (2014)*

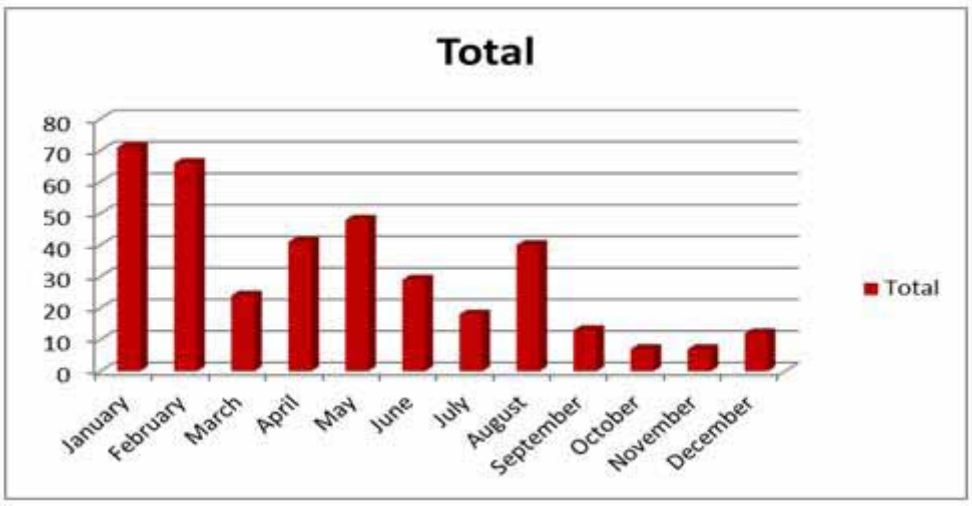
Country	Outbreak	Susceptible	Cases	Deaths	Slaughtered	Destroyed
Burkina Faso	18	9950	272	54		
Ethiopia	292	718	2629	587	44	
Guinea	2	371	26	11	5	
Sierra Leone	2	120	127	26	0	0
Somalia	9	455	37	3	0	0
South Sudan	18	4298	112	26	0	0
Sudan	13	24789	444	71	0	0
Tanzania	1	181	1	0	0	0
Zambia	21	2578	61	33	0	0
Total	**376**	**43460**	**3709**	**811**	**49**	**0**

Other Pasteurellosis

Country	Outbreak	Susceptible	Cases	Deaths	Slaughtered	Destroyed
Mali	1	200	8	0	0	
Namibia	6	684	76	49	0	0
Senegal	5	1165	120	45	0	
South Africa	2	0	3	1		0
The Gambia	1	10				
Total (14)	**15**	**2059**	**207**	**95**	**0**	**0**



Map 22: *Spatial distribution of HS and other Pasteurellosis in Africa in 2014*



Other Pasteurellosis

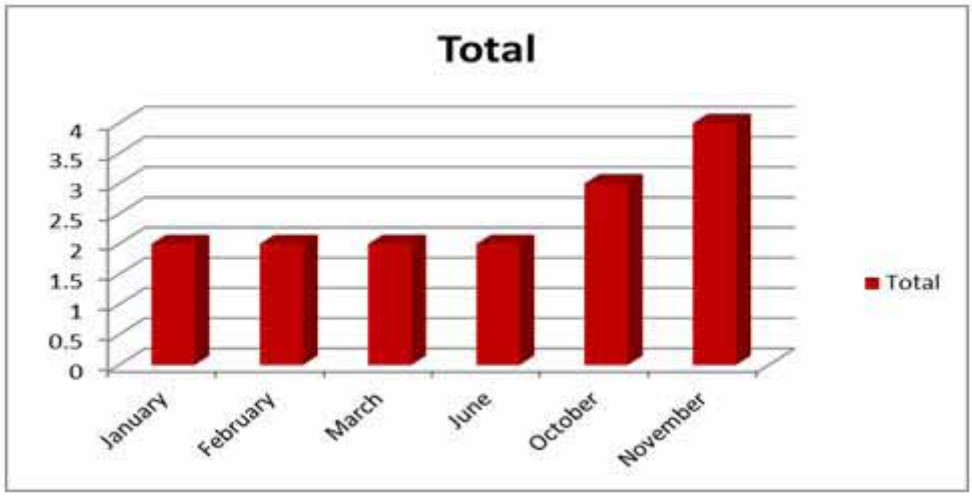


Chart 21: *Monthly Distribution of HS and other Pasteurellosis Outbreaks (2014)*

5.11 Rabies

Rabies remains the most widely reported and distributed disease in Africa, a trend that remained consistent over many years. In 2014 at total of 27 countries reported 2062 outbreaks with 4712 cases and 2348 deaths (Table 26). This indicates a downward trend from 34 countries that reported 1343 outbreaks involving 5279 cases and 3166 deaths in 2013. Algeria reported the highest number of outbreaks (474), followed by Tunisia (380), Namibia (264), South Africa (217) and Zimbabwe (198).

Table 26: *Countries reporting Rabies*

Country	Outbreak	Susceptible	Cases	Deaths	Slaughtered	Destroyed
Algeria	474	12858	552	133	6	472
Botswana	34	888	66	47	0	0
Burkina Faso	88	157	254	254		
Cameroon	6	6	6	5	1	
Central African Republic	8	4490	820	255	40	0
Cote d'Ivoire	1	1	1	1	1	1
Democratic Republic of Congo	37	212882	497	2	1	205
Eritrea	9	33787	190	84		
Ethiopia	44	188	141	49	0	
Ghana	87	20689	95	84	6	16

Country	Outbreak	Susceptible	Cases	Deaths	Slaughtered	Destroyed
Kenya	43	7694	61	19	0	37
Lesotho	1	561	1	0	0	0
Mozambique	5	682	7	6	0	1
Namibia	264	6454	360	340	0	0
Nigeria	12	46	12	9	2	1
Rwanda	26		61	37	0	748
Senegal	10	2992	27	8	0	0
South Africa	217	8901	279	181		132
South Sudan	14	9	1	1	0	0
Sudan	7	5670	40	3	0	5
Swaziland	7	2262	12	6	0	6
Tanzania	11	10399	106	45	0	0
Togo	3	200	17	5	1	
Tunisia	380	6909	434	434	10	4466
Uganda	9	461	9	0	0	2
Zambia	67	42710	295	116	0	0
Zimbabwe	198	60286	368	224	5	68
Total (27)	**2062**	**442182**	**4712**	**2348**	**73**	**6160**

Map 23 is the spatial distribution of Rabies outbreaks in Africa in 2012 and shows that the disease is present in all regions of the continent. Although Rabies is one of the major zoonotic diseases in the continent and is widely reported by member states, there are still strong suspicions of under reporting by many countries. There were many gaps in the reporting networks including poor linkage with public health services to determine the number of human cases an essential parameter to substantiate the impact of Rabies on public health.

In terms of species affected, Dog was the most commonly affected species (Figure 21), accounting for 55.3% of all outbreaks followed by cattle (21.5%) and wildlife (3.8%).

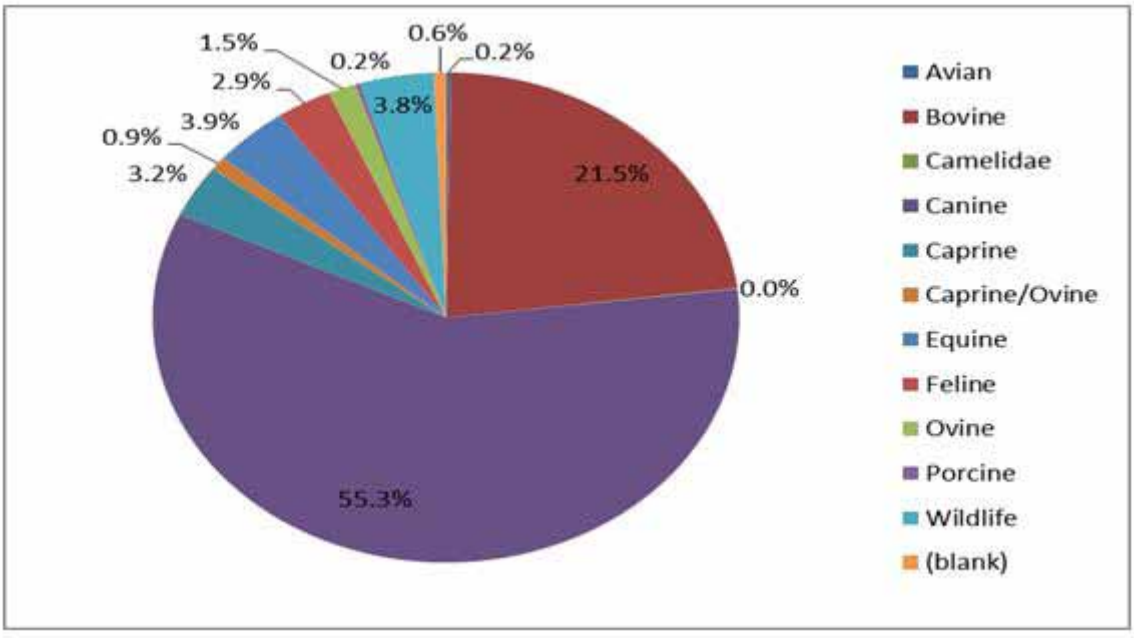
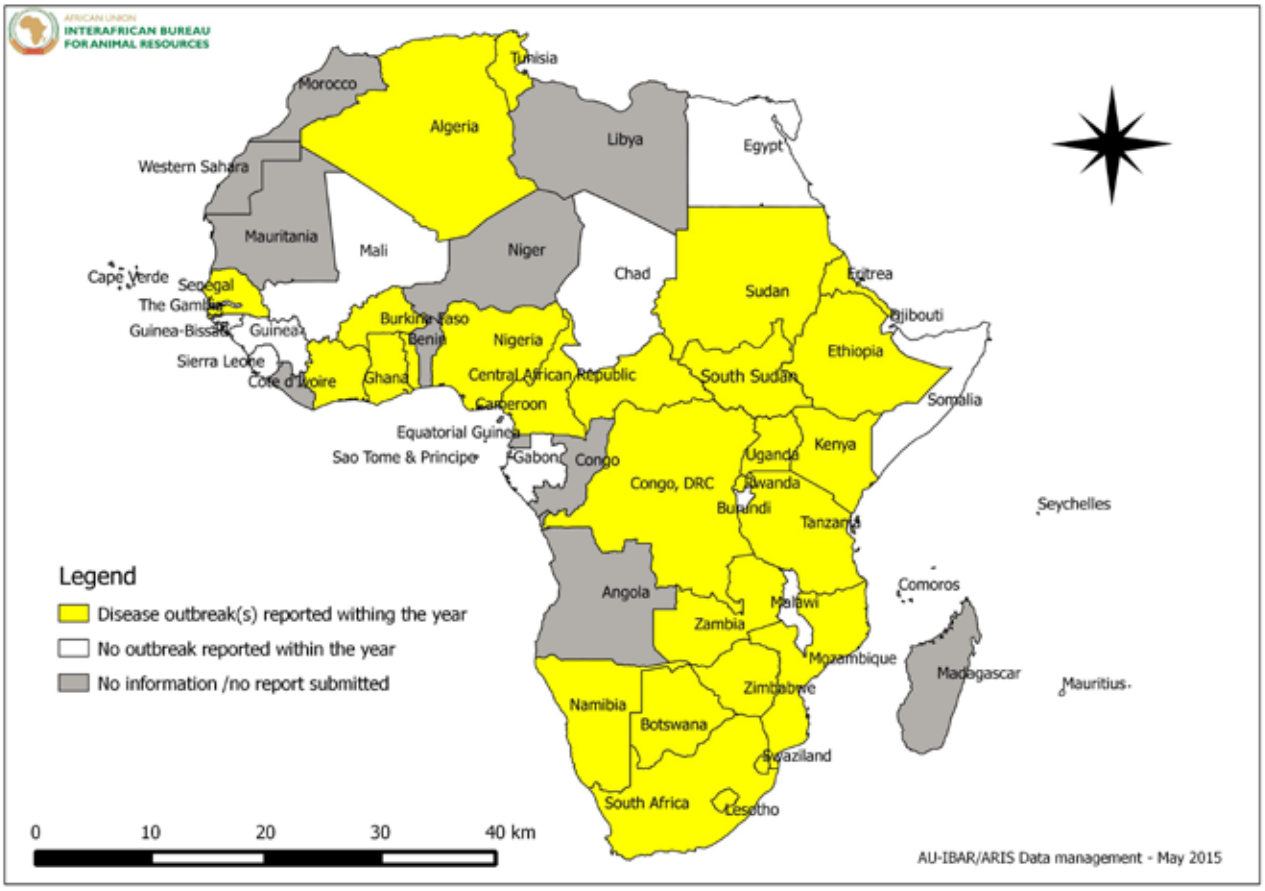


Figure 19: *Proportion of species affected with rabies during 2014*



Map 23: *Spatial distribution of Rabies outbreaks*

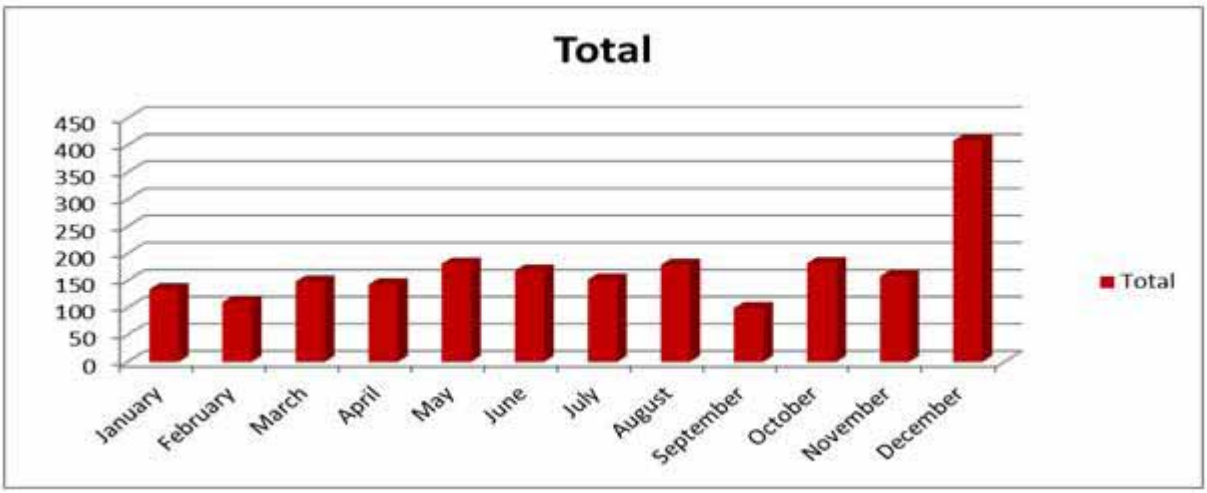


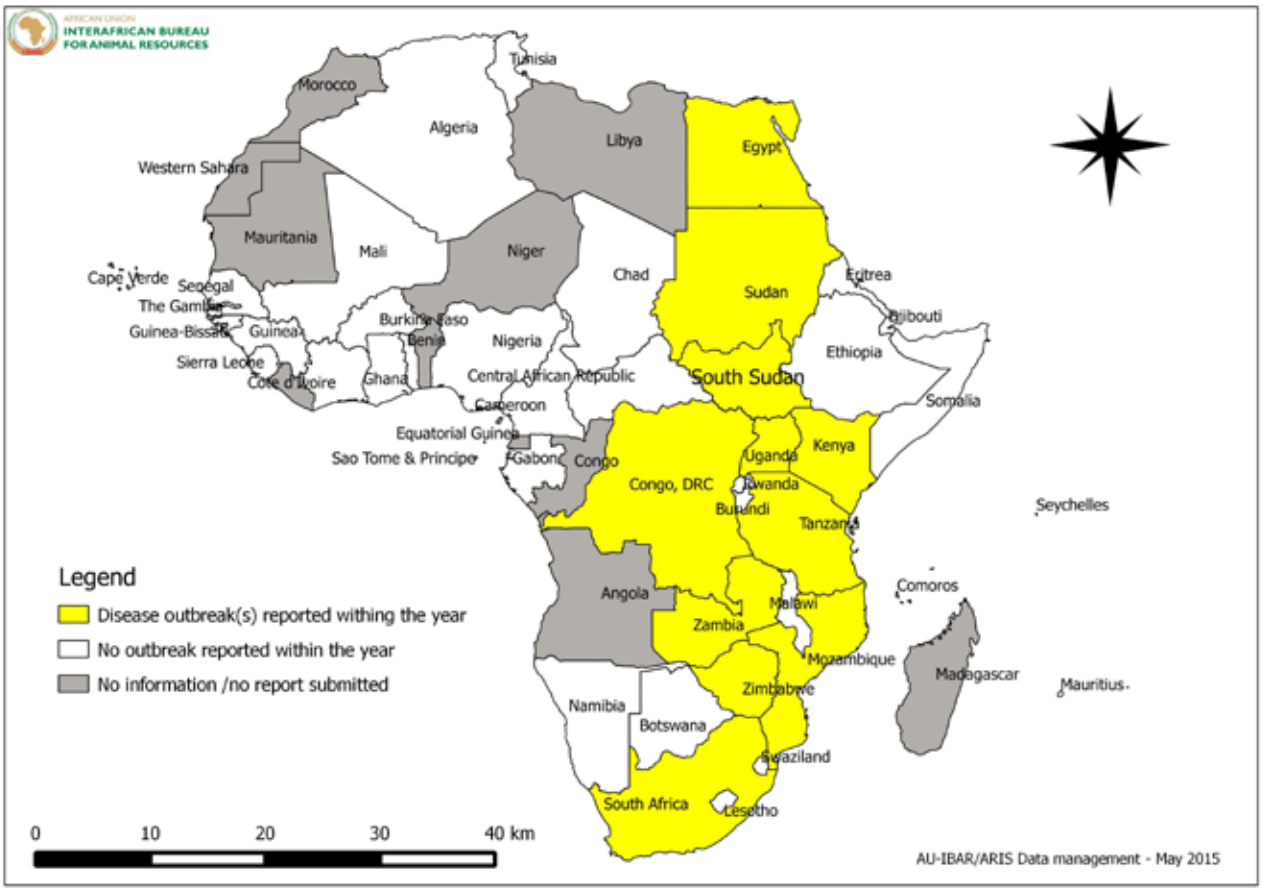
Chart 22: *Monthly Distribution of Rabies Outbreaks (2014)*

5.12 Theileriosis

Bovine Theileriosis also known as East Coast Fever (ECF) or more commonly as Corridor disease in Africa is most prevalent in central and eastern Africa. During 2014, eleven (11) countries reported 559 outbreaks of the disease, with 24,427 cases and 3120 deaths. Egypt recorded the highest number of outbreaks of 215, followed by Zambia (121), Zimbabwe (75), Tanzania (44), Kenya (34) and South Sudan (25). Regarding the cases and deaths, Tanzania had the highest numbers (8811 and 235), followed by Zambia (7369 & 1704), DRC (3106 & 298) and Egypt (2796 and 0), respectively.

Table 27: *Shows details of the reporting countries with the related quantitative data (2014)*

Country	Outbreak	Susceptible	Cases	Deaths	Slaughtered	Destroyed
Democratic Republic of Congo	11	32804	3106	298	31	0
Egypt	215	6750	2796	0		
Kenya	34	74582	350	38	0	0
Mozambique	6	1159	28	19	0	
South Africa	11	3031	337	330		0
South Sudan	25	11914	1112	273	0	0
Sudan	11	11450	368	181	0	0
Tanzania	44	159954	8811	235	0	0
Uganda	6	1515	21	1	0	0
Zambia	121	79797	7369	1704	0	0
Zimbabwe	75	5762	129	41	0	0
Total (11)	**559**	**388718**	**24427**	**3120**	**31**	**0**



Map 24: *Shows the spatial distribution of Theileriosis in Africa in 2014.*

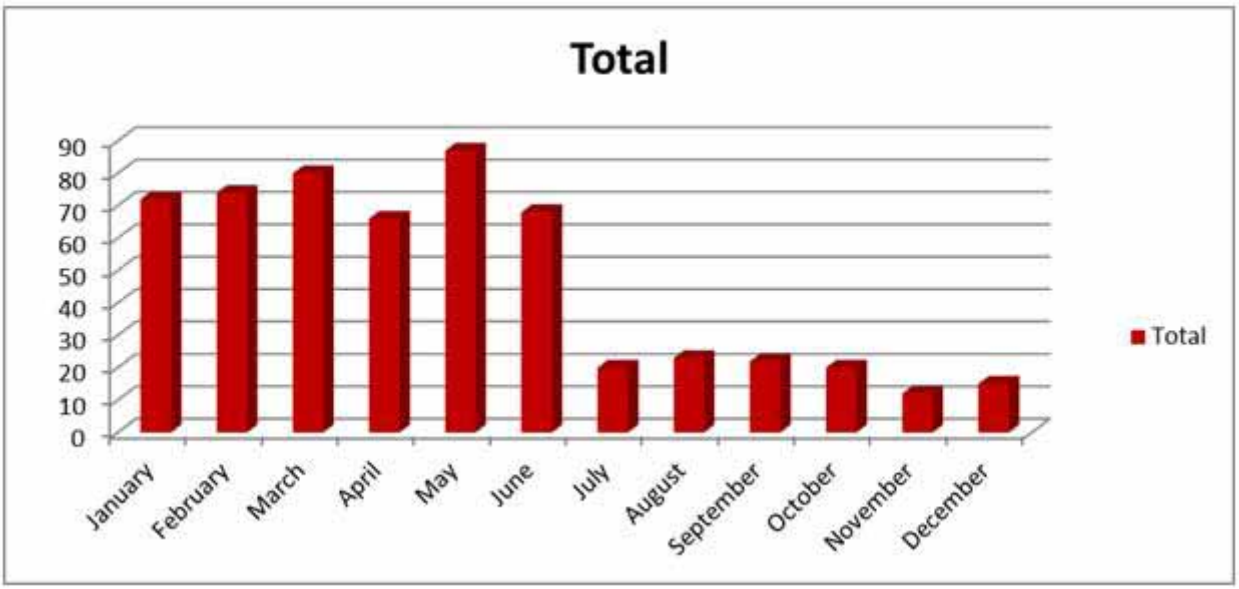


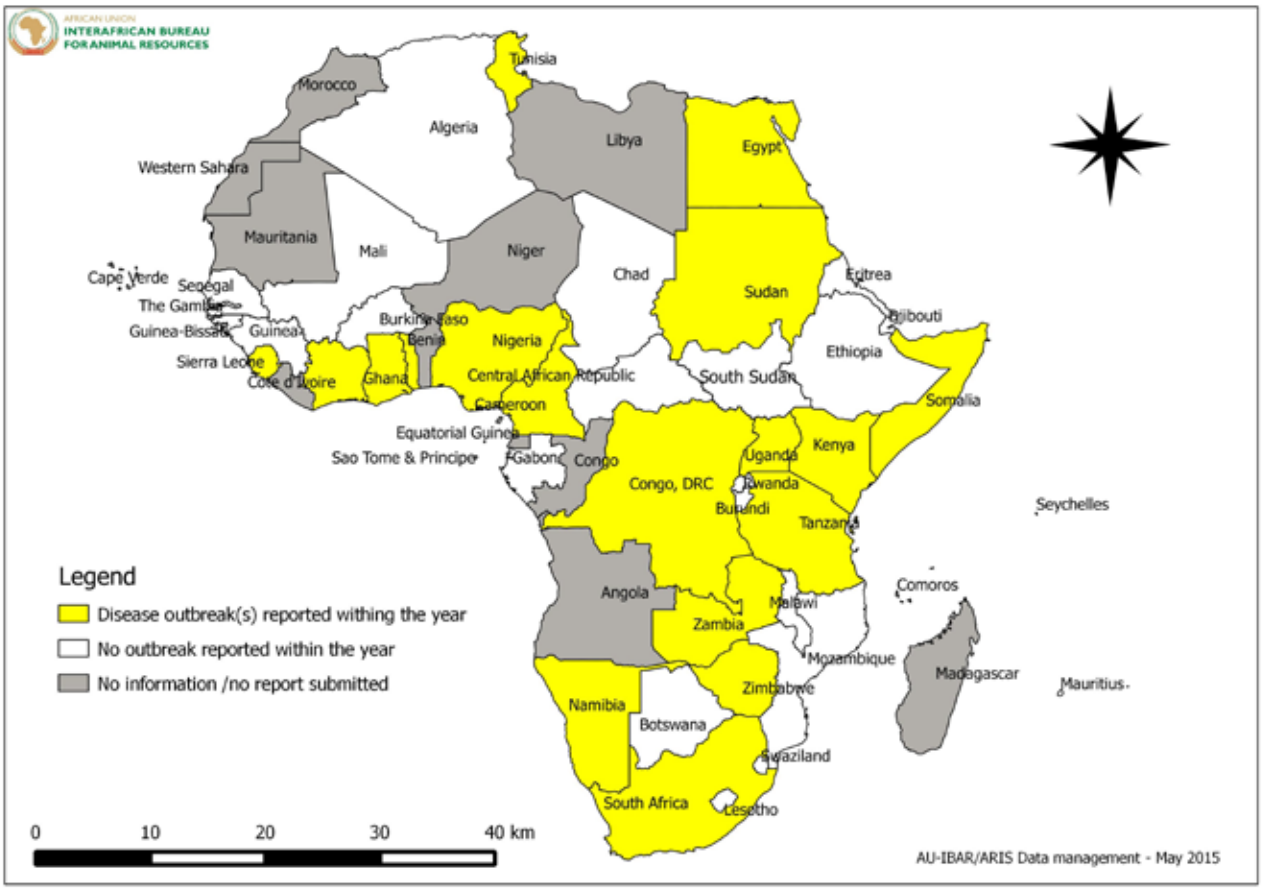
Chart 23: *Monthly Distribution of Theileriosis Outbreaks (2014)*

5.13. Trypanosomosis

During the reporting period, 19 countries reported a total of 435 outbreaks with 5557 cases and 326 deaths (Table 28). Somalia reported the highest number of outbreaks (132), followed by Tunisia (69), Zambia (62), Egypt (31) and South Sudan (26). Regarding cases and deaths, Zambia reported the highest numbers (1611 and 58), followed by Tanzania (1570 and 22), Somalia (773 and 71), DRC (338 and 45) and Cameroun (249 and 6).

