# GF-TADs for Africa

## *Contagious bovine pleuropneumonia* (CBPP)
## *Standing Group of Experts* (SGE)
## for Africa

## Third meeting

## 05 – 07 May 2025 Online (Zoom)

**July 2025**

Picture credits : Participatory Epidemiology - CBPP - Picture (c) Nma Bida El-Hadj (University of Ibadan) 2013

# Table of contents

**Recommended Citation**

**WOAH and FAO.** 2025. *Third GF-TADs for Africa meeting of the* Standing Group of Experts *(SGE) for Contagious bovine pleuropneumonia. Report, 5 – 7 May 2025, online.*

## Introduction and background to the meeting

*Contagious bovine pleuro-pneumonia* (CBPP) or lung sickness in cattle, caused by *Mycoplasma mycoides subsp. mycoides* (Mmm) is truly an African disease, long eradicated from the rest of the world, with few exceptions. The disease represents a considerable burden for cattle owners in many parts of Africa (EMPRES-AH, FAO, 2013), from Senegal and the Gambia in the west through Somalia in the east, and as far south as Namibia and Tanzania.

In October 2021, the 10th *Regional Steering Committee* (RSC) for Africa of the *Global Framework for the progressive control of Transboundary Animal Diseases* (GF-TADs for Africa) endorsed the 2021 – 2025 Strategic Plan, which targets five TADs, i.e. *African swine fever* (ASF), *Foot-and-mouth disease* (FMD), *Peste des petits ruminants* (PPR), *Rift valley fever* (RVF) and indeed *Contagious bovine pleuro-pneumonia* (CBPP), in addition to the overall strengthening of veterinary services.

The GF-TADs' *Standing Group of Experts* (SGE) format allows countries with similar socio-economic and epidemiological situations to share information, challenges and best practices, and to discuss regional solutions and approaches to enhancing control. The *Terms of reference* (ToR) of the SGE CBPP for Africa were adopted during the 11th *Regional Steering Committee* (RSC) meeting for Africa, held in June 2022. The ToR of the SGE are presented as **annex 1.** The establishment and launch of SGE CBPP for Africa was undertaken by the WOAH Regional Representation for Africa, in its capacity as the Secretariat of the GF-TADs for Africa RSC, with the support of the Food and Agriculture Organization of the United Nations (FAO) and the African Union (AU-IBAR and AU-PANVAC) via video conference (Zoom platform, in 6 sessions) from 6 – 15 June 2023. The report of this inaugural meeting can be downloaded here : Standing Group of Experts (SGE).

The second SGE was held in Lusaka, Zambia in July 2024 and focused on *strategy*. The report of this inaugural meeting can be downloaded here : Standing Group of Experts (SGE).

## Objectives and narrative report of the meeting

The third meeting was attended by two CVOs / WOAH Delegates, of Eswatini (as Vice-President of the GF-TADs for Africa RSC), and of Zambia (as Regional CBPP Expert). Overall, the online meeting was attended by 43 individuals over the three sessions, with daily attendance decreasing from 36 on day one to 26 on day 3. Twenty-eight percent (28%) of registered attendants were French-speaking and 32% of attendees were women.

Represented at the meeting were representatives of Nigeria (VS), Nigeria (national reference laboratory, NVRI), Zambia (VS), Somalia (VS), Chad (VS), Tunisia (VS, incoming Member of the SGE), FAO (ECTAD, Accra), FAO (RAF, Accra), FAO (NSAH, Rome), FAO (IAEA Joint Division, Vienna), AU-IBAR (Nairobi), IGAD – ICPALD (Nairobi), COMESA Secretariat (Lusaka), Italy (Reference Laboratory, IZS, Teramo), Botswana (Reference Laboratory, BNVL, Sebele), France (Reference Laboratory, CIRAD, Montpellier) and Portugal (Reference Laboratory, INIAV, Oeiras).

The list of participants is presented as **annex 2.**

Based on the expected outcomes of this meeting and follow-up activities, i.e. that the SGE - CBPP for

Africa would discuss and debate every topic of the work programme, i.e. this time **Surveillance**, the following agenda was prepared, fostering as much exchange of information and discussion between participants as possible (agenda as delivered, including ~~deletions~~ and additions):

| **Time Date > GMT** | **Monday 5 May 2025** | |
|---|---|---|
| 08:30 – 09:00 | Zoom™ room opening, ground rules and introductions via chat | Zoom™ Administrator |
| Session : | Opening | **Chair: K. Tounkara** |
| 09:00 – 09:20 | • FAO RAF<br>• WOAH RR<br>• AU-IBAR | ~~Mohammed Shamsuddin~~<br>Roland Dlamini<br>Huyam Salih |
| **Session 1** | **Governance aspects** | **Chair: M. Letshwenyo** |
| 09:20 – 09:25 | ~~Introduction and recognition of new SGE Member (Tunisia)~~ | ~~M. Letshwenyo (SRR SA, WOAH, Gaborone)~~ |
| 09:25 – 09:30 | Meeting objectives, focus/theme (Surveillance) and expected outputs of the meeting | Akiko Kamata (NSAH, FAO, Rome) |
| 09:40 – 09:50 | Presentation of the priority topics and overview of the outcomes of the second meeting held in July 2024 (Lusaka) | Viola Chemis (RAD, SRR EA, WOAH, Nairobi) |
| 09:50 – 10:10 | Discussion: Clarification or comments | Session Chair |
| **Session 2:** | **Principles of surveillance that can enhance reporting of CBPP in the region** | **Chair: ~~Hiver Boussini~~ Huyam Salih** |
| 10:10 – 10:25 | Analysis of CBPP reporting through WAHIS | Patrick Bastiaensen (SRR EA, WOAH, Nairobi) |
| 10:25 – 10:40 | *Standards, Methods and Procedures* - Animal Health (SMP-AH) for CBPP and reporting of CBPP via ARIS | ~~Hiver Boussini, James Wabacha~~ Huyam Salih (AU-IBAR, Nairobi) |
| ~~10:40 – 10:55~~ | ~~FAO ECTAD surveillance~~ | ~~Mamadou Niang (RAF, FAO, Accra)~~ |
| 10:55 – 11:20 | General principles of Surveillance guided by the WOAH Terrestrial Animal Health Code and Manual (Chapters 1.4, 1.10 of the Code and 3.4.8 of the Manual) | Misheck Mulumba (Scientific Commission for Animal Diseases, SCAD, WOAH, Lusaka) |

| | | |
|---|---|---|
| 11.20 – 11.40 | Use of participatory epidemiology in the surveillance of CBPP and other priority bovine diseases (Nigeria). | Nma Bida Alhaji (Public Health and Epidemiology Department, Ministry of Livestock and Fisheries, Niger State, Minna) |
| 11.40 – 12.00 | Guidelines for designing animal disease surveillance plans to improve understanding of CBPP epidemiology and infection | Mamadou Niang (RAF, FAO, Accra) |
| 12.00 – 12.20 | Discussion, question and answer session | Session Chair |
| 12.20 – 12.35 | Mentimeter™ session: Challenges of CBPP surveillance, possible solutions by countries, areas requiring support | P. Bastiaensen (SRR EA, WOAH, Nairobi) |
| 12.35 – 12.45 | Day 1 Wrap up | ~~Hiver Boussini, James Wabacha~~ Huyam Salih (AU-IBAR, Nairobi) |
| 12:45 – 13:00 | Online group photograph (webcams)<br>Close of Day 1 | |

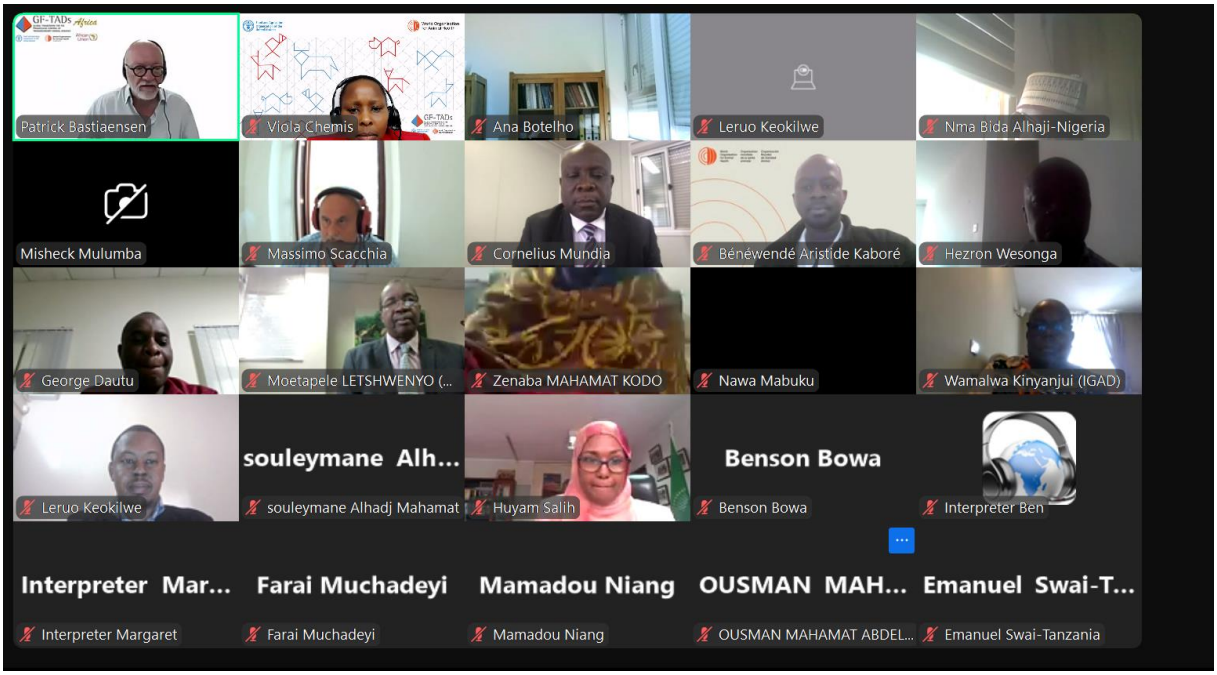
| **Time Date > GMT** | **Tuesday 6 May 2025** | |
|---|---|---|
| 08:30 – 09:00 | Zoom™ room opening, ground rules and introductions via chat | Zoom™ Administrator |
| | ~~Brief presentation of the main rapporteur and chair on the recurring challenges and issues raised in discussions, as well as solutions~~ | ~~Rapporteur~~ |
| 09:00 – 09:10 | • FAO RAF | Mohammed Shamsuddin |
| **Session 3** | **Focus on Abattoir surveillance and coordination for improved reporting of CBPP at national level** | **Chair: Mamadou Niang** |
| 09:10 – 09:40 | Elements of passive/abattoir surveillance and importance of promoting harmonised procedures for abattoir surveillance and reporting | Massimo Scacchia (IZS, Teramo) |
| ~~09:40 – 10:00~~ | ~~Case study: Abattoir survey of CBPP lesions in slaughtered cattle in selected districts in Northern Tanzania~~ | ~~Emmanuel Swai, Former Head of the Veterinary Investigation Centre, Arusha, Tanzania~~ |

