



# CBPP TWINNING PROJECT FINAL INTERNATIONAL MEETING REPORT



**Prepared By: Dr. Biniam Tadesse, Project focal point**

**December, 2023**



<b>Contents</b>	<b>Page</b>
1. BACKGROUND .....	3
2. OPENING SESSION .....	4
3. PRESENTATIONS IN THE FINAL WORKSHOP.....	5
4. SUGGESTIONS FORWARDED FROM WORKSHOP PARTICIPANTS .....	11
5. LABORATORY VISITING SESSION .....	14
6. LESSON LEARNT .....	15
7. WAY FORWARD .....	15



## **PARTICIPANTS OF THE FINAL MEETING**

A total of 31 participants were involved

- 4 from IZS Teramo
- 1 from WOAHA
- 5 East African CVO's
- 1 from AU-PANVAC
- 1 from Italian Cooperative Agency
- 19 from AHI

The final meeting was conducted at AHI, Sebeta, Ethiopia from November 30/2023 – December 1, 2023

### **1. BACKGROUND**

Contagious bovine pleuropneumonia (CBPP) is a notifiable and highly contagious respiratory disease of cattle and water buffalo, caused by the *Mycoplasma mycoides* subspecies *mycoides*. It causes significant economic losses and leads to a serious food security problem, negatively influencing peoples' livelihoods in affected countries. Its economic importance is related to its high morbidity and mortality rates, costs related to quarantine, increased cost of controlling the disease, delayed marketing, reduced draft power, reduced fertility, loss of market due to trade bans and inhibition of sustained investment in livestock production. Economic loss in the African continent is estimated to be 2 billion US\$ per year only due to mortality of the disease.

In Ethiopia, CBPP is an endemic disease, reported in different parts of the country with prevalence varying between 1.78% and 96%. Disease transmission occurs through direct and repeated contacts between infected and susceptible animals. Inhalation of infective droplets is the main route of infection. Under natural conditions, the main source of infection is the excretion of infective droplets by the infected coughing animal. Nasal discharge, fetal fluids, and urine of sick animals can serve as sources of infection. Diagnosis of CBPP is done based on clinical signs, isolation of the etiological agents, polymerase chain reaction (PCR), serological tests (cELISA and CFT), and necropsy findings.

Animal health Institute (AHI) had been with a limited capacity of diagnosing CBPP. To strengthen its diagnostic and epidemiological competencies, and production of laboratory reagents for the testing of CBPP and other diseases, a three-year laboratory twinning project was



agreed between Istituto Zooprofilattico Sperimentale dell’Abruzzo e del Molise “G. Caporale” /IZSTE (WOAH reference center), Parent Institute, and Animal Health Institute/AHI (formerly called National Animal Health Diagnostic and Investigation Centre (NAHDIC), the Candidate Laboratory through the support of WOA. The project has been effective starting from November 2019 and achieved its objectives. The twinning will be closed by the end of 2023.

### **The objectives of this final workshop were to**

- Officially close the project and discuss on the way forward.
- Recognize the efforts of IZSTE through WOA twinning project to improve the competency of AHI through knowledge sharing, technology transfer, and material supports.
- Present and discuss how the AHI could support the East Africa region in the diagnosis and control of CBPP.

### **2. OPENING SESSION**

The meeting was officially opened by Dr. Tesfaye Rufael, General Director of AHI who welcomed all the participants of the workshop and following that Dr. Romano Marabelli who is personal advisor to WOAH General Director, and Dr. Giacomo Migliorati, Scientific director of IZS Teramo made a key note speech regarding the twining project and stressed the importance of collaborations. The objectives and the contents of the final meeting were briefly explained by Dr. Massimo Scacchia, and Dr. Biniam Tadesse, the project coordinator from IZS and AHI side respectively.