Table 28: *Countries reporting Trypanosomosis*

Country	Outbreak	Susceptible	Cases	Deaths	Slaughtered	Destroyed
Cameroon	7	685	249	6	3	
Cote d'Ivoire	5	388	49	30		
Democratic Republic of Congo	14	12395	338	45	6	7
Egypt	31	178	78	0		
Ghana	18	2636	126	0	26	0
Kenya	11	292	43	4	0	0
Namibia	8	23	8	0	0	0
Nigeria	4	105	39	0	0	0
Sierra Leone	2	85	52	14	0	0
Somalia	132	9237	773	71	40	21
South Africa	7	68	45	1		2
South Sudan	26	2670	88	17	0	0
Sudan	6	4765	119	55	0	0
Tanzania	17	41132	1570	22	0	0
Togo	14	947	215	3	7	
Tunisia	69	2649	151	0	0	0
Uganda	1	1500	1	0	0	0
Zambia	62	10067	1611	58	0	0
Zimbabwe	1	14	2	0	0	0
Total (19)	**435**	**89836**	**5557**	**326**	**82**	**30**



Map 25: *Spatial distribution of Trypanosomosis (2014)*

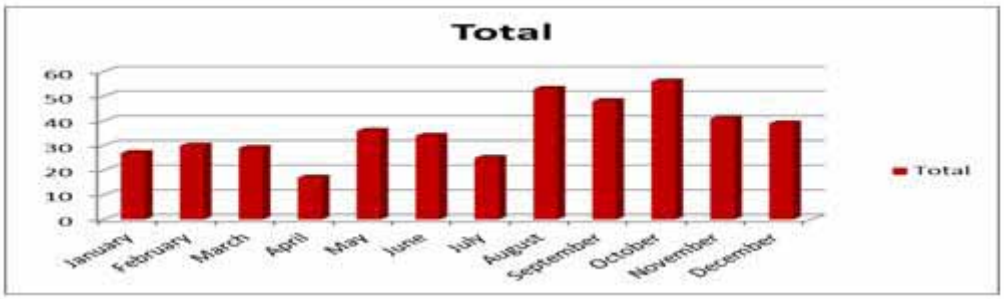


Chart 24: *Monthly Distribution of Trypanosomosis Outbreaks (2014)*

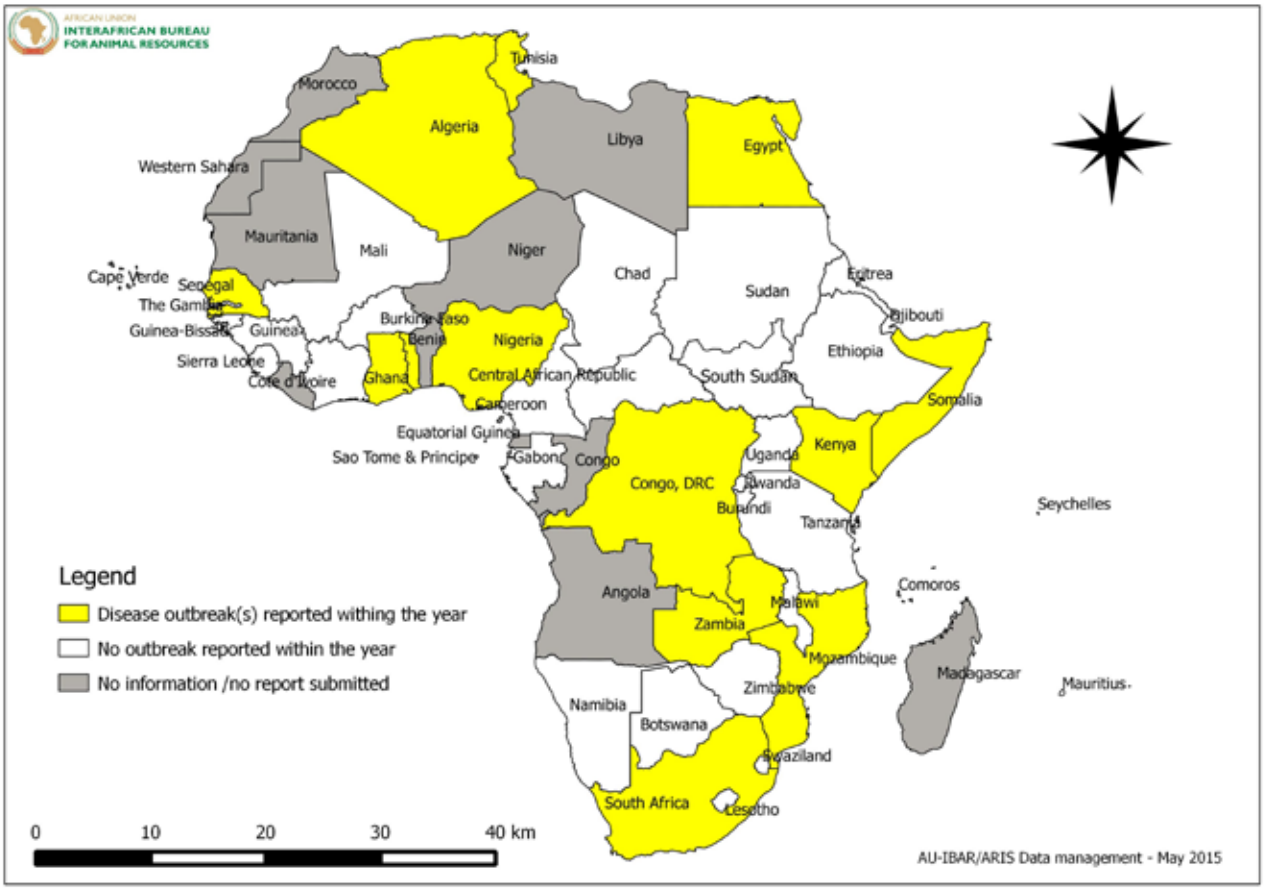
5.14 Tuberculosis

During 2014, 13 countries reported 287 outbreak of tuberculosis with a total of 3487 cases and 22 deaths (Table 29). Algeria reported the highest number of outbreaks (106), followed by Ghana (69), Togo (28), DRC (23) and South Africa (23).

Table 29: *Countries reporting Tuberculosis (2014)*

Disease	Outbreak	Susceptible	Cases	Deaths	Slaughtered	Destroyed
Algeria	106	1623	283	0	283	0
Democratic Republic of Congo	23	20975	1452	0	5796	765
Egypt	18	419	128	0		
Ghana	69	2114	100	1	309	0
Kenya	2	140	2	2	0	0
Mozambique	2	40	2	2	0	
Nigeria	1	850	400			350
Senegal	1	3800	5	0	0	0
Somalia	1	34	5	2	0	0

Disease	Outbreak	Susceptible	Cases	Deaths	Slaughtered	Destroyed
South Africa	23	5951	119	6		71
Togo	28	1213	71		44	27
Tunisia	7	105986	892	1	773	94
Zambia	6	314	28	8	0	0
Grand Total (13)	**287**	**143459**	**3487**	**22**	**7205**	**1307**



Map 26: *Spatial distribution of Tuberculosis in Africa in 2014*

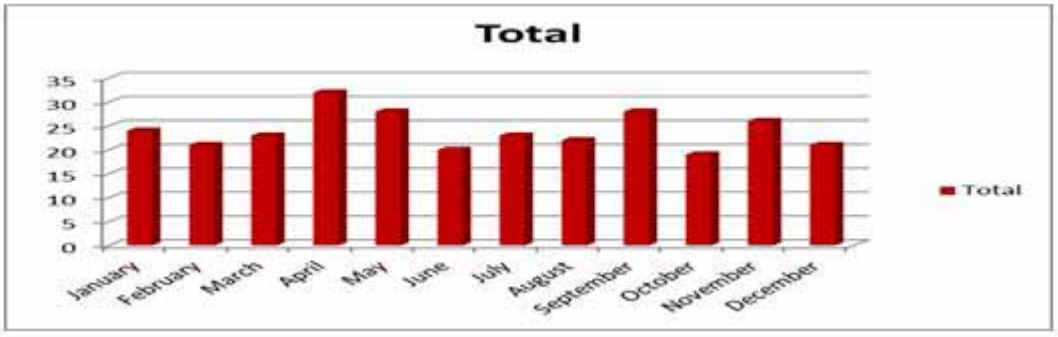


Chart 25: *Monthly Distribution of Tuberculosis Outbreaks (2014)*

5.4 African Bee health status in 2014

In 2014, it is observed that only Algeria officially notified 1 outbreak of American foulbrood and 57 outbreaks of varrosis in the whole continent.

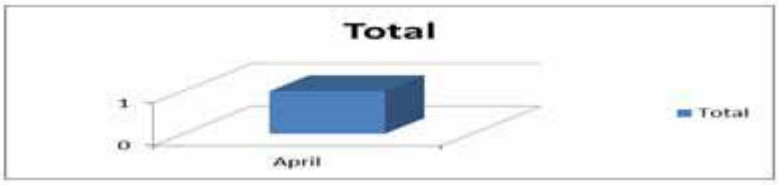
American Foulbrood

Country	Outbreak	Susceptible	Cases	Deaths	Slaughtered	Destroyed
Algeria	1	10	10	0	0	10
Total	**1**	**10**	**10**	**0**	**0**	**10**

Varrosis

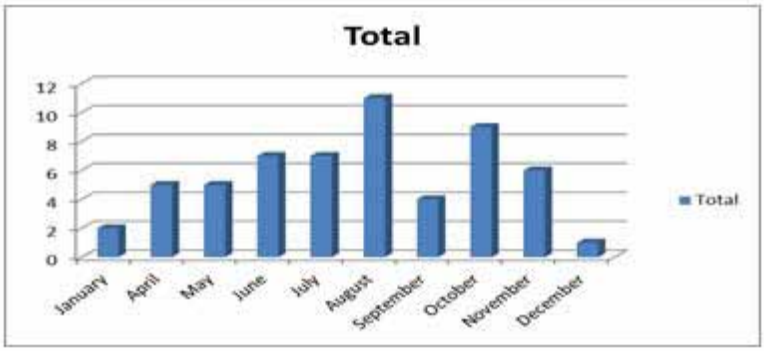
Country	Outbreak	Susceptible	Cases	Deaths	Slaughtered	Destroyed
Algeria	57	448	462	0	0	457
Total	**57**	**448**	**462**	**0**	**0**	**457**

The temporal distribution showed that American foulborood occurred only in the month of April, while Varrosis occurred throughout the year with the peak in August.



American Foulbrood

Month	Outbreaks
April	1
Total	**1**

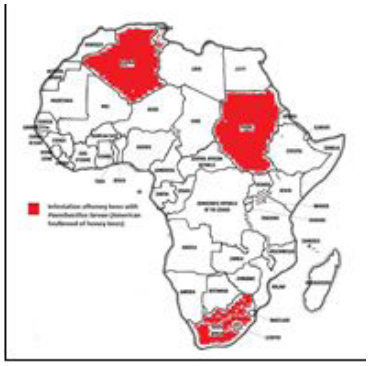


Varrosis

Month	Outbreaks
January	2
April	5
May	5
June	7
July	7
August	11
September	4
October	9
November	6
December	1
Total	**57**

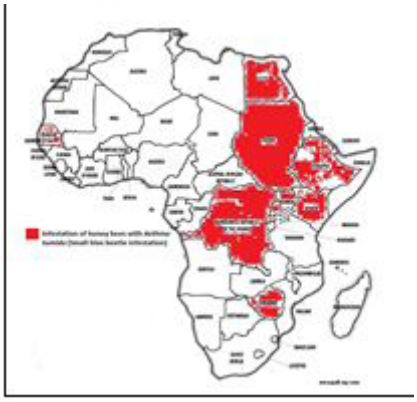
However compilation of information on 30 countries from presentations made during trainings by veterinary officers on disease surveillance and timely reporting and also during bee project workshops and meetings on the status of apiculture in 2014 showed a different picture. Below are mapping of the six diseases of bees listed in the OIE Terrestrial Animal Health code which member countries are obligated to report their occurrence. The six diseases are: Acarapissosis of honey bees caused by (Acarapis woodi);American foulbrood of honey bee caused by (Paenibacillus larvae); European foulbrood caused by (Melissococcus plutonius); Small hive beetle infestation (Aethina tumida); Tropilaelaps infestation; and Varrosis of honey bees caused by varroa spp.

Map 27: *Spatial distribution of infection of honey bee by Acarapisosis*



Map 28: *Spatial distribution of infestation of honey bee American foolbrood*

Map 29: *Spatial distribution of infestation of honey bee European foolbrood*



Map 20: *Spatial distribution of infestation of honey bee by Aethinia Tumida*

Map 30: *Spatial distribution of infestation of honey bee by Aethinia Tumida*

In order to have an accurate bee diseases mapping in Africa, it is necessary that a more comprehensive pests and diseases surveillance and monitoring should be carried out. The infested areas should be mapped to indicate the national status. It is also recommended that capacity building on disease surveillance and diagnosis; residue monitoring; research on production, pests, diseases and pollination should be prioritized by parties in MS. Couple to this, both passive and active disease and pest surveillance need to be strengthened in all MS to establish the nature of endemic and emerging diseases affecting each country. International surveillance need also be implemented to improve on sanitary assurance.

6. AFRICA LIVESTOCK POPULATION AND COMPOSITION IN 2014

6.1 The context of an African Animal Genetic Resources

Africa is home to a world of diverse Animal Genetic Resources. The rich bio-diversity span across genetic diversity, species diversity and ecosystem diversity, that has contributed to the vast range of Darwinian adaptations that have been documented and continue to evolve within these species. These genetic resources are of great significance spanning from economic value, ecological value, cultural value and historical importance and thus it is critical that these resources are effectively managed by ensuring a deeper understanding of their population dynamics, status and trends.

A description of the current African AnGR is presented here, with a special focus on the population status and trends. The sources of information are recently submitted country reports (2014) and the FAO – FAOSTAT database http://faostat3.fao.org.

6.2. State of species diversity

In Africa (based on the FAO statistics division records which populates aggregate data attained from official records, semi-official and estimates), the aggregate population numbers for some selected mammalian species currently stands at ~304 million for the cattle, 347 million for goats, ~328 million for sheep, ~35 million for pigs, ~6 million horses and ~23 million camels amongst others. Figure 1 represents the percentage proportions of some selected livestock species in Africa.

The Avian species are also well represented as indicated in Figure 2. The largest percentage proportion of 95% is attributed to the chicken species followed by ducks (2%) while Geese, guinea fowls and turkeys have the lowest proportion (1%) across the continent.

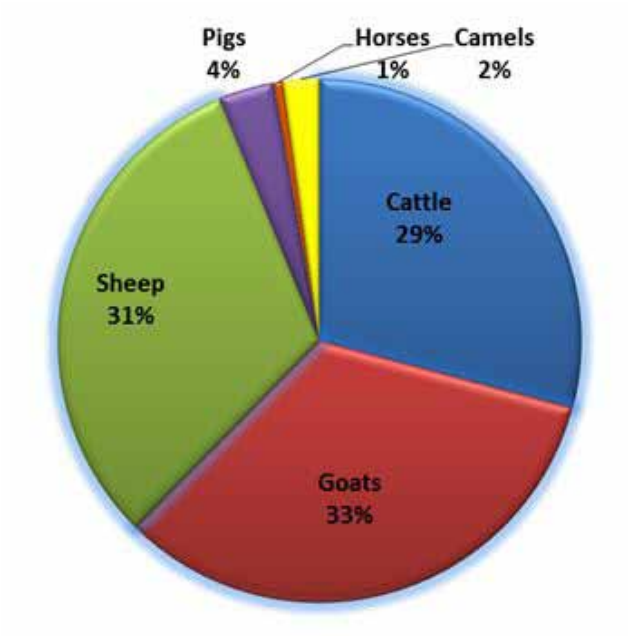


Figure 20: *Distribution of some selected mammalian livestock species found in Africa*

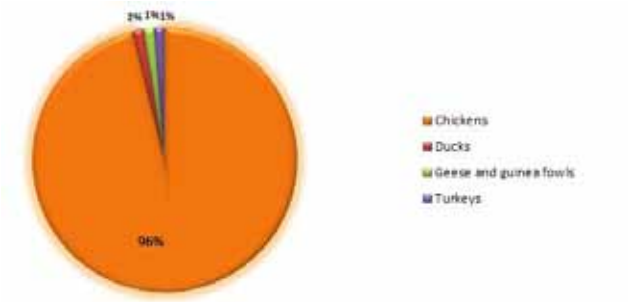


Figure 21: *Distribution of some selected Avian Species found in Africa*

6.3 Regional distribution of species diversity

From the population size estimates attained from the FAOSTAT http://faostat3.fao.org, Africa has a wide species diversity with different species dominating different regions. This differential occurrence could be attributed to various aspects such as cultural, traditional preferences and religious values of the human populations occupying these regions.

As represented in figure 3, the largest sheep populations occur in Northern Africa and this

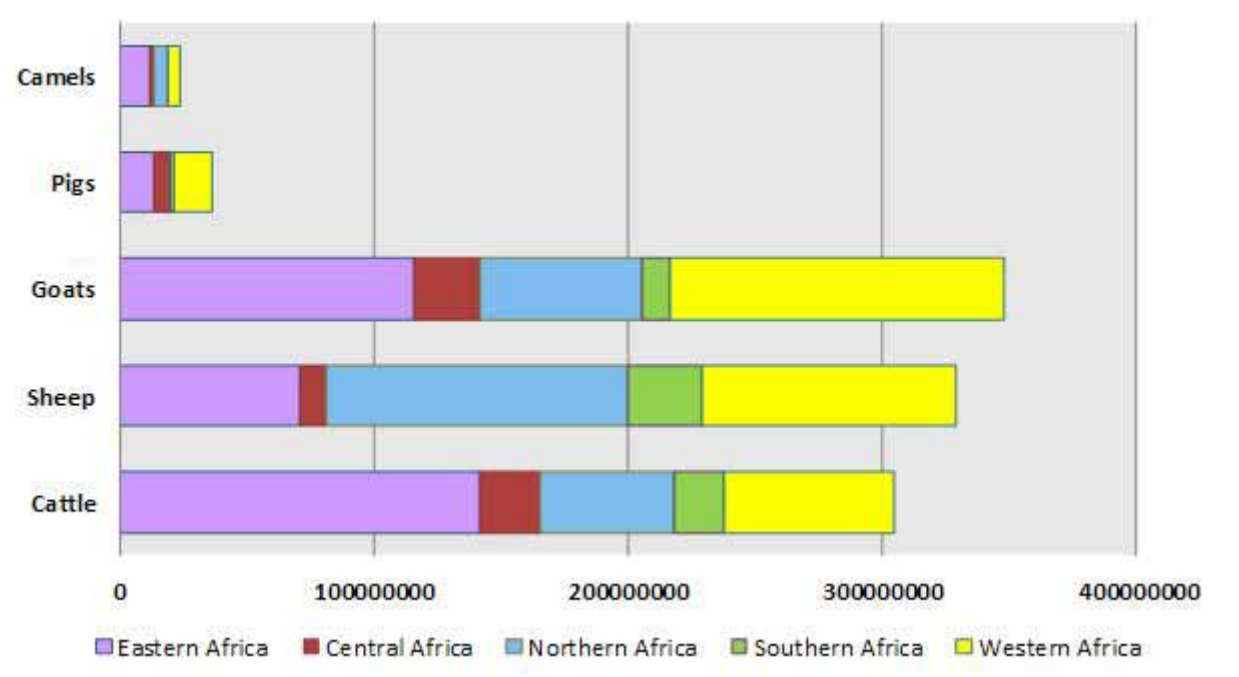


Figure 22: *Number of selected livestock species at regional level in Africa based on 2013 records*

may be attributed to the cultural/traditional preferences of the human populations that occupy these regions, sheep meat is considered of greater value as opposed to other livestock products.

Eastern Africa recorded the largest number of cattle populations as opposed to the other African regions. Sudan and Ethiopian have been listed as amongst the top ten countries with the highest cattle populations globally reportedly at approximately 41 million and 53 million respectively (FAOSTAT-http://faostat3.fao.org).

Western Africa had the largest goat populations recorded at ~130 million. In general, this region has the highest largest small ruminant population (219 million) with majority of the populations being owned by rural folk mainly men and women and are mainly reared under traditional livestock systems.

Western Africa and Eastern Africa regions had the largest pig population at 14 million and 12 million respectively while the lowest numbers where recorded in Southern (1.8 million) and Northern Africa (29,000).

The Southern Africa region data indicates that it hosts a total of 20 million cattle and approximately 40 million small ruminants. This region has the smallest camel population in the continent as per the population records availed.

The Central Africa region is home to estimated totals of 23 million, 35 million and 6.7 million, cattle, small ruminants (sheep and goats) and pigs respectively.

For some non-conventional species such as grass cutters/Cane rat and Guinea pigs, there appears to be evident data gaps on the population estimates or actual counts reported in FAOSTAT database. With the ongoing increased consumer preference for these non-conventional species, there is need to provide these actual population counts thus countries with these animal populations should be sensitized on the need to avail this vital information.

For the Avian species (Figure 4), Northern Africa and Western Africa have the largest chicken population reported at 603 million and 514 million respectively. Interestingly, information on population sizes for the Guinea fowls and geese is missing for Western and Central Africa, yet

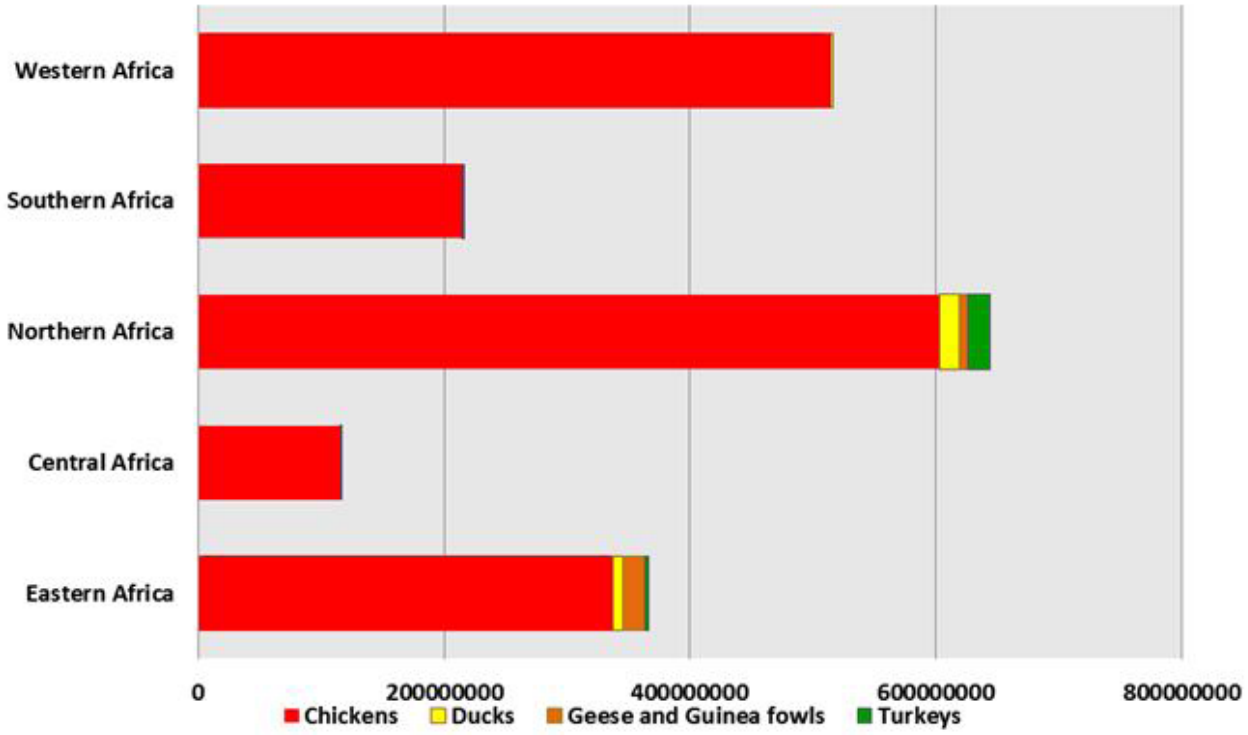


Figure 23: *Number of selected avian species at regional level in Africa based on 2013 FAOSTAT database records*

these avian species are found in these regions. This phenomenon further emphasizes the need to have regular inventory actions concerning AnGR in Africa.

6.4. Trends in Breed diversity

Breed diversity details two main categories, these include local breeds and transboundary breeds. Local breeds cover breeds that occur only within a country while transboundary breeds encompass breeds that occur in more than one country, this may include regional transboundary breeds that are found in within only one of the world's regions or those breeds that occur in more than one region often referred to as the international transboundary breeds1.

Data sources from FAO publications of 20071 and 20132, report an increase in number of breeds for some selected species. Table 1 highlights an increase of 18 and 37 additional breeds for cattle and Chicken species respectively.

Table 1: *Number of some selected local breeds (Source: FAO 20071, FAO 20132)*

Mammalian species	Years		Avian species	Years	
	1999-2006	2008-2012		1999-2006	2008-2012
Cattle	154	172	Chicken	89	126
Goat	86	96	Duck	14	14
Sheep	109	114	Goose	10	10
Camel	44	46	Turkey	11	11
Pig	49	51			
Horse	36	38			
Total	**478**	**517**	**Total**	**124**	**151**

Table 2: *Number of some selected regional transboundary breeds - Data source (FAO, 20071 & FAO 20132)*

Species	Years	
	1999-2006	2008-2012
Cattle	35	36
Camel	2	2
Goat	15	15
Horse	7	7
Pig	2	2
Sheep	27	24
Chicken	0	3
Total	**97**	**95**

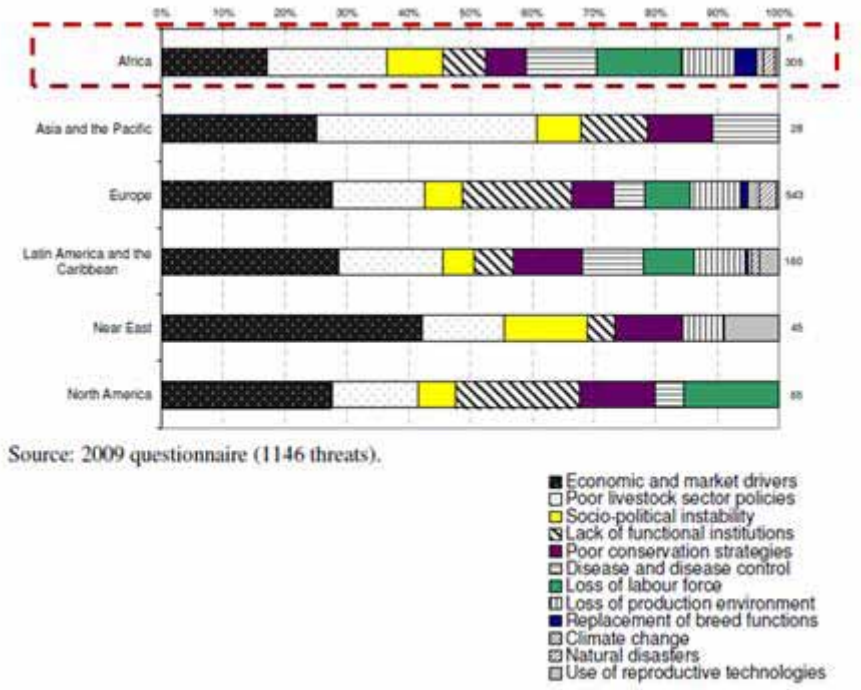


Figure 24: *Global distribution of threats by geographical categories (Source FAO, 20094)*

There is a high presence of regional transboundary breeds in Africa as indicated in table 2. The cattle population has the highest occurrence with numerous transboundary cattle breeds. It is evident that economic and market drivers are threats that contribute significantly to the decline of AnGR in Africa. Unfortunately, this particular threat is beyond the control of the livestock sector and may be difficult to put interventions in place. However, the issue of breed replacement or crossbreeding can be well-tackled by formulating good crossbreeding policies and regulations that will assist in curbing this menace. It is also important to note that poor conservation strategies are additional threats that can be dealt with and deliberate actions put into place. This could include the establishment of conservation initiatives (in-situ and ex-situ) or undertaking monitoring activities to identify populations at risk and put the necessary management measures in place.

6.5. Conclusion

In a nutshell, there is a huge gap in relation to the availability of relevant and reliable data on population status and trends of African AnGR due to the issue of using estimates, this could consequently result to misinformed decisions and poor management of AnGR within the African continent. It is therefore pertinent for national governments to take deliberate actions that will drive the inventory process. Concerning

the threats identified, national governments may aim to develop and implement sustainable strategies such as formulation of market based or regulatory policies, cross-breeding policies and conservation initiatives. The continent's collective approach may be the necessary action needed to stop the loss of African animal genetic resources that is our wealth and heritage.

7. AFRICAN FISHERIES AND AQUACULTURE PRODUCTION AND INTERNATIONAL TRADE IN 2014

7.1 Capture fisheries production by principal producers in Africa

Morocco continues to be the highest fish producing country on the continent followed by South Africa and Nigeria. Morocco is part of the highly productive canary current large marine ecosystem with significant upwelling events with significant landings of the small-pelagic fish species. In general terms the general fish production trend across these countries mirrors that of the global trend of stagnant capture fishery production while human population growth continues to increase portending serious implication for food security. Some of the threats to stagnation production are attributable to unsustainable fishing practices, high levels of fishing intensity in commercial fisheries, open access fishery, environmental degradation and habitat destruction, externalities (e.g. climate change, other natural disasters). The solution is to promote good governance principles and strengthen institutional capacity for enhanced governance.