| | | |
|---|---|---|
| 10:00 – 11:15 | Country presentations on CBPP surveillance including abattoir surveillance, combined surveillance (with other priority diseases) and reporting (15 minutes each)<br>~~▪ Chad~~<br>~~▪ Nigeria~~<br>▪ Somalia<br>▪ Zambia<br>▪ Tunisia | Country Representatives |
| 09:40 – 10:00 | Case study: Abattoir survey of CBPP lesions in slaughtered cattle in selected districts in Northern Tanzania | Emmanuel Swai, Former Head of the Veterinary Investigation Centre, Arusha, Tanzania, presented by Akiko Kamata (FAO) |
| 11.15 – 11.40 | Discussion, Question and Answer session | Session Chair |
| 11:40 – 12:30 | How are RECs/RAHCs positioned to support surveillance activities for CBPP along shared borders/within a cluster of countries with similar challenges?<br>~~ECCAS-RAHC (CA)~~<br>IGAD-ICPALD<br>SADC-FANR<br>~~ECOWAS-RAHC (WA)~~ | <br><br><br><br>~~Patchili Bouzabo~~<br>Wamalwa Kinyanjui<br>Gaolathe Thobokwe<br>~~Hassane El-Hadj Adakal~~ |
| 12:30 – 12:50 | CBPP epidemiology based on sero-surveillance activities, conducted by countries with the support of PRAPS in the Sahel region | Anta Diagne ~~Oumar Idriss Al-Farouk~~ (PRAPS, WOAH, Bamako) |
| ~~12:50 – 13.00~~ | ~~Mentimeter™ – Experiences and challenges with combined and abattoir surveillance~~ | ~~P. Bastiaensen, Viola Chemis (SRR EA, WOAH, Nairobi)~~ |
| 13.00 – 13.10 | Day 2 Wrap up | M. Shamsuddin (RAF, FAO, Accra), Akiko Kamata (NSAH, FAO, Rome) |
| 13.10 - 13.10 | Close of Day 2 | Zoom™ Administrator |

| Time Date > GMT | Wednesday 7 May 2025 | |
|---|---|---|
| 08:30 – 09:00 | Zoom™ room opening, ground rules and introductions via chat | Zoom™ Administrator |
| 09:00 – 09:10 | Country presentations on CBPP surveillance including abattoir surveillance, combined surveillance (with other priority diseases) and reporting (15 minutes each)<br>▪ Nigeria | Country Representatives |
| 09:10 – 09:30 | Mentimeter™ – Experiences and challenges with combined and abattoir surveillance | P. Bastiaensen, Viola Chemis (SRR EA, WOAH, Nairobi) |
| | ~~Brief presentation of the main rapporteur and chair on the recurring challenges and issues raised in discussions, as well as solutions~~ | ~~Rapporteur~~ |
| **Session 4** | **Tools and innovations to support enhanced national surveillance of CBPP at national level** | **Chair: Misheck Mulumba** |
| 09:30 – 09:50 | *Standard Operating Procedures* (SOPs) for official recognition of CBPP free status and for the endorsement of official control programmes | Aristide Kabore (Disease Status Officer, Status Department, WOAH, Paris) |
| 09:50 – 10:10 | Country Experience with development and elements of an Official control pro-gramme (OCP) for CBPP, endorsed by WOAH, according to the provisions of Chapter 11.5. of the Terrestrial Code. | Country Representative:<br><br>Charles Maseka (Director of Veterinary Services, Zambia) |
| 10:10 – 10:40 | Sensitisation on the Questionnaire (Chapter 1.6. of the WOAH Terrestrial Code for countries applying for endorsement of official control programmes for CBPP | Min Park (Head, Status Department, WOAH, Paris) |
| 10:40 – 11:00 | Innovative technologies to support event-based surveillance, e-reporting, tele-diagnosis, etc | Massimo Scacchia (IZS, Teramo) |

| | | |
|---|---|---|
| 11:00 – 11:30 | Announcements of capacity building activities to improve awareness on CBPP disease recognition, e.g, guided courses (programmes, topics covered), schedule (envisaged frequency, dates, duration, etc) | BNVL, Sebele<br>IZS, Teramo<br>CIRAD, Montpellier<br>FAO/IAEA, Vienna<br>FAO/RAF, Accra<br>WOAH, Nairobi<br>AU-IBAR, Nairobi<br>~~Other Partners~~ |
| 11:30 – 11:50 | Discussion, Question and Answer session | Session Chair |
| 11:50 – 12:00 | Mentimeter™ – Feasibility of implementing novel tools for event-based surveillance, e-reporting, tele-diagnosis, etc | P. Bastiaensen (WOAH, Nairobi), ~~Massimo Scacchia (IZS, Teramo)~~ |
| | ~~Discussion, Question and Answer session~~ | ~~Session Chair~~ |
| **Session 5** | **Infrastructure and networking requi-rements to support enhanced sur-veillance of CBPP at national level** | **Chair: ~~Mohammed Shamsuddin~~ Abebe Wolde** |
| 12:00 – 12:10 | What are the opportunities to leverage existing platforms to enhance networking and epidemiological information sharing on CBPP and other priority TADs in Africa?<br>▪ ERFAN - IZS<br>▪ ~~ECCAS - RAHC~~<br>▪ ~~IGAD - ICPALD~~<br>▪ ~~SADC - FANR~~<br>▪ ~~ECOWAS - RAHC~~<br>▪ COMESA | Massimo Scacchia<br>~~Patchili Bouzabo~~<br>~~Dereje Wakjira~~<br>~~Gaolathe Thobokwe~~<br>~~Hassane El-Hadj Adakal~~<br>Yoseph Mamo |
| 12:10 – 12:30 | Facilitated ~~Break-out Group~~ Discussions (English & ~~French~~)<br>Q1: What infrastructure is needed at national level to improve abattoir surveillance and differential diagnosis for CBPP<br>Q2: How can stakeholders be organised collectively to improve flow of information<br>Q3. What practical steps required at national level for adoption of proven tools for e-surveillance/reporting/remote support/tele-diagnosis, etc.<br>Q4. Which are the potential ''quick-fix'' pilot countries for adoption of the proven tools (per REC) ~~via Zoom™ poll~~ | Overall facilitator :<br>Viola Chemis<br>Facilitator English:<br>Hezron Wesonga<br>Akiko Kamata<br>~~Facilitator French:~~<br>~~Mamadou Niang~~<br>~~P. Bastiaensen~~ |

| | | |
|---|---|---|
| | ~~Closed meeting of the chairs and rapporteurs (joint writing team)~~ | ~~Rapporteurs~~ |
| ~~12:30 – 12:50~~ | ~~Group restitution and discussion~~ | ~~Session Chair~~ |
| **Session 6** | **Final deliberations, action points, closing** | **Chair: Neo Mapitse** |
| 12:30 – 12:40 | Presentation of the draft conclusions and action plan (joint writing team) | Via email |
| 12:40 – 12:50 | Next steps and dates and venue for the fourth meeting. Theme : diagnosis | Viola Chemis (RAD, SRR EA, WOAH, Nairobi) |
| 12:50 – 13:00 | Closing remarks | ~~Mohammed Shamsuddin~~<br>Abebe Wolde<br>~~Roland Dlamini~~<br>Neo Mapitse<br>~~Huyam Salih~~ |
| 13:00 | End of the third SGE CBPP meeting | Zoom™ administrator |




*Group photograph [screen-capture].*

## Session 0. Introductions and updates

The meeting started with opening remarks provided by Huyam Salih, the Director of the African Union *Interafrican Bureau for Animal Resources* (AU-IBAR), Roland Dlamini (WOAH Delegate of Eswatini and Member of the WOAH Council) on behalf of WOAH and Mohammed Shamsuddin with support of Mamadou Niang, representing the FAO Regional Office for Africa (RAF). AU-IBAR confirmed their dedication to tackling priority transboundary animal diseases in Africa, which is guided by disease specific continental strategies that provide a roadmap.

*Dr Huyam Salih, Director of AU-IBAR (screen capture*)

This implies AU-IBAR is also actively planning a comprehensive CBPP Strategy, expected to be initiated in 2026 and validated through the *African Union Commission's* (AUC) *Specialized Technical Committee* (STC) for Agriculture and Rural Development in 2027, so as to facilitate its endorsement by the AU Executive Council. The Strategy will serve as a roadmap for coordinated, effective prevention and control actions across Africa. In support of this effort, AU-IBAR has resumed an important collaboration with Texas A&M University to update the regional *Standards, Methods and Procedures* (SMP) for ten key TADs, including CBPP. The work was initiated during the first week of April, and the next workshop is planned for July 2025. These protocols will establish standardised benchmarks for disease surveillance, monitoring and control measures across the continent, fostering harmonised efforts and facilitating data sharing. The goal is to develop these SMPs into continental guiding documents that ensure regional and inter-regional standards, strengthening collective capacity for early detection and informing quarantine and trade decisions. She acknowledged the continent's surveillance and reporting systems face considerable challenges. These include weak surveillance systems, inconsistent reporting, and limited funding, all hampering the ability of Veterinary Services to respond swiftly and effectively to outbreaks. To address these obstacles, Africa needs innovative solutions: mobilising resources through public-private partnerships, establishing regional coordination platforms, and integrating risk-based surveillance approaches that prioritize high-risk zones. Such solutions should enable the region to prioritise the allocation of limited resources more efficiently, improve data accuracy, and support targeted interventions.

Similar sentiments on the existing commitment towards CBPP control, terming it a 'low hanging fruit' for elimination, were echoed by Roland Dlamini, who also lamented that CBPP control is hampered by insufficient surveillance, as conducted by countries, and adversely affected by the use of antibiotics. The latter practice complicates ongoing advocacy on *antimicrobial resistance* (AMR). He challenged the meeting that efforts need to be made to limit the use of antibiotics and to focus on vaccination. For control measures to be effective there needs to be a clear picture on surveillance details. Except for the work done by Emmanuel Tambi and colleagues 20 years ago[1] no recent estimation of the economic impact/cost of CBPP has been done, therefore the disease is not receiving attention is deserves, yet it's a regional priority and there is need for more efforts from within the region and advocacy for investment and support. The council member advocated for more work towards the status of freedom for CBPP as a realistic and tangible target. He advised that if countries could focus on zoning, it is actually possible to eliminate and manage CBPP. He appreciated the Director of AU-IBAR for encouraging opening remarks and invited colleagues to engage and develop practical and tangible recommendations.