Fig 1: Shows opening session



### 3. PRESENTATIONS IN THE FINAL WORKSHOP

A series of presentations were made from AHI staffs, East African CVO's and IZS highlighting the situation of CBPP in their respective country and the experiences shared during the project period.

#### *Presentation 1*

**Topic: AHI overview: challenges and opportunities: Presented by Dr. Getnet Abie, Deputy Director of AHI**

**The following Points were the content of the presentation**

- Introduction
- Mission: Core Activities
- Facility
- Standards & Competencies
- Research in AHI
- Way forward



Fig 2: Dr. Getnet Abie, Presenter



## ***Presentation 2***

**Topic: CBPP situation in Ethiopia, its economic implications: Presented by Dr. Gizat Almaw, Microbiology Laboratory Lead executive**

**The following Points were the content of the presentation**

- Introduction
- CBPP in Ethiopia
- CBPP Economic Implications in Ethiopia
- Vaccination



Fig 3: Dr. Gizat Almaw, Presenter

## ***Presentation 3***

**Topic: CBPP situation in Uganda and economic implications: Presented by Dr. Anna Rose, Uganda CVO, WOAHA Delegate**

**The following Points were the content of the presentation**

- Introduction
- CBPP control in Uganda
- The way forward





Fig 4: Dr. Anna Rose, Presenter

#### *Presentation 4*

**Topic: CBPP situation and economic implication in Tanzania: Presented by Prof. Hezron E. Nonga, Tanzania CVO, WOA Delegate**

**The following Points were the content of the presentation**

- Introduction
- CBPP in Tanzania
  - CBPP Passive surveillance
  - CBPP active surveillance
- CBPP control in place
- Economic implication
- Current efforts on CBPP prevention and control



Fig 5: Prof. Hezron Nonga, Presenter



### *Presentation 5*

**Topic: CBPP situation in South Sudan: Presented by Dr. Agol Kut, South Sudan CVO, WOAHA Delegate**

**The following Points were the content of the presentation**

- Introduction
- CBPP in South Sudan
- Clinical signs
- Possible CBPP Treatment



Fig 6: Dr. Agol Kut, Presenter

### *Presentation 6*

**Topic: Situation of CBPP in Eritrea: Presented by Mr. Afewerki Mehreteab, Animal & Plant Health Division Advisor, Eritrea CVO delegate**

**The following Points were the content of the presentation**

- Introduction
- CBPP situation in Eritrea
- Reporting system
- Passive surveillance
- Prevention & Control programs.
- STSD project
- Laboratory diagnosis conducted in Eritrea
- Awareness programs
- Way forward





Fig 7: Mr. Afewerki Mehreteab, Presenter

### *Presentation 7*

**Topic: CBPP situation in the Somalia and its economic implications: Presented by Dr. Abdulkadir Abdi, Acting Director of Animal Health and Public Veterinary Service, Somalia CVO Delegate**

**The following Points were the content of the presentation**

- Introduction Country brief,
- Revitalization of Veterinary Services
- Activities implemented by LPAs from 2022
- CBPP situation in Somalia
- Prevention and Control activities
- Major challenges and proposed solutions.
- Conclusions



Fig 8: Dr. Abdulkadir Abdi



## *Presentation 8*

**Topic: CBPP WOAHA Twinning Project b/n IZSTE-AHI Parent lab report and the way forward: Presented by Dr. Massimo Scacchia, Twinning project focal person, IZS**

**The following Points were the content of the presentation**

- Introduction about the twinning project,
- Activities carried out during the Project Period
- Our Project during COVID time(Online training courses)
- Reagents sent to the AHI
- Interim Audit of the candidate institute
- The collaboration B/N AHI and IZS Teramo
- AHI and ERFAN
- Way forward



Fig 9: Dr. Massimo Scacchia, presenter

## *Presentation 9*

**Topic: Experience and lessons from WOAHA CBPP Twinning Project: Presented by Dr. Biniam Tadesse, Twinning project focal person, AHI**