Table 1: *Time series capture fisheries production data (inland and marine) form first 10 fish producing countries in Africa (FAO SOFA, 2014) in metric tonnes.*

Country	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Morocco	918 643	918 151	1 026 395	876 878	879 469	997 127	1 165 062	1 136 240	958 907	1 171 496
South Africa	822 935	888 104	817 666	618 617	678 878	644 659	512 284	628 268	533 432	701 711
Nigeria	475 162	465 251	523 182	552 323	530 420	601 368	598 210	616 981	635 486	668 754
Namibia	637 799	571 199	553 995	509 585	413 333	372 822	378 847	381 928 F	413 925	468 678
Senegal	466 842	434 769	399 848	368 388	412 360	428 298	447 685	409 717	427 135	460 871
Uganda	241 810	371 789	416 758	367 099	431 500	403 500	412 000	413 805	437 415	407 638
Tanzania	351 294	363 688	376 700	335 437	426 114	326 812	334 860	346 792	342 614	372 257
Ghana	390 784	417 651	373 985	375 087	327 293	351 444	322 268	351 205	344 872	364 949
Egypt	431 123	393 494	349 553	375 894	372 491	373 815	387 398	385 209	375 354	354 237
Angola	212 033	240 002	202 616	225 741	306 436	305 860	272 042	280 000	273 000	277 000

7.2 Aquaculture production (quantity and value) by major producers in Africa

Egypt continues to dominate aquaculture production both in terms of volume and value. The main dominant culture species is the Nile tilapia, Tilapia niloticus. Improved technology and sustainable culture practices with initial Government assistance to private sector has contributed to the growth of fish farming industry in the country. The catfish farming industry is Nigeria is booming with increased private sector involvement and the African catfish, Clarias gariepinus, is the main cultured species. The aquaculture industry is Ghana has expanded with increased cage culture development on the Volta River and is the main contributor to cultured fish (tilapia-based) production in the country.

The main challenge to commercial aquaculture development, particularly in African countries south of the Sahara, is weak regulatory frameworks and poor practices. Sustainable commercial aquaculture would require strategies for diseases control on farms, biosecurity governance and control on movement of genetic materials, feed additives etc.

Table 2. *Aquaculture production from top 10 African countries (FAO, 2014)*

Top 10 - Country aquaculture production (2012) Thousand tonnes and million USD)		
Country	Quantity	Value
Egypt	1017.738	2010.815
Nigeria	253.898	711.8065
Uganda	95.906	209.1156
Ghana	27.45	61.35058
Kenya	21.488	54.82907
Zambia	12.988	42.92208
Madagascar	8.5875	47.03537
Tunisia	8.577	57.32962
Zimbabwe	8.01	42.92208
South Arica	3.99853	62.10894

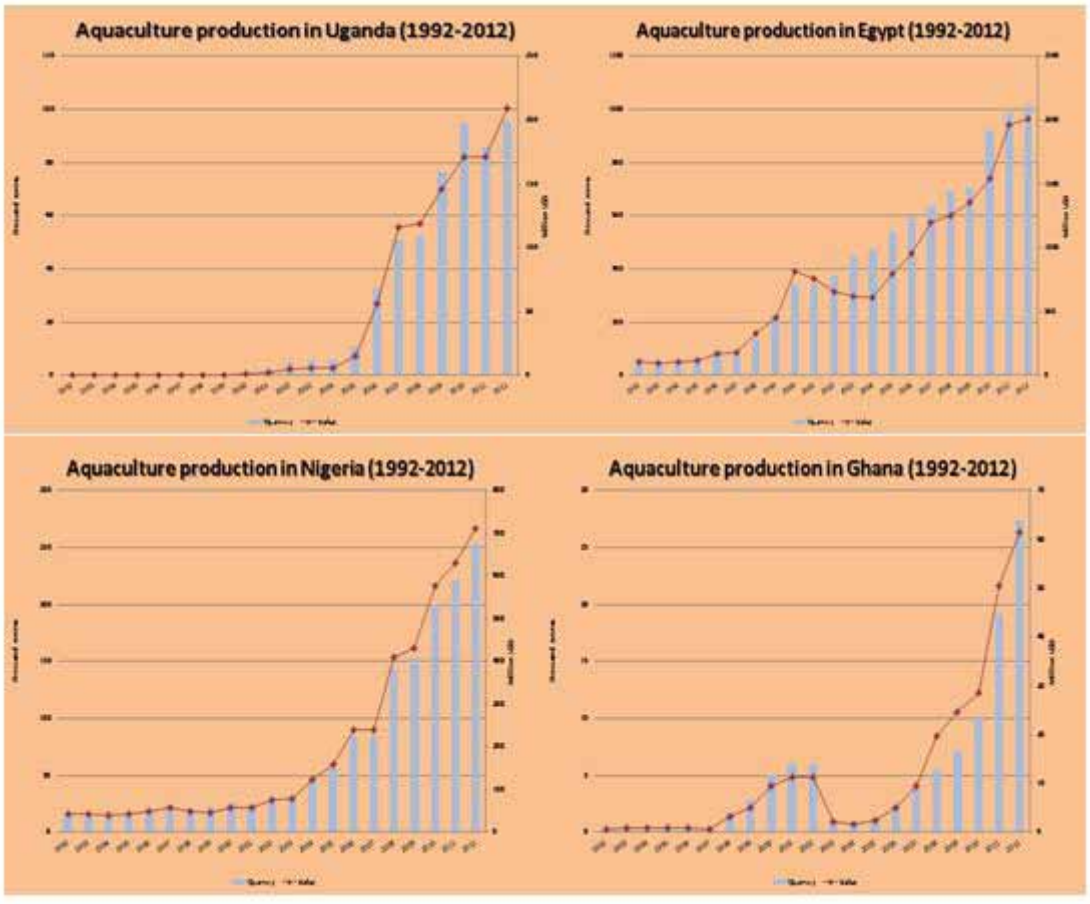


Figure 25: *Trends in aquaculture production and value in major producer countries (FAO,*

Gross Production Values (GPV) by fishing subsector in some African countries

The production values of capture fisheries (total production x price) are significant for countries such as Tanzania, Egypt, Mozambique, Madagascar and Senegal. The inland fisheries subsector in Egypt and Tanzania is the largest contributor to gross production value in these countries, 57 % and 84 % respectively. The inland water bodies i (e.g. Aswan dam in Egypt, Lakes Victoria,

Tanganyika in Tanzania) support important fisheries with highly valued fish species (e.g. Tilapia, Nile perch) that cater for both local and export markets. In Mozambique, Madagascar and Senegal, the coastal (marine) artisanal fisheries contributes hugely to total production and values, 69 %, 44 % and 75 5 respectively. Mozambique and Madagascar are adjacent to the Southwest Indian Ocean (Agulhas-Somali Current large marine ecosystem) whilst Senegal is adjacent to the Canary current large marine ecosystems with intense fishing activity by small-scale fishing crafts. The artisanal fisheries production comprises of valuable pelagic and demersal fish species, some of which target lucrative expert markets with fiscal returns.

Table 2. *Gross Production Values (GPV) by capture fisheries subsector in some African countries (de Graaf, G. & Garibaldi, L. 2014)*

Country	Inland fisheries	Marine artisanal fisheries (US$)	Marine industrial fisheries (US$)	Total capture fisheries GPV (US$)
Benin	157,325,208	49,299,489	1,401,540	208,026,237
Burundi	21,680,346			21,680,346
Congo, Dem Rep of the	563,282,100	12,895,934	0	576,178,034
Congo, Republic of	182,176,500	32,947,961	71,216,156	286,340,617
Côte d'Ivoire	8,182,012	24,786,842	10,063,526	43,032,379
Djibouti	0	4,438,200	0	4,438,200
Egypt	529,239,795	136,693,095	260,451,538	926,384,428
Ethiopia	106,201,521			106,201,521
Gambia	1,442,954	4,163,504	361,713	5,968,171
Guinea	29,220,300	152,016,120	34,048,080	215,284,500
Kenya	135,254,281	10,207,683	220,001	145,681,964
Madagascar	49,310,520	138,310,373	129,378,019	316,998,911
Malawi	170,357,472			170,357,472
Mauritius	0	7,449,426	9,667,726	17,117,152
Mozambique	147,972,160	334,026,000	3,063,200	485,061,360
Rwanda	46,106,580			46,106,580
Sao Tome and Principe	0	13,621,390	0	13,621,390
Senegal	18,550,190	287,345,331	79,812,013	385,707,535
Tanzania	836,980,956	146,002,089	0	982,983,045
Togo	2,548,000	18,477,925	459,680	21,485,605
Zanzibar	0	52,096,086	0	52,096,086

Source: de Graaf, G. & Garibaldi, L. 2014. The value of African fisheries. FAO Fisheries and Aquaculture Circular. No. 1093. Rome, FAO. 76 pp

7.3. Value of African fisheries

Fisheries and aquaculture contribution to GDP in Africa by subsector Source:

The data underscored the importance of small-scale fisheries in national development, especially the marine artisanal fisheries, being the subsector with highest contribution to national GDP (0.43 %) and agriculture GDP (1.82 %) in comparison to the highly mechanized industrial fisheries, inland fisheries and aquaculture. The small-scale fisheries plays crucial role in employment creation and food security in African coastal and riparian communities. The highly mechanized, technological advanced industrial fisheries is mainly foreign-owned and export oriented and, mainly due to their off-shore operations, contribute relatively little to employment in African countries. Aquaculture contributes the least to both national (0.15 %) and total agricultural

GDP (0.96 %). Commercial aquaculture has a potential for significant contribution to economic growth (GDP) and employment but the practice is still at rudimentary stage (focusing more on subsistence) on the continent as compared to Asian countries such as China, Vietnam, etc.

It is important to note that total contribution of fisheries and aquaculture to the national GDP in most countries have been depressed in recent years by mining sector with the discovery of oil fields and minerals.

Table 3. *Contribution of fisheries and aquaculture to national and agriculture GDP (de Graaf, G. & Garibaldi, L. 2014)*

	National GDP		Total Agriculture GDP (Agriculture, livestock, hunting, forestry, and fishing)	
	Gross Value Added (US$ millions)	**Contribution to GDP (%)**	**Gross Value Added (US$ millions)**	**Contribution to Agriculture GDP (%)**
Total national and Agriculture GDPs in African countries	1,909,514		288,392	
Total Fisheries and Aquaculture	24,030	1.26		
Total Inland Fisheries	6,275	0.33	4,676	1.62
Total Marine Artisanal Fisheries	8,130	0.43	5,246	1.82
Total Marine Industrial Fisheries	6,849	0.36	4,670	1.62
Total Aquaculture	**2,776**	**0.15**	**2,776**	**0.96**

Source: de Graaf, G. & Garibaldi, L. 2014. The value of African fisheries. FAO Fisheries and Aquaculture Circular. No. 1093. Rome, FAO. 76 pp

7.4 Employment by subsector

The employment number in the fisheries and aquaculture sector is estimated at about 12. 2 million people, with the highest employment from the inland fisheries (40.9 %) followed by the coastal (marine) fisheries (32.9 %). The majority of those employed in the fisheries sector are in the processing industry, comprising mainly of women. The aquaculture subsector employs the least number of people (7.5 %) which is l dominantly being practiced for subsistence in many African countries.

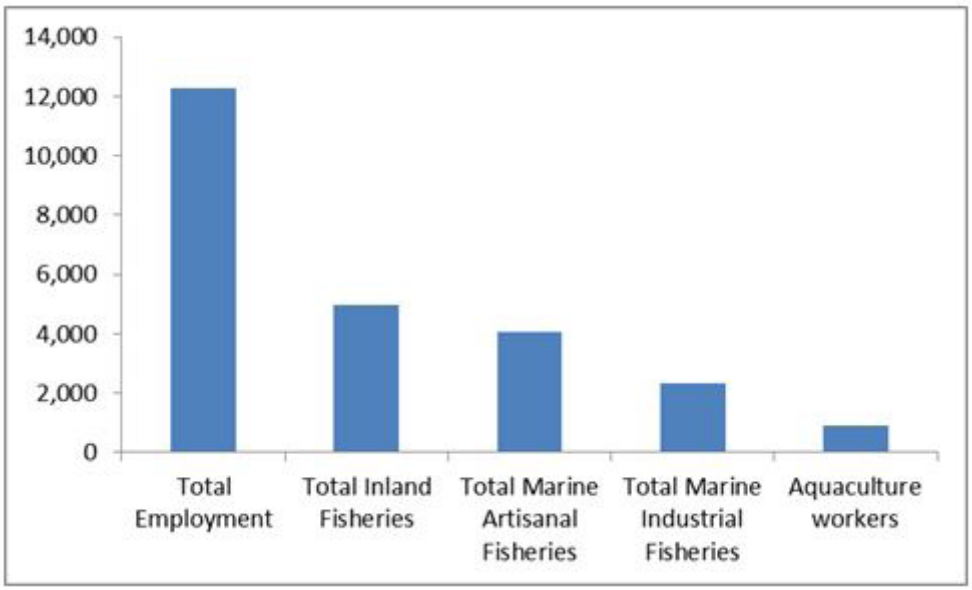


Figure 26: *No. of employees (thousands) in fisheries and Aquaculture subsectors (de Graaf, G. & Garibaldi, L. 2014)*

7.5. Fish consumption

Fish and fishery products play a critical role in global food security and nutritional needs of people in developing and developed countries. Africa and Latin America (including the Caribbean) have the lowest per capital fish consumption. In the Asian countries, fish products form Aquaculture continues to play massive role in food security whilst in Africa fisheries production from artisanal fisheries is, with often low-valued species, are destined for domestic consumption and hence impacting vitally on food and nutritional security goals attainment. Fish importation from Africa contributes in large measures to increased fish consumption in developing countries. Strengthening capacity for intra-regional trade on the African continent as well as increasing production from aquaculture has increased prospects of increasing fish consumption on the Africa continent. Also, building capacity for reduction in post-harvest loss in the small-scale fisheries would lead to increased fish supply availability and hence increased consumption. The poor statistical data collection on fish production, import and export could also blur the true picture of fish consumption rate in Africa. In coastal countries however, e.g. Sierra Leone, Gambia, Cameroon, the per capita fish consumption rates are in excess of 20 %. The situation is different in some landlocked countries such as Ethiopia, Rwanda etc., where per capita fish consumption rates are less than 5 %.

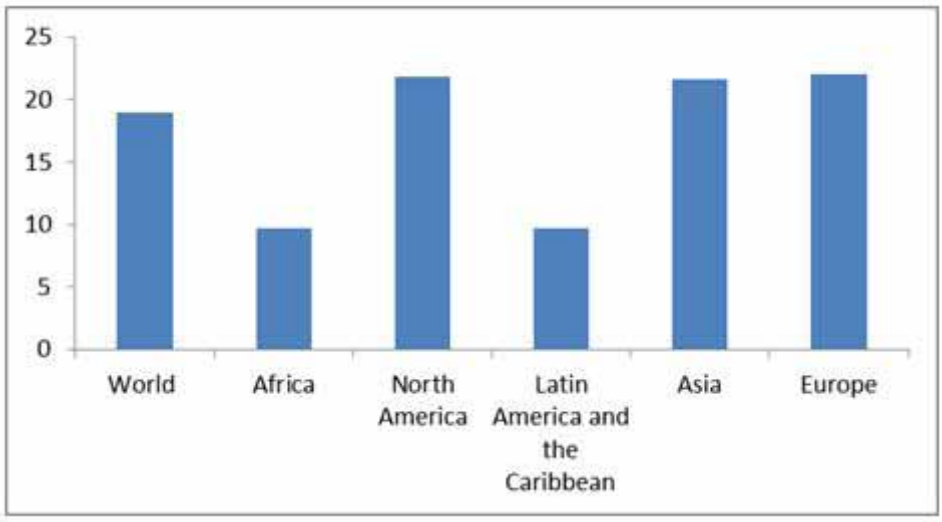


Figure 27: *Per capita fish consumption (Kg/year), FAO SOFA 2014*

8. HUMAN RESOURCES AND INFRASTRUCTURE FOR DEVELOPMEMENT OF ANIMAL RESOURCES IN AFRICA IN 2014

8.1. Human Resources

Veterinarians and Public Health Personnel

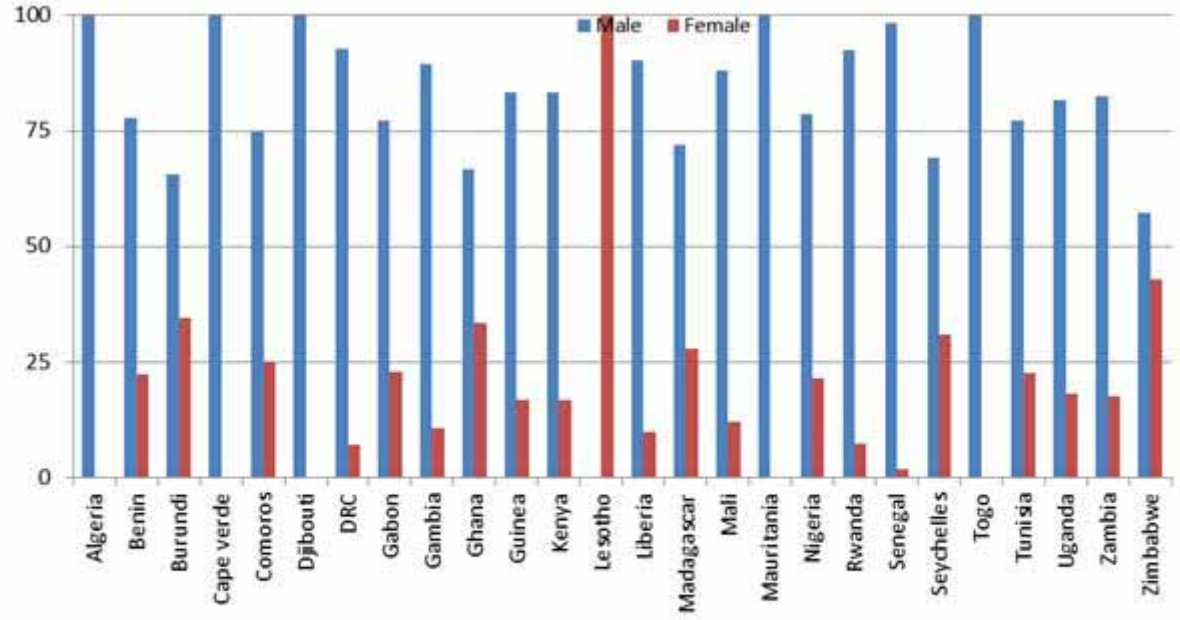
Egypt has the highest number of personnel involved in animal health in Africa, followed by Ethiopia, Nigeria, Algeria and Sudan. Some countries, such as South Africa have not provided data on private veterinarians and other personnel in this sector. There is no apparent trend between veterinarians in the public and private practice. For example, Egypt has 45,000 veterinarians in private practice compared with about 13,000 in the public sector. This may be an indication of the demand for private veterinary services as well as the rewards thereof. Ethiopia on the other hand has more veterinarians in the public sector than private sector, 1,009 vs 150, respectively. For those providing the information, Algeria has the highest number of veterinarians in the public health sector. This may be an indication of the importance attached to public health issues in that country or just the interest in that subject. From the above, indications are that there is no clear pattern of the distribution of veterinary personnel between the public and private sectors in the different countries. There are various reasons for these differences. The economic environment prevailing in the countries may generally influence the levels of public sector spending on animal health. This may manifest in well-funded public animal health systems which may attract veterinarians into this sector, especially the younger generation and recently-graduated veterinarians who often have to serve in the public sector as part of their obligation for the support they received during their graduate studies.

In early assessments of veterinary services, it was suggested that the minimum requirement to deliver effective essential public sector veterinary services, expressed as a ratio of livestock units (LU) to veterinarians is 100,000:1 (FAO, 1993). However, in Africa this ratio is reportedly anywhere between 100,000 and over 1,000,000. This suggests a serious shortage of veterinarians in Africa in general. It must be noted though that there are huge differences on this between countries in Africa. Botswana and Egypt could claim to have enough veterinarians to cope with the required veterinary services, while countries like Guinea, Mauritania and Mali have serious shortages of the same.

Animal Production, Fisheries and Wildlife Personnel

There is a general trend in most African countries that there are more animal production personnel than veterinary. It can be generally agreed that most of the animal production personnel are employed in the public sector. They are generally involved in research, extension and development work. Those in the private sector tend to be employed in animal resources manufacturing sector, as well as dairy industry. Others are employed by NGO, CSO and church development work. In most African countries, there are more animal production, fisheries and wildlife personnel in the public than private sector. However, in some countries where private sector fisheries play a key role, for example, Uganda, there are more personnel in the private sector. Similarly, in the wildlife sector, there is more personnel in the public sector than in the private sector. However, in some countries like Zimbabwe, where wildlife is important in the private sector, there are more actors from that sector. This trend could apply to other countries in Southern Africa, especially South Africa, Botswana and Namibia, where the private sector is heavily engaged in wildlife management.

Distribution of Fisheries Professionals in the Public sector by sex as at 2011



Source: AU-IBAR (2011). Veterinary Demography

8.2 Animal Resources Training Institutions

Training institutions comprise institutes, colleges or universities, offering training in animal resources-related fields such as veterinary and animal production. At the end of the training, students receive certificates, diplomas or degrees, depending on the institutes attended. However, it must be noted that there are differences between African countries on the training institutes and the type of graduates produced. These institutes produce graduates who will provide hands-on auxiliary services, particularly the certificate holders, to more technical provision of animal resources-related services from diploma and degree holders.

It has also been noted that Francophone West Africa has a shortage of veterinary training institutions when compared with other regions in Africa. One of the main reasons could be that veterinary schools are very expensive to establish and run hence once a country has invested in a national veterinary school, it runs the risk of producing graduates in excess of its needs to justify the investment (Smith and Hunter for FAO, 1993). In 2011, a total of 80 veterinary training institutions (VTIs) were identified in Africa. Forty two (42) of these were in East and Southern Africa, 22 in North Africa, 12 in West Africa and 4 in the Central Africa (AU-IBAR, 2012). For animal production, many of the universities with faculties or departments of agriculture tend to offer animal science courses as part of BSc (Hons) degrees. Certificates and diplomas in animal production are offered at institutes and colleges. It appears very few universities and training institutes offer courses specifically in fisheries and wildlife. Of these Uganda (fisheries), Zimbabwe (wildlife), Senegal (fisheries and aquaculture) and Kenya (fisheries and wildlife) are among the few providing these courses.

8.3 Infrastructure to support Animal Resources

There is need to provide infrastructural support for animal resources management and development. The infrastructure ranges from veterinary laboratories for various tests and evaluations, quarantine stations, dip tanks, sale

pens to crushes, milk collection centres and weigh-scales, among others. Depending on levels of development and the requirements of the animal resources sector, countries have access to different types of infrastructure. However, it can be assumed that infrastructure available and required for animal production will depend to a large extent on the level of intensification of production systems. Intensification requires a higher level of supportive infrastructure when compared with, for example, extensive and pastoral systems.

9. AU-IBAR INTERVENTIONS ON ANIMAL RESOURCES IN 2014

9.1 Animal Resources Information System (ARIS)

The goal of AU-IBAR through the development of the Animal Resources Information System (ARIS) is to enhance animal resources data management and help position AU-IBAR, the Regional Economic Communities (RECs) and AU member states as the core and reliable sources of comprehensive animal resources information in Africa. ARIS is therefore aimed at enabling and supporting the collection and analysis of reliable animal resources data and information from Africa in a timely manner to support planning and decision making.

During the year 2014, AU-IBAR concentrated mainly on the improvement of the hosting environment and system features, and continuous roll out of the Animal Resources Information system (ARIS-2) to AU MSs and the RECs. This process involved overhauling the system operational platform and development of additional features based on experiences gathered so far. Specifically the new features being developed and/or enhanced included:

- Creating interoperability between ARIS-2 and other information systems especially the OIE/World Animal Health Information System (WAHIS);
- Integrating Mobile data upload
- Publicly published content to enable public access to selected reports
- Publicly accessible forum

The roll out process involved training of various stakeholders including head users at AU-IBAR headquarters, regional and national system administrators as well as regular data submitters at the national level. Fourteen (14) countries were trained in 2014, bringing the total number of MSs and RECs where ARIS has been rolled out to 41 MSs and 8RECs as at end of the year 2014.

9.2 Reinforcing Veterinary Governance in Africa Programme VET-GOV

Rationale

In sub-Saharan Africa Livestock represents on average 30% of the Agricultural Gross Domestic Product (GDP) and about 10% of the national GDP and up to 250 million poor people depend on livestock for their income and livelihoods. However the sector is seriously constrained by animal diseases and inadequate investments to enhance its contribution to the development of the African Continent, despite its great leverage potential. Since the 1980's the livestock sub sector in Africa has been subjected to unfavourable government policies resulting from structural adjustment programmes with consequent under-funding from both public and private sectors, as well as poorly functioning institutional settings and weak implementation capacity of policies, regulations and standards. In order to reverse the negative trends of livestock development in SSA, major institutional and policy reforms are required at national, regional and pan-African levels. The prevailing institutional environment in most African countries is not conducive to the provision of affordable, accessible and sustainable quality veterinary services. An analysis of these problems provides the basis for the approach proposed in the VET-GOV programme with the aim to improve aspects of Governance and Institutional reforms which are required to improve the provision of veterinary services in Africa

Objectives

The overall objective is to "Improve contribution of livestock to food security and safety, economic growth and wealth creation in Africa".

The Specific objective is to "Improve the institutional environment at national and regional

levels to provide effective and efficient animal health services in Africa"

The expected results are:

- Knowledge and awareness for institutional change enhanced
- Institutional capacity for livestock policy formulation, animal health strategies and legislation enhanced
- Institutional capacity for the implementation of policies and enforcement of regulations enhanced

Intended impact

- Enhanced food security and poverty alleviation through enhanced productivity and production systems;
- Improved and/or secured trade and market access;
- Savings in potential outbreak costs and avoided economic damages, and public health improved through reduction in the occurrence of zoonotic diseases;
- The wide-ranging potential benefits justify national authorities' engagement and donors' support of a global strategy for progressive major diseases control and investment in good governance of Veterinary Services.

Progress

1. Support has been provided to 40 Member States for the establishment of national policy dialogue platforms (hubs), which are enabling the participation of the majority of the stakeholders in decision and policy making in the livestock sector, and national policies and legal frameworks are being updated. Support has also been provided for the formulation of Regional livestock policies for EAC and COMESA and for the domestication of the IGAD regional livestock policy.
2. Regional harmonization of veterinary legislation is also being supported
3. The strengthening of 10 regional networks (epidemiology, laboratory, socio-economics) is being supported.
4. The evaluation of the performance of veterinary services (OIE PVS) in 17 Member State has been carried out and has led to the identification of the areas in which the concerned Member States must improve in order to be compliant with international standards that will enable them to produce quality products. This identification will enable MS to target and rationalize their resource in improving the veterinary services.
5. The evaluation of Livestock related capacities of 5 regional farmers associations has been carried out and the results of this evaluation will be used to improve their capacities and operations and enable them to participate more effectively in livestock value chains
6. Support is being provided to MS for 16 pilot projects on institutional strengthening for enhanced services delivery
7. Over 200 public sector workers and non-state actors have been trained by the programme on policy development and supporting the policy work at MS level.
8. Over 150 veterinary and legal experts have been trained on veterinary legislation and supporting work is being done at MS level
9. Over 200 public sector workers and non-state actors have been trained on animal health standards
10. The rolling out of the Animal Resources Information System (ARIS) in RECs and MSs is being supported (through training and provision of software and hardware). Further this African home-grown system has been linked to the world animal health information system (WAHID).