Representing FAO, Mohamed Shamsuddin welcomed all participants on behalf of GF-TADs. He echoed the statement about CBPP being a serious animal health issue in Africa, affecting the livestock industry, food security and nutrition and preventing trade to lucrative markets. It is therefore important to combine efforts to prevent

[1] https://rr-africa.woah.org/app/uploads/2024/08/Tambi-Onesmus-and-Ndi-2006-CBPP-Economic-impact.pdf

and control CBPP. Some programmes have been successful and important in understanding how to improve surveillance and take decisions based on the actual presence of CBPP in the field.

The overall theme for the meeting was CBPP **Surveillance**, with the objective of improving the understanding of disease intelligence for better and more reliable reporting of the disease.

The sessions covered the following sub-themes:

- Renewed efforts to focus on the affordable and effective abattoir surveillance as the tool of choice (including in free countries in Southern and North Africa);
- Developing standardised reporting templates and harmonised procedures for abattoir surveillance;
- Developing guidelines and delivery of training on abattoir surveillance (including in free countries in Southern and North Africa);
- Promoting novel tools for events-based surveillance, e-reporting and tele-health or tele-diagnosis;
- Upgrading infrastructures to support abattoir surveillance;
- Promoting networking and information sharing at (sub)regional level(s), including in free countries in Southern and North Africa and leveraging existing platforms where possible;
- Promoting the transparent reporting of cases and vaccination numbers (and fighting reporting aversion);
- Promoting countries to engage in official pathways (dossier preparation, submission): status recognition (in particular for disease-free countries) or endorsement of official control programmes.

The meeting was expected to deliver better understanding on:

i. Recommended procedures and guidelines for effective abattoir surveillance and reporting;
ii. Understanding national surveillance gaps and areas of support to enhance sample submission and official reporting;
iii. Approaches to define the CBPP episystems based on improved understanding of the epidemiological situation and corresponding control measures for each category.

## Session 1. Governance Aspects

The meeting was reminded of the priority SGE topics agreed upon during the inaugural meeting in June 2023 and hence the selection of the topic of ***Surveillance*** for the current meeting.

The second meeting which was held in Lusaka, Zambia 23rd to 25th July 2024, discussed ***Strategy*** with a perspective to guiding development and validation of strategic plans at various levels of governance (national, clusters of neighboring countries, sub-regions, the continent and/or the international community), for higher prioritization of the disease (technically and financially). The presentation delivered in this session highlighted the agreement for national and continental ***strategies***, reflecting key components such as proper understanding of the epidemiology of the disease, consideration for zoning, as per the case of Zambia, capacities for Veterinary Services, alignment with implementation of control of other priority diseases, viable approaches with inclusion of public private partnership, antibiotic use, vaccines and vaccination systems and progression for endorsement of official control programs with ultimate recognition of CBPP freedom where feasible. The regional economic communities will support national and continental strategies through advocacy for political goodwill and national commitments, facilitating bilateral or multi-lateral agreements to support implementation of policies, enhance coordination, support capacity building and promote collaboration amongst countries to reduce and manage risks across borders. The international community was mandated to continue supporting recognition for CBPP global freedom, research coordination that supports evidence-based implementation of control measures, updating standards and guidelines, capacity building and international linkages.

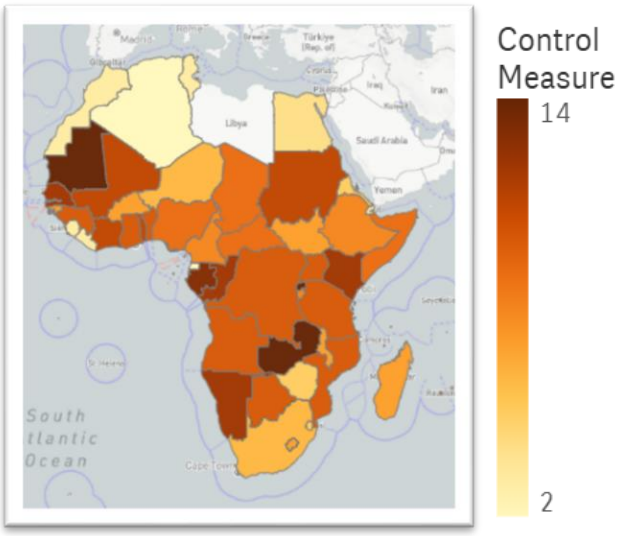
The meeting welcomed **Tunisia** as incoming member of the SGE, representing North Africa, currently free of CBPP (self-declaration).

## Session 2. Principles of Surveillance that can enhance reporting of CBPP

The session started with an analysis of reporting on CBPP surveillance through WAHIS. The reports show that 52 of the Members in Africa have reported CBPP as either *absent* or *present*, including indicating that the disease is *limited to one or more zones* or *never reported* and/or *suspected* (3 countries). The latest six-monthly reports point to 11 countries in which the disease is *absent* and another 15 countries where the disease has *never been reported*; making it half of the countries that have reported on CBPP to WOAH (26 out of 52). The data applies to reports on domestic animals only.

Regardless of the CBPP disease status, countries should implement certain preventive and control measures, one of which is ***Surveillance***.

Map 1 below shows the cumulative number of surveillance and control measures reported (there are 18+ measures in total, including e.g. ante and post-mortem inspections, disease notification for notifiable diseases, general surveillance, targeted surveillance, screening, monitoring, precautions at the borders, movement control, official vaccination, selective killing and disposal, slaughter, stamping out, treatment, vaccination prohibited, zoning, control of wildlife reservoirs, vector control, the latter of which are not applicable to CBPP).




An extremely low percentage of countries (Members) report ante and post-mortem inspections as part of their surveillance measures. The analysis from WAHIS showed that there seems to be no significant differences in the way disease-free countries design or regulate surveillance, except for a stronger focus on disease notification and border control.

The presentation on *Standards, Methods and Procedures* (SMP) by AU-IBAR and reporting on CBPP via its *Animal Resource Information System* (ARIS) showed there were few cases reported until 2020 when there was an increase in cases of CBPP reported.

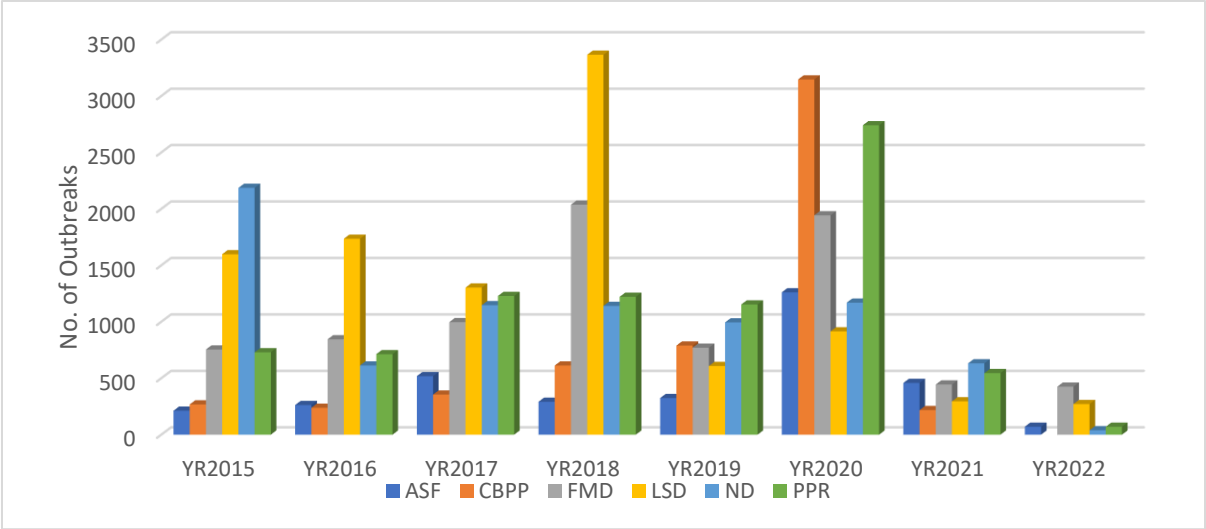
*Map 1. Cumulative number of surveillance and control measures reported through WAHIS. Source : WOAH ( 2025)*

The data indicates weak reporting on CBPP among other *Transboundary Animal Diseases* (TADs) leading to delayed response to outbreaks. AU-IBAR is working through another project to train Focal Points to impr)ove reporting via ARIS. The SMP approach was developed about a decade ago with support of USAID in order to harmonize the control of trade related animal diseases with guided operational protocols, which should be aligned with national *Standard Operating Procedures* (SOPs) to provide minimum standards, procedures, and goals for regional disease control.

The latest initiative on SMPs is co-organised by AU-IBAR, the *Institute for Infectious Animal Diseases* at the Texas A&M University (TAMU), WOAH and the *United States Department of Agriculture* (USDA) with the objective of updating the SMP protocols and scale them from regional to continental protocols, including an SMP for CBPP surveillance and control. The first SMP-AH planning meeting was organised at the AU-IBAR offices in Nairobi from 2 - 4 April 2025 and the next workshop is planned for July 2025.

The presentation on *General principles of Surveillance* guided by the WOAH Terrestrial Animal Health Code and Manual indicated that the main problems for control or eradication are the frequent occurrence of subacute or subclinical infections, the persistence of chronic carriers after the clinical phase and the lack of extensive vaccine

coverage. The meeting was reminded of the CBPP laboratory diagnostic tests and their purposes to guide selection. It was mentioned that the modified Campbell & Turner *Complement Fixation Test* (CFT) remains the recommended procedure and is widely used in countries where infection occurs (Provost *et al*., 1987). The CFT is most conveniently carried out in a microtitre format and been harmonised within most countries in the world (European Commission, 2001). This CFT test has a sensitivity of 63.8% and a specificity of 98% (Bellini *et al*., 1998) and can detect nearly all sick animals with acute lesions, but a rather smaller proportion of animals in the early stages of the disease or with chronic lesions.




