Food and Agriculture Organization of the United Nations

World Health Organization

World Organisation for Animal Health

National Bridging Workshop on the International Health Regulations (IHR) and the Performance of Veterinary Services (PVS) Pathway

16 - 19 November, 2021
Naivasha, Kenya

ACKNOWLEDGEMENT

The workshop was organized by the Kenya Ministry of Health and the Ministry of Agriculture, Livestock and Fisheries, the World Health Organization, the World Organisation for Animal Health and the United Nations Food and Agriculture Organization. The organizers hereby express their sincere gratitude to the government and people of Kenya for their support in the preparation and implementation of the workshop. Together with the participants they acknowledge the agencies that technically supported the meeting including the World Health Organization (WHO), Food and Agricultural Organization of the United Nations (FAO), World Organisation for Animal Health (WOAH) and the United Kingdom Health Security Agency (UK HSA). Financial support was received from the United States Defence Threat Reduction Agency (US DTRA)

TABLE OF CONTENTS

ABBREVIATIONS & ACRONYMS

AAR	After Action Review
AH	Animal Health
AMR	Antimicrobial Resistance
CA	County Assembly
CDC	Centers for Disease Control and Prevention (USA)
CECM	Chief Executive Committee, Member
CO	Chief Officer
CoG	Council of Governors
COHU	County One Health Unit
CS	Cabinet Secretary
DDSR	Division of Disease Surveillance & Response
DG	Director General
DSET	Diagnostic Services and Efficacy Trials
DVS	Director of Veterinary Services
EOC	Emergency Operating Center
FAO	Food and Agriculture Organization of the United Nations
FELTP	Field Epidemiology and Laboratory Training Program
FP	Focal Point
GHSA	Global Health Security Agenda
GIS	Global Implementation Solutions
HQ	Headquarters
IHR	International Health Regulations (2005)
IHRMEF	International Health Regulations Monitoring and Evaluation Framework
JEE	Joint External Evaluation
JEET	Joint External Evaluation Tool
JRA	Joint Risk Assessment
KEMRI	Kenya Medical Research Institute
KWS	Kenya Wildlife Service
LITS	Livestock Identification and Traceability System
MALFC	Ministry of Agriculture, Livestock, Fisheries and Cooperatives
MEF	Monitoring and Evaluation Framework
MERS-CoV	Middle East Respiratory Syndrome, Corona Virus
MOH	Ministry of Health
MoU	Memorandum of Understanding

NAPHS	National Action Plan for Health Security
NBW	National Bridging Workshop
NPHL	National Public Health Laboratory
OH	One Health
PH	Public Health
PHEOC	Public Health Emergency Operation Centre
PS MOH	Permanent Secretary, Ministry of Health
PS SDL	Permanent Secretary, State Department of Livestock
PVS	Performance of Veterinary Services
RCP	Risk Communication Plan
RRT	Rapid Response Team
SOP	Standard Operating Procedures
SPs	State parties
ToR	Terms of Reference
TWG	Technical Working Group
UK HSA	United Kingdom Health Security Agency
US DTRA	United States Defense Threat Reduction Agency
USAID	United States Agency for International Development
VEES	Veterinary Epidemiology and Economics Section
WB	World Bank
WHO	World Health Organization
WOAH	World Organisation for Animal Health
ZDU	Zoonotic Disease Unit

INTRODUCTION

Background

The health of humans and animals are interlinked. As such, there is a shared responsibility for collaboration between public and animal health sectors in their efforts to combat zoonotic diseases. The WHO, OIE and FAO have been active promoters and implementers of an inter-sectoral collaborative approach among institutions and systems to prevent, detect, and control diseases among animals and humans.