9.3 Improving Animal Disease Surveillance in Support of Trade in IGAD Member States (Surveillance of Trade-Sensitive Diseases – STSD) Project

In an effort to reduce the impacts of animal diseases on trade performance of the livestock sector in the IGAD region, AU-IBAR in partnership with IGAD Secretariat are implementing the project: **Improving Animal Disease Surveillance in**

Support of Trade in IGAD Member States, in short **"Surveillance of Trade Sensitive Diseases – STSD"**.

The overall objective of the STSD is **"to improve the contribution of livestock to food security and safety, economic growth and poverty reduction in IGAD region"**, and

The specific objective of the project is **"to reduce the impact of TADs and zoonoses on trade in livestock and livestock products in the IGAD region"**. The expected results of the project are two, which include:

i. **Result 1:** Animal Identification, Traceability and Health Certification Systems Improved; and
ii. **Result 2:** Surveillance Systems and Disease Control Strategies Improved at national and regional levels.

The STSD is financed by the European Union with a total budget of 5,880,000Euros and will be implemented for a total period of 32 months up to 15th June, 2016. The project benefits all the eight Member States of the IGAD region and is implemented jointly by AU-IBAR and IGAD Secretariat.

Actual implementation of the project began in February 2014 following the signing of partnership agreement between the implementing partners, AU-IBAR and IGAD Secretariat during the official launch of the project on February 18, 2014 in Djibouti.

In 2014, the following two planned activities (100%) were implemented under result I:

- Two guidelines were developed on LITS and AHC which will be subsequently used to implement other related activities of the project in the 2nd and 3rd years; and
- A regional coordination forum on LITS and AHC was launched, which serves as a platform to coordinate the fragmented initiatives in the region and provides avenue for experience sharing among stakeholders

Furthermore, twelve out of the fifteen planned activities (80%) were implemented under result 2. Through these activities, the project is supporting the beneficiary countries to build disease early detection, reporting and rapid response capacities through procurement of laboratory diagnostic supplies, cars, motorcycles as well as provision of tailor-made training programs. In addition, the STSD was able to support development of survey designs and undertook preparations for full-scale launching of next year cross-sectional survey activities in all beneficiary countries. The project was also able to set-up coordination mechanisms as well as supported the development of regional framework for the progressive control of PPR and other SRDs in the IGAD region.

However, there are also challenges experienced during implementation of the STSD project, which include the following interalia:

- The number of planned activities appear to be too many raising concern on the possibility of executing all the planned activities within the project lifespan;
- Delay in the delivery of procured items (project inputs) by suppliers causing delays in the implementation of key national activities;
- Weak capacity in some countries to implement national activities at a desired pace & quality.

9.4 Standard Methods and Procedures in Animal Health (SMP-AH) Project - Achievements for 2014

The arid and semi-arid lands in the Greater Horn of Africa (GHoA) are occupied by a large proportion of poor and vulnerable populations, the majority of whom rely on livestock to sustain livelihoods. However, the performance of livestock in the region remains low given the widespread occurrence of transboundary animal diseases (TADs) and other production constraints. TADs are a cause of food and

nutritional insecurity and constrain the flow of livestock and livestock products in the region for trade. Live animal export from the region has been severely constrained on multiple occasions during the past two decades by bans imposed by importing countries to reduce risks associated with TADs.

The United States Agency for International Development (USAID) is supporting AU-IBAR and the IGAD Center for Pastoral Areas and Livestock Development (ICPALD) to implement the Standard Methods and Procedures in Animal Health (SMP-AH) Project. The project is supporting coordination and harmonization of disease prevention and control among countries in the GHoA in order to create uniform conditions for safe and stable intra and interregional livestock trade.

The project is supporting the use of specific protocols/guidelines, the Standard Methods and Procedures (SMPs), as the basis for harmonization of TADs prevention and control in the region. The SMPs deal specifically with how countries perform surveillance, manage disease outbreaks, perform laboratory confirmation tests, and manage vaccination campaigns. Additionally the project is supporting capacity building to support the implementation of the SMPs.

During 2014, four (4) SMPs for Foot and Mouth Disease (FMD), Brucellosis, Rift valley Fever (RVF) and Peste des Petits ruminants (PPR), that deal specifically on how countries perform surveillance, manage disease outbreaks, perform laboratory confirmation tests, and manage vaccination campaigns were developed and validated by stakeholders for implementation.

Seven (7) SMPs for Contagious Bovine Pleuro-pneumonia (CBPP), Contagious Caprine Pleuro-pneumonia (CCPP), Sheep and Goat Pox (S&G pox), Lumpy Skin Disease (LSD), Camel Pox (CP), Rinderpest and one for quarantine stations in the region were drafted and will be validated during 2015.

The managerial and technical capacity for the veterinary personnel in the GHoA region, to support the implementation of the SMPs was enhanced. This was achieved through training; of 24 Veterinary personnel, for 18 weeks, in Management Skills Development; 28 Veterinary personnel, for 13 weeks, in surveillance and epidemiology of trade-related transboundary animal diseases and 26 veterinary personnel in animal inspection, certification and welfare.

A regional training, for 20 weeks, for twenty four (24) veterinary personnel from the region was carried out at the National Animal Health Diagnostic and Investigation Centre, Ethiopia to enhance the proficiency, accuracy, safety of veterinary departments' staff, throughout the region, in carrying out laboratory work in support of control and management of transboundary animal diseases.

Animal disease control and animal health and welfare of exported animals at the regional livestock quarantine stations was enhanced through capacity building of twenty six (26) veterinary personnel on animal inspection, diseases control, animal welfare, sanitary and phytosanitary issues and sanitary process in a quarantine station for livestock export and animal health certification.

Knowledge on disease occurrence and distribution in the participating countries was enhanced through support to diseases surveillance activities.

The capacity for two veterinary vaccine production laboratories, the Kenya Veterinary Vaccine Production Institute (KEVEVAPI) and the National Veterinary Institute (NVI) in Ethiopia to produce quantity and quality vaccines for the control of the transboundary animal diseases was enhanced through provision of key equipment and quality control reagents.

Capacity for the IGAD Centre for Pastoral Areas and Livestock Development (ICPALD)

was enhanced through recruitment of two staff, an epidemiologist and a socio-economist. ICPALD is now able to backstop countries in the region in training local staff, supporting sanitary information sharing and in the implementation of diseases management interventions.

The North Eastern Africa Livestock Council (NEALCO), a regional livestock association established by national livestock traders association from 13 countries: Djibouti, Ethiopia, Eritrea, Egypt, Kenya, Sudan, South Sudan, Tanzania, Uganda, D.R. Congo, Rwanda, Burundi and Somalia was strengthened and is supporting coordination of trade of livestock and livestock products in the region. During 2014 the organization was also supported to review its constitution and to develop the strategic plan for 2014 -2018.

Sharing of information and experiences on transboundary animal diseases in cross border areas was enhanced through cross border coordination and harmonization meetings and through use of Animal Resources Information system (ARIS).

9.5 IRCM and One Health initiative

(Samuel Muriuki to complete)

9.6 Reinforcing the Participation of African Nations in the Standard Setting Process – (PAN-SPSO) Consolidation Phase

The Participation of African Nations in Sanitary and Phytosanitary Standard Setting Organizations (PANSPSO) project aims at strengthening and sustaining the effective participation of African countries in the activities of international standard setting organizations, namely OIE, IPPC and Codex Alimentarius Commission in order to influence their interests during the formulation of international standards on food safety, animal health and plant health in Africa. It will build and consolidate the achievements of former and ongoing projects managed by the AU-IBAR, in particular those gained through the PAN-SPSO phase I (PAN-SPSO I).

PAN-SPSO phase II (PAN-SPSO II) lays out an overall objective of contribution to poverty reduction through promoting international trade of agricultural products (including livestock and fisheries) in Africa.

Its specific objective is to strengthen and sustain effective participation of African countries during the formulation of international standards by the OIE, IPPC and Codex Alimentarius Commission on animal health, plant health and food safety, respectively. A secondary and indirect objective is to support publicity of adopted standards to end users and promote compliance with the set standards.

The project has five major results as follow:

R1: Relevant information related to animal health, plant health and food safety standards enhanced and made available to key stakeholders in African countries.

R2: Consultation and coordination mechanisms established for building common positions on sanitary and phytosanitary issues at national, regional and continental levels.

R3: Technical capacity of African countries to develop standards and science-based arguments strengthened

R4: Participation of relevant public and private stakeholders in standard setting processes strengthened through establishment or reinforcement of intersectoral coordination mechanisms (SPS committees)

R5: Decision makers get sensitized on the necessity of adequate involvement and investment of countries in the Standard Setting Process through strong advocacy mechanism

The immediate and direct beneficiaries of the project include the 54 Member States of the African Union as well as eight recognised Regional Economic Communities (RECs), who will benefit from capacity building support for coordinating agricultural and food safety issues among their member states. .Furthermore,African agricultural producers (including livestock and fisheries), market operators and agro-processors will also benefit from enhanced trading opportunities and improved safety and health standards as a result of greater and more effective participation of African countries in formulating SPS standards.

Stakeholders in the project include the African Union Commission - Directorate of Rural Economy and Agriculture (AUC-DREA), AU-IBAR and AU-IAPSC, African Nations, RECs, WTO, the STDF, private sector individuals, institutions and the agencies involved in setting international SPS standards i.e. OIE, IPPC, CAC.

AU-IBAR is the main implementer of the project.

1. Summary of the achievements in year 2014

Result area 1

A total number of 250 experts is the ARIS database from which 46 are experts in the field of animal health, 45 plant health, 127 food safety and 32 experts in SPS matters.at end of year 2 (2013)

An online registration of experts has been uploaded at AU-IBAR website but not be used so far although tested by staff of AU-IBAR.

The SPS components is already developed and tested. The team of ARIS has conducted roll out and training in 27 member states for national focal points.

The phytosanitary component has been developed and was hosted in a separate server to be transferred to AU-IAPSC.

The subscription to Journal of Animal Sciences and to Food Sciences is effective since December 2013. One brief produced and disseminated to MSs. A number of SPS information was provided to MS by email and through an online SPS bulletin.

Four handbooks that provide guidelines for participation in the standard setting process of OIE, Codex, IPPC and in the meetings of the SPS Committee of WTO are online in the AU-IBAR website and printed for large dissemination.

Result area 2

Plant health: The low level of funds availability did not allow the project to support the annual technical meeting of plant health experts in 2014.

Inter-regional meeting of Directors of Plant Health or their representatives met in Tunis, Tunisia, in March 2014, in order to agree on common positions on draft standards proposed for adoption during the 9th session of the Commission on Phytosanitary Measures (CPM9). 23 drafts proposed standards were discussed and common positions reached by the delegates.

Animal health: Three technical meetings of animal health experts were organized in April, July and December 2014.

In 2014 the African OIE Delegates adopted 34 common positions on OIE standards that were presented during the 82nd General session of the World Assembly of OIE Delegates. This exercise is now well mastered by the OIE Delegates and is being improved every year.

There was no regional meeting for coordinated positions.

Food safety: African Experts on Codex technical committees met in nine Codex meetings organized by AU-IBAR in the scope of the project PANSPSO.

The preparatory meeting held in Nairobi, Kenya

in June 2014 led to an agreement by MS on common positions on Codex standards for the 37th Session of CAC.

Seventy (70) common positions on the agenda items of the 37th session of the CAC were presented by the African delegates: fourteen positions on contaminants in foods, six on pesticide residues (thirty nine compounds were proposed by JMPR for adoptions and supported by African delegates), six proposal of new work on spices and culinary herbs (new created codex committee), six on nutrition in foods for special dietary uses and ten on fish and fishery products, nine on residues of veterinary drugs in food, eight on food additives, eight on food hygiene, four on fresh fruits and vegetables. During the 37th session of the CAC, the performance of African delegates in presenting the common positions has been improved compare to the 36th session.

IGAD is an observer in the OIE, Codex, IPPC and at the WTO SPS Committee in a meeting by meeting basis. Sponsors to IGAD and SADC to attend meetings of the SPS Committee and to CAC (IGAD).

At present six (6) RECs have observer status among the 7 RECs targeted. The observers should attend at least one meeting per year and participate in the activities of the Committee in order to avoid their status to be suspended.

Result area 3

Training workshop on the transparency provision of the SPS Agreement of the World Trade Organization (WTO) and on improvement of the participation of African delegates in the meetings of the SPS Committee for SPS National Notification Authorities (NNA) and National enquiry points (NEP) from French-speaking countries held in Nairobi, Kenya in December 2014.

Of attendance, thirty five participants from nineteen (19) African countries and one (1) from AU-IAPSC 26 selected national SPS NNA&EP + 4 participants from English-speaking countries joined the group for a two-day workshop on improved participation in the meetings of the SPS Committee of WTO.

Recommendation to AU-IBAR + MSs and their missions in Geneva, and WTO to organize a workshop with the objective to improve the quality and efficiency of participation of African

Observer status

RECs	WTO-SPS	OIE	IPPC	CODEX
IGAD	YES	YES	YES	YES
ECOWAS	YES	YES	YES	YES
SADC	YES	YES	YES	YES
COMESA	YES	YES	YES	YES
EAC	NO	NO	NO	NO
CEN-SAD	YES	YES	YES	YES
ECCAS	YES	YES	YES	YES
AU	YES	YES	YES	YES

Member States in the activities of the WTO SPS committee during its session of March 2015 in Geneva, Switzerland.

One training of trainers was done for IGAD region in Addis Ababa and the regional SPS Committee was formed. This workshop has helped to bring on board Ethiopia, South Sudan and Somalia. IGAD, through its technical branch ICPALD is making good progress in the SPS area.

A Consultancy on the development of standard on the movement Cassava germplasm was done and a draft standard has been developed and handed-over to AU-IAPSC.

Result area 4

The national SPS Committee of Burundi is functioning. The members meet regularly under the funding of the government.

Among the 41 national SPS committees created, only Guinea, Burkina Faso, Gambia, Burundi and Togo have a legal act creating them.

AU-IBAR conceptualized an exit strategy for national SPS committees and it has been tested in Senegal in 2013 and rolled out in Guinea, Burundi, Burkina Faso, and Gambia in 2014.

The political instability combined with the risk of frequent reshuffles of the Cabinet have compromised the commitment gained from the authorities in main countries.

Result area 5

Two policy papers produced: one on good practices for enhanced participation in sessions of standards setting organizations and the other one on Enhancing regional trade through improved competitiveness and compliance with Sanitary and Phytosanitary Standards.

The EU Day jointly organized by EU and AU-IBAR in May 2014 was an opportunity to present the project to Kenyan officials, EU officials, AU officials, African Ambassadors and the public that attended the event.

Conclusions

The implementation of the endorsed mechanisms on coordination of positions is going on and is improving in the three sub-sectors. The project has now embarked since November 2013 on the workshop for national notification authorities and national enquiry points on the improvement of the participation of African delegates in the meetings of the SPS Committees of WTO.

The issue of sustainability at the continental level will be assured by AUC but at the country level the governments should fully support the national SPS committees. The rolling out by AU-IBAR of the exit strategy on national SPS committees has shown an engagement of the governments that should be transformed in effective allocation of national budget for their functioning. In bringing into reality these engagements at continental, regional and national levels, the project is likely to achieve the expected results in terms of effective and sustained participation in standards setting processes and in SPS activities.

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achieve the expected results in terms of effective and sustained participation in standards setting processes and in SPS activities.

At the regional level (RECs), the sustainability of the PANSPSO activities within the region by the Secretariats of RECs will vary from REC to REC. This will depend mainly on the SPS expertise available at the Secretariat and the priority given to SPS activities by the decision makers. Most of the RECs have based their integration through the trade agenda and free movement of goods and people and therefore investments are likely to address issues that are hampering free-trade and specifically SPS and cross-border issues.

The project PANSPSO is the first project to implement activities with the RECs and therefore the experience was very challenging during the first and the second phase. The Secretariats of RECs were represented at the project steering committee (PSC) as members.

In most of the continental meetings organized by the project, few RECs attended. The ownership of the project by the RECs is weak while it is very strong at MS level. This has brought the project coordination unit (PCU), to work with MS but bringing on board the RECs, the reason being that the participation in the meetings of the three ISSOs and in the SPS Committee is mainly for countries which are the contracting parties and have the right to make decisions on the basis of one member one voice. The African Union and the RECs are observers and can make only suggestions.

The project will still continue to bring on board the RECs during the implementation of the exit strategy at national level in order to open a window for countries to call RECs to take up the activities at the end of the project.

9.7 Reinforcing Animal Health Services in Somalia (RAHS) Project

The project for Reinforcing Animal Health Services in Somalia (RAHS) is designed to build on the achievements and broaden the impacts of successive projects funded by the EU towards rebuilding Somali public and private sector institutions to enhance the delivery of animal health services. This takes cognizance of the vital role of livestock production and trade in supporting livelihoods, household food and nutritional security and income generation for the purchase of other essential household commodities and services in Somalia. The RAHS project will strengthen the provision of animal health services in order to improve the animal health status and the contribution of livestock to the resilience of livestock dependent households.

The established public and private animal health service delivery institutions remain weak due to insufficient financial resources and inadequate skills to deliver all the required services. The regulatory environment is particularly weak as the institutions to supervise this aspect have only recently been established in Somaliland and Puntland while the legal framework to facilitate the establishment of regulatory authorities in Central and Southern Somalia has not been enacted by parliament under the Federal Government of Somalia. In addition, the public private partnerships that are necessary for improved service delivery operate on an ad-hoc basis that is not well structured and the prevailing security situation in most parts of Central and Southern Somalia prevents the delivery of animal health services by public sector personnel. The RAHS project aims to strengthen the interactions between public and private animal health service providers and their outreach to target communities in order to enhance the quality, availability and sustainability of animal health services in Somalia. The implementation of the project activities supports the priorities outlined under the Peace and State building Goals 4 (Economic Foundations) and 5 (Revenue and Services) of the Somali Compact New Deal for both the Somali Federal Republic and the special arrangement for Somaliland.

Objectives and expected Results:

The **overall objective** of the Project is to improve the livelihoods and resilience to natural disasters and shocks of livestock dependent households in Somalia.

The **Specific objective** is to enhance the quality, access and sustainability of animal health services in Somalia.

The project has three **expected results** as follows:

Result1: Capacity of Public institutions to deliver and regulate animal health services strengthened

Result2: Public, private and community partnerships in animal health services delivery strengthened

Result3: Surveillance and control systems for trade sensitive diseases strengthened

The alignment and coordination of RAHS activities with complementary continental and regional projects will contribute to enhanced integration of Somalia into regional and continental initiatives for the improvement of animal health services delivery.

Official launch of the RAHS Project

The official launch of the RAHS project was held in two sessions held in Garowe, Puntland on 17th -18th June for stakeholders from Puntland, Central and South Somalia and in Hargeisa, Somaliland on 21st – 22nd June 2014 for stakeholders from Somaliland. The launch in Puntland was conducted by His Excellency, Abdihakim Abdullahi Haji Omar Camay, the Acting President of the Puntland State of Somalia during a colourful ceremony held at the Rug San Hotel in Garowe, Puntland on 17th June 2014. Also in attendance were, Hon. Prof. Salim Alio Ibro, the Minister of Livestock, Forestry and Range of the Somali Federal Republic, Hon. Abdullahi Duuale, the Puntland Minister of Livestock and Animal Husbandry, Hon. Abdi Ismail Boss, the Puntland Minister of Agriculture, Hon. Mr. Guuleed, the Puntland Minister of Environment and Ms. Daria Fane, the Head of Cooperation of the EU Delegation to Somalia. A former Puntland State Minister for Good Governance, Hon. Dr. Mohamed Gae Shaan also attended the launch ceremony.

In Somaliland, the official launch of the project at the Maansoor Hotel was conducted on 21st June 2014 by Hon. Eng. Abdirahman Jama Abdalla, the State Minister of Livestock in the Ministry of Livestock on behalf of Dr. Adi Aw Dahir Ali, the Minister of Livestock in Somaliland. The Director of AU-IBAR was represented at both the project launch ceremonies by the RAHS project Coordinator, while the two NGO implementing partners of the project were represented by Mr. Damiano Lotteria, the Regional Representative of COOPI and Dr. Paul Rwambo, representing the Regional Director of Terra Nuova in Eastern Africa.

The high level of political support for the launch of the RAHS project served to emphasize the importance accorded to the livestock sector by the Somali Government authorities.

Achievements of the RAHS Project in 2014

a. Review/development of livestock policies and legislative frameworks

This activity was designed to be implemented through complementary and synergistic actions between the continent-wide EU funded VET-Gov. project and the RAHS project. It was planned that the VET-Gov project would provide the technical and financial support for the review and development of livestock policies and legislative frameworks in Central/South Somalia, Puntland and Somaliland while the RAHS project would convene stakeholders' consultative workshops to validate the findings and proposals for the reviews. The Vet Gove and RAHS projects jointly supported the Line Ministries to establish

Livestock Policy Hub teams for Somaliland, Puntland Central/South Somalia to spearhead the livestock policy reviews in their respective areas. Subsequently, the VET-Gov. project identified and recruited three llocal Consultants for livestock policy and legislation reviews in Somaliland, Puntland and Central/South Somalia. The policy reviews were initiated in the 3 areas by the Vet Gov. Project with logistical and technical support from the RAHS project field offices.

The project provided financial and technical support to the Ministry of Livestock, Forestry and Range (MLFR) of the Federal Somali Government to convene a successful Somali Livestock Stakeholders' Consultative Cconference in Mogadishu from 29th March to 1st April 2014. More than 100 livestock sector stakeholders from Somalia and the diaspora participated in the conference that was officially opened by the Prime Minister and closed by the President and of the Federal Republic of Somalia. The participants included the Minister of Livestock, Forestry and Range and senior staff in the Ministry, Cabinet Ministers from other Ministries, prominent politicians, livestock sector professionals from various institutions in Somalia including the Universities, private companies, the three Livestock Professionals' Associations (BENALPA, CERELPA and SOWELPA), invited Somali Livestock professionals from the Diaspora and public sector employees from different regions of Central and South Somalia. Participants from the Puntland State of Somalia included the Director-General of the Ministry of Livestock and Animal Husbandry (MoLAH) and other senior staff of MoLAH as well as representatives of the Puntland Livestock Professionals' Association (PULPA). One veterinarian from Somaliland also attended the conference.

The RAHS project is supporting the implementation of some of the key recommendations from this Conference particularly those relating to: The design by MLFR and stakeholders of appropriate policies and strategies to enhance the performance of the livestock sector; assistance to MLFR in staff training, provision of equipment and supplies to strengthen animal health services; the coordination by MLFR of the review and ratification of draft veterinary laws and the formation of a Veterinary Regulatory Body; the establishment by MLFR of mechanisms for improving coordination between all governmental and non-governmental stakeholders in the livestock sector for harmonized and efficient service provision; the strengthening of public and private sector partnerships in the livestock sector and their role in educating the Somali pastoral communities in order to raise their awareness and instill a sense of economic value for their livestock.

b. Support for operations of Veterinary Boards in the regulation of Veterinary services

The project supported the training of Members of the Somaliland and Puntland Veterinary Boards on the performance of regulatory functions. During the training, the participants reviewed the procedures and regulatory functions for the registration of Veterinary professionals, the licensing of Veterinary practices, the licensing of Veterinary drugs traders and registration of their premises and procedures for enforcement of regulations. The participants also discussed the implementation of other non-immediate mandates of the Veterinary Boards including the regulation of Veterinary Education, accreditation and operations of the National Veterinary Associations and the role of the Board in assisting in the formulation of Decrees and Acts of parliament for the regulation of Veterinary services. The project also supported the two Veterinary Boards to develop and broadcast radio messages that aim to reinforce compliance to good practices by veterinarians and veterinary paraprofessionals, sellers of veterinary products including veterinary pharmacies and small-scale veterinary drugs retailers. The messages included information on the requirements for the registration of animal health service providers,

the registration and licensing of the operations of veterinary pharmacies and veterinary drugs sellers, information to livestock owners on the requirements to report disease outbreaks to the veterinary services and the need to avoid the use of expired and unfamiliar veterinary drugs for the treatment of their animals.

In Mogadishu, the project supported MLFR to convene a three day workshop for 30 representatives of key stakeholder groups including Cabinet Ministers, Members of Parliament (MPs), parliamentarians and senior Ministry officials for sensitization and awareness on the need to enact the draft Veterinary Law Code for the Federal Government of Somalia. The draft Veterinary Code was prepared through the support of a previous EU-funded project and awaits debate and enactment by Parliament.

c. Support for participation of the Somalia OIE delegate in the OIE General Sessions

The project made payments of Somalia's annual contribution to the World Organisation for Animal Health (OIE) and supported the participation of Somalia's OIE delegate to the 82nd Annual General Session of the OIE that was held in Paris, France from 25th – 30th May 2014. This followed a formal request from the Minister of Livestock, Forestry and Range of the Federal Government of Somalia. The payment represented a part payment of the outstanding arrears of Somali's annual contributions to the OIE.

Promoting empowerment of communities in animal health services delivery

The project supported the Ministry of Livestock, Forestry and Range and the line Ministries in Somaliland and Puntland to initiate Community dialogue sessions in selected locations. The sessions entailed initial dialogue conducted within the communities by the local Community elders/leaders to articulate issues affecting livestock production at the community levels. Subsequently, joint dialogue forums sessions were held between the Communities, the Line Ministry and the Livestock Professional Association in the respective areas to identify solutions and modalities for improving service delivery to address the issues identified by the Communities. In 2014, community dialogue sessions and forums were conducted in Afgoye district in the Lower Shabelle region of Southern Somalia, in the Wooqoyi Galbeed region of Somaliland and in the Galdogob district of Puntland

d. Strengthen the capacity for early detection, surveillance, reporting and control of diseases affecting pastoral livelihoods and resilience

The project provided surveillance materials and transport to facilitate the activities of four livestock disease surveillance teams. The teams each comprising of four members were appointed by the respective Ministries in Somaliland, Puntland and Central and South Somalia. Project staff assisted the Line Ministries to develop terms of reference and a protocol for supporting field disease surveillance and preliminary outbreak investigations and responses. Financial and logistical support was provided for two teams in Somaliland and Puntland were supported to undertake disease outbreak investigations in three areas in the Wooqoyi Galbeed region of Somaliland and in five areas of the Nugal Region of Puntland respectively.