*Graph 1. CBPP and major TAD outbreaks reported to AU-IBAR (ARIS) from 2015-2022. Source : AU-IBAR (2025).*

The presentation covered various methods of surveillance, process of design, implementation and quality assurance of the surveillance system, including minimum surveillance requirements for recognition of free status as per the code. The types of surveillance used to assess progress in control/eradication of selected infections/infestations should be designed to collect data about a number of variables such as prevalence or incidence of infections/infestations, morbidity and mortality rates, frequency of risk factors and their quantification, frequency distribution of results of laboratory tests, post-vaccination monitoring results and frequency distribution of infection/infestation in wildlife, which raised questions on the existence of wildlife reservoirs for CBPP.

*Picture 1. Seasonal calendar scoring exercise `for seasonal occurrence of CBPP and other priority cattle disease conditions by pastoralists in a pastoral community in Nigeria. Picture (c) Nma Bida El-Hadj (University of Ibadan) 2013*

It was clarified that the above surveillance guidelines are generic and that there are no known documented wildlife reservoirs for CBPP.

In hard-to-reach areas, the use of *Participatory Epidemiology* (PE) techniques is a useful approach for improving disease surveillance in developing countries. PE is the application of participatory methods to epidemiological research and disease surveillance.

It uses *participatory rural appraisal* (PRA) tools to collect epidemiological data or intelligence information contained within communities through observations, existing veterinary knowledge and traditional oral history to improve understanding of animal health issues. A study, published by the University of Ibadan in Nigeria, was conducted in nine Fulani pastoral communities of Lapai, Eyagi, Lemu, Paiko, Kuta, Bosso, Wushishi, Bobi grazing reserve and Borgu, to collect semi-quantitative data from piled and ranked cattle diseases relative to their impacts. The targeted populations were seasonally mobile, with scattered herds of local breeds of cattle (*Bunaji, Rahaji* and *Bokoloji),* domiciled in the remote areas of Nigeria. The PE exercises showed that high proportions of Fulani pastoralists in Nigeria possessed a quite satisfactory existing knowledge of CBPP and other priority cattle diseases[2].

The presentation on *Guidelines for designing animal disease surveillance plans to improve understanding of CBPP epidemiology and infection* recommended focusing on:

i) Abattoir surveillance,
ii) Participatory surveillance/community diagnosis and
iii) Serological surveillance (random sampling) in endemic countries

while in non-endemic countries it is recommended to focus on:

i) Abattoir surveillance,
ii) Risk-based serological surveillance (transversal surveys) and
iii) Sentinel surveillance i.e. monitoring of herds/species from a limited number of selected sites based on risk.

In both endemic and non-endemic countries abattoir surveillance remains an important, effective and low-cost tool. The risk of spreading CBPP is high when trading or moving live animals but low when trading commodities, such as meat or milk. Gross pathology (post-mortem) lesions of CBPP are more or less pathognomonic. Therefore, there is need for proper training of meat inspectors to support slaughterhouse surveillance and reporting (using innovative technologies, where appropriate).

## Session 3. Focus on abattoir surveillance and coordination for improved reporting of CBPP at national level

All experts emphasised the need to promote feasible and sustainable epidemiological surveillance to be implemented at regional level using networking and standardising the epidemiological approach (sero-surveillance, slaughterhouse surveillance, etc).

**Postmortem examination remains the most effective tool for detecting CBPP.**

It is important to conduct detailed ante-mortem and post-mortem inspections at slaughterhouses for the detection of suspected lesions followed by laboratory examination of the lesions. Depending on context, other players beyond veterinarians and veterinary paraprofessionals should be incorporated to support identification of pathological lesions, for example pastoralists in unstable or far/hard to reach areas, using traditional leaders, breeders, among others, so that inspection can be extended to informal slaughter settings, such as bush slaughter by herders or home slaughter for family gatherings or ceremonies. Suspected cases at ante-mortem should be correlated with post-mortem findings. For example, there is a higher prevalence of confirmed CBPP cases whenever the body condition score of the (live) animal is low at ante-mortem examination.

[2] Contagious Bovine Pleuropneumonia: Challenges and Prospects Regarding | VMRR

The feasibility of using surveillance data at slaughterhouses to assess the prevalence level of CBPP in a cattle population should be considered alongside the availability of these facilities and a reliable flow of data. Where procedures are strictly followed, i.e. ante-mortem inspection is properly conducted, a veterinarian or technician in charge might not authorise the slaughter of animals showing clinical symptoms of disease. Consequently, it is possible that the rate of CBPP-infected cattle in the abattoir is much lower than at herd level; in such cases, epidemiological surveillance at slaughterhouse-level could be considered biased.

However, in countries where it is common for sick animals to be sent to the slaughterhouse and slaughtered, epidemiological surveillance at slaughterhouse-level could be statistically useful to define the prevalence of CBPP. Even then, in cases where cattle could have been treated a few days prior to transportation to the slaughterhouse, clinical symptoms could have been suppressed. Hence, animals that present mild clinical symptoms during ante-mortem inspection, but show acute or sub-acute lesions, referable to CBPP, on post-mortem examination, should be considered suspected of having been treated with antibiotics. Inspectors and veterinarians should check for lesions at injection sites, likely to have been caused by antibiotics. In such cases, the detection of antibiotic residues in meat is highly recommended, where it is possible.

Slaughterhouse inspections are useful in determining the magnitude of CBPP but may also allow Veterinary Authorities to trace the farm-of-origin of the animals, measure the economic losses due to the condemnation of organs and the reduction in carcass weight and determine the seasonal occurrence of CBPP. Abattoir surveillance is inexpensive as the system is in place anyhow and can provide data on an ongoing basis. The costs are mainly related to the acquisition of data and any laboratory tests performed to monitor the disease. It allows the collection of photos and diagnostic samples (when a diagnostic laboratory is available nearby), such as blood or pleural fluid, lymph nodes and lung tissue samples. It is possible to monitor a relatively small number of slaughterhouses while inspecting a large number of animals, originating from many farms or villages. To have standardised results, it is essential to define which slaughtered animals are to be considered in the study. Overall, slaughterhouse surveillance is useful whether CBPP is present or absent in a country.

One of the WOAH Reference Laboratories for CBPP, the *Istituto Zooprofilattico Sperimentale dell'Abruzzo e del Molise "Giuseppe Caporale"* (IZS) in Teramo, Italy, has acquired vast experience in conducting classroom and practical training on CBPP detection, including in slaughter facilities. Diagrams below show CBPP lesions at various stages of infection. The IZS, working with its partners, should explore the potential to build a training course and training system on CBPP surveillance at different stages of infection. In addition to training, the SGE was also encouraged to establish a database of pictures at different stages of progression of CBPP to be availed in a repository (possibly on the GF-TADs Africa webpages, and acknowledging the source of the pictures).

The discussions which followed also addressed the role of non-veterinarians in meat inspection, a common occurrence, but nonetheless sensitive political and economic question whereby other line ministries (e.g. public health, trade, municipalities) may take an interest in collecting fees to release carcasses based on debatable inspection competencies and practices. Bottom line is that Veterinary Services should work on an arrangement whereby veterinarians are recognised as the qualified competent authorities for meat inspection. This is also a key competence in the (WOAH) PVS tool. There is therefore a need to ensure that independent meat inspectors are responsible to guarantee the quality of reports submitted through the Veterinary Services, as the (only) regulatory authority, governing animal health.

An abattoir case study conducted in **Tanzania** and published in 2013[3] confirmed the presence of CBPP in that country, leading to movement restrictions among other measures to help control the spread of the diseases. The most observed pulmonary signs included labored breathing (90%), dry cough (57%) and mucopurulent nasal discharge (47%). The characteristic gross pathological lesions most frequently encountered were left lung lesion (47%), pinkish lung (71%) and pleural adhesion (98%). Epidemiological reports show that the reported outbreaks of CBPP increased from 19 in 2002 to 65 in 2003 and to 18 in 2004 (for January-March only). The corresponding

[3] Abattoir survey of contagious bovine pleuropneumonia lesions in Tanzania

number of reported deaths increased from 137 in 2002, to 269 in 2003 and to 77 in 2004 (for January-March only). The study concluded – at the time - that CBPP had remained a problem in spite of the extensive awareness and vaccination campaigns. A continued surveillance programme, including routine checks of all cattle carcasses at the abattoir and subsequent epidemiological investigation of suspected cases were recommended. At the time of its introduction into Tanzania, CBPP was declared a 'national disaster', and a roll-back plan was adopted, targeting all animals living below the main central railway line for vaccination. The vaccination was designed to vaccinate all animals consecutively for five years. After adopting the roll-back vaccination programme, backed by rigorous surveillance systems (passive, active and abattoir surveillance), vaccination continued for 2 years. However, funds to sustain the vaccination for the remaining years was not made available and this led to the further emergence and re-emergence of CBPP as we know it today.

*Pictures (2) CBPP lesions at various stages of infection. Source: Massimo Scacchia, IZS, Teramo.*

In **Somalia** CBPP remains endemic and is more prevalent near the Kenya and Ethiopia borders, in the areas with the highest cattle population. Surveillance is limited by several structural and contextual challenges including insecurity in many regions, weak Veterinary Services delivery and lack of infrastructure. Surveillance is based on reports from field veterinarians and *community-based animal health workers* (CAHWs), as well as community-based reporting systems using syndromic and clinical surveillance, but lack (laboratory) diagnostic confirmation. Somalia utilises existing reporting platforms at federal and veterinary office levels using a national disease reporting template. Abattoir surveillance is implemented in selected municipal, federal and export slaughterhouses. The latter is managed by the private sector, therefore there are limitations to information sharing. Slaughter surveillance is limited by poor infrastructure and weak coordination between abattoir systems and surveillance systems. Reporting structure flows from the CAHWs to the district veterinary office, and onwards to federal/state veterinary offices and to the Directorate of Animal Health at the *Ministry of Livestock, Forestry and Range* (MoLFR), who submits its reports to the *Chief Veterinary Officer* (CVO). The States of Somaliland and Puntland report to the (federal) CVO in case of outbreaks. There is no real-time national animal health information system established as yet; for the time being, the system is fully reliant on CAHWs at village level.