- Introduction about the twinning project
  - The objectives and intended outcomes
- Activities carried out during the Project Period and the lesson learned
  - CBPP serology training
  - CBPP bacteriology training
  - CBPP Molecular diagnostic technique trainings
  - Antigen production training



- NGS and Bioinformatics Trainings
- Epidemiology and GIS trainings
- Our Project during COVID time(Online training courses)
- Reagents received by the AHI
- Interim Audit reports(Achievements and gaps)
- AHI and ERFAN(ERFAN strategic platform trainings and experience sharing's)
  - Bovine tuberculosis Diagnostic techniques training at Naples, Italy
  - Anthrax diagnostic techniques training at AHI, Ethiopia
  - CBPP CFT Antigen production for ERFAN Laboratory Training at Botswana
  - Brucellosis technical working group meeting, IZS Gulianova, Italy
  - CBPP international workshop in Zambia, Lusaka
  - Anthrax technical working group meeting in IZS Teramo, Italy
- Challenges at AHI
- Future collaborations and Way forward



Fig 10: Dr. Biniam Tadesse, Presenter

#### **4. SUGGESTIONS FORWARDED FROM WORKSHOP PARTICIPANTS**

##### **Dr. Agol Kut (South Sudan CVO)**

Generally stressed working together is important if we have common interest and raised the following issues

- ✓ What are the activities need to be carried out from the twining project
- ✓ What are the lessons learned to be shared to member countries
- ✓ Are we equipped enough to produce the proposed reagents and consumables
- ✓ Who is responsible to do this
- ✓ Are we planning to include other diseases like BTB, Brucellosis and others



- ✓ AHI is better to take the initiative to start the development of the project and organize a platform to work together.

### **Dr. Anna Rose (Uganda CVO)**

A way forward should be sort out and a regional program should be written including the participants and neighboring countries.

- ✓ The WOAHP procedure should be followed to apply for reference lab
- ✓ In Uganda serological tests are preferred than culture and isolation due to the capacity problem.
- ✓ Focal persons should be assigned from each country to do the actual activities for the project work.

### **Prof. Hezron Nonga (Tanzania CVO)**

- ✓ The collaboration should be based on WOAHP strategy to control CBPP and other disease priority list also be considered.
- ✓ Using hi tech equipment's like Maldi TOF should be in a sustainable way and should not be always dependent on projects.
- ✓ Supported the proposed regional program including the participants and neighboring countries

### **Mr. Afewerki Mehretab (Eritrea CVO delegate)**

- ✓ Acknowledged AHI and IZS for organizing the CBPP final workshop
- ✓ Supported the development of the regional joint project.

### **Dr. Abdulkadir Abdi (Somalia CVO delegate)**

- ✓ Acknowledges AHI and IZS for organizing the CBPP final workshop
- ✓ Supported the development of the regional joint project.

### **Dr. Flavio Sacchini (IZS Teramo)**

- ✓ ELISA commercial kits for CBPP are no more produced from the company. Consequently CFT will be the preferred test method for the future due to easiness of production of reagents at laboratory level

### **Dr. Massimo Scacchia (IZS Teramo)**

- ✓ AHI should share the SOP for the diagnosis of CBPP to the east African member countries.



- ✓ The member countries should develop a project proposal together and search for a donors to cover the cost of reagents and consumables.
- ✓ In the future, other countries can apply for twining projects on other diseases based on their priorities.
- ✓ Recommended AHI to lead this activity of collaboration in the region and AHI should prepare a draft project proposal the this should be shared to member countries to put their intended inputs and enrich the proposal
- ✓ PANVAC should play a great role on the tasks of reagents production.
- ✓ Online trainings and experience sharing for a can be organized by IZS Teramo at any time based on the request.