The project also supported eight staff in four Epidemiology and Data Management Units (EDMUs) to collect, compile, analyse and report on livestock disease data. The support provided through the RAHS project enabled the four EDMUs to resume their disease reporting functions by August, 2014 and a backlog of monthly disease reports was provided to the Somali OIE delegate for reporting to AU-IBAR and to OIE. In addition, the project provided support to the respective line Ministries to identify and support a total of 49 Disease Reporting Focal Points (DRFPs) comprising mainly of Community Animal Health

Workers (CAHWs) from different regions in Somaliland, Central and Southern Somalia and Puntland. The DRFPs are located in strategic areas with high livestock populations and major livestock marketing chains. A programme for the training of the DRFPs to support their functions in disease reporting was prepared and initial training on disease recognition and reporting was provided for 12 CAHWs in Afgoye, South Somalia in November 2014.

e. *Sentinel Herds Surveillance for Rift Valley Fever*

In Puntland and Central Somalia, the project provided financial support and technical guidance for four veterinarians working under the supervision of the Directors of Animal Health in the respective Ministries to carry out field assessments and continue Rift Valley Fever Sentinel flock surveillance activities including the collection of samples for laboratory testing. The sentinel flocks were previously established in 2012 under the EU funded Somali Animal Health Services Project (SAHSP) phase III at two sites located in the flood-prone Nugal Valley and in the Hiran region of Central Somalia. A total of 84 serum samples collected from the flocks in Hiran region for laboratory testing. The results of the tests will be compared with test results previously obtained from the same flocks under the SAHSP III project to determine if the flocks have been recently exposed to RVF virus infection.

f. *Strengthening veterinary laboratory capacities for disease diagnosis*

An assessment of the Central Veterinary Laboratories in Hargeisa and Galkaiyo was undertaken to identify the available human resources and their technical capacities, the diagnostic kits, chemicals and reagents available and the tests conducted at the laboratories. The results of the assessments showed that almost 50% of the staff that had been previously trained in laboratory diagnostic techniques had left the Ministry of Livestock (MoL) in Somaliland for alternative employment. Most of the laboratory chemicals, reagents and kits supplied through previous projects had been exhausted while some had expired. The laboratories made use of the available diagnostic kits to test sera from sheep, goats, cattle and camels for various diseases including contagious caprine pleuropneumonia (CCPP), brucellosis, foot and mouth disease (FMD) and bovine tuberculosis. The Central Veterinary laboratories were thus operational despite the shortages of essential diagnostic kits, reagents and chemicals. Support was provided to strengthen the Central Veterinary laboratories in Hargeisa, Somaliland and Galkaiyo, Puntland to continue undertaking diagnostic testing.

g. *Performance of routine inspections of trade animals along the marketing chains*

During this reporting period, a total of 50 Veterinary Inspection staff were identified in consultation with the respective line Ministries for support under RAHS. This comprised of 13 inspection staff in different locations in each of Somaliland and Puntland and 24 staff in Central and South Somalia. The veterinary inspection staff started routine inspection of trade animals along the marketing chains in Somaliland and Puntland in August 2014 and in South and Central Somalia in September, 2014. Standard operating procedures and the recording, monitoring, and evaluation systems established under the AU-IBAR SOLICEP project were adapted to operate the trade animal inspections supported through the RAHS project.

9.8 African Reference Laboratory with Satellite Stations for the Management of Pollinator Bee Diseases and Pests for Food Security (Bee Health Project)

Within the framework of the Comprehensive African Agriculture Development Program (CAADP), AU-IBAR and icipe are implementing this project aiming at improving honeybee production and pollination services through reduced incidence of bee diseases and pests, enhanced markets access, and bee health

institutional environment. This initiative by AU-IBAR and icipe for research, development, advocacy, capacity building and strategic networking for honeybee diseases and pests in Africa proposes a coordinated action along the bee health service chain. The project will on the one hand established four regional satellite laboratories in west, central and East Africa and a central reference laboratory at icipe Kenya, to generate new knowledge on bee diseases and pests and their control measures for the Farmers' Federations and beekeepers at large.

The project overall strategy is focusing on developing linkages between participatory bee health management (PBHM) and beekeeping technology, pollination services, market access and bee health policy and legislation at both national, regional and continental levels has four expected results and main activities (two for icipe our implementing partner and two for AU-IBAR).

Project Objectives

The overall objective of the proposed action is "To enhance the contribution of bees and other pollinators to food security and improved livelihoods in Africa".

The purpose of the action is "To improve bee products and pollination services through reduced incidence of bee diseases and pests, enhanced markets access, and bee health institutional environment".

Achievements in 2014

The EU project grant was signed with icipe on May, 2013 and with AU-IBAR (Contract No: DCI-FOOD/2013/330416) end December 2013.This project is implemented by icipe and AU-IBAR. The AU-IBAR's components are implemented within the strategic programme 2 on **Animal Resource Production System and Ecosystem Management** of the institutions 2014-2017 strategic plan.

Key result area: Sustainable utilisation, management and conservation of animal resources and their ecosystems enhanced.

Result 3: Enhanced awareness on the honeybee health and conducive environment for enhanced bee disease control, access to markets, and consumer safety created.

Activity 3.1: Organize effective multi-stakeholder partnerships and mechanisms for the development of policy, institutional and market options for bee health and pollination services for food security

The process of establishment of an effective bee multi-stakeholder partnerships and mechanisms for the development of policy, institutional and market options for bee health and pollination services for food security started in Naivasha in September 2014 and the launch of the African Apiculture Platform (AAP) on Honey Production, Bee Health and Pollination Services took place in Kampala, Uganda in December, 2014 and was attended by 91 participants from the public sector, private sector, civil society, beekeepers associations, and research & training institutions as well as some experts in apiculture, four RECs and international organizations. His objective is to improve the performance of the apiculture sector and its specific objectives are to:

- facilitate collaboration and partnerships within bee value chain stakeholders;
- sharing of best practices and lessons learnt;
- facilitate creation of an enabling policy framework on the continent;
- facilitate increased public & private investment in apiculture;
- facilitate capacity development in the sector;
- promote partnership between crop and apicultural sectors and advocate for all issues affecting the apiculture sector (bee health, environment, investment).

Structure of the Africa Apiculture Platform (AAP)

The AAP is constituted of a General Assembly composed of AU member states and with a governance structure that consisted of the Executive Committee, the Working Groups and a Support team.

The General Assembly

The AAP has a General Assembly organized around five constituencies or clusters: Public sector, Private sector; Civil society; Beekeeping Associations and Research/Training/ and Academia.

The Executive committee (EC)

i. Roles and functions of the EC

The EC roles are to:

- Provide oversight and strategic direction of the AAP;
- Advocate for the development of the apiculture sector in MS.

The EC functions are to:

- Ensure that the platform functions and stays relevant;
- Set agenda and facilitate different forums;
- Advise on and establish the overall framework, procedures and activities of the platform;
- Build synergies within the sector;
- Lead advocacy and lobby work;
- Resource Mobilisation;
- Engage other sectors for the development of apiculture sector;
- Prepare & present progress reports to the AAP General Assembly on an annual basis.

ii. EC Composition

The EC is composed of 19 members elected by the General Assembly. This includes:

- public sector
- Private sector,
- beekeeper associations all the above with five seats each representing the five regions of the continent;
- Civil society and research, training and academia with two seats each;
- Observers: institutions that are designated observers will take part in the debates and discussions within the EC but with no voting rights.

The Working Groups

Working group is constituted of technical people specialized for a specific domain of work link to the development of the apiculture section. The principle to have permanent working groups and ad hoc working group who could be establish by the Executive Committee as the need arises was retain. As permanent Working Groups, These are (Bee Health; Production, Marketing and Technologies and Pollination Services & biodiversity).

Each working group is headed by a Coordinator elected by the General Assembly and will be composed of at least 7 members appointed by the EC in consultation with the Coordinator and AU-IBAR. The working groups are answerable to the EC.

The Support Team

AU-IBAR coordinates the support functions to the Africa Apiculture Platform (AAP). This is a preferred model for a conventional Secretariat that would require substantial human resources and funding to establish, run and maintain itself. A Support Team would allow the AAP to utilise energies and resources among members and to build sustainability beyond the AU-IBAR funded project.

A number of institutions observer status on the Executive Committee: These included institutions of the African Union and United Nations, Regional Economic Communities, international NGOs and civil society, and technical institutions. Observer institutions that were identified include: AU-IAPSC, ECOWAS, COMESA, IGAD, EAC, ECCAS, UMA, SADC, SNV,

FAO, ICIPE, OIE, CEBEVIRHA (CEMAC), Bees for Development, CropLife Africa and Middle East, Apitrade and Centre Suisse de Recherche Scientifiques (CSRS).

Activity 3.2: Develop policy and regulatory frameworks for sustainable bee health, apiculture and pollination services at national, regional and continental levels in tight connection with OIE and RECs

Work in the current reporting period has focused on taking stock and assessing policies and regulatory frameworks in MS. The stock taking exercise and the assessments of policies and regulatory frameworks have been completed in Ethiopia, Tanzania, Madagascar, Rwanda, Zimbabwe, Egypt, Cameroon, Zambia, Sudan and Algeria. The work is currently is ongoing in the rest of the countries.

Results show that, countries like Ethiopia, Tanzania, Rwanda and Zimbabwe have policies and regulatory frameworks on apiculture or bees, while Madagascar, Egypt, Cameroon Zambia, Sudan and Algeria only have draft policies and draft regulatory frameworks that are at diverse stages of discussion with various stakeholders.

Activity 3.4: Enhance capacities for timely collection, analysis and sharing of accurate sanitary information; this activity will consist of strengthening the capacity of National veterinary services for early detection, timely notification/ reporting, prevention and control of bee diseases

Two training sessions on bee diseases were organize (one in English and one in French). In total 47 out of 54AU Member State participated represented by two officers each.

The training in English was held in April 2014 at icipe campus in Nairobi, Kenya. The training in English was attended by 39 participants from 24 AU Members State whereas the French training was held in June 2014 in Ouagadougou, Burkina Faso and was attended by 45 participants from 25 AU Members State. Each country was represented by the head of the epidemiology unit and a veterinarian based at a bee station.

The objective of the training was to build capacity of officers in the directorate of veterinary services in AU-Members State for identification and diagnostic of bee diseases, for early detection and timely reporting of bee disease outbreaks as part of the disease reporting assignment of the directorate of veterinary services. The trainings were organized around three thematic areas:

Practical sessions on surveillance, early detection and timely reporting of honeybee diseases and pests

- Sampling techniques and specimen preservation;
- Surveillance of honeybee diseases; .
- Practical assessment of bee diseases status using participatory epidemiology (PE) or participatory research appraisal (PRA) methods;
- Laboratory (Chemical Ecology lab, Molecular Biology lab, Biopesticides lab, Commercial Insects bee health lab):

Activity 3.6: Identify market constraints and opportunities for honey and hive products and investment opportunities of bee products and pollination services

Work in the current reporting period has focused has focused on assessments of Honey bee value chains. The value chains have been assessed in Ethiopia, Madagascar, Tanzania, Algeria, Cameroon, Zambia, Sudan and Egypt. From the assessment of the honey value chain, market constraints faced by producer groups often include problems arising caused by the remoteness of producers from suppliers, traders and technical advisers, the often-small volumes of products, and difficulties of obtaining pre-finance for honey purchase, packaging and marketing. It was also observed in many regions that the marketing system of

honey faces various constraints. Most of the local markets are far from the beekeepers and are presenting difficulties in accessibilities.

Another constraint includes the need for candidate exporting countries to provide Honey Residue Monitoring Plan who can only be done by an International Accredited Laboratory at prohibited costs.

9.9 Strengthening institutional capacity to enhance governance of the fisheries sector in Africa - FISHERIES GOVERNANCE PROJECT

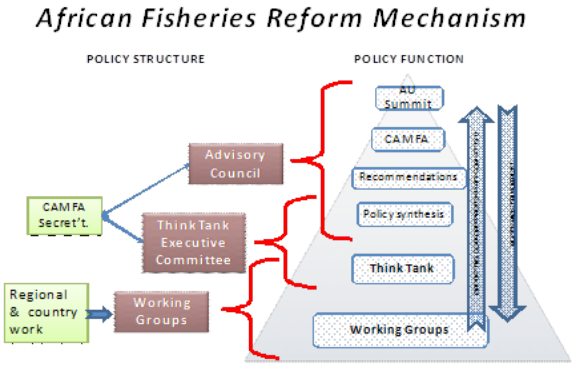
The implementation of fisheries governance project started immediately after its signature between the European Union Commission and the African Union Commission in March 2014. The project was conceived against the background of mounting challenges that continue to afflict the fisheries and aquaculture sector in Africa. Some of the critical challenges are illegal fishing practices) resulting in overexploitation, stagnant or declining capture fishery production), weak coordination and cooperation in the sector, weak capacity for sustainable aquaculture development, lack of value addition for market access and hence economic poor returns from sector. The objective of the project is to strengthen institutional capacity and create the enabling environment for increased and sustainable contribution to livelihoods, food security and economic growth. Since commencement of implementation, the activities have been undertaken by the project and the resulting accomplishments.

Enhance coordination in the fisheries sector for expeditious development of the sector

- The project organized several consultation meetings with Regional Fisheries Bodies (RFBs) and Regional Economic Communities (RECs) and eventually built consensus on the most appropriate wayforward establishing or strengthening institutional linkages in the fisheries and aquaculture sector. In the above regard:
  - » A framework for formal technical cooperation (letter of agreement) between the RFB, the Fisheries Committee for Central Gulf of Guinea (COREP) and the REC, the Economic Community for Central African States (ECCAS) has been drafted and ready for submission for adoption by the policy organs of the two institutions.
  - » The RFBs on the continent agreed to establish an African Platform for RFBs that will facilitate exchange of information, harmonization of their activities and increase their efficiency. Towards the operationalization of this platform, the terms of reference, rules of procedure and modus operandus were developed and validated by the stakeholders (RFBs, RECs, RFMOs, environmental or LME-based institutions)) during a consultative meeting involving RFBs and RECs.
  - » An Institutional assessment of 12 Regional Fisheries Bodies and Water Basin Commissions has been conducted in the Southern and Eastern Africa (LVFO, LVBC, LTA, SWIOFC, ZAMCOM, CIFAA and ANAF) and ongoing in West Central and North Africa (SRFC, FCWC, LCB, COREP, NBA, CEBREVIRHA). The objective of these assessments is to strengthen and increase the efficiency of these RFBs to effectively fulfil their mandates to their member states.
- The African Fisheries Reform Mechanism (AFRM) – which is a coherent platform established with the objective of facilitating the development, adoption and implementation of reforms in fishery governance was operationalized following the establishment of 7 AFRM working Groups. These WGs are now functional with clear terms of reference developed. They support evidence-based governance and policy interventions to ensure African fisheries are better able to contribute sustainably to economic growth, food security and livelihoods. The seven working groups are:

» Policy, governance and institutions
» Monitoring, Control and Surveillance
» Small-scale fisheries development
» Aquaculture development
» Trade and market development
» Finance and investment
» Human capacity development

Strengthen institutional capacity and systems for effective Monitoring, Control and Surveillance CS to combating Illegal, Unreported and unregulated fishing



In response to demands by stakeholders, the project has intensified activities with a view of supporting regional initiatives on combating IUU fishing through effective coordination of national MCS activities.

- The project has conducted scoping missions in three regions (West Africa, Central Africa and Southern Africa) and in the Indian Ocean countries and identified strengthens and weaknesses for priority interventions.
- The MCS status of individual member states has also been assessed: Gambia, Cote d'Ivoire, Madagascar, Mauritius, Ghana, Gabon, Cameroon, and Botswana (for Inland fisheries) and strengthens and weaknesses identified for possible support.
- These assessments have, on preliminary basis, identified the relevant elements that have significantly informed the formulation of appropriate and technical document strengthening regional MCS centres.

Support effective participation of African Countries in RFMOs for sustainable high sea fisheries management and other fisheries forums

FAO Committee on fisheries (COFI) in Rome, Italy, June 2014

During the Thirty-first session of the FAO Committee on fisheries (COFI) in Rome, Italy, the AU-IBAR, in collaboration with partners, helped facilitate coherent African positions on key fisheries management and aquaculture development issues. Forty nine AU member states, represented by Ministers and Directors, participated in this meeting and coherent positions were developed on the following:

- Securing Sustainable Small-scale fisheries- endorsement of the Voluntary Guidelines for Securing Sustainable SS Fisheries in the context of food security and poverty eradication;
- Global and regional processes and instruments (Blue growth Initiative, Regional fisheries Bodies, IUU (including vessel record)
- Inland fisheries
- Fish Trade
- Aquaculture

The First African Tuna Conference, Abidjan, September 2015

The 1st edition of African Tuna conference was organized by the Atuna.com one of the world's leading websites in Tuna Industry News in collaboration with INFOPECHE an Africa-based fish trade and marketing information organization and hosted with the support of the Government of Cote d'Ivoire through the Ministry of Animal Resources and Fisheries of Côte d'Ivoire, 25th-26th September 2014.

The Project identified major tuna producing countries in the five regions of the continent to support their participation (South Africa, Namibia, Mauritania, Seychelles, Ghana, Sao Tome and Principe) but due to the Ebola outbreak in the West African region, only two countries

accepted the invitation to participate (Ghana and Sao Tome & Principe). The project contributed to deliberations with the following major issues and outcomes relevant to African fisheries;

- Proper governance and monitoring of FADs (Fishing Aggregating Devices)
- Strengthening MCS and formulation of Minimum Access Conditions
- Catch certification scheme was a trade related measure to combat illegal fishing but.
- Eco-labelling and Marine Stewardship Council (MSC) was discussed but some African
- The need for five African region to collaborate and align efforts-African countries to engage each other and speak common and coherent "African voice" prior to meeting international agencies and also in managing tuna industry.

Promote coherence and harmonization in fisheries policies and regulatory frameworks

The Policy Framework and Reform Strategy for Fisheries and Aquaculture in Africa, was formulated by AU-IBAR in collaboration with the NEPAD Agency. The policy document elaborates and makes explicit essential guiding principles for good governance of Africa's fisheries for increased coherence and coordination of the sector with the main aim of:

- facilitating AU Member States, RECs and RFBs to develop realistic fisheries and aquaculture policies by suggesting standards and best practices to the sector's benefits to AU member states, in terms of food security, employment and income;
- facilitating regional collaboration and integration in shared fisheries and aquaculture resources management;

The project organized the second Conference of African ministers and Aquaculture which adopted the Policy Framework and Reform Strategy and subsequently endorsed by the HSG summit in June 2014, Equatorial Guinea. In a bid to popularize the document, the key essential provisions of the policy document have been presented in several forums involving stakeholders (member states, RFBs, RECs and CSOs). These include:

- The project Inception workshop in Dar es Salaam, Tanzania, November, 2014.
- Technical meeting of the Fisheries Committee of Central Gulf of Guinea, COREP in Douala, November, 2014.
- Ministerial meeting of the Fisheries Committee for West Central Gulf of Guinea, Abidjan Cote d'Ivoire, December, 2014.
- First African Tuna Conference in Abidjan, September, 2014.
- The LME Governance meeting in Douala, December, 2014.

Ratification/adoption/application of international instruments for sustainable fisheries management

The project conducted desk and online studies to identify the level of implementation or adoption of global fisheries management and aquaculture development instruments, including relevant instruments to the sector for enhanced fisheries management and aquaculture development. The project has compiled the full list of member states and the level or rate adoption of these instruments.

Enhance capacities for Fisheries diseases surveillance and control, timely collection, analysis

and sharing of accurate sanitary information and Biosecurity

The project built the capacities of 70 participants from various member states of the African Union in fish diseases control and biosecurity governance, in a workshop conducted jointly by AU-IBAR, FAO, OIE and the South African Government.

The main outcome of this training workshop was the identification of the building blocks for the formulation of a continental wide project proposal on aquatic animal health management and biosecurity governance. The workshop provided requisite information for the formulation of a draft SADC regional strategy for fish diseases control and biosecurity governance.

Strengthen capacities and promote regional arrangements for improved negotiation of fisheries access arrangements (FAA)

To get evidence-based information that would rationally inform the content of a regional training for fair fisheries access negotiation at regional levels and also facilitate formulation of regional frameworks for negotiating equitable FAA, the project has commenced the process of packaging lessons and best practices from the past and present ongoing fisheries access agreements in selected AU MS .

Strengthen Capacities for access to Market.

The project conducted a meeting with the Marine Steward Council (MSC) that has a global mandate for ecollabeling certification of marine fish products. The meeting agreed on the following:

- A global management plan of a particular or selected species with value chain development approach
- Select activities from Fisheries Governance and Fish Trade projects that can accommodate MSC interventions (for e.g. select African Union Member states (AU MS) and species where a fisheries improvement programme can be implemented)
- An action plan to be developed for capacity in fisheries improvement programme toward certification

The project also organized a tripartite meeting involving the management of African Eco-labelling Mechanism (AEM) and the MSC. The Mechanism has developed the Eco Mark Africa (EMA) as an African eco-label for products and services in four sectors- agriculture, fisheries, forestry and tourism. For purpose of collaboration and synergy on fisheries, AEM agreed to partner with MSC for capacity building amongst AU member states towards ecolabelling certification.

Strengthen stakeholder participation and promotion of community-based management of small-scale fisheries

For realistic implementation of this activity, the project conducted strategic meeting with a cross-section of the Civil Society organizations (CSOs) for identification of the most logical wayforward for their empowerment for effective participation in fisheries management at national and regional levels. Two meetings were held in respect of this.

- AU-IBAR consultation with CSOs from West, East and Southern Africa in Nairobi to discuss the prospects of establishing an apex continental body for Non-State actors in fisheries and aquaculture in Africa. The meeting agreed on the need for Mapping & Validation of the Civil Society actors involved in Fisheries and Aquaculture in Africa, the process of which is in process.

- AU-IBAR consultation with CSOs in Dar es Salaam to define and agree on the role of the CSO in the implementation of the policy framework and reform strategy for fisheries and aquaculture in Africa.
- The priority action that have resulted from these initial discussions was the need for the

establishment of regional CSOs that would have a mechanism for working with the national CSOs in the sector for purpose of coordinating, strengthening and identifying rational entry point for support.

The project supported the participation of five member states (Mauritania, Mozambique, Kenya, Benin and Congo) and two representatives of regional fisheries bodies to a workshop on User-Right based fisheries management in Cambodia, March 2015. The workshop created awareness on this fisheries management practices.

Strengthen capacity for improved management practices, including TURFs, Co-managements, and establishment of MPAs

The project conducted scoping mission to Gabon and Benin and determined key parameters for establishment of and for the improved government of marine protected areas.

Strengthening aquaculture network and information sharing

The project participated and contributed to the discussions during the extraordinary session of the Committee for Inland Fisheries and Aquaculture of Africa (CIFAA) December 2014 Lusaka, Zambia. CIFAA was created to foster and promote international cooperation in the development and management, utilization and conservation of fishery resources of inland waters of Africa and to promote the sustainable development of aquaculture in its 38 Member Countries. The body has a subsidiary body, Aquaculture Network for Africa (ANAF) which is dedicated to supporting aquaculture development through information sharing and capacity of the AU member states.

Strengthen capacity for evidence based advocacy

The project organized an interactive workshop on lessons and best practices in the management of the five African large marine ecosystems (Guinea Currents, Canary current, Benguela current, Somali and Aghulas and Mediterranean current). The main outcome was the formulation of lessons, best practices and action plans for the sustainable management of these LMEs.

The process of establishing fisheries policy research network is in progress. This policy research centre would support translation of scientific findings into policy and management measures in the AU member states. This activity would establish a net of researchers in various disciplines related to fisheries and aquaculture in and outside the continent.

Support Advocacy Forums for fisheries reforms

The project organized the second conference of African Ministers of fisheries and aquaculture as part of the Joint Ministerial Conference of Agriculture, Rural Development, Fisheries and Aquaculture in April-May 2014, Addis, Ababa, Ethiopia. The conference adopted resolutions for sustainable fisheries management and responsible aquaculture which were endorsed by the Summit of the African Heads of States and Governments in June 2014, Malabo, Equatorial Guinea.

Towards the Agricultural transformation agenda for food security, and consistent with the resolutions of the June 2014 African Head of States and Governments (HSG), the project developed a concept note on the contribution of fisheries and aquaculture to the attainment of zero hunger by the agricultural sector by 2025. This includes increasing fisheries and aquaculture productivity by reducing post-harvest loss by 50 %, triple intra-African trade in fish and fisheries products and services, increasing climate change resilience, job creation, reducing poverty by 50 % etc.

In support of the above goal, the project developed a concept note for the establishment of centres of Excellences on the continent for training:

a. Centre of excellence for Aquaculture development;

b. Centre of Excellence for marine fisheries and oceanography;
c. Centre of excellence for inland fisheries and limn logical studies;
d. Centres of excellence for fisheries policy planning and ocean governance;
e. Vocational training centres in fisheries and aquaculture services;

Communication Plan and M&E framework

The project has developed:

a. Communication and visibility plan
b. Monitoring and Evaluation Framework

9.10 Improving Food Security and Reducing Poverty through intra-regional Fish Trade in sub-Saharan Africa - FISH TRADE PROJECT

The Fish Trade Project is an EU funded collaborative effort among three partners the WorldFish (WF), African Union-Interafrican Bureau for Animal Resources (AU-IBAR) and NEPAD Planning and Coordinating Agency (NPCA). This four year action, that cuts across for regions in Africa (West, Central, East and Southern), has the objective of improving food security and reducing poverty through intra-regional fish trade in sub-Saharan Africa and is programmed to deliver around four specific goals:

- Information on the structure, products and value of intra-regional fish trade in food security in sub-Saharan Africa generated and made available to stakeholders;
- Recommendations on policies, certification procedures, standards and regulations, well embedded in national and regional fisheries, agricultural trade and food security policy frameworks;
- Increased capacities for trade amongst private sector associations, in particular of women fish processors and traders and aquaculture producers, to make better use of expanding trade opportunities through competitive small and medium scale enterprises and
- Adoption and implementation of appropriate policies, certification procedures, standard and regulations by key stakeholder participating in intra-regional trade in four selected trade corridors in sub-Saharan Africa.

The project will be implemented through a partnership arrangement with WorldFish as the lead institution responsible for the overall technical and financial coordination of the project. The participation and contribution of the other partners, i.e. NEPAD Planning and Coordination Agency [NPCA] and African Union Inter-African Bureau for Animal Resources [AU-IBAR] will be facilitated through Memorandum of Agreement [MoA].

PLANNING MEETING ON THE IMPLEMNTATION MECHANISM FOR THE EU FUNDED PROJECT- January 2014, Johannesburg, South Africa

The meeting was held between the partners with the overall aim of finalizing the implementation arrangements for each partner of the project, including agreement on the contents of the memorandum between the institutions, finalizing budget allocation as per activities, project management structure, establishing relations with African fisheries reform mechanism and synergies with other related projects etc.

A template of the MOA (Memorandum of agreement) from Worldfish was displayed and agreement reached on roles and responsibilities. The approved project budget was discussed in detailed and agreement reached on the allocation as per activity based on comparative advantage of capacity of each partner, especially between the AU-IBAR and NPCA.

- Respective draft contracts, in the form of MOA, between Worldfish and AU-IBAR and NPCA were developed. AU-IBAR will receive a total of about EUR 1000000 for activity implementation under this project. The draft MOA will further be reviewed by each

partner institution before signature
- The workplan for 2014 was developed with roles assigned roles and responsibilities for each three partners
- The draft project management structure was developed
- The draft terms of reference for the project steering committee, including tentative membership composition developed
- The profiles (requirements) for the project manager of the project developed
- Consensus reached amongst partners to use the opportunity for CAMFA to launch the fish trade project and thus utilize the allocated funds to pay for the participants (Directors) to the CAMFA II
- Elements identified for assessment in the tentative standard methodology framework for value chain analysis along trade corridors

Memorandum of Agreement

The legal office gave clearance for signing the Memorandum of Agreement (MOA) between Worldfish and AU-IBAR. Based on the memorandum of Agreement AU-IBAR will undertake the following activities:

Planning workshop towards the inception workshop of the Fish Trade Project, July 2014

Activities	**Result 1: Information on the structure, products and value of intra-regional fish trade in food security in Sub Saharan Africa generated and made available to stakeholders**
1.1	Conduct a fish trade analysis and assessment in corridor C – East Africa Corridor
1.2	Support the dissemination of Fish trade analysis and assessment of Case Study Results
	Result 2: Recommendations on policies, certification procedures, standards and regulations, well embedded in national and regional fisheries, agricultural, trade and food security policy frameworks
2.1	Support the Identification and prioritizing of policies and regulatory options for promoting intra-regional fish trade in East Africa Corridor
2.2	Support in Formulating regional policies, fish certification procedures, standards and regulations in selected areas that are critical for promoting intra-regional fish trade in East Africa
2.3	Contribute to developing protocols for implementation and monitoring of these policies, standards and regulations in East Africa.
	Result 3: Increased capacities for trade amongst private sector associations, in particular of women fish processors and traders and aquaculture producers, to make better use of expanding trade opportunities through competitive small- and medium-scale enterprises
3.1	Contribute to the development of a geo-coded, interactive database of existing formal and informal private sector associations engaged in fish processing and trade, and assessment of their capacities, economic performance and needs in East Africa
3.2	Support capacity building, networking and institutional strengthening of Private Sector Associations in East Africa
3.3	Establish user-owned information and advocacy tools and mechanisms in the East Africa corridor.
	Result 4: Adoption and implementation of appropriate policies, certification procedures, standards and regulations by key stakeholders participating in intra-regional trade in four selected trade corridors in West, Central, East and Southern Africa
4.1	Catalyze and facilitate increased fish trade in the East Africa trade corridor
4.2	Strengthen the capacity of veterinary services to implement regional guidelines and national policies
4.3	Monitor and document performance of East Africa corridor and share lessons learnt.