An official control programme, endorsed by WOAH, is guiding interventions in **Zambia**. Active and passive surveillance are conducted and there is a plan to introduce disease compartments especially in western and southern parts of the country. The country is divided into zones. In the endemic areas, movement restrictions are enforced leading to depressed market prices in those areas; this triggers illegal movements in search of better prices for meat from the non-endemic areas, i.e. controlled, free areas. Passive surveillance is conducted for all live animals, these are tested for particular diseases, i.e. CBPP, East Coast Fever, accompanied by strict animal movement control for those that require laboratory testing, whereby any regional laboratory is linked to the central laboratory. If any positive cases are detected, the control measures include trace back to the farm of origin. Active surveillance is planned and sometimes based on disease intelligence and outbreak investigation. A total of 14,755 samples were tested through active surveillance in Southern Province along the borders with Western Province in the first quarter of 2024. In free areas, any detection leads to stamping out of the herd. Risk based surveillance is conducted using modelling tools for surveillance of CBPP. This helps reduce the cost of conducting surveillance at high-risk border areas, where (increased) animal movement is correlated with climate change and seasons. Abattoir surveillance is conducted at low cost and the best entry-point for conducting surveillance is at slaughterhouse-level. However, there are other departments or services interested in meat inspection (refer to comments on page 16). Sometimes there is dishonesty and difficulty to trace back if identification and traceability is not effective. Zambia is in the process of involving other stakeholders in surveillance. One approach is to introduce private laboratories to support CBPP detection at local level and increase capacity for surveillance. There is demand for more trained personnel to conduct meat inspections. Another priority for Zambia is to introduce compartments for improved animal health and biosecurity. The WOAH Delegate of Zambia is quoted as saying:

***"Yes, we can raise to the occasion and are able to use surveillance as an effective tool to improve disease detection at national level".***

The country has put measures in place to continue disease surveillance in the northern and eastern areas (Malawi/Mozambique borders) and so far haven't picked any cases along those borders.

Zambia is also working to improve its livestock identification and tracking system, moving from a paper-based system to an electronic system. Currently they are recording all farmers to be supported by SMS communication, as a way to support traceability. Zambia also has CBPP zonal brand marks for the identification of animals, based on which CBPP control zone the animals belong to.

The discussion recommended that abattoir locations should be considered as a tool to support surveillance especially in endemic areas. However, it was also recognised that the private sector may not see much profit in setting up abattoirs in such (endemic disease) locations and may require policy incentives to encourage *Public-Private Partnerships (*PPP) to shoulder less lucrative investments, considered as public goods for animal health.

**Tunisia** has not reported CBPP and conducts surveillance to confirm its free status (self-declaration) and to support other disease control programmes. The country has an early warning system in place for notification through syndromic, passive and slaughterhouse surveillance. The reporting structure flows from the farmers to private or official veterinarians, which triggers investigation by the federal or central level laboratory before submission to the national Veterinary Services that finally reports to WAHIS. CBPP is categorized as a notifiable disease as per a Decree from 2009. Passive surveillance is the most important surveillance tool, through syndromic surveillance involving stakeholders, slaughterhouse monitoring, laboratory sampling and screening for investigation, awareness raising and communication at all levels.

The **Nigeria** national reference laboratory, the *Nigeria Veterinary Research Institute* (NVRI) in Vom, has 23 outstations that support serological surveillance testing for CBPP though limited by irregular funding. Targeted active surveillance is conducted in border areas during the seasons of animal movements, linked to potential outbreaks. Abattoir surveillance, including both ante-mortem and post-mortem, is conducted in designated slaughter facilities. Though highly irregular, participatory disease surveillance, which is based on syndromes is conducted to support early warning in remote areas.

The discussion which followed these presentations emphasised the importance of laboratory diagnosis. Expertise must be built, in order to differentiate CBPP cases from other diseases like pasteurellosis. Challenges to collecting post-mortem samples in difficult circumstances exist, begging the question : how essential is it to have an isolate to confirm and report CBPP? Given the current limitations of most Veterinary Services, laboratory diagnosis is probably not a pre-requisite to report an outbreak to WOAH, especially in an infected (endemic) country or zone. However, for a free country, and understanding the repercussions of such report, it is of paramount importance to have laboratory confirmation before reporting to WAHIS. In general, Member(s) Countries/States were encouraged to utilise existing resources (available personnel, the available technology in laboratories, IT tools), expertise and stakeholders, to exploit available data to improve surveillance and understanding of disease presence, in the specific context of these countries.

The **Regional Economic Communities,** represented at the meeting by the *Inter-Governmental Authority on Development* (IGAD) and the *Southern African Development Community* (SADC), continue to play a critical role in promoting political goodwill in Member States or Member Countries to support implementation of MoUs to enhance cross-border cooperation and collaboration on animal health and sanitary measures, especially around livestock trade corridors, transhumance (pastoralist, nomadic) livestock routes and informal livestock movement channels. Coordinated actions can be better informed when sharing of surveillance and laboratory data is regularly done through the regional epidemiology and laboratory networks.

Some Member(s) Countries/States have functional surveillance systems and laboratory capacity whereas others will need support. For example, Zambia has plans in place to strengthen cross-border collaboration on CBPP control with Angola, Namibia and Tanzania.

In Eastern Africa, the *IGAD Center for Pastoral Areas and Livestock Development* (ICPALD) is working with the Member States to facilitate planning for synchronized vaccination and surveillance calendars, focused on clusters suffering from CBPP and other TADs. The ICPALD has also supported training of veterinary paraprofessionals on harmonised disease surveillance, understanding protocols for information sharing on cross-border animal health and sanitary measures between Ethiopia and Kenya, on SMPs for animal health, quarantines, SOPs for laboratory diagnostics, risk based and syndromic animal disease surveillance. The bilateral or multi-lateral MoUs, facilitated by IGAD, are operationalised through implementation frameworks. IGAD has been documenting implementation of the signed MoU between Ethiopia and Kenya and between Kenya and Uganda since 2018 and after launch of synchronised vaccination and harmonised surveillance against TADs in the cross-border areas. Up to 2023 over 38.7 million heads of livestock were vaccinated, benefiting over 1.6 million pastoralists. IGAD plans to maintain the momentum and initiate the same in other clusters. The implementation framework between Djibouti and Ethiopia launched synchronised vaccination with support of FAO but follow up has been a challenge.

In Southern Africa, the SADC *Livestock Technical Committee* (LTC) holds regular meetings and considers to formally include CBPP in its operational planning and resource mobilisation activities. There have been some activities addressing CBPP issues through the KAZA[4] Animal Health Working Group, including cross-border collaboration meetings. Countries like Namibia, Tanzania and Zambia have been conducting active surveillance and control activities for CBPP. SADC in collaboration with partners like FAO and WOAH are working with historically free countries to undertake the process towards recognition of disease free status.

The World Bank funded **Regional Sahel Pastoralism Support Project** *(Projet régional d'appui au pastoralisme au Sahel*, PRAPS) continues to support pastoral production systems in some Sahelian countries like Burkina Faso, Chad, Mali, Mauritania, Niger and Senegal. CBPP is one of the key diseases of the Project alongside PPR. WOAH provides technical assistance to support national plans for training of Veterinary Services. The main activities conducted by countries are mass vaccination and antibiotic therapy of affected animals, before sending these for slaughter. PRAPS countries are expected to aim for "control" in the foreseeable future, as there is no coordinated intention to "eradicate" CBPP from the region.

The Project support countries to develop national strategic plans that guide activities such as vaccination (using T1/44 vaccines), passive surveillance through the national epidemio-surveillance networks, laboratory diagnosis and serological surveillance, conducted every two years. *Event based surveillance* (EBS) is based on post-mortem reports. Vaccination is conducted in specific zones under continued surveillance in order to prevent re-emergence of new cases. Inter-state coordination is facilitated by the Project, whenever there is an emergence of outbreaks in border regions; this translates to coordinated or joint campaigns and information sharing among countries, with the support of partners.

Sero-surveillance data from 2016 to 2024, as shown on the table below, based on c-ELISA (IDVeT) serology, confirm reduction in non-vaccinated herds (but with increased prevalence in Burkina Faso, in 2024). Countries without results for $t_2$ and $t_3$ are due to bureaucratic procurement processes, leading to kits not being availed.

The vaccination programme is based on cost-recovery, thus limiting the vaccination coverage. Several countries also suffer from a low level of reporting due to limited resources, such as the inaccessibility of laboratories (regional laboratories don't always have the capacity for certain tests), the capacity for isolation of *Mycoplasma* spp. to conduct antibiotic sensitivity tests and finally : not having the capacity to conduct stamping-out operations.

Regulated antibiotic therapy is encouraged to avoid self-prescription and the random use of any antimicrobials.

*Table 1. Prevalence of CBPP in naturally infected herds (non-vaccinated)*

| Country | $t_0$ (2016) | $t_1$ | $t_2$ | $t_3$ (2024) |
|---|---|---|---|---|
| **Burkina Faso** | 100% | 70% | 56% | 89% |
| **Chad** | 44% | 73% | 65% | |
| **Mali** | 37% | 82% | | |
| **Mauritania** | 50% | 68% | 76% | 59% |
| **Niger** | 36% | 67% | 43% | 24% |
| **Senegal** | 70% | 76% | 52% | |

Insecurity makes certain areas inaccessible for sampling and vaccination. Harmonised national control strategies and adoption of good practices such as the use of certified vaccines, the centralisation of data and synchronisation of vaccination and cross-border campaigns are facilitated by the *Regional Animal Health Centre* (RAHN) for West Africa of the *Economic Community of West African States* (ECOWAS), based in Bamako, Mali.

Training is conducted to better analyse CBPP data. The project is also working with CIRAD

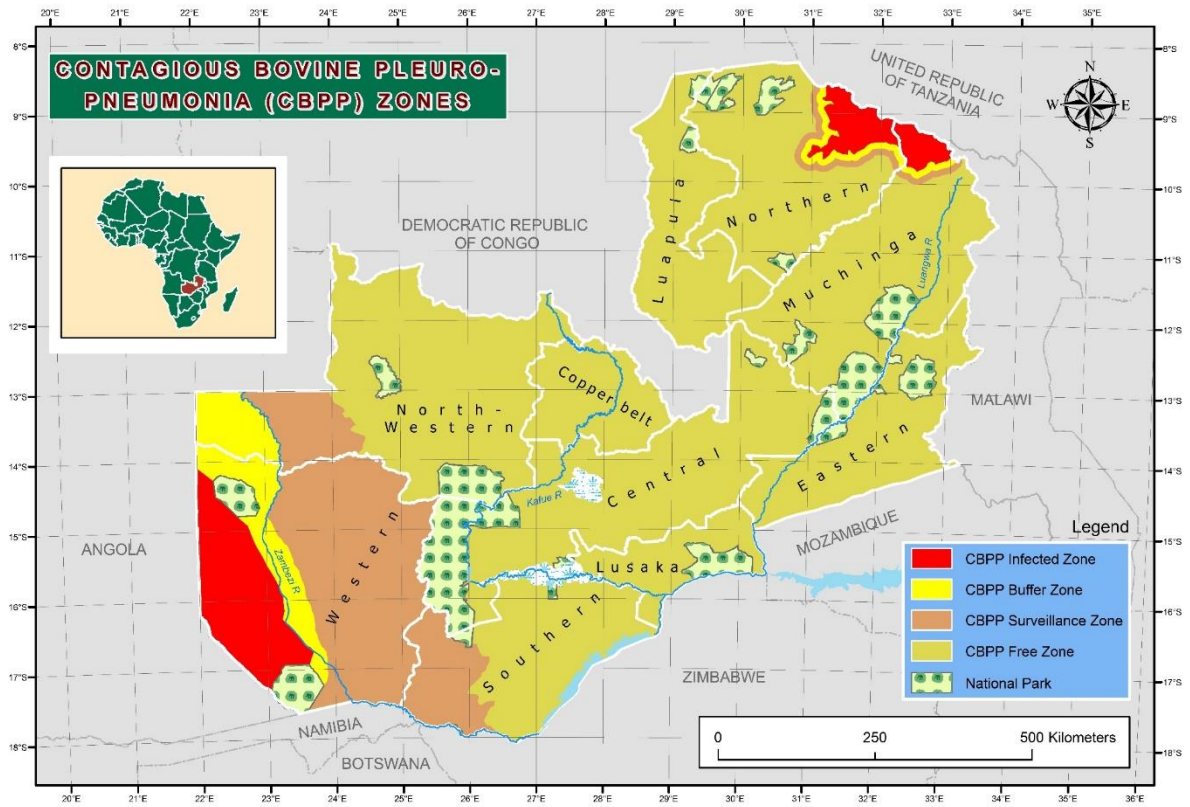
[4] KAZA stands for the Kavango-Zambezi *Transfrontier Conservation Area* (TFCA). This TFCA is nearly twice as large as the United Kingdom. It lies in the Kavango and Zambezi river basins where Angola, Botswana, Namibia, Zambia and Zimbabwe converge.