**Dr. Tesfaye Rufael (AHI Director General)**

- ✓ The networking of different institutions in the east African region should be strengthened.
- ✓ AHI will share its experience and provide training to support the region on culture and isolation of the mycoplasma as well as on diagnostic tests of priority disease.
- ✓ AHI will be responsible to draft the proposal and share to East African member countries and PANVAC to comment and enrich the proposal.
- ✓ AHI promised to prepare the first draft of the proposal within a month.

**Dr. Getnet Abie (AHI Deputy Director)**

- ✓ AHI has the willing to provide a support to East African laboratories.
- ✓ AHI will develop a joint project and coordinate the activities by engaging regional organizations like AU-IBAR, PANVAC which are a potential source of funds for the region.
- ✓ Basic data should be shared by member states in drafting the project proposal which will be helpful in showing member states strength and gaps.
- ✓ Since the CVO's have a direct contact with AU-IBAR, they can initiate a meeting to discuss priority issues like CBPP

**Mr. Hassen Belay (AU-PANVAC)**

- ✓ Mentioned the CBPP twining project b/n AHI and IZS as exemplary for other future twining programs.
- ✓ AU-PANVAC is can contribute a lot for the member countries by producing laboratory reagents if sources of funds are secured. Thereby, African Philanthropist may be one source.
- ✓ Explained AU-PANVAC is providing training which are demand driven (based on request) and by preparing training proposal and searching funds.





**Dr. Romano Marabelli (WOAH Advisor to General Director)**

- ✓ WOAH can support CBPP control using vaccination by availing budget to purchase vaccine and other reagents for CBPP diagnosis. Currently AMR, Rabies and PPR are also the priority disease control activities
- ✓ Slaughter house survey for CBPP surveillance and detection should be considered as a priority activity for member countries.
- ✓ This workshop can serve as a first step forward in planning future activities.
- ✓ Also stressed ERFAN is doing a great job which should be encouraged.
- ✓ Promised WOAH to help this kind of regional collaborations if they are properly prepared.

**Dr. Giacomo Migliorati (IZS Scientific Director)**

- ✓ Acknowledged AHI and IZS for the collaboration and share the opinions raised from the participant and stated the activities on CBPP should be performed in a sustainable manner.
- ✓ Member countries should identify their priority disease problems which will be an input for the future common collaboration.



Fig 11: Plenary Session/ Discussion

## **5. LABORATORY VISITING SESSION**

**The following laboratories and departments were visited and experience were shared**

- Sample Reception unit
- Bioinformatics Department
- Molecular Biology laboratory
- Viral Serology Laboratory
- Cell Culture Laboratory
- Bacterial Serology laboratory





- General Bacteriology Laboratory
- Rabies Diagnostic Laboratory
- BSL-3 Zoonotic Laboratory

### Points addressed during laboratory visit

- Main tasks of each laboratory and departments were elaborated
- How the activities of the laboratory are related to global, regional national agendas
- Capacities of the lab and the
- How each laboratory and department inter linked to each other
- As a reference laboratory, Activities that are provided for neighbouring countries and African countries were indicated.
- Information and data sharing b/n Sample reception unit and the labs were briefly explained.



Fig 12: AHI Laboratory Visit

## 6. LESSON LEARNT

- Collaboration and networking of different institutions of member countries should be strengthened
- Great attention should be given for Sustainability of activity
- The diagnostic part of CBPP should be supported with Research.
- Produce reagents and media for laboratory consumption was explained

## 7. WAY FORWARD

- ✓ AHI will develop a joint project with east African member countries on the enhancement of the diagnostic capacity of the CBPP in the region which plays a great role in the prevention and control of the disease. The joint project will mainly focus to fill the limitations on diagnostic capacity of the institutes that will be engaged in the member countries. Beside, experience sharing b/n institutes will be a tool in the improvement of diagnostic capacity. AHI epidemiology unit supports the project in the disease



surveillance and outbreak investigation activities. Regional organizations like AU-IBAR, PANVAC which are stakeholders in technical support as well as a potential source of funds for the region.