The project organized a planning workshop in July, 2014 in Lusaka, Zambia with the main purpose of developing greater shared common understanding of the project and related initiatives, discussing key deliverables central to the expected results and impacts of the project, and setting up the implementation framework to deliver the project. The meeting reached consensus on the wayforward with regards to the issues:

- Strategic linkages: potential partners and stakeholders; and connected research

- Research approach and methodology including participatory approaches and gender approaches
- Capacity development
- Influencing policy and the communication strategy
- Monitoring and Evaluation framework
- Project governance, management and operations structure
- Next steps clarifying and agreeing on follow-up activities, responsibilities and timelines towards the Inception Workshop/ Technical Launch

A summary of actions/activities were agreed for the immediate short term before the inception workshop with tasks and responsibilities and a timeline elaborated.

9.11 Strengthening the Capacity of African Countries to Conservation and Sustainable Utilisation of African Animal Genetic Resources

The African Union Commission (AUC) and the European Union (EU) have signed a contribution agreement for the implementation of the project "Strengthening the Capacity of African Countries to Conservation and Sustainable Utilisation of African Animal Genetic Resources". This project is being implemented by the African Union Interafrican Bureau for Animal Resources (AU-IBAR). Its primary objective is to enhance the contribution of livestock to food security, and economic growth in Africa through strengthening the capacity of countries and Regional Economic Communities to sustainably use and conserve African animal genetic resources through institutionalizing national and regional policy, legal and technical instruments. The project's life-span is 5 years and will be implemented in all AU Member States. The project received financial support from the European Union (EU) and its Member States, 14.6 Million and 0.4 Million Euros, respectively.

The overall strategy of the project is to facilitate and fast track the implementation of the Global Plan of Action (GPA) for sustainable use of AnGR in Africa, build capacity of RECs and Member States for effective formulation and implementation of policies and strategies for the management of AnGR and create awareness for its inclusion into national and regional agricultural investment priorities as well as build consensus on the methodology and tools for the characterization and inventory of AnGR. The main beneficiaries of the action will be livestock owners, especially those who rely on livestock production for their livelihoods, and members of breeders' associations. Other beneficiaries will be technical staff and decision makers of national, regional and continental institutions and research centres involved in policy development, design of intervention strategies and support tools, and implementation of specific activities. Indirect beneficiaries will be local communities benefitting from biodiversity conservation measures.

This project aims to achieve the following end results: Establish the status and trends of animal genetic resources; Develop policy frameworks for the sustainable use of AnGR; Support and strengthen national and regional conservation and improvement strategies and initiatives; and increase knowledge, attitude and practice of the contribution of livestock and livestock sector to economic growth, food security and poverty reduction.

In the true spirit of collaboration and co-operation, AU-IBAR's approach on the project implementation includes well defined roles and responsibilities for its implementing partners; Food and Agriculture Organization of the United Nations (FAO); International Livestock Research Institute (ILRI), Centre International de Rechercher-Dévelopment sur l'Elevage en zone Subhumide (CIRDES) and West Africa Livestock Innovation Centre (WALIC, formerly International Trypanotolerance Centre, ITC) amongst other stakeholders.

The Animal Genetic Resources Project has also realised some key achievements;

Technical backstopping by the AU-IBAR led Animal Genetic Resources Project enabled a strong representation from African countries, which provided a third of all reports that fed into the preparation of the Second State of the World's Animal Genetic Resources Report. The report, an update of the first report produced in 2007, will provide a 10-year synthesis of the global state of AnGR, and is key to execution of the Global Plan of Action for sustainable use of AnGR. The first ever continental State of African Animal Genetic Resources Report is also concurrently under development. This report, which will focus on articulating and addressing Africa's unique needs and resources, and will be instrumental in informing and shaping Africa's AnGR agenda will allow Africa to address priorities that are important to the continent and that may not be considered at the global level.

Policy reforms commenced with a series of stakeholder workshops where existing policy, legislative and regulatory frameworks were scrutinized, and gaps and suitable interventions identified to inform the creation of a more enabling environment for the management of animal genetic resources. The evidence generated will feed into policy dialogues and reforms, for advocacy and for lobbying for increased public sector funding and private sector investment.

National Gene banks across Africa were identified and suggested for upgrading into regional gene banks. These facilities were selected after an assessment of ex-situ and in-situ facilities in 14 countries, and a needs assessment to determine the equipment, infrastructure and human resource requirements of each of the regional facilities is underway to determine support needs for the upgrade. A continental back-up facility, to be housed by the African Union Commission at the Pan-African Veterinary Vaccine Centre (AU-PANVAC) was proposed.

In addition there have been institutional reforms whereby AU-IBAR through the genetics project has worked in conjunction with Member States to establish or strengthen Sub-regional Focal Points (S-RFPs) for AnGR in all five main regions of the continent. To ensure ownership, relevance and sustainability, it was agreed that the S-RFPs would be anchored within existing Sub-Regional Research and Development Organizations. The appointed sub-regional focal points are Centre for Coordination of Agricultural Research and Development for Southern Africa (CCARDESA-Southern Africa), Conseil ouest et Centre Africain pour la Recherche et le Développement Agricoles / West and Central African Council for Agricultural Research and Development (CORAF/WECARD-Western Africa), Association for strengthening agricultural research in Eastern and Central Africa (ASARECA-Eastern Africa), Communauté Economique du Bétail, de la Viande et des Ressources Halieutiques (CEBEVIRHA-Central Africa) and Institut National de la Recherche Agronomique d'Algérie (INRAA-Northern Africa). The instalment of Sub-regional Focal Persons was instrumental in Africa having a well-coordinated participation and united voice on key issues at the Eighth Session of the Inter-governmental technical Working Group on AnGR in November 2014 in Rome, Italy. Africa also shared its experiences of a bottom-up approach to establishing its Regional Focal Points.

Other achievements included the needs assessment of the African Animal Genetic Resources Information System (AAGRIS) viewed as a one-stop-shop for AnGR that will allow a wide range of end uses to access knowledge and data to inform policy processes, raise awareness and promote best practice in management of AnGR on the continent. The six main data and information categories have since been validated by member states and will include; species and breeds, Inventory, monitoring and surveillance, Conservation and breed improvement programmes, Capacity development, AnGR

Institutions and News trends, establishment of a regional information Networks (DAD-NET Western Africa, Central Africa, Southern Africa, Northern Africa and Eastern Africa) for information sharing, lessons learning and coordination of AnGR initiatives on the continent of which will be hosted in AAGRIS; initiatives to revise and harmonize characterization, inventory and monitoring tools within Africa included the creation of an animal genetic resources taxonomy advisory group (AnGR-TAG) for Africa and the development of the first draft of the revised and harmonized characterization, inventory and monitoring tools' guidelines for Africa. In addition, a roadmap has since been developed to guide the movement and exchange of animal genetic materials and implementation of the Nagoya protocol on access and benefit sharing (ABS) in Africa.

9.12 Other initiatives on Animal Health and Wildlife

AU-IBAR has embarked in others important initiatives in the areas of animal diseases control. These initiatives are being done in close collaboration with keys traditional technical partners namely FAO, OIE, ILRI, RECs, AU-PANVAC, AU-PATTEC and MS. During the year of 2014, ASF and PROCNADA strategies have been developed and animal welfare has become of the key result areas AU-IBAR strategic plan 2014-2017.

9.12.1. The Panafrican strategy and program for the eradication of Peste des petits ruminants (PPR)

The development of the PPR continental strategy and the PPR control program were a follow up to the recommendations of the 8th Ministerial conference held at Entebbe, Uganda in 2010 and 9th Ministerial conference held in April 2013 in Abidjan, Cote D'Ivoire, where AU-IBAR and AU-PANVAC were mandated to spearhead the development of a strategy and a continental program for the control of PPR in Africa respectively.

Following the global eradication of Rinderpest, technical experts in Africa and the Global Framework for the Progressive Control of Transboundary Animal Diseases (GF-TADs) has identified PPR eradication as the next most likely candidate disease for control and possibly eradication. PPR has always been a major issue for attention in Africa and this decision resonated very well with African countries.

The strategy was developed by AU-IBAR in close collaboration with ILRI through a consultative process. It is essentially a framework for the control and eradication of in Africa by 2030. While a global control, strategy for PPR is being developed under the leadership of the OIE and FAO, it expected that the Africa continental strategy will ultimately be aligned to the global strategy when it is finalized.

In order to operationalize the strategy, a joint AU-IBAR and AU-PANVAC PPR taskforce has also developed the Progressive Pan African Program for Control and eradication of PPR in Africa (PCP-PPR) program as mandated by the Ministers. The overall objective of this continental PPR control program is to contribute to food security, poverty alleviation and resilience of livestock-dependent communities in Africa. Its specific objective is to progressively control PPR and to control other small ruminant priority diseases in Africa.

The main components of the program include:

- Epidemiological Status and socio-economic impacts of PPR; and other small ruminant priority diseases established
- Control/eradication strategies for PPR and small ruminants priority diseases designed and implemented
- Animal health service delivery enhanced
- Coordination and harmonization of PPR control at regional and continental levels improved

The implementation of the program is envisaged to involve four phases which will be implemented simultaneously in the various member States based on the epidemiological and socio-ecological considerations in each country and region.

9.12.2. Regional strategy for the control of African swine fever in Africa (ASF)

Occurrence of African swine fever (ASF) was reported in almost half of the countries that make up the African continent in 2012. This TAD can have a powerful negative impact on a nation's economy and social structures. It causes major economic losses from its effects on pig production and economically hinders people who depend on pig farming and who risk, as a result of ASF, to lose their livelihoods. It also reduces poor communities' access to high-quality and cheap animal proteins. For these reasons, ASF is considered the most serious infectious disease in pigs in Africa.

In recent years, the international community, national authorities, the pig production sector and researchers are trying to solve the problem in a sustainable way in order to eliminate constraints on pig production and enhance rural development. The African Union's Interafrican Bureau for Animal Resources (AU-IBAR), the Food and Agriculture Organization of the United Nations (FAO) and the International Livestock Research Institute (ILRI) have been collaborating since March 2013 to implement a regional strategy to control ASF in infected countries and to prevent its spread to non-infected countries.

The strategy is based on collaboration and partnerships among farmers, traders, veterinary and animal production services, researchers, governments, civil society and development partners. With the growing pig trade throughout Africa, the regional strategy will promote viable pig production and improve the livelihoods of all actors in the pig and pork value chains, especially poor people. It is articulated around three founding principles.

- The first principle is knowledge-based, meaning that the control of the disease should be based on the best available epidemiological knowledge and experience of ASF to reduce its prevalence and prevent its further spread. This aspect includes the following activities: the collection and analysis of existing information relevant to epidemiology and control, surveillance of the ASF situation in the region, increased capacity for field diagnosis through training and research in pig management, value chain analysis and molecular epidemiology studies, diagnosis and vaccine development.
- The second principle regards an area-specific approach ensuring that country and sector-specific epidemiological scenarios and technical options for prevention and control are taken into account in order to have appropriate outbreak management for different systems and socio-economic situations.
- The third principle is to use a holistic approach to promote a gradual transformation of the less biosecure, small-scale, scavenging (extensive) production system into a more biosecure, small-scale, semi-intensive production system. This requires the harmonization of policy and legislation as well as coordination and resource mobilization in order to integrate traditional veterinary approaches with other components of animal production. Constraints in pig production are interrelated and need to be addressed via an integrated approach combining health, genetics, feeding, husbandry practices and organization at the producer level, as well as public and private partnerships to support the swine sector. In addition, the research community should provide sound evidence to inform prevention and control programmes about viable interventions.

Together, AU-IBAR, FAO and ILRI articulated an action plan into short (1-3 years)-, medium (3-7 years)- and long (>7years)-term streams

of activities and identifying the stakeholders and institutions responsible for each activity. They are seeking to bring them together to collectively participate in finding solutions that address the main hindrances faced in pig production and marketing in order to create an enabling environment and ensure the sustainable development of the pig sector in Africa.

This strategy is proposed for action against ASF and a framework towards this action triggered by enhanced collaboration and partnership between farmers, veterinary and animal production services, researchers, African governments, civil society and development partners. The proposed strategy is planned to be validated by African CVOs in 2015 alongside with the development of a continental control program.

9.12.3. Strategic framework for the progressive control of neglected animal diseases in Africa (SF-PROCNADA)

The Strategic framework for the progressive control of neglected animal diseases in Africa (SF-PROCNADA) is an African initiative for the progressive control of NADs in Africa (AI-PROCNADA). AI-PROCNADA includes the African Union-Interafrican Bureau for Animal Resources (AU-IBAR), the African Union Pan African Vaccine Centre (AU-PANVAC), the United Nations of Food and Agriculture Organization (FAO) and the World Organization for Animal Health (OIE) featured NADs control plans. The SF-PROCNADA document has been developed in 2014 and it is planned to be validated by MS and RECs and technical partners in early 2015 together with the control program. The strategic framework is articulated into eight (8) strategic elements namely i) the determination of the epidemiology of the diseases; ii) the determination of the socio-economic importance of the diseases; iii) the prevention and control tools for the diseases; iv) the advocacy, communication and resource mobilization; v) the research and development components of the diseases; vi) the capacity building; vii) the coordination and partnerships; and viii) the learning and knowledge management. The achievement of these major components will involve the strengthening of existing animal and public health surveillance, response, prevention and preparedness systems at the country, regional and continental levels. The definition of NADs and priority diseases for interventions and associated actions were identified by officials at the country level using a scoring disease approach developed by AU-IBAR. The objective is to provide African countries with a simple and user-friendly tool enabling them not only to qualify diseases as neglected, but to also assess their priorities for ranking purposes.

From African perspective, neglected animal diseases e defined as "Diseases that are usually endemic in Africa and that cause significant socio-economic and /or public health impacts for livestock dependent communities and other livestock value chain actors, but which are not sufficiently considered for allocation of resources for their prevention and control. For these diseases, there is lack / inadequacy of tools and /or epidemiological information, awareness and strategies resulting into sub-optimal investment for their control".

It is expected that, MS, RECs developed national and regional for the progressive control of NADs and zoonosis at national and regional levels in line with the proposed strategy at by AU-IBAR. National and regional control program should be also developed as well as resource mobilization for the effective implementation of NADs control taking into account national and regional specifities.

9.12.4 Wildlife health

9.12.5. Animal welfare agenda development in Africa

Animal welfare is a growing agenda in animal resource development worldwide. Its denotes the desire to prevent unnecessary animal suffering, while recognizing the necessary use of animals

by humans to meet varied needs. The Interafrican Bureau for Animal resources of African union (AU-IBAR), since its establishment in 1951, has focused on animal resources development including animal health, animal production and access to markets. Although the interventions have contributed to animal welfare, promotion of Animal welfare principles as key determinants of animal resource development and trade have not yet been sufficiently addressed by AU-IBAR's strategic plans. As observed in many African countries, little attention is given to policies and legislations concerning animal welfare in spite of the support and interventions by non-governmental organizations (NGOs) which focused mainly on companion and drought animals. With the increasing interest in animal welfare in Africa because of its potential impact on trade, the changing animal production system towards a more intensive and industrial production system and its attendant implications on animal welfare among other factors, AU-IBAR need to take a leading role in coordination and promoting improvement of animal welfare standards as well as helping to change attitudes and practices towards animal welfare. This will contribute to enhancing production performance and access of African animal resources to international markets. It is therefore urgent that national and regional policies and legal frameworks undergo necessary reforms and that required support be provided to increase awareness and compliance by all actors along the value chains with animal welfare standards as defined by OIE. To this effect, AU-IBAR has included animal welfare as one of the key result areas in its strategic plan 2014-2017 with the ultimate goal of enhancing the compliance of African Member States (MS) with animal welfare standards. This will involve providing technical and institutional support to regional economic communities (RECs) and AU MSs in understanding, reviewing and contributing to animal welfare standards setting process as well as including animal welfare matters in their national policies, legislations, strategies and programs related to the development and utilization of animal resources. Furthermore, the implementation of the VET-GOV Program and establishment of national policy hubs provides a unique opportunity for policy and legislation review and reform ensuring animal welfare related matters are adequately taken into consideration.

Based on its proven record and long experience in coordination and leadership in animal resource development, AU-IBAR enjoys unique convening power, and is a critical instrument for advocacy and influencing decision makers. It is very well placed to translate global strategies and or frameworks, including animal welfare, into national, regional and continent-wide policy and practices. Therefore, AU-IBAR in close collaboration with key stakeholders will spearhead the development of a continental animal welfare strategy in line with the "Universal declaration on animal welfare" and World Animal health Organization (OIE) chapter on AW standards but taking into account African context. This will be achieved through the creation of African Platform of Animal Welfare (APAW) with a Secretariat at AU-IBAR to coordinate and guide the process of formulation of the Pan African Animal Welfare strategy; enhance collaboration, cooperation, coordination and partnership with specialized organizations, and engage in the formulation of African common positions on AW during standard setting process. However any effort to strengthen compliance with AW international standards need to take into consideration the reality of production and marketing systems in Africa. An attempt to blindly and fully implement the AW standards could be detrimental to market access for African animals as our producers and traders may not yet have the capacity and will to strictly comply with these standards. A progressive application of rules support with sensitization campaigns and behavior change communication at individual and community/ association levels to yield change of mentality and culture over animal welfare

The idenitified and planned priority areas of interventions are the following :

- ***Coordination of AW initiatives: Establishment of an Animal Welfare Platform***
  - » Establish animal welfare platform for Africa;
  - » Establish and institutionalize an animal welfare secretariat at AU-IBAR;
  - » Promote and foster collaboration, coordination and partnerships on animal welfare among actors;
  - » Initiate the development of a continental strategy for animal welfare.

- ***Support awareness creation and communication support***
  - » Sensitize and engaged MS on animal welfare issues using various forums (VETGOV national and regional policy hub establishment) and communication tools;
  - » Create a AW module in ARIS-2 for data collection analysis, information along the entire AW value chain to inform policy, advocacy and capacity development;
  - » Sensitive MS in improving health conditions of working animals and promoting animal welfare
  - » Sensitise MS on the need for improving training on animal welfare within National learning institutions curricula.
  - » Sensitise MS on the need to strengthen enforcement capacity within Competent Authority instruments.

- ***Support the inclusion of AW in policies and legislation reform and harmonization***
  - » Advocate and support MS to include AW issues in the revision of livestock policies and strategies and veterinary legislation;
  - » Assist and support MS in compliance with animal welfare related issues with AW international standards taking into consideration the reality of production and marketing systems in Africa.
  - » Assist and facilitate a common position of African countries on AW issues.
  - » Take advantage of the VET-GOV Program to drive the process of influencing governments and other institutional policies, strategies, and best practices, lessons learnt; and of gathering baseline data on AW in collaboration/partnership with relevant stakeholders in the continent

- Support capacity building of AU MS and RECs for the understanding, teaching, application and monitoring compliance with AW standards
  - » Provide recommendations to countries and stakeholders on priority intervention areas based on African Context;
  - » Facilitate training on AW.

In the meantime, "Reinforcing Veterinary Governance Program in Africa (VETGOV)" is implemented in Africa countries with the establishment of national livestock policy hub (NLPH) in MS and the update of veterinary legislation as well as livestock development policy, strategies and program development. Therefore, VET-GOV program will be used to play central role and drive the process of influencing governments and other institutional policies, strategies, best and practices, lessons learnt; and of gathering baseline data on AW and promoting, advocating the development of AW agenda in collaboration/partnership with relevant stakeholders in MS, RECs and the continent.

10. MAJOR RECOMMENDATIONS OF THE CVOs AND DIRECTORS OF ANIMAL PRODUCTION MEETINGS IN 2014

Within the scope of the consolidation phase of the project Participation of African Nations in Sanitary and Phytosanitary Standard Setting Organizations (PANSPSO Phase 2), AU-IBAR convened the sixth meeting for OIE delegates, from 5th to 7th May 2014 in Nairobi to examine the proposed changes in the OIE Terrestrial and Aquatic Codes submitted for adoption during the General Session of the World Assembly of OIE Delegates to take place in Paris, France from 25th to 30th May 2014.

Of attendance were thirty eight African Delegates from Algeria, Angola, Benin, Botswana, Burkina Faso, Burundi, Central African Republic, Chad, Comoros, Congo Democratic Republic, Côte d'Ivoire, Djibouti, Gabon, Gambia, Ghana, Kenya, Lesotho, Liberia, Malawi, Mauritius, Mozambique, Namibia, Niger, Nigeria, Rwanda, Senegal, Seychelles, Somalia, South Africa, South Sudan, Sudan, Swaziland, Tanzania, Togo, Tunisia, Uganda, Zambia and Zimbabwe. IGAD was the only regional economic community represented.

Also in attendance were representative of FAO (ECTAD Nairobi) and OIE (OIE Regional representative for Africa, OIE sub-regional office for East Africa)

The African OIE Delegates and the representatives of RECs agreed on common positions that the 52 African countries members of OIE will present at the 82nd General Session of OIE. The meeting recommended to African OIE Delegates absent at the meeting in Nairobi to support the common positions in order for Africa to speak with ONE VOICE.

The commons positions agreed during the meeting are attached as Annex xx

11. SUMMARY OF THE MAJOR RECOMMENDATIONS OF MINISTERIAL MEETINGS ON ANIMAL RESOURCES IN 2014

11.1 AU Joint Conference of Ministers of Agriculture, Rural Development, Fisheries and Aquaculture 1– 2 May 2014, Addis Ababa ETHIOPIA

We, the Ministers of Agriculture, Rural Development, Fisheries and Aquaculture, having met at the AUCC in Addis Ababa, Ethiopia from 01-02 May 2014, on the Theme of the Year of Agriculture and Food Security: "Transforming Africa's Agriculture for Shared Prosperity and Improved Livelihoods through Harnessing Opportunities for Inclusive Growth and Sustainable Development".

Recognising and appreciating the African Union Assembly of Heads of State and Government for having declared, during its 19th Ordinary Session, the Year 2014 to be the Year of Agriculture and Food Security, marking the 10th Anniversary of the Adoption of the Comprehensive Africa Agriculture Development Programme (CAADP).

Acknowledging the progress made in the realisation of the 2003 Maputo Declaration on Agriculture as enshrined in the CAADP framework, the challenges faced, the important lessons learnt over the last decade through implementation of CAADP, and reflecting on the prospects and opportunities for accelerated agricultural growth and transformation through sustaining the momentum.

Convinced that accelerated agricultural growth and transformation is a sine qua non for achieving Africans' aspirations for shared prosperity, improved livelihoods and dignity, as well as peace and security.

Stressing the strategic significance of ensuring that all segments of our populations, particularly women, the youth, and other disadvantaged sectors of our societies, must participate and directly benefit from the growth opportunities.

Also convinced that success in an inclusive agricultural growth and transformation will have the most direct, positive consequential impact on achieving broader sustainable development goals in Africa, including poverty reduction, greater social equity and better environmental stewardess.

Recognizing the need for enhancing conservation and sustainable use of fisheries and aquaculture resources through coherent policies as well as governance and institutional arrangements at national and regional levels,

Acknowledging the potential of the aquaculture sector to generate wealth, social benefits and contribute to the development of the African economy, and the importance of fish and fish products in food and nutrition security and livelihoods;

Considering the need to harness the benefits of Africa's fisheries and aquaculture endowments through development of value chains, accelerated trade and marketing

Emphasising recognizing the role of research and science in transforming fisheries and aquaculture production and productivity to exploit its full potential

Concerned over the limited value addition in fisheries and aquaculture coupled with the high level of post-harvest losses especially in small scales fisheries, and taking note of the absence of specific financial mechanism to support SMEs in fisheries and aquaculture:

i. Commend the African Union Commission (AUC) and the NEPAD Coordination and Planning Agency (NPCA) for the articulation of a vision and clear goals for Accelerated Africa's Agricultural Growth and Transformation to be achieved during the next decade, on which we deliberated during our meeting
ii. Endorse the Report of the Senior Officials and Experts of Agriculture, Rural Development, Fisheries and Aquaculture, who met from 28-30 April 2014; also endorse the key messages that arose from the interactive discussions that we held with stakeholders on the basis of the proposed vision and goals.
iii. Hereby adopt the following Resolutions:

a. On acceleration of inclusive growth of agricultural production and productivity, to:
   i. At least double the current level of productivity, focussing on inputs, irrigation and mechanization, Sustain Annual sector growth in Agricultural GDP at least 6%
   ii. Support production and utilisation of cost-effective and quality agricultural inputs, mechanisation and agrochemicals (for crops, livestock, fisheries and aquaculture) that are affordable and accessible to all stakeholders.
   iii. Invest in efficient and effective water management and irrigation infrastructure to facilitate a stable and predictable water supply system, as well as affordable, reliable renewable energy for agricultural production.
   iv. Put in place measures and mechanisms for ensuring equal access to opportunities, including land, productive assets, knowledge information and skills, for women, the youth, pastoral groups and other socially disadvantaged groups
   v. Support professionalization of smallholder producers and family agriculture through vocational training programmes
   vi. Endorse the Science Agenda for Agriculture in Africa (S3A) to increase the level of ATFP annual growth through technology generation, dissemination and adoption, and skilled human resources
   vii. Endorse the Guiding Principles on Large Scale Land Based Investments (LSLBI) in Africa, prepared by the Joint AUC-AfDB-ECA Land Policy Initiative that is aimed at assisting Member States to generate an optimum benefit from such investments.

b. On harnessing markets and trade opportunities for transformation and shared prosperity, to:
   i. Reduce poverty through agriculture by half, through among other things, creating job opportunities for at least 30% of the youth in agricultural value chains.
   ii. Triple Intra-African Trade
   iii. Accelerate intra and inter-regional trade in Africa aimed at bolstering demand for African agricultural products, including simplifying and formalising the current trade practices.
   iv. Fast-track establishment of Continental Free Trade Area (CFTA) and transition to a continental Common External Tariff (CET) scheme to promote intra-African value-addition and trade in food and agriculture, without compromising quality and standards
   v. Reform policies and institutions to facilitate investment in markets and trade infrastructure and promote inclusive regional agricultural value chain development, focussing on strategically selected agricultural commodities
   vi. Commit to coordination mechanisms put in place at continental level to promote African common position on agriculture-related international trade negotiations and partnership agreements.
   vii. Strengthen the capacities of smallholder producers in the areas of entrepreneurships, leadership and organisation development, negotiations and entry to markets including

contracting.

viii. Reduce PHL at least by half. Invest in infrastructure for market and value-chain development at national, regional and continental levels, including, local manufacturing transport, energy, ICT, post-harvest handling, processing, storage and distribution.

ix. Support and facilitate preferential entry and participation for women and youth in gainful and attractive agri-business opportunities.

x. Promote the establishment of platforms for multi-actors interactions.

c. On achievement of food and nutrition security goals, to

i. Commit to Zero Hunger by 2025, reduce stunting by 50%

ii. Take concrete measures that ensure good governance and necessary policy reform and legal frameworks to prioritise food and nutrition security agenda towards meeting the 2025 ending hunger goal.

iii. Develop and operationalise social protection packages and agro-entrepreneurship programs that target rural smallholders, especially women and youth

iv. Develop and apply context-specific and realistic indicators for tracking food and nutrition security, considering the complexity of the food and nutrition security issue

v. Prioritize livestock and integrate animal welfare issues as an important part of agriculture development and transformation and as a key strategy towards realizing the food and nutrition security goals.

vi. Develop an African position on Genetically Modified Organisms (GMOs) and capacity for Africa to take advantage of the opportunities.