to determine the sensitivity of the tests being used by countries. Table 1. Needs to be interpreted in the context of what countries aimed for at the start of the Project. For most countries, the expected prevalence is between 60 - 70%. But four countries opted to reduce prevalence to 15% maximum, whereas two countries (more ambitious) want to reduce prevalence to less than 10%.

## Session 4. Tools and innovations to support enhanced surveillance of CBPP at national level

The presentation delivered by WOAH covered the ***Standard Operating Procedures*** (SOP) for official recognition of disease (free) status, as well as the **endorsement by WOAH of *Official Control Programmes*** (OCP) and the questionnaire which comes with the application. While filling-out this questionnaire it is important to provide detailed information and evidence to support written statements. The common shortcomings encountered in submissions include the lack of information on animal identification and traceability systems and the lack of standardised terminology.

This presentation was followed by **Zambia's** presentation, sharing its experience with the development of the national OCP for CBPP. The aim for Zambia is CBPP eradication, based on stamping-out in clean areas. The zoning approach is used with the borders with Angola (in the west) and Tanzania (in the north) being categorized as infected zones. The roll-back strategy ensures that all positive and in-contact herds in the free (clean) zones are removed/stamped out. The country has completed the feasibility study for the re-establishment of a cordon fence (abandoned in the seventies) to tackle the situation in Western Province.




*Map 2. Map of the 5 different control zones in Zambia : CBPP infected zone, CBPP protection zone with vaccination, CBPP protection zone without vaccination, CBPP high surveillance zone and the CBPP free zone.*
*Source : Department of Veterinary Services, Ministry of Fisheries and Livestock, Zambia.*

In the northern zone, the intention is to reduce the size of the infected zone and start moving towards stamping-out of remaining foci, as well as intensity surveillance with the support of the Veterinary Authorities from Tanzania.

The OCP covers clinical, abattoir, sero-surveillance, movement restrictions, cattle identification (branding for individual farmers and individual animal identification), vaccination, awareness campaigns and CBPP community taskforces. Members within the community help curb the illegal movement of cattle. This is a voluntary role entrusted to community members, especially where and when staff are not present. Support to community taskforces is provided for mobility, using motorbikes for the dissemination of information to farmers.

*Picture 3. Consultative meeting with traditional leaders and other stakeholders in Southern Province in 2025 over CBPP prevention. Source : Department of Veterinary Services, Ministry of Fisheries and Livestock, Zambia.*

None other than the President of the Republic supports the CBPP efforts, creating a lot of political goodwill. The biggest threat to CBPP control is the illegal movement of cattle which is triggered by the socio-economic impact of CBPP. The value of cattle where CBPP is endemic is low, thus triggering attempts to move cattle to higher value locations. There is therefore a pressing need to conduct social studies and enhance risk communication especially where there are politically or economically driven interests. Zambia has also started to established both a *livestock identification and traceability system* (LITS) for individual farms and a communication platform for stakeholders and farmers. The *Animal Identification and Traceability* (AIT) Act has been passed into law and the DVS is conducting trials on its implementation utilizing digital ear tags. The OCP for CBPP was endorsed by WOAH in 2023 and reconfirmed in 2024. The country has rekindled collaborations with Namibia and Angola in the west and plans to have this same discussion with Tanzania in the north, for harmonised programmes along the border.

The *Istituto Zooprofilattico Sperimentale dell'Abruzzo e del Molise "Giuseppe Caporale"* (IZS) in Teramo, Italy provided an overview of **innovative technologies to support event-based surveillance, e-reporting, tele-diagnosis,** etc. Indeed, the use of mobile apps to facilitate veterinary telemedicine and/or remote technical assistance, allowing veterinarians and pathologists/experts to support veterinary technicians, farmers and local community members (as in Zambia) who are willing to share (pictures or videos of) pathological lesions found in animals. This allows experts to provide standardised data and photos following a standardised/systematic post-mortem approach. The technology should allow remote diagnostic support with the use of photos, audio, text, images, videos among others. For the approach to be useful, training on how to collect standardised data related to farm-based epidemiology, clinical visits, recognise symptoms at ante-mortem, post-mortem, laboratory diagnosis, and of course differential diagnosis, should be organised. The possibility for use of artificial intelligence (AI) could be explored, considering that tools such as mobile phones, tablets, laptops, and internet connections in most parts of Africa are readily available.

The **capacity building activities** presented by the various partner organisation, present in the meeting, included training for Member(s) Countries/States on CBPP diagnosis, delivered by Botswana *(Botswana National Veterinary Laboratory, BNVL*), a WOAH Reference Laboratory for CBPP. The training has in the past been conducted both online and in-person. Access to reagents is a key challenge for some Member(s) Countries/States. The recurrent shortages call for local production centres for reagents, within Africa. The *Enhanced Research for Africa Network* (ERFAN), under the auspices of IZS, Teramo, and with the support of WOAH, has added two new countries to its membership, with the CBPP Working Group Members constituting the Network Forum. ERFAN conducted two events in September and December 2024 in response to requests for training. There are more online meetings scheduled for 13 and 20 May 2025. The Reference Laboratory also facilitates online courses on recognition of CBPP for CBPP-free countries, using abattoirs as epidemiological surveillance units.

The French agricultural research and cooperation organisation CIRAD, in Montpellier, France, organises annual training on CBPP and coordinates regular *Proficiency Testing* (PT) exercises. CIRAD also engages in twinning programmes to increase the number of laboratories that are proficient in CBPP diagnosis.

The Joint FAO/IAEA Centre of Nuclear Techniques in Food and Agriculture in Vienna, Austria, is implementing the Flagship 'Atoms4Food' Initiative, a programme providing technical assistance to laboratories, including e.g. Mozambique for PCR, but is not exclusively focused on CBPP.

FAO is also supporting Member(s) Countries/States with the enhanced EMA-i for real-time animal disease reporting. Other capacity building activities include the veterinary paraprofessional training scheme and online courses availed by the FAO Virtual Learning Centers, the Frontline *In-Service Applied Veterinary Epidemiology Training* (ISAVET) programme and the Farmer Field Schools. However, CBPP is not specific to these latter programmes as CBPP is not listed by ECTAD as a priority TAD.

The CBPP SGE is encouraged to recommend that CBPP be considered as an ECTAD priority disease going forward.

WOAH plans to conduct abattoir surveillance training, working in close collaboration with technical and scientific partners. The ERFAN phase II is subject to a new grant agreement with the IZS in Teramo. These funds (EUR 1.5 million) have been secured through the fifth funding convention of the Republic of Italy with WOAH.

AU-IBAR is working on updating regional *Standards, Methods and Procedures* (SMP) for CBPP and nine other diseases, to be published soon. A collaboration with the *Arab Organisation for Agricultural Development* (AOAD) has been initiated to be implemented in nine African Union Member States, targeting improved capacity to develop policies and legal frameworks for disease surveillance and control. The aim is to support Member States to control and prevent priority TADs. Also, AU-IBAR is implementing the second half of its Strategic Plan 2024 2028. Among the key activities one should highlight the establishment of *Centres of Excellence* (CoE) for TADs and partnerships with Reference Laboratories, which will help pool resources among Member States.

The experts, present in the meeting, encouraged Member(s) Countries/States to harness the use of digital disease reporting systems, electronic animal identification and tracking systems and *participatory epidemiology* (PE) tools, supported by simplified rapid diagnostic and molecular tests to support surveillance. Where feasible, Member(s) Countries/States should further explore the use of data analytics and AI, as well as the use of drones in well-established Member(s) Countries/States, legislation permitting.

The MentiMeter™ polls conducted during the meeting demonstrate that the use of phones (voice calls), WhatsApp and email were the most used modes of communication in surveillance. Several Member(s) Countries/States, represented in the meeting, claim that they are already using remote assistance, while all Members consider the use of mobile tools and electronic systems as feasible.

## Session 5. Infrastructure and networking requirements to support enhanced surveillance of CBPP at national level

The partner organisations present at the meeting reflected on the opportunities to leverage existing platforms to enhance networking and epidemiological information sharing on CBPP and other priority diseases.

One such network is the *Enhanced Research for Africa Network* (ERFAN) that encourages networking to support capacity building and bring epidemiological information together. Others are the (sub-)regional epidemiology and laboratory networks, as established under ECCAS, ECOWAS, IGAD and SADC.

At higher political level, the Secretariat of the *Common Market for Eastern and Southern Africa* (COMESA) has established technical committees composed of Principal Secretaries who are sent to Ministerial meetings that are organized annually or every two years. Relevant information shared through networking, epidemiology, infrastructure, and related platforms, is consolidated and shared with the Council of Ministers (of Trade and of Finance). The information is also shared with Heads of States. Therefore, information can be provided to these decision-making structures to advance disease control strategies. Aspects such as socioeconomic importance, strengthening of infrastructure, budget allocation, animal identification and tracking systems, engagement in surveillance, regulatory frameworks can all be highlighted in these high-level gatherings.