- ✓ ELISA commercial kits for CBPP are no more produced from the company. Consequently CFT will be the preferred test method for the future due to easiness of production of reagents at laboratory level. The directors of AHI and PANVAC will discuss for perusing the production of laboratory reagents for CFT.



### Annex: List of participants of the final meeting

Name	Organisation/ Position	Country	Email
Dr. Mariano Marabelli	WOAH expert, Advisor to the General Director	Italy	r.marabelli@woah.org
Dr. Giacomo Miglorati	IZS Teramo Scientific Director	Italy	
Dr. Massimo Scacchia	Project Focal Person (IZS Teramo)	Italy	m.scacchia@izs.it
Dr. Flavio Sacchini	IZS Teramo	Italy	f.sacchini@izs.it
Dr. Daniela Aveiramo	IZS Teramo	Italy	d.averaimo@izs.it
Dr. Anna Rose	Uganda CVO, WOAHA Delegate	Uganda	ademunrose@yahoo.co.uk
Prof. Hezron Nonga	Tanzania CVO, WOAHA Delegate	Tanzania	nongahezron@yahoo.co.uk
Mr. Afewerki Mehretab	Eritrea CVO Delegate	Eritrea	amehreteab72@gmail.com
Dr. Abdulkadir Abdi	Somalia CVO delegate)	Somalia	dooli1144@gmail.com
Dr. Agol Kut	South Sudan CVO, WOAHA Delegate	South Sudan	agol.malak@gmail.com
Dr. Tesfaye Rufael	AHI Director General	Ethiopia	director@ahi.gov.et
Dr. Getnet Abie	AHI, Deputy Director	Ethiopia	getnet.abie.mekonnen@gmail.com
Dr. Gizat Almaw	AHI, Microbiology Laboratory Lead executive	Ethiopia	gizatalm@yahoo.com



Dr. Biniam Tadesse	AHI, Project focal person,	Ethiopia	binimanu10@gmail.com
Mr. Teferi Benti	AHI, Bacterial Serology	Ethiopia	teferibenti58@gmail.com
Mr. Abdi Ahmed	AHI, General Bacteriology	Ethiopia	abdivet2014@gmail.com
Mr. Abebe Olani	AHI, General Bacteriology	Ethiopia	abebenaol@gmail.com
Dr. Matios Lakew	AHI, General Bacteriology	Ethiopia	<a href="mailto:matioslakew@gmail.com">matioslakew@gmail.com</a>
Dr. Redeat Belaineh	AHI , Biotechnology lab executive	Ethiopia	Red.tkbr@yahoo.com
Mr. Bayeta Senbeta	AHI , Biotechnology lab	Ethiopia	didigabruma@gmail.com
Mrs. Ayelech Muluneh	AHI , Viral Serology lab	Ethiopia	tesefayemulatu@yahoo.com
Mr. Abera Kebede	AHI, Capacity Building Department	Ethiopia	melatkeb@yahoo.com
Dr. Fasil Aklilu	AHI , Viral Serology lab	Ethiopia	fasil.aklilu@yahoo.com
Mr. Tesfaye Mulatu	AHI, Parasitology Lab	Ethiopia	tesefayemulatu@yahoo.com
Dr. Hagos Asgedom	AHI, Epidemiology Dep.	Ethiopia	haghad2012@yahoo.com
Dr. Garoma Dessa	AHI, Epidemiology Dep.	Ethiopia	garomadesa@yahoo.com
Mr. Ashebir Abebe	AHI, Epidemiology Dep.	Ethiopia	ashebir.abebe@gmail.com
Mr. Hassen Belay	AU-PANVAC	Ethiopia	
Mrs. Faben Getachew	Italian Cooperative Agency	Ethiopia	faben.getachew@aics.gov.it
Mr. Desta Gerba	AHI, Public relation communication	Ethiopia	<a href="mailto:ydestaemail@gmail.com">ydestaemail@gmail.com</a>