vii. Strengthen strategic food and cash reserves to respond to food shortages occasioned by periodic prolonged droughts or other disasters/emergencies

viii. Strengthen early warning systems to facilitate advanced and proactive responses to disasters and emergencies with food and nutrition security implications

ix. Target priority geographic areas and community groups for interventions on Food and Nutrition

x. Encourage and facilitate increased consumption of locally produced food items, including the promotion of innovative school feeding programs that use food items sourced from the local farming community

xi. Enhance the nutritive quality of food items through fortification of necessary elements.

d. On enhancing resilience of Africa's agriculture to climate change and other types of hazards, to

i. Ensure at least 30% of farm/pastoral households be resilient to shocks

ii. Support the integration of the resilience-building agenda into Africa's contribution to the post-2015 Framework for Disaster Risk Reduction, sustainable development agenda, and climate change.

iii. Accelerate implementation of the Climate Change Response Strategies at national level and the Africa Regional Strategy for Disaster Risk Reduction and its Programme of Action in line with the Hyogo Framework for Action (HFA)

iv. Support capacity development and increase investments for resilience building initiatives, including social security for rural workers

v. Integrate climate change adaptation and disaster risk reduction programmes and mainstream both into NAIPs and RAIPs

vi. Strengthen and actively participate in continental, regional, and national platforms for enhanced coordination,

experience sharing and mutual learning

vii. Improve availability and access by smallholder famers to reliable and up to date climate and risk information, knowledge, technology and instruments (e.g., crop and livestock insurance) to facilitate climate-resilient and risk-informed agricultural development process through investments on climate and weather information services

viii. Promote the conservation and development of crops varieties and livestock breeds that can withstand and adapt to harsh climate conditions, including use of indigenous genetic resources

ix. Improve risk management and resilience capacity for the most vulnerable groups, including women, children, and socially disadvantaged groups.

x. Prioritize the vulnerable ecosystems such as forests, arid and semi-arid lands, soil health, soil erosion, biodiversity, etc., where the challenges of desertification and land degradation are acute.

xi. Develop and implement in-country pilot projects on climate change and desertification impacts on agriculture, for possible scaling up of best practices and strengthen resilience.

xii. Set realistic targets on additional number of farm households practicing climate smart agriculture by 2025

e. On enhancing public-private partnerships and investment financing for African agriculture, to:

i. Sustain the momentum of allocating an increased percentage of national annual budgets to agriculture, in line with the 10% minimum commitment, also putting in place measures to ensure efficiency and effectiveness of these investments.

ii. Put in place mechanisms and systems to recognize and appreciate performance of Member States with respect to progress on key agreed-upon commitments.

iii. Establish and/or strengthen inclusive public-private partnerships for at least five (5) priority agricultural commodity value chains with strong linkage to smallholder agriculture.

iv. Put in place and/or strengthen financing schemes that are friendly to smallholder enterprises to support their transition to viable businesses.

v. Create multi-stakeholder platforms to promote mutual financing mechanisms.

vi. Promote and prioritize local resources mobilization for agriculture investment to discourage heavy dependence on external sources of funding that may limit a sense of ownership and buy-in by farmers and other stakeholders.

vii. Establish and strengthen the capacities of domestic apex private sector intermediary institutions for inclusive facilitation and coordination to ensure engagement of private sector in CAADP implementation.

f. On harnessing the potentials of fisheries and aquaculture resources, to:

i. Endorse the AU Policy Framework and Reform Strategy for Fisheries and Aquaculture in Africa

ii. Undertake reforms to address governance of fisheries and aquaculture and develop institutions that lead to sustainable fisheries and aquaculture in line with the AU policy framework and reform strategy for fisheries and aquaculture

iii. Develop fisheries and aquaculture as an integral component of sustaining the CAADP momentum results framework

iv. Scale-up integrated aquaculture development as a means of increasing rural productivity and food security and nutrition

v. Accelerate trade by developing fish value chains, promoting responsible and equitable fish trade and marketing in

order to significantly harness the benefits of Africa's fisheries and aquaculture endowments

g. On Sustaining the CAADP Momentum Results Framework, to:
   i. Commit the Principles and Values of the CAADP Process
   ii. Endorse the CAADP Results Framework as a key tool:
      - to translate Africa's agricultural development goals into tangible targets; to track, monitor and report on progress as well as facilitating mutual learning and accountability
      - to foster alignment and coordination and rallying multi-sectoral efforts towards common goals
      - to accompany further planning and programming for new programmes
   iii. Strengthen Africa's capacity for knowledge and data generation and management to support evidence based planning and implementation
   iv. Strengthen multi-institutional platforms for regular peer review, mutual learning and mutual accountability.
   v. Commit to an Agricultural Review Process to be conducted every two years; and a mid-term review, after five years, of the 2015-2025 CAADP key goals.

h. Request:
   i. The AU Commission and NPCA to develop an implementation strategy and roadmap that facilitates translation into results, of the vision and goals of the CAADP 2025 Africa Accelerated Agricultural Growth and Transformation (3AGTG 2025);
   ii. The AU Commission and NPCA, in collaboration with partners to develop mechanisms that enhance Africa's capacity for knowledge and data generation and management to strengthen evidence based planning and implementation.
   iii. The AU Commission and NPCA, in collaboration with African relevant scientific institutions, to undertake a study to explore the possibility of developing an African position on GMOs with a view to taking advantage of the opportunities that this may present.
   iv. The AU Commission and NPCA to institutionalize a system for peer review that encourages good performance on commitments and periodically recognize exemplary performance through awards.
   v. The AU Commission and RECs to facilitate the acceleration of economic integration to boost intra-Africa trade in food and agriculture.
   vi. The AU Commission, NPCA and RECs to establish African Centres of Excellence for Aquaculture, Capture fisheries, biodiversity studies and oceanography to enhance capacity for fisheries and aquaculture research.
   vii. The RECs to support the efforts of Member States in developing value chains, promoting responsible and equitable fish trade and marketing, through significantly harnessing the benefits of Africa's fisheries and aquaculture endowments
   viii. Development Partners to rally their technical and financial support in a harmonized and coordinated manner behind implementation of these resolutions.

i. Recommend the AU Assembly to endorse the following commitments on Africa Accelerated Agricultural Growth and Transformation Goals to be achieved by 2025 (3AGTGs 2025):
   i. Recommit to the Principles and Values of the CAADP Process
   ii. Recommit to the allocation of at least 10% of public spending on agriculture
   iii. Commit to Zero Hunger
      - At least double productivity (focusing on Inputs, irrigation, mechanization)

- Reduce Post Harvest Losses (PHL) at least by half
- iii. Improve Nutrition: reduce stunting by half

j. Commit to reduce poverty through agriculture by half.
   i. Sustain annual sector growth in agricultural GDP by at least 6%
   ii. Establish and/or strengthen inclusive public-private partnerships for at least five (5) priority agricultural commodity value chains with strong linkage to smallholder agriculture.
   iii. Create job opportunities for at least 30% of the youth in agricultural value chains.

k. Commit to triple Intra-African Trade in Agricultural commodities and services
l. Commit to ensuring at least 30% of farm/ pastoral households to be resilient to shocks
m. Commit to the CAADP Results Framework and to an Agricultural Review Process to be conducted every two years.

11.2 High level Ministerial meeting on the Livestock Development strategy for Africa 12 -14 November 2014

The Livestock Development Strategy for Africa (LiDeSA) high level meeting was organized for African Ministers of Livestock, on 14th November 2014, at the African Union-Inter-African Bureau for Animal Resources (AU-IBAR) in Nairobi, Kenya. The strategy development is taking place against the background of the fast growing demand for livestock and livestock products, trends which indicate that by the years 2030-2050, the demand will increase two to eight fold, due to factors such as the increase in urban populations and increased incomes. This growing demand may lead to a critical shortfall in the supply of quality proteins from animals, with negative impact on food and nutrition security in Africa, given the existing low levels of investment and growth of the livestock sector.

Ministers and/or their representatives from 17 countries were present.

At the end of the meeting, the Ministers unanimously agreed as follows:

- Adopted the report and recommendations of the committee of high level experts made up of Directors of VS and PS on the LiDeSA
- Approved the adoption of the LiDeSA as strategy to be implemented for development animal resources in Africa
- All agreed that the document be adopted for presentation through AUC policy organs (through acclamation) to the summit of Heads of Government taking place in January 2015 for approval.

ANNEX 1: STATUS OF MONTHLY DISEASE REPORTING BY COUNTRIES IN 2013

	Country	MONTHS - 2012											% REPORTING				
		J	F	M	A	M	J	J	A	S	O	N	D	2014	2013	2012	2011	2010
1.	Algeria													100%	100%	100%	100%	100%
2.	Angola													0%	0%	100%	0%	100%
3.	Benin													0%	100%	100%	100%	100%
4.	Botswana													100%	50%	100%	100%	100%
5.	Burkina Faso													100%	100%	100%	100%	100%
6.	Burundi													25%	100%	100%	0%	100%
7.	Cameroon													50%	100%	100%	100%	100%
8.	Cape Verde													0%	0%	0%	0%	0%
9.	CAR													100%	100%	83.33%	100%	100%
10.	Chad													100%	100%	100%	100%	100%
11.	Comoros													0%	0%	0%	100%	100%
12.	Congo Brazzaville													0%	0%	100%	100%	100%
13.	Cote d'Ivoire													100%	25%	100%	100%	100%
14.	Djibouti													100%	100%	100%	100%	100%
15.	DR Congo													100%	100%	91.67%	100%	100%
16.	Egypt													50%	100%	100%	100%	100%
17.	Equatorial Guinea													0%	0%	0%	0%	100%
18.	Eritrea													50%	100%	100%	100%	100%
19.	Ethiopia													100%	100%	100%	100%	100%
20.	Gabon													100%	0%	0%	100%	100%
21.	Gambia													100%	0%	0%	100%	100%
22.	Ghana													100%	100%	100%	100%	100%
23.	Guinea Conakry													100%	100%	100%	100%	100%
24.	Guinea Bissau													83.33%	100%	100%	100%	100%
25.	Kenya													100%	100%	100%	100%	100%
26.	Lesotho													58.33%	100%	100%	100%	100%
27.	Liberia													0%	0%	100%	100%	75%
28.	Libya													0%	0%	33.33%	0%	0%
29.	Madagascar													0%	0%	0%	100%	41.67%
30.	Malawi													100%	25%	100%	100%	100%
31.	Mali													100%	42%	50%	100%	100%
32.	Mauritania													8.33%	0%	100%	100%	100%
33.	Mauritius													42%	42%	100%	0%	100%
34.	Mozambique													83.33%	100%	33.33%	83%	100%
35.	Namibia													100%	100%	100%	100%	100%
36.	Niger													0%	100%	100%	100%	100%
37.	Nigeria													100%	100%	100%	100%	100%
38.	Rwanda													42%	100%	100%	100%	100%
39.	Sahrawi																	

	Country	MONTHS - 2012												% REPORTING				
		J	F	M	A	M	J	J	A	S	O	N	D	2014	2013	2012	2011	2010
40.	Sao Tome & Principe													0%	0%	100%	0%	0%
41.	Senegal													91.67%	100%	100%	100%	100%
42.	Seychelles													0%	100%	100%	58%	100%
43.	Sierra Leone													100%	100%	100%	66%	100%
44.	Somalia													50%	50%	100%	100%	100%
45.	South Africa													100%	100%	100%	100%	100%
46.	Sudan													100%	100%	100%	100%	100%
47.	South Sudan													83.33%	100%	100%	NA	NA
48.	Swaziland													100%	100%	100%	100%	100%
49.	Tanzania													100%	100%	100%	100%	100%
50.	Togo													100%	100%	100%	100%	100%
51.	Tunisia													100%	100%	100%	100%	100%
52.	Uganda													100%	100%	100%	100%	100%
53.	Zambia													100%	100%	100%	100%	100%
54.	Zimbabwe													100%	100%	100%	100%	100%

Full Reports Zero Reports No Reports

ANNEX 2: LIST OF DISEASES REPORTED IN AU-IBAR MEMBER STATES IN 2014 AND RELATED QUANTITATIVE DATA

	Disease	Countries	Outbreaks	Susceptible	Cases	Slaughtered	Deaths	Destroyed
1	Actinomycosis	2	3	3220	16	2	0	0
2	African Horse Sickness	6	296	1827	499	126	0	2
3	African Swine Fever	14	183	260256	31413	17012	2765	2700
4	American Foulbrood	1	1	10	10	0	0	10
5	Anaplasmosis	14	1649	15929943	6673	1199	6	3
6	Anthrax	18	778	199912	4004	1477	20	14
7	Avian Chlamydosis	2	5	381	12	10	0	0
8	Avian Infectious Bronchitis	4	36	58414	3911	3047	0	368
9	Avian Mycoplasmosis	1	2	296	213	113	0	0
10	Babesiosis	11	1273	677346	24157	4291	651	205
11	Blackleg	17	684	365872	3939	1366	238	41
12	Bluetongue	4	94	66663	780	296	0	0
13	Botulism	5	83	45196	1069	815	4	1
14	Bovine genital campylobacteriosis	1	26	383	58	1	0	0
15	Bovine Malignant catarrhal fever	6	36	5066	108	61	0	1
16	Brucellosis	15	1393	86595	6382	178	1377	445
17	Camel Pox	2	7	234	15	0	0	0
18	Canine Distemper	6	122	8205	997	105	0	0
19	Caseous Lymphadenitis	2	2	21	2	1	0	0
20	Chronic Respiratory Disease	1	1	129	22	21		
21	Coccidiosis	8	541	227763	24404	5649	12	2
22	Contagious agalactia	1	1	21	1	0	0	0
23	Contagious Bovine Pleuropneumonia	19	294	201595	10569	3164	1061	7
24	Contagious Caprine Pleuropneumonia	6	117	65884	3729	594	55	22
25	Contagious Ophthalmia	2	643	295698	1353	11	0	1
26	Contagious Pustular Dermatitis	5	146	23403	809	77	5	0
27	Cysticercosis	3	127	113276	330	5	1773	107
28	Dermatophilosis	10	646	680548	2453	42	9	0
29	Distomatosis (Liver fluke)	6	72	37609	2105	75	2522	1200
30	Duck Virus Enteritis	1	2	3810	341	341	0	0
31	Echinococcosis/ hydatidosis	3	90	23381	488	3	2786	0
32	Ectoparasitosis	1	2	155	32	0	0	0
33	Enterotoxaemia	3	91	10792	314	236	0	7
34	Enzootic Abortion of Ewes	1	2	1000	23	20		0

	Disease	Countries	Outbreaks	Susceptible	Cases	Slaughtered	Deaths	Destroyed
35	Enzootic Bovine Leukosis	1	1	1	1	1	0	0
36	Equine Herpes Virus	1	3		60	22	0	
37	Equine Rhinopnemonitis	1	1	23	1	0		0
38	Erysipelas	5	9	6057	95	11	19	39
39	Filariasis	1	12	0	23	0		0
40	Foot and Mouth Disease	26	1246	2068953	56042	948	7373	415
41	Footrot	7	279	101882	1814	27	0	3
42	Fowl Cholera	3	9	2221	717	396	0	0
43	Fowl Pox	11	408	197706	10304	2490	70	32
44	Fowl Typhoid	4	25	5747	366	37	8	0
45	Haemorrhagic Septicaemia	9	376	43460	3709	811	49	0
46	Heartwater	13	1376	699567	4250	1395	29	28
47	Helminthosis	1	7	168	34	0	0	0
48	Highly Pathogenic Avian Influenza	1	46	24894	1147	668		24225
49	Infectious Bursal Disease	6	443	1543653	77989	32005	10	0
50	Infectious coryza	6	351	139689	4712	1551	29	8
51	Infectious Laryngotrachaetis	1	1	4000	500	300		
52	Leishmaniasis	1	1	2	1	0		0
53	Leptospirosis	1	2	4	2	1	0	0
54	Low Pathogenic Avian Influenza	1	6	1104	306	159		41
55	Lumpy skin disease	24	2758	2086186	24654	4857	646	10
56	Mange	11	514	95772	3281	261	116	2
57	Marek's disease	2	3	1890	11	9	0	0
58	Mastitis	6	545	183151	786	12	0	0
59	Nairobi sheep disease	1	2	90	14	2	0	0
60	Newcastle disease	27	797	3871149	701703	484911	4370	324511
61	Old World Screwworm	2	132	29540	238	5	0	0
62	Other Clostridial Infections	2	3	727	4	3		1
63	Other pasteurellosis	5	15	2059	207	95	0	0
64	Paratuberculosis	3	21	16501	64	21	0	15
65	Parvovirus enteritis	1	4	7	5	2	0	0
66	Peste des Petits Ruminants	25	596	507740	36193	14979	1205	124
67	Pneumonia	1	1	128	3	0	0	0
68	Pullorum disease	1	1	400	35	35	0	
69	Rabies	27	2062	442182	4712	2348	73	6160
70	Rift Valley Fever	4	8	350	31	3	0	0
71	Salmonellosis	8	42	572484	161998	4167	38602	312930

	Disease	Countries	Outbreaks	Susceptible	Cases	Slaughtered	Deaths	Destroyed
72	Sheep and Goat Pox	13	578	176140	6698	857	70	22
73	Sheep enteritis	1	1	453	8	1	0	1
74	Sheep Scabies	1	69	43761	7017	0		0
75	Strangles	2	2	3905	13	0	0	0
76	Streptothricosis	2	3	135	31	7	0	0
77	Tetanus	1	3	26	11	9	0	0
78	Theileriosis	11	559	388718	24427	3120	31	0
79	Toxoplasmosis	2	2	67	5	0	0	0
80	Trichomonosis	2	31	202	73	0	0	0
81	Trypanosomosis	19	435	89836	5557	326	82	30
82	Tuberculosis	13	287	143459	3487	22	7205	1307
83	Varrosis	1	57	448	462	0	0	457
	Grand Total		**23581**	**32891541**	**1275032**	**597212**	**73271**	**675497**

ANNEX 3: LIVESTOCK POPULATION IN AFRICA IN 2013

SN	Country	Cattle	Sheep	Goats	Shoats	Birds	Swine	Equine	Camels	Dogs	Cats	Buffaloes	Hare/ Rabbits	Bees
1	Benin	2111000	842000	1678000	2520000	16941000	398000	1556	0				115418	
2	Burkina Faso	8912433	9007564	13485889	22493453	40990790	2299836	1234973	18013					
3	Botswana	2556228	173920	755934	929854	0	7957	196259	287	133932	17013	61105		
4	Cameroon	5600000	3000000	4000000	7000000	45000000	1500000	0	0					
5	Congo DRC	1145222	1284790	4225300	5510090	22316000	981435	0	0					
6	Djibouti	40000	400000	600000	1000000	0	0	6800	50000					
7	Algeria	1909455	26572980	4910700	31483680	194411814	0	208590	344015				2021737	1271609
8	Egypt	3002778	2337486	1083518	3421004	24992	0	1059955	66801			2238140	1894583	
9	Ethiopia	53990061	25489204	24060792	49549996	50377142	0	9005430	2245581	1900000				5207300
10	Ghana	1590000	4156000	5751000	9907000	61565711	638000	2468	0	493125	116549			
11	Guinea	4704299	1616747	2174820	3791567	517006	96344	0	0					183045
12	Guinea Bissau	1325413	304745	649083	953828	1482641	343680	4355	0					
13	Kenya	17501684	17259360	29715633	46974993	32612620	305036	0	2985153					1842496
14	Lesotho	830560	2605710	890358	3496068	3978293	119939	316090	0	262500	30900		2940	
15	Morocco	3172984	19956385	6235861	26192246	0	0	1540167	197550					480200
16	Mozambique	1680787	851644	3167511	4019155	0	990292	28027	0	186937		401		
17	Mali	10012966	13735523	19126806	32862329	36850378	77594	517605	978980					
18	Malawi	1241714	255928	5356545	5612473	17200	2754414	107	0					
19	Mauritius	7302	2211	27430	29641	6000000	15287	900	0				3000	
20	Mauritania	1773563	10073138	6714042	16787180	0	0	0	1379417					
21	Namibia	2671062	2225708	1848718	4074426	698023	185079	324066	290					
22	Nigeria	15316025	57685216	109362672	167047888	224264490	8361713	1286505	92699	4943836	3448779		2794981	921667
23	Sudan	29840000	39483000	30837000	70320000	45500000	0	8312148	4751000					
24	Senegal	3313055	5571335	4754845	10326180	39269866	354474	972598	4740					
25	Sierra leone	517000	682000	803000	1485000	9460000	17000	0	0					
26	Swaziland	627486	16286	458516	474802	1833717	38861	11691	20	96357		95		
27	Chad	6879722	2886282	6287562	9173844	48000000	74319	883799	1374307					
28	Togo	428772	1111977	2526059	3638036	15344011	944979	0	0					

SN	Country	Cattle	Sheep	Goats	Shoats	Birds	Swine	Equine	Camels	Dogs	Cats	Buffaloes	Hare/ Rabbits	Bees
29	Tunisia	646157	6855520	1274460	8129980	97172000	2000	187805	80000	568154		65	96133	329500
30	South africa	13919931	20331685	6138146	26469831	50792224	1585955	0	0					
31	Uganda	12896041	3721028	13910274	17631302	41725658	3928218	0	0					
32	Zambia	3995142	697352	1386420	2083772	28114625	1207248	0	0					
33	Zimbabwe	5368106	513741	2995776	3509517	20161788	310101	426232	0	740519		10000		
	TOTALS	219526948	281706465	317192670	598899135	1135421989	27537761	26528126	14568853	9325360	3613241	2309806	6928792	10235817

ANNEX 4: VETERINARIANS AND PUBLIC HEALTH PERSONNEL 2014

SN	Country *	Year *	Vets in Animal Health	Vets in Animal Health (Private)	Vets in Public Health (Govt)	Vets in Public Health (Private)	Vets in Laboratory (Govt)	Vets in Laboratory (Private)	Vets in Academic/Training Institutions	Vets in Pharmaceutical Industry	Independent Vet private practitioners	Other Vets	Total Vets
1	Egypt	2014	13970	45000					2361				61331
2	Ethiopia	2013	1009	150	305	20	111		237	170	19	99	2120
3	Nigeria	2013	1382		677		182		1146	42	2576		6005
4	Algeria	2013	1029	1974	1072		77		319	470	7233		12174
5	Sudan	2012	1666	2150	513		305		821		1658		7113
6	Kenya	2013	539	308	79	23	160	51	157	124	134		1575
7	Cameroon	2013	51	65	16		13		10	10	89		254
8	Tanzania	2012	165	29	1	20	50	48	120	20	220		725
9	Mozambique	2013	40	15	23		19		160	1			258
10	Zimbabwe	2013	51	216	12		18		45				342
11	Uganda	2013	587		92		33	6	144	132	66		1060
12	Togo	2013	27	30	10		1		3	1			72
13	Democratic Republic of the Congo	2013	358	158	26	34	58		85		506		1225
14	Burundi	2010	23	13	2	1	8		7		7		61
15	Rwanda	2013	56	15	12	6	11		11	3	18	6	138
16	Tunisia	2014	300	245	167		32		50	1	245	235	1275
17	Zambia	2013	250	50	10	5	43	11	73	10	23		475
18	Mali	2013	395	154	158	128	71		28	12	448		1394
19	Malawi	2013	3		4		3		4	1	1		16
20	Burkina Faso	2013	50	41	3		7	3	10	16	7	9	146
21	South Africa	2013	150		26		33						209
22	Madagascar	2013	53	148	22	148	5	3	9	9	265		662
23	Morocco	2013	136	653	140		35		50	40	15		1069
24	Ghana	2014	85	40	2		7	1	21	8	18	3	185
25	Niger	2013	15	17	10		7		5		5		59
26	Guinea	2013	236	54	12	12	10	10	27	3			364
27	Lesotho	2013	11		1		1		2		3		18
28	Swaziland	2013	15		2		1		1		10		29
29	Senegal	2014	33	46	33	46	7		6		116		224
30	Côte d'Ivoire	2012	41	9	3		12	2	5	5	6		83
31	Benin	2013	21	50	2		2		15		78	10	178
32	Chad	2015	150	4			31	0	15	0	4		200
33	Namibia	2014	45		13	0	6	1	5	0	78	90	236
34	Congo	2013	49		8		5		9	1	8	6	86
35	Eritrea	2012	11	1	15		1		2				30
36	Somalia	2011	103				1		3		97		204
37	Mauritania	2013	25	42	9		6		3		42		127
38	Angola	2013					15		5		44	7	71
39	Centrafricaine Republique	2013	33		2		4		4	4			47
40	Mauritius	2013	23	52	12		3				52	2	144
41	Djibouti	2013	6	9	3	2	1	4			2		27
42	Sierra Leone	2013	3	1	2	1	3	1	2	2	6	1	22
43	Gabon	2011	28	6	5		2	2			3		46
44	Guinea Bissau	2013	9		2		3						14
45	Sao Tome and Principe	2012	6	1	1	1					1		10
46	Cabo Verde	2015	16	4	16		1		1				20
47	Comoros	2011	2				2					12	16
48	Equatorial Guinea	2013	8	4									12
49	Seychelles	2013	5	0							2		7
50	The Gambia	2014	4	7	0	0	0	2	1				14
51	Western Sahara												0
52	South Sudan												0
53	Libya												0
54	Liberia												0

Source: AU-IBAR ARIS 2

ANNEX 5: INFRASTRUCTURE AND INSTITUTIONS TO SUPPORT ANIMAL RESOURCES DEVELOPMENT

	Country	Name of Infrastructure	Type of Infrastructure
1.	Algeria	Institut Pasteur d'Algérie	Veterinary diagnostic laboratory
		Laboratoire Central Vétérinaire d'Alger	Veterinary diagnostic laboratory
		Laboratoire Vétérinaire Régional d'El Tarf	Veterinary diagnostic laboratory
		Laboratoire Vétérinaire Régional de Constantine	Veterinary diagnostic laboratory
		Laboratoire Vétérinaire Régional de Laghouat	Veterinary diagnostic laboratory
		Laboratoire Vétérinaire Régional de Mostaganem	Veterinary diagnostic laboratory
		Laboratoire Vétérinaire Régional de Tizi ouzou	Veterinary diagnostic laboratory
		Laboratoire Vétérinaire Régional de Tlemcen	Veterinary diagnostic laboratory
2.	Angola	Laboratório Regional de Veterinária de Luanda	Veterinary diagnostic laboratory
3.	Benin	Labovet	Veterinary diagnostic laboratory
		Ladisero	Veterinary diagnostic laboratory
4.	Botswana	Botswana Vaccine Institute	Veterinary diagnostic laboratory
5.	Burkina Faso	Laboratoire National d'Elevage Ouagadougou	Veterinary diagnostic laboratory
6.	Cameroon	Laboratoire National Vétérinaire (LANAVET)	Veterinary diagnostic laboratory
7.	Cape Verde (updated in 2014)	Laboratoire Vétérinaire de la Direction Générale de l'Agriculture, de la Sylviculture et de l'Elevage	Veterinary diagnostic laboratory
8.	Central African Republic	Laboratoire Central Vétérinaire (LACEVET)	Veterinary diagnostic laboratory
9.	Chad	Laboratoire de Farcha	Veterinary diagnostic laboratory
10.	Côte d'Ivoire	Laboratoire National d'Appui au Développement Agricole (LANADA)	Veterinary diagnostic laboratory
11.	Democratic Republic of the Congo	Laboratoire Vétérinaire Central de Kinshasa	Veterinary diagnostic laboratory
12.	Egypt (updated in 2014)	Animal Health Research Institute	Research Institute
		Animal Reproductive Research Institute	Research Institute
		Central laboratory for Quality Control of Poultry Production	Research laboratory
		Animal Production Research Institute	Research Institute
		Veterinary Serum and Vaccine Research Institute	Veterinary diagnostic laboratory
		Central Laboratory for Evaluation of Veterinary Biologics	Veterinary diagnostic laboratory
		Regional Center for Food & Feed	
		National Gene Bank	
13.	Eritrea	Central Veterinary Laboratory	Veterinary diagnostic laboratory
14.	Ethiopia	National Animal Health Investigation and Diagnostic Center	Veterinary diagnostic laboratory
		National Veterinary Institute	Veterinary diagnostic laboratory
15.	Gabon	Laboratoire National Vétérinaire de Libreville	Veterinary diagnostic laboratory
16.	Ghana (updated in 2014)	Accra Veterinary Laboratory	Veterinary diagnostic laboratory
		Abattoir (medium/municipal)	Abattoir
		Artificial insemination pen	
		Crush pens; Farms; Hatchery / Incubator; Livestock research facilities; L:oading rumps; Public and private veterinary clinics; Quarantine facilities; Slaughter slabs (Municipal and other); Vaccines and drugs manufacturer; Government livestock services office; Frozen meat storage / Coldrooms / Chillers	Various