A group discussion was held as one plenary session, guided by three questions as follows:

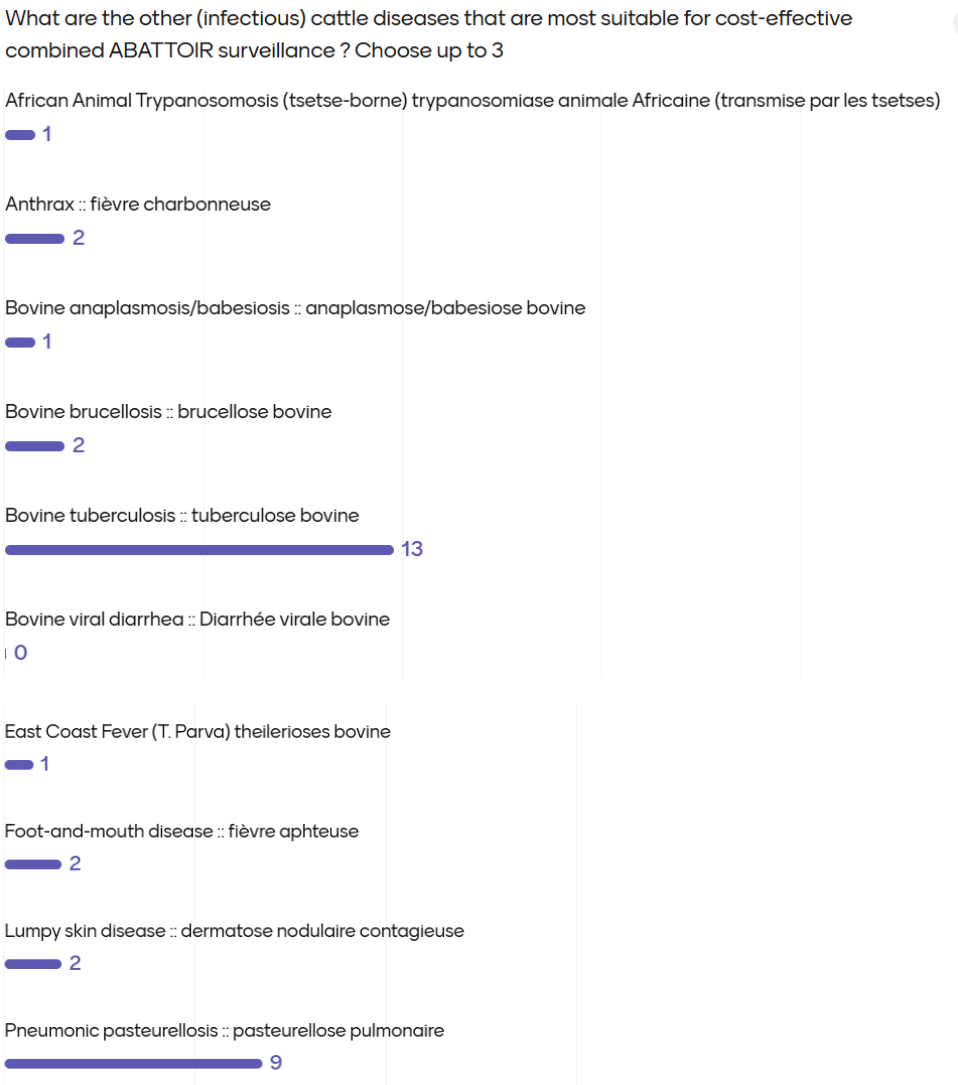
1. What infrastructure is needed at national level to improve abattoir surveillance and differential diagnosis for CBPP?

    - One needs cameras and mobile technology to support lesion identification remotely, as well as appropriate collection of samples and handling. Depending on the size of the lesion, a deep freezer may be required. Transport could be by courier if the laboratory is far (clarity is required on who pays).
    - Budget should be allocated (and mobilised) to support these field activities.
    - Collections of photos to compare with lesions observed that are characteristic of CBPP.
    - Well-documented protocols and procedures for the collection of samples, storage and transport, and shared with relevant teams.

2. How can stakeholders be organized collectively to improve flow of information?

    - Veterinary Services should engage stakeholders and consider developing training focused on specific, skilled personnel: meat inspectors, livestock farmers or handlers, CAHWs, community focal points, etc. The training should cover the differential diagnosis for other diseases that can be confused with CBPP and should be extended to decisions for sampling for antibiotic residues.
    - This should be followed by remote support to ensure standardised procedures are followed.
    - The information flow should be well coordinated from the farmer/livestock owner/handler to the Veterinary Services, while aiming to close information gaps and reduce the time it takes from initial point of reporting to the nearest Veterinary Office to trigger response. Veterinary Services should encourage mobile-based reporting, supported by use of photos where feasible and working with butcher associations to provide additional information.
    - Decision-making based on this constant data flow, fed through the reporting system, will encourage timely submissions. However, where no action is taken in cases of suspicion or even confirmed cases, stakeholders will not be motivated to keep engaging with Veterinary Services.

The MentiMeter™ polls conducted during the meeting provide insight in which other disease could be considered for abattoir surveillance, and to some extent, as important differential diagnoses, bovine tuberculosis being the most mentioned :




3. What practical steps are required at national level for adoption of proven tools for e-surveillance / reporting / remote support / tele-diagnosis, etc.?

- Member(s) Countries/States should organise training for their teams and stakeholders and allocate sufficient budgets to support surveillance activities.
- Member(s) Countries/States are encouraged to recognise any available technology to support reliable data flow and collection, despite other limitations that may exist. Case studies could be utilised to advocate for the use of electronic disease reporting.
- Member(s) Countries/States are encouraged to ensure inter-operability of their existing or new electronic reporting systems with sub-regional / regional and global reporting systems to be more efficient and for continued use (sustainability).
- A pilot programme using remote support / tele-diagnosis should be considered with a willing Member(s) Countries/States, and supported by a technical partner.

## Session 6. Conclusion and Action Plan

In closing FAO and WOAH appreciated all participants, facilitators and interpreters for the productive meeting on the important topic of CBPP ***Surveillance*** in Africa. They noted the patience and dedication of all during the three days, running continuously for four hours each day. Speaking on behalf of WOAH, Dr. Neo Mapitse, Sub-Regional Representative for Eastern Africa, recognised participants for their endurance and commitment to the GF-TADs mechanism and urged all to follow up recommendations and actions from this meeting. Talking on behalf of FAO, Dr. Abebe Wolde, Deputy-Regional Manager (ECTAD) stated that it was important to turn various recommendations into actions and that FAO was committed to accompany Member(s) Countries/States in the process of eradication of CBPP, in collaboration with other partners.

Resulting from the various presentations and discussions held during the above-mentioned sessions, the last part of the programme (on 7 May) was dedicated to the preparation of the following issues or action points that were identified in the course of the three days:

**Considering:**

I. That Member(s) Countries/States have competing priority diseases to address and different capacities to implement surveillance;
II. The direct impact of CBPP to trade and economies, the volatility of market prices, loss of income, livelihoods, food insecurity, *antimicrobial resistance* (AMR), *antimicrobial use* (AMU), the effects of climate change and its environmental impacts, etc;
III. That CBPP control efforts must be coordinated between Member(s) Countries/States;
IV. That key stakeholders along the value chain are crucial participants in the identification and reporting of syndromes that point to priority diseases such as CBPP to Veterinary Authorities;
V. The difficulties faced by some Member(s) Countries/States in implementing or enforcing appropriate surveillance, stamping out, quarantine measures, as well as the reluctance from communities to systematically report, fearing not only for loss of business continuity (as market prices may be affected) but also the challenges of sanitary measures that may be applied;
VI. The role of AU-IBAR, AU-PANVAC, *Regional Economic Communities* (RECs), international partners, and research institutions in support of (coordination of) animal health actions in the region;
VII. The importance of ante-mortem and post-mortem inspections for the detection of suspected CBPP cases, supported by laboratory confirmation, with the ability for traceback to the farm-of-origin;

**The meeting concluded as follows :**

1. The SGE recognises the role of non-veterinarians in meat inspection, a common occurrence, but nonetheless sensitive political and economic question whereby other line ministries and sectors (e.g. public health, trade, municipalities, private sector) may take an interest in collecting fees to release carcasses based on debatable inspection competencies and practices. There is therefore a need to ensure that independent meat inspectors are responsible to guarantee the quality of harmonized and standardised reports submitted through the Veterinary Services, as the (only) regulatory authority, governing animal health, regardless of private sector or other sectors' involvement in the management of slaughterhouses/facilities;

   **Action**: National Veterinary Services to work on an arrangement whereby veterinarians are recognised as the only qualified Competent Authorities in charge of meat inspection.

   **Action**: National Veterinary Services with support of partners to establish harmonized procedures and protocols for abattoir inspections and reporting and ensure its implementation through training of veterinarians and core personnel along the beef value chain.

2. There is a need to promote feasible and sustainable epidemiological surveillance to be implemented at regional level using networking and standardising the epidemiological approach (sero-surveillance, slaughterhouse surveillance, etc). Post-mortem examination is important to detect suspected lesions followed by laboratory examination of the lesions;

   **Action**: Regional Economic Communities to support their Member Countries and States through technical networking to promote the use of feasible, standardised and sustainable epidemiological surveillance approaches.

3. Slaughterhouse inspections are particularly useful in determining the magnitude of CBPP but may also allow tracing outbreaks to the farm-of-origin of the animals, measure the economic losses due to the condemnation of organs and the reduction in carcass weight and determine the seasonal occurrence of CBPP. Abattoir surveillance is inexpensive as the system is in place anyhow and can provide data on an ongoing basis. The costs are mainly related to the acquisition of data and any laboratory tests performed to monitor the disease. It allows the collection of photos and diagnostic samples (when a diagnostic laboratory is available nearby), such as blood or pleural fluid, lymph nodes and lung tissue samples. It is possible to monitor a relatively small number of slaughterhouses while inspecting a large number of animals, originating from many farms or villages. To have standardised results, it is essential to define which slaughtered animals are to be considered in the study. Overall, slaughterhouse surveillance is useful whether CBPP is present or absent in a country. Irrespective of the capacity of the national laboratory system to diagnose CBPP, infected (endemic) countries are encouraged to report CBPP suspicions/cases via WAHIS;

   **Action**: Member(s) Countries/States to prioritise and strengthen abattoir surveillance and reporting systems for CBPP detection.

   **Action**: The IZS (Teramo) to work with partners to explore the potential to develop a training course on CBPP surveillance at different stages of infection.

   **Action**: The GF-TADs for Africa Regional Secretariat to establish a database of pictures at different stages of progression of CBPP to be availed in a repository, possibly on the GF-TADs Africa webpages.