	Country	Name of Infrastructure	Type of Infrastructure
17	Guinea	Laboratoire Central Vétérinaire de Diagnostic	Veterinary diagnostic laboratory
18	Guinea-Bissau	Laboratório Nacional Veterinária	Veterinary diagnostic laboratory
19	Kenya	Central Veterinary Laboratories, Kabete	Veterinary diagnostic laboratory
		Foot & Mouth Disease Laboratory, Embakasi	Veterinary diagnostic laboratory
20	Lesotho	Central Veterinary Diagnostic Laboratory	Veterinary diagnostic laboratory
21	Libya	Central Veterinary Laboratory	Veterinary diagnostic laboratory
		National Institute of Biotechnology	Veterinary diagnostic laboratory
		Veterinary college/El-Fateh University	Veterinary diagnostic laboratory
22	Madagascar	Institut Pasteur de Madagascar	Veterinary diagnostic laboratory
23	Malawi	Central Veterinary Laboratory	Veterinary diagnostic laboratory
24	Mali	Laboratoire Central Vétérinaire	Veterinary diagnostic laboratory
25	Mauritania	Centre National d'Elevage et de Recherches Vétérinaires (CNERV)	Veterinary diagnostic laboratory
26	Mauritius	Animal Health Lab	Veterinary diagnostic laboratory
27	Morocco	Institut Agronomique Vétérinaire Hassan II	Veterinary diagnostic laboratory
28	Mozambique	Central Veterinary Laboratory	Veterinary diagnostic laboratory
29	Namibia	Central Veterinary Laboratory	Veterinary diagnostic laboratory
		Laboratoire Central d'Elevage	Veterinary diagnostic laboratory
30	Niger	National Veterinary Research Institute, Vom	Veterinary diagnostic laboratory
31	Nigeria	Laboratoire National de Rubirizi	Veterinary diagnostic laboratory
32	Rwanda	Laboratoire Satellite de Nyagatare	Veterinary diagnostic laboratory
		Laboratoire National de l'Elevage et de Recherches Vétérinaires	Veterinary diagnostic laboratory
33	Senegal	Vaccine manufacturer	Veterinary Vaccine manufacturer
		Central Veterinary Laboratory, Teko Makeni	Veterinary diagnostic laboratory
34	Sierra Leone	Onderstepoort Veterinary Institute (OVI)	Veterinary diagnostic laboratory
35	South Africa	Central Veterinary Research Laboratories	Veterinary diagnostic laboratory
36	Sudan	Central Veterinary Laboratory	Veterinary diagnostic laboratory
37	Swaziland	Central Veterinary Laboratory	Veterinary diagnostic laboratory
38	Tanzania	Institut de la Recherche Vétérinaire de Tunis	Veterinary diagnostic laboratory
39	Tunisia	Institut Pasteur de Tunis	Veterinary diagnostic laboratory
		National Diagnostic and Epidemiology Laboratory	Veterinary diagnostic laboratory
40	Uganda	Central Veterinary Research Institute	Veterinary diagnostic laboratory
41	Zambia	Central Veterinary Research Laboratories (Kwekwe)	Veterinary diagnostic laboratory
42	Zimbabwe	Central Veterinary Research Laboratories (Mutare)	Veterinary diagnostic laboratory
		Henderson Research Institute	Crush pen
		Grasslands Research Institute	Spray race
		Mazowe Veterinary Research Institute	Slaughter slab (Municipal and other)
		Mazowe Veterinary Research Institute	Crush pen
		Matopos Research Institute	Dip tank
		Grasslands Research Institute	Slaughter slab (Municipal and other)
		Mazowe Veterinary Research Institute	Dip tank
		Matopos Research Institute	Farm
		Mazowe Veterinary Research Institute	Farm
		Mazowe Veterinary Research Institute	Feedlot sale pen
		Mazowe Veterinary Research Institute	Government livestock services office
		Matopos Research Institute	Feedlot sale pen

	Country	Name of Infrastructure	Type of Infrastructure
		Grasslands Research Institute	Auction sale pen
		Mazowe Veterinary Research Institute	Holding ground
		Matopos Research Institute	Government livestock services office
		Grasslands Research Institute	Crush pen
		Mazowe Veterinary Research Institute	Public veterinary clinic
		Matopos Research Institute	
		Makoholi Research Institute	Dip tank
		Mazowe Veterinary Research Institute	Render plant
		Matopos Research Institute	Holding ground
		Makoholi Research Institute	Farm
		Mazowe Veterinary Research Institute	Spray race
		Matopos Research Institute	Slaughter slab (Municipal and other)
		Makoholi Research Institute	Feedlot sale pen
		Henderson Research Institute	Dairy processing plant
		Matopos Research Institute	Spray race
		Makoholi Research Institute	Government livestock services office
		Henderson Research Institute	Dip tank
		Matopos Research Institute	Slaughter slab (Municipal and other)
		Henderson Research Institute	Farm
		Henderson Research Institute	Feedlot sale pen
		Matopos Research Institute	Auction sale pen
		Henderson Research Institute	Government livestock services office
		Matopos Research Institute	Crush pen
		Henderson Research Institute	
		Grasslands Research Institute	Dip tank
		Makoholi Research Institute	Holding ground
		Henderson Research Institute	Holding ground
		Grasslands Research Institute	Farm
		Makoholi Research Institute	Slaughter slab (Municipal and other)
		Henderson Research Institute	Milk collection centre
		Grasslands Research Institute	Feedlot sale pen
		Makoholi Research Institute	Spray race
		Central Veterinary Research Laboratories (Harare)	Veterinary diagnostic laboratory
		Henderson Research Institute	Slaughter slab (Municipal and other)
		Grasslands Research Institute	Government livestock services office
		Makoholi Research Institute	Slaughter slab (Municipal and other)
		Central Veterinary Research Laboratories (Harare)	Vaccines and drugs manufacturer
		Henderson Research Institute	Spray race
		Grasslands Research Institute	
		Makoholi Research Institute	Auction sale pen
		Central Veterinary Research Laboratories (Harare)	Government livestock services office
		Henderson Research Institute	Abattoir (Industrial and other)
		Grasslands Research Institute	Holding ground

	Country	Name of Infrastructure	Type of Infrastructure
		Makoholi Research Institute	Crush pen
		Central Veterinary Research Laboratories (Bulawayo)	Veterinary diagnostic laboratory
		Henderson Research Institute	Artificial insemination pen
		Grasslands Research Institute	Slaughter slab (Municipal and other)
		Central Veterinary Research Laboratories (Gweru)	Veterinary diagnostic laboratory
		Henderson Research Institute	Auction sale pen

Source: AU-IBAR ARIS 2

ANNEX 6: TRAINING INSTITUTIONS (VETERINARY, ANIMAL PRODUCTION, FISHERIES AND WILDLIFE)

	Type of institutions	No.	Award	Length of study (Years)	Average No. of graduates per year
Algeria	Ecole Nationale Supérieure Vétérinaire d'Alger (University)	1	Docteur en médecine Vétérinaire	5	100
	Institutes		- Docteur en médecine Vétérinaire - Licence en médecine Vétérinaire Master en médecine Vétérinaire	5 Bac + 3 ans Bac + 5	500
Burundi	Faculté de science animale(Zootechnie) (University)	1	Ingénieur Industriel	4	10
	Ecole de formation Techniciens vétérinaires (College)	4	diplôme de technicien Vétérinaire A2	4	60
Cape Verde	Ecole de formation d'infirmiers vétérinaire ou de techniciens d'élevage (Formation des Techniciens zooveterinaires de niveau profissionel et myens) (College)	1		3	Courses de formations pounctuels et irreguliéres
Central African Republic		0	-	-	-
	Ecole Nationale d'Elevage de Bouar : formation Techniciens d'élevage (College)	1	Diplôme de Technicien d'Elevage	3	35
Congo	Institut de Développement Rural (IDR) (University)	1	Ingénieur de Développement Rural (option production et santé animale)	5	35
		1	Ingénieur des Travaux de Développement Rural (option production et santé animale)	3	20-30
	Lycée Technique Agricole (College)	4	Contrôleur d'élevage	3	15
DRC	Faculté de médicine vétérinaire (University)	3	Docteur en médecine vétérinaire A0	7	44
	Faculté de sciences agronomiques (University)	5	Ingénieur zoo technicien et gestionnaire (faune et flore) A0	5	128
	Ecole vétérinaire (College)	235	-vétérinaire A2	4	1.332
	Ecole agricoles (College)	821	Agronomes A2	4	3.14
Gabon	Faculty veterinary medicine (University)	0		0	0
	Institut of Agronomic science and biotechnology (University)	1	Bachelor	3	10
		1	Master	5	5

	Type of institutions	No.	Award	Length of study (Years)	Average No. of graduates per year
Gambia	School of veterinary education	1	Certificate in Animal Health and Production	2	20
	School of Veterinary Medicine (University)	2	DVM	6	30
Ghana	Veterinary College-Pong Tamale (College)	1	Diploma/Certificate	2/3	50
Guinea Bissau					
Guinea Conakry	Faculté de médicine vétérinaire (University)	1	Diplôme de Docteur vétérinaire	5	90
			Diplôme d'Ingénieur Technologue des produits animaux	4	
	Ecole de formation d'infirmiers vétérinaire ou de techniciens d'élevage (College)	3	diplôme d'infirmier or de technicien d'élevage	3	19
Kenya	Faculty Veterinary medicine	1	BVM	5	70
Lesotho	Faculty of Agriculture, National University of Lesotho	1	BSc Animal Science	4	50
Liberia	faculty Veterinary medicine (University)	1	DVM	6	50
	Faculty of animal science	1	Bsc Animal science	4	60
	School of veterinary education (College)	4	diploma	2	100
Madagascar	Ecole Supérieur de la médicine vétérinaire (ESMV) (University)	1	Doctorat en Médecine Vétérinaire	6	25
	Ecole Supérieur des Sciences Agronomiques (ESSA) (University)	1	Ingéniorat Agronome (Option Elevage)	5	25
	Ecole d'Application des Sciences et Techniques Agricoles (EASTA) (College)	1	Diplôme de Technicien Agricole (Option Elevage)	3	25
	Ecole Professionnel Supérieur Agricole (EPSA) (College)	1	Diplôme de Technicien Supérieur Agricole (Option Elevage)	3	25
Mali	Faculté d'Agronomie et de médicine Animale vétérinaire (University)	1	Master 2	5	50
	Ecole de formation d'infirmiers vétérinaire ou de techniciens d'élevage (College)	6			

	Type of institutions	No.	Award	Length of study (Years)	Average No. of graduates per year
Mauritania	Ecole de formation d'infirmiers vétérinaire ou de techniciens d'élevage (Institute)	Dernière promotion en 1995 1	Assistants et infirmiers d'Elevage Techniciens de santé ou de production animale Ingénieurs de santé ou de production animale	3 3 4	15 Pour cette filière, la rentrée de la première promotion est prévue pour l'année 2011/2012 20
Mozambique	Faculty Veterinary (University)		DVM Bachelor	5.5 3	Only from 2012 (40)
			MSc	2	Only from 2015 (20)
	School of veterinary education (College)	12	Licentiate		
Niger	Faculté Agronomie (University)	1	Ingénieurs des techniques Elevage	4 après BAC	20
	IPDR Kollo (College)	1	Techniciens Elevage	4 après le Brevet	40
	Ecole des Volontaires de l'Elevage (Institute)	1	Auxiliaires d'élevage	6	30
	Ecoles Veterinaires Etrangeres (University)		Docteur Vétérinaire	6 or 7 après le BAC	50
Rwanda	Faculty of Veterinary medicine (University)	1	BVM	5	11 (in 2010)
	Faculty of animal science (University)	1	B.Sc Animal science	5	35
			Advanced diploma	3	70
	Schools of veterinary education (College)	7	Diploma	3	150
Senegal	Ecole Inter-Etats des Sciences et Médecine Vétérinaires (University)	1	Doctorat d'Etat en Médecine Vétérinaire	BAC + 6	40-50
	Institut Supérieur de Formation Agricole et Rurale (University)	1	Diplôme d'Ingénieur des Travaux d'Elevage	BAC + 3	10
	Centre National de Formation de Techniciens et en Industries Animales (College)	1	Diplôme d'Agent Technique d'Elevage	BAC + 3	25
	Institut Universitaire des Pêches et de l'Aquaculture (College)	1	Diplôme de techniciens des Pêches	BAC + 3	5
		1	Diplôme d'Ingénieur des Pêches	BAC + 5	5 to 10
Seychelles					
Sierra Leone	Faculty of Animal Science (University)	1	BSc Animal Science	4	4 – 5
Somalia	faculty Veterinary medicine (University)	1	DVM	6	50
	Faculty of animal science (University)	1	BSc Animal science	4	60
	Technical Veterinary School (College)	1	diploma	3	30

	Type of institutions	No.	Award	Length of study (Years)	Average No. of graduates per year
Togo	Institut national de formation agricole (Institute)	1	Diplômé de technicien agricole (niveau BEPC : brevet d'étude du premier cycle)	3	30
			Diplômé de technicien supérieur de l'agriculture (niveau BAC)	3	35
Tunisia	Ecole nationale de médecine vétérinaire (University)	1	Docteur en médecine vétérinaire	6	65
		1	Médecin vétérinaire spécialiste	10	5
	Ecole /Institut supérieure d'agriculture (College)	9	Ingénieur agronome	5	630
			Technicien supérieur	3	445
Uganda	faculty Veterinary medicine (University)	1	BVM	5	35
	Fisheries training institute (Institute)	1	Diploma	2	100
	Agricultural training institute (Institute)	1	diploma	2	45
Zambia	faculty Veterinary medicine (University)	1	DVM	6	15
	Faculty of animal science (University)	1	BSc Animal science	5	15
	School of veterinary education (College)	4	Diploma	3	30
	School of Veterinary (Institute)	1	Certificate	2	40
Zimbabwe	Faculty of Veterinary Science (University)	1	Bachelor of Veterinary Science	5	15-20
			MSc	2	8
			PhD	3	2
	Faculty of Agriculture (Department of Animal Science (University) –)	1	BSc Animal Science	3	20
			MSc	2	+/- 12/10
			PhD/DPhil	3-4	various
	Faculty of Agriculture and Natural Resources (University)	1	BSc Hon in Agriculture and Natural Resources BSc in Natural Resource Management	3 3	30
			MSc	2	+/-8
	National University of Science and Technology (University)	1	BSc Environmental Science - Forest Resources and Wildlife Management		
	Lupane State (University)	1	BSc Agricultural Science BSc Hon in Animal sciences & Rangeland Management	4	10

	Type of institutions	No.	Award	Length of study (Years)	Average No. of graduates per year
	Midlands State University	1	BSc in Livestock and Wildlife Management	4	10 to 15
	Zimbabwe Open University	1	BSc Agricultural Management	4 (distance learning)	20-25
	Veterinary College	1	Diploma in Animal Health	3	30
	Department of Agricultural Education Colleges	1	Higher National Diploma in Animal Production	4	8 to 10
	Agricultural College	3	Higher National Diploma in Animal Production	3	
	Agricultural Institutes	3	Certificate in Agriculture (including Animal Production)	2	

ANNEX 7: COMMON POSITION OF AFRICA OIE DELEGATES PRESENTED AT THE 82nd t WORLD ASSEMBLY OF DELEGATES OF THE OIE: PARIS, FRANCE: 25 to 30 MAY 2014

The Africa position presented in the table below is the main outcome of the sixth meeting of African CVOs organized by AU/IBAR in Nairobi on 5-7 May 2014. The position reflects the common view of the participating 38 African countries that were consensually agreed by the national delegates, the one REC represented as well as AU/IBAR; and represent positions on specific topics of interest to Africa.

Item/Chapter	Comment / African Position
Technical Item I: Criteria and factors for use establishing priority diseases of aquatic and terrestrial animals under official control programmes	Africa compliments the rapporteur on the findings of this important study and agrees in principle with the findings and recommendations but makes the following comments: It is notable that the findings of a prioritisation issue be shared with the veterinary services and related stakeholders but it must be emphasised that more efforts should be made to share it with Ministry of Finance as it ultimately allocates financial resources for the execution of programs. Africa reiterates the need for guidance and possible training workshops by experts on applying criteria for prioritisation as expressed during the survey. The outcome showing tuberculosis, rabies and brucellosis as the most important priority diseases has also a historical connotation in Africa but diseases such as Peste des Petits Ruminants and Foot and Mouth Disease might be of higher priority in terms of trade and economic impact. Africa strongly supports the development of guidelines for the prioritization of animal diseases through consolidation of the proposed criteria.
Technical Item II: African Swine Fever : new challenges and measures to prevent its spread	Africa thanks the rapporteur and his co-workers for this study on African Swine Fever (ASF). We would like to recall that ASF is a priority disease of the 5 year plan of the Global Framework for Progressive Control of Transboundary Animal Diseases (GF-TADs) Africa, and that in the scope of this plan, the African Union – Interafrican Bureau for Animal Resources (AU-IBAR) and FAO were tasked to develop a continental strategy for the control of this disease. However, the study and subsequent recommendations focus mainly on the current situation in Europe and do not apply a global approach to ASF control nor address the needs for control in respect of the epidemiology of the disease in Africa, such as the recurrence of outbreaks in infected countries, the transboundary nature of the disease and the need to clarify the role played by the tick species Ornithodoros.

Item/Chapter	Comment / African Position
	The rapporteur briefly mentions the need for "preventive control measures" but does not provide any indications of these measures. In Africa, these measures should include strengthening of networks for epidemiological surveillance and laboratory diagnosis. An important issue for example not mentioned, is the importance of swill control – especially at ports of entry. The need for the development of an effective vaccine against ASF cannot be over-emphasised and Africa would like to urge the research community to work towards the development of a vaccine for the control of ASF. Africa also requests the support of the international community for the implementation of the continental control strategy.

Aquatic Code Commission CHAPTER	PROPOSED FOR ADOPTION	AFRICAN POSITION
Definition of emerging disease	Replacement of "newly recognised infection," by "disease other than listed diseases, which has a significant impact on aquatic animal or public health"	As proposed in previous General Sessions,Africa reiterates the need for harmonization of definitions in the aquatic and terrestrial codes. Therefore the sentence should read as follows: "means a new occurrence in an animal of a disease, infection or infestation, causing a significant impact on animal or public health resulting from:…"

Item - Scientific Commission for Animal Diseases	Comment / African Position
Chapter 8.6 Foot and Mouth Disease (FMD)	Africa thanks and congratulates the Scientific Commission for the extensive review undertaken to amend the current chapter. We urge both Commissions to expedite the process for its final adoption.
Expert missions to Member Countries	Africa appreciates the implementation of resolution No 25 of the 81st General Session by the Scientific Commission with support from the Director General, to conduct expert missions to Member Countries to verify the maintenance of disease status and to provide guidance to Member Countries on achieving disease status recognition. Africa recommends involving African experts from regional and continental organizations to be part of such missions in the future.
Rinderpest containing materials	Africa thanks the Scientific Commission and the OIE for the progress made with the establishment of an electronic database for rinderpest containing materials and the information that has already been collated in this database.

Item - Follow-up to the Recommendations of the Conferences	Comment / African Position
OIE Global Conference on the prudent use of antimicrobial agents for animals	Africa strongly supports the recommendations of the Conference especially in respect of providing assistance to developing countries in improving and harmonising their legislation for the manufacturing, registration and use of veterinary antimicrobial remedies. Africa requests support from the OIE for the establishment of a surveillance network on resistance to antimicrobials.

Item - Follow-up to the Recommendations of the Conferences	Comment / African Position
OIE Global Conference on Veterinary Education and the Role of the Veterinary Statutory Body	Africa strongly supports the recommendations and welcomes the intended accreditation of Veterinary Education Establishments (VEEs) and strengthening the role of Veterinary Statutory Bodies (VSBs) to enhance and oversee the quality of veterinary education, ensuring compliance to Day-1 competencies of new graduates. Africa also welcomes the intention to augment the standards and criteria in the PVS tool as requested during the 2011 Bamako Conference on the role of VSB's in veterinary education. Africa also recommends that the One Health concept be incorporated in the training curricula, and that the twinning programme between VEEs be rolled out.

Terrestrial Code Commission CHAPTER	PROPOSED FOR ADOPTION	AFRICAN POSITION
Difference between standards, guidelines and recommendations	NA	The Current text in the introduction reads: "'standards' means any texts which have been subjected to the official procedure of the OIE for adoption by the World Assembly of Delegates, and thus are found in Codes and Manuals, while 'guidelines' and 'recommendations' are used for other texts published by the OIE Headquarters". In spite of this clarification from the Code Commission, the difference between standards, guidelines and recommendations is still not clear. For instance in Chapter 7.10 related to "animal welfare and broiler chicken production systems", submitted for adoption by this GA, the introduction mentions that the contents of chapter are 'recommendations'. Africa needs to know if these recommendations can be considered as standards and therefore should be enforced by trading partners. Africa therefore requests the OIE to clarify further this issue by harmonising and bringing consistency in the code.
	User's Guide Par. A(2):	In this paragraph, the word "notification" has been added after "reporting". Africa requests the Commission to provide an explanation on what is the perceived difference between reporting and notification as both are used alternatively for the same purpose i.e. to make a disease occurrence known.
	Par. A(3):	In the second sentence of this paragraph, Africa suggests to replace "during" with "throughout" The sentence would now read "…animal health and welfare and veterinary public health throughout production and trade cycle in animals and animal products". This comment only applies to the English version. The French version is satisfactory.
	Par. B(5)	Africa suggests deleting "Veterinary Services" in the second sentence of this paragraph, as standards may have a wider application than just the Veterinary Services. This part of the sentence would now read: "…standards are intended to assist Member Countries…"

Terrestrial Code Commission CHAPTER	PROPOSED FOR ADOPTION	AFRICAN POSITION
	Par. B(10):	In the first sentence of the second paragraph, Africa suggests to add "zone or compartment" after "country" The sentence would now read "The standards in each of the chapters of Sections 8 to 15 are designed to prevent the aetiological agents of OIE listed diseases, infections or infestations from being introduced into an importing country, zone or compartment". This comment only applies to the English version. The French version is satisfactory.
	Par. B(10):	In the third sentence of the second paragraph, we suggest to add the word "infestations" after "infection". The sentence would now read "Some chapters include specific measures to prevent and control the infections or infestations of global concern."
	Par. C(4):	Africa suggests to rephrase the first sentence of the paragraph for better language as follows: "Animal health measures related to international trade, should be based on OIE standards" Other written comments on this chapter have been sent to the OIE
Introduction to the recommendations for controlling antimicrobial resistance Chapter 6.6 Article 6.6.1	Replacement of "entire" by "all" in last sentence of 4th para.	For better clarity, Africa suggests deleting the word "the" in the last part of sentence. The sentence would now read: "the OIE developed these chapters to provide guidance to Member Countries in regard to risks in all animal sectors" This comment only applies to the English version. The French version is satisfactory.
Risk analysis for antimicrobial resistance arising from the use of antimicrobial agents in animals Chapter 6.10 Article 6.10.2 - Para (3). release assessment	Reformulation of the second bullet	In the English version, In our opinion, the word "and" is redundant. The second bullet should be changed to: "number of animals treated, their age, geographical distribution and sex, where appropriate". The same comment applies to Article 6.10.3 (Release assessment). This comment only applies to the English version. The French version is satisfactory.
Article 6.10.3- Para (4) : Exposure assessment	Reformulation of bullet 5	In the English version, Africa suggests to change the formulation of this sentence to: "quantity and trends in the use of antimicrobial agent(s) in animals" This comment only applies to the English version. The French version is satisfactory.
Article 6.10.3 - Para (5) (Consequence assessment)	Reformulation of bullet 4	In the English version, Africa suggests to change the formulation of this sentence to: "potential linkage of virulence with resistance ;" This comment only applies to the English version. The French version is satisfactory

Terrestrial Code Commission CHAPTER	PROPOSED FOR ADOPTION	AFRICAN POSITION
Animal welfare and broiler chicken production systems Chapter 7.10 Article 7.10.2	Definition of the scope	In the scope, and in line with the comment made earlier on the introductory report on the definition of standard, recommendation and guidelines, Africa suggests to replace "these recommendations" with "this chapter" to avoid confusion
Article 7.10.3	Addition of a sentence at beginning of 7.10.3	Africa would like to suggest moving the last sentence of the paragraph between the first and second sentence. The paragraph would now read "The welfare of broilers should be assessed using outcome-based measurables. Consideration should also be given to the resources provided and the design of the system The following outcome-based measurables, specifically animal-based measurables, can be useful indicators of animal welfare"
Infection with Rift valley fever virus Whole chapter		Africa generally welcomes the changes to this chapter which is of great importance for our Continent.
Chapter 8.12 Article 8.12.3	New requirements for country or zone free from Rift valley fever virus infection	Africa believes that the statement reading "No country or zone which has experienced an epizootic of RVF can be considered free from RVFV" is too dogmatic and should be removed since it adds nothing to the conditions for country or zone freedom already mentioned in 1, 2a and 2b. Secondly, the statement "indigenous human case" in 2b is unclear.
Article 8.12.8 (1) and (2)	Changes in the requirement for veterinary certificate	In the provisions of Article 8.12.8 Africa suggests to add the word "AND", in capitals, between (1) and (2), as it exists between (2) and (3). The other option would be to delete the second "AND" between (2) and (3) since it is normally implied that a list of conditions not separated by "OR" are all compulsory.
Article 8.12.1 -Point (6)	Definition of susceptible species	Africa supports the comment from the EU and requests the OIE to ensure that camels, including dromedaries, are considered as susceptible species in this chapter. This should be achieved by adding "including camels" after "ruminants" in para 2 of 8.12.1, or by reinserting the sentence "For the purposes of this chapter, ruminants include camels », proposed for deletion, in para 6 of the same article.
Infection with Mycoplasma mycoides subsp. mycoides sc (contagious bovine pleuropneumonia) Chapter 11.8	Whole chapter	Africa thanks the Scientific and Code Commissions for the speedy reaction to insert the article for endorsement of control programs for CBPP following its request at the 81st General Session.

ANNEX 8: Contact addresses of Directors of Veterinary Services, Animal Production Services and Fisheries

NO	COUNTRY	DIRECTOR OF VETERINARY SERVICES	DIRECTOR OF ANIMAL PRODUCTION	DIRECTOR OF FISHERIES
1.	**ALGERIA**	***Dr. Ahmed Chawki Karim Boughalem*** *Directeur des Services Vétérinaires et délégué auprès de l'OIE* *Ministère de l'Agriculture et du Dévelop. Rural* *12, Boulevard Colonel, Amirouche* *16000 Alger, ALGERIE* *Tel: (213-21) 743 434* *Fax: (213-21) 745 611* *Email: dsval@wissal.dz* *boughalemk@yahoo.fr*	***Dr Ichou Sabrina SOUS*** *DIRECTRICE DU DEVELOPPEMENT DES FILIERES ANIMALES* *brinaichou@yahoo.fr*	***Mr Hamid*** *Benderradjihbenderradji@gmail.comv*
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