   **Action** : FAO to consider clearly listing CBPP as an ECTAD priority disease, eligible for ECTAD support and include CBPP in the training offer (ISAVET, VLC).

4. The SGE recognises the need to adapt relevant, innovative technologies to promote veterinary telemedicine and/or remote technical assistance where feasible. This includes, but is not limited to, the use of mobile applications that allow veterinarians and pathologists to support veterinary technicians, farmers and local communities who are willing to share (pictures or videos of) pathological lesions found in animals. The technology should allow remote diagnostic support with the use of photos, audio, text, images, videos among others. For the approach to be useful, training on how to collect standardised data related to farm-based epidemiology, clinical visits, recognise symptoms at ante-mortem, post-mortem, laboratory diagnosis, and of course differential diagnosis, should be organised. The possibility for use of artificial intelligence (AI) could be explored, considering that tools such as mobile phones, tablets, laptops, and internet connections in most parts of Africa are readily available;

   **Action**: Member(s) Countries/States, with the support of partners, are encouraged to integrate and harness the use of technology to support veterinary telemedicine and/or remote technical assistance, digital disease reporting systems, electronic animal identification and tracking systems and *participatory epidemiology* (PE) tools to support surveillance.

5. The meeting recognised the role of WOAH in endorsing *Official Control Programmes* (OCP) and CBPP disease status recognition. There is a need for increased sensitisation on the completion of the questionnaire for countries applying for endorsement;

   **Action**: Member(s) Countries/States are encouraged to progress in their control activities against CBPP and utilise the voluntary mechanism provided by WOAH for endorsement of official control programmes and for countries that have never reported CBPP to proceed to provide evidence of disease absence and seek CBPP status recognition according to the relevant requirements of the Terrestrial Code[5].

**The next meeting:**

The next meeting of the SGE will be dedicated to ***Diagnosis*** i.e. to enhance networking between national reference laboratories, national reference laboratories offering regional services and international reference laboratories, and, in time, increase the number of WOAH/FAO Reference Laboratories in Africa.

Note that a dedicated SGE page was created on the GF-TADs for Africa website (hosted by WOAH Africa) in order to facilitate the sharing of information amongst members of the SGE (click the link) :

Contagious Bovine Pleuropneumonia - Standing Group of Experts (SGE) - Africa

[5] Codes and Manuals - WOAH - World Organisation for Animal Health

# Annex 1. Proposed amended terms of reference of the Africa CBPP SGE

**Standing Group of Experts on Contagious bovine pleuro-pneumonia for Africa**

(…)

**Composition**

The composition should be diversified in origin, with experts drawn from veterinary services, the dairy and beef industry, academia, research institutions, NGOs acting on CBPP or bovine production development, private sector along the value chain.

- The founding Member Countries (**Chad, Nigeria, Somalia** and **Zambia**) will establish the SGE CBPP for Africa. Experts from other countries in the region have been included in SGE CBPP when relevant according to the extension of the engagement of more countries to active CBPP control strategies : **Tunisia**
- AU-IBAR, AU-PANVAC, Regional Economic Communities (COMESA Secretariat, ECCAS-RAHC, ECOWAS-RAHC, IGAD-ICPALD, and SADC-LTC), FAO and WOAH regional representations, ILRI, the Joint FAO/IAEA Centre of Nuclear Techniques in Food and Agriculture and other regional organizations active in the field of animal disease control strategies.
- Regionally and internationally recognized CBPP experts with experience working in Africa will be included in the group on an ad hoc basis.
- Experts from WOAH and FAO reference laboratories, as well as selected national/regional laboratories: the *Animal Health Institute* (AHI) Sebeta – Ethiopia, the *National Veterinary Research Institute* (NVRI), Vom - Nigeria, the *Botswana National Veterinary Laboratory* (BNVL) Gaborone - Botswana and the *Laboratoire Central Vétérinaire* (LCV) Bamako – Mali.
- Additional international recognized experts drawn from universities/academia, partners and donors on CBPP or other technical topics to be invited by the group to support the SGE-CBPP on an ad hoc basis.

(…)

## Annex 2. List of participants

| First Name | Last Name | Organization | Job Title | City | Country | Gender | Attending as |
|---|---|---|---|---|---|---|---|
| Ahlem | Abdelwaheb | DGSV | Santé animale | Tunis | Tunisia | M | Member (country) |
| Ousman Mahamat | Abdelrahim | Institut de recherche en élevage pour le Development | Chercheur, chef d'unité de mycoplasme | Ndjamena | Chad | M | Member (country) |
| Nma Bida | Alhaji | Federal University of Technology | Associate Professor | Minna | Nigeria | M | Member (country) |
| Patrick | Bastiaensen | WOAH | Programme Officer | Nairobi | Kenya | M | Member (int. organisation) |
| Interpreter | Ben | Interpreter | Interpreter | Nairobi | Kenya | M | Interpreter |
| Rachèd | Ben Slimane | DGSV | Santé animale | Tunis | Tunisia | M | Member (country) |
| Ana | Botelho | INIAV, Department of Bacterio-logy and Mycology | Researcher, Head of Department | Lisbon | Portugal | F | WOAH / FAO Ref. Lab. |
| Benson | Bowa | Central Vet. Research Institute | Senior Veterinary Research Officer | Lusaka | Zambia | M | Member (country) |
| Mariem | Chamli | DGSV | Santé animale | Tunis | Tunisia | F | Member (country) |
| Viola | Chemis | WOAH | Programme Officer | Nairobi | Kenya | F | Member (int. organisation) |
| George | Dautu | Central Vet. Research Institute | Chief Veterinary Research Officer | Lusaka | Zambia | M | Member (country) |
| Anta | Diagne | WOAH | Assistante technique régionale, chargée de la formation, PRAPS-2 | Bamako | Mali | F | Member (int. organisation) |

| First Name | Last Name | Organization | Job Title | City | Country | Gender | Attending as |
|---|---|---|---|---|---|---|---|
| Roland Xolani | Dlamini | Ministry of Agriculture | Director, Department of Veterinary Services | Manzini | Eswatini | M | Member (country) |
| Abdulkareem | Durosinlorun | Fed. Ministry of Livestock Dev. | Director/CVO (CBPP) | Abuja | Nigeria | M | Member (country) |
| Fusya | Goma | Ministry of Fisheries and Livestock | Assistant Director | Lusaka | Zambia | F | Member (country) |
| Heni | Haj Ammar | DGSV | SD | Tunis | Tunisia | M | Member (country) |
| Bitrus | Inuwa | National Vet. Research Institute | Researcher/Veterinarian | Jos | Nigeria | M | Member (reg. service lab.) |
| Musa Mohammed | Inuwa | Fed. Ministry of Livestock Dev. | Chief Veterinary Officer | Abuja | Nigeria | M | Member (country) |
| Bénéwendé Aristide | Kaboré | WOAH | Disease Status Officer | Paris | France | M | Member (int. organisation) |
| Akiko | Kamata | FAO | NSAH | Rome | Italy | F | Member (int. organisation) |
| Leruo | Keokilwe | Botswana Nat. Vet. Laboratory | Ag. Laboratory Manager | Gaborone | Botswana | M | WOAH / FAO Ref. Lab. |
| Wamalwa | Kinyanjui | IGAD | Animal Health Expert | Nairobi | Kenya | M | Member (REC) |
| Moetapele | Letshwenyo | WOAH | Representative | Gaborone | Botswana | M | Member (int. organisation) |
| Nawa | Mabuku | Ministry of Fisheries and Livestock | Principal Veterinary Officer | Lusaka | Zambia | F | Member (country) |
| Zenaba | Mahamat Kodo | IRED | Épidémiologiste | Ndjamena | Chad | F | Member (country) |
| Yoseph Shiferaw | Mamo | COMESA | Senior Fisheries and Livestock Officer | Lusaka | Zambia | M | Member (REC) |
| Lucia | Manso-Silvan | CIRAD | Senior researcher | Montpellier | France | F | WOAH / FAO Ref. Lab. |
| Interpreter | Margaret | Interpreter | Interpreter | Nairobi | Kenya | F | Interpreter |

| First Name | Last Name | Organization | Job Title | City | Country | Gender | Attending as |
|---|---|---|---|---|---|---|---|
| Charles | Maseka | Ministry of Fisheries and Livestock | Ag. Director | Lusaka | Zambia | M | Member (country) |
| Qassim Abdi Moallim | Mohamed | Ministry of Livestock, Forestry and Range | CBPP focal point | Mogadishu | Somalia | M | Member (country) |
| Farai | Muchadeyi | IAEA | Head of Animal Production and Health | Vienna | Austria | F | Member (int. organisation) |
| Misheck | Mulumba | SCAD | Member | Lusaka | Zambia | M | Other |
| Cornelius | Mundia | Ministry of Fisheries and Livestock | Assistant Director, Research, Epidemiology | Lusaka | Zambia | M | Member (country) |
| Mamadou | Niang | FAO | Regional Laboratory Expert, Regional Office for Africa (RAF) | Accra | Ghana | M | Member (int. organisation) |
| Min-Kyung | Park | WOAH | Head of the Status Department | Paris | France | F | Member (int. organisation) |
| Manel | Rezgui | DGSV | Chargée de mission | Tunis | Tunisia | F | Member (country) |
| Huyam | Salih | AU-IBAR | Director | Nairobi | Kenya | F | Member (AU) |
| Massimo | Scacchia | Istituto Zooprofilattico Sperimentale (IZS) | CBPP WOAH Expert | Teramo | Italy | M | WOAH / FAO Reference laboratory |
| Emmanuel | Swai | Ani-care Vet Services | Private veterinarian | Tanga | Tanzania | M | Other |

| First Name | Last Name | Organization | Job Title | City | Country | Gender | Attending as |
|---|---|---|---|---|---|---|---|
| Gaolathe | Thobokwe | SADC Secretariat | Programme Officer Livestock | Gaborone | Botswana | M | Member (REC) |
| Columba | Vakuru | Fed. Ministry of Livestock Dev. | Former Chief Vet. Officer | Abuja | Nigeria | M | Member (int. organisation) |
| Francesco | Valentini | WOAH | Programme Officer | Tunis | Tunisia | M | Member (int. organisation) |
| Hezron | Wesonga | Private Consultant | | Nairobi | Kenya | M | Other |
| Abebe | Wolde | FAO | Deputy-Regional Manager ECTAD, Regional Office for Africa (RAF) | Accra | Ghana | M | Member (int. organisation) |

*This event was organised under the auspices of*

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

Food and Agriculture Organization of the United Nations

World Organisation for Animal Health
Founded as OIE