The WHO and OIE are the two main international organizations responsible for setting standards and guidelines for public health and animal health sectors. They have developed various frameworks, tools, and guidance material to strengthen the capacities at the national, regional, and global levels:

- WHO Member States adopted a legally binding framework (the International Health Regulations (IHR, 2005)) for events that may constitute a public health emergency of international concern. Through these regulations, States Parties (SPs) are required to develop, strengthen, and maintain minimum national core public health capacities to detect, assess, notify and respond to public health threats. As such, SPs should implement plans of action to develop and ensure these core capacities are present and functioning throughout their territories. WHO supports countries in their assessment of capacities through the IHR Monitoring and Evaluation Framework (IHRMEF) which includes inter alia a self-assessment tool for annual reporting to the World Health Assembly and a voluntary Joint External Evaluation Tool (JEET), with indicators of performance for predefined technical areas. Additional tools that are more specific are also available (e.g., laboratory assessment tools, Point of Entry monitoring tool etc.).

- The OIE is the international organization responsible for developing standards, guidelines and recommendations for animal health and zoonosis; these are mainly laid down in the OIE Terrestrial and Aquatic Animals Codes and Manuals. To achieve the sustainable improvement of national veterinary services' compliance with those standards, on the quality of veterinary services, the OIE has developed the Performance of Veterinary Services (PVS) Pathway, which is composed of different tools to assist countries to objectively assess and address the main weaknesses of their veterinary services. The tools include the initial PVS Evaluation (a qualitative assessment of level of compliance with standards on quality of veterinary services), the PVS Gap Analysis (PVS Costing Tool) (a qualitative and quantitative assessment of priorities and investments needed to address identified key gaps), the PVS Pathway Evaluation Follow-up (a consistent mechanism to monitor and evaluate progress of all PVS components), and tools within technical areas (e.g. laboratory assessment tools, veterinary legislation support programs).

Both the WHO IHRMEF and the OIE PVS Pathway approaches provide the ability for countries to determine strengths and weaknesses in their respective functions and activities and promote prioritization and pathways for improvement. Furthermore, they propose to engage the countries in a routine monitoring and follow up mechanism on the overall level of performance and help to determine the needs for compliance with internationally adopted references or standards.

The two organizations proposed this workshop to be conducted in the country to further explore possible overlapping areas between the two sectors when managing zoonotic events, identify synergies and gaps in coordination, and define opportunities for improved coordination. The results of this National Bridging Workshop (NBW) inform policy makers for operational planning and strategic investments, including through the National Action Plan for Global Health Security, as part of the national IHR action plan.

NBWs have been conducted in several countries now and have proven their value in helping countries in the development of their One Health approach. Trans-sectoral dialogue is often a challenge and is greatly facilitated when counterparts from the different sectors use tools and references, they are familiar with. Using IHR (2005) and the OIE frameworks as starting points ensure both sectors take ownership of results, use the strength of these regulatory frameworks, and make the necessary adjustments at the human-animal interface.

In Kenya:

- A 2nd PVS Evaluation Follow up Mission was conducted in February 2019
- PVS Gap Analysis mission was conducted in July 2011
- The Joint External Evaluation (JEE) mission was conducted between February to March 2017

OBJECTIVES OF THE WORKSHOP AND OUTCOMES

Main Objective

To provide an opportunity to the human and animal health sectors in Kenya to build on the respective sector-specific assessments conducted, explore options for improved coordination and jointly strengthen their preparedness for, and control of the spread of zoonotic diseases.

Strategic Objectives

Brainstorming: discuss the outcomes of IHR and PVS Pathway country assessments and identify ways to use the outputs.

Advancing One Health: improve dialogue, coordination, and collaboration between animal and human health sectors to strategically plan areas for joint action for synergistic approach to prevent, detect and control diseases.

Improving capacity: facilitate the identification of possible synergies on tools, approaches and strategies, through facilitated discussion on technical expertise, data, best practices, and resources.

Building sustainable networks: contribute to strengthen the inter-sectoral collaboration for disease prevention, detection, and surveillance, through improved understanding of respective roles and mandates.

Efficient external support: provide comprehensive and realistic information to inform investments project design and tailor the technical and financial support, aligning national priorities and strategies based on a structured need-based assessment complying with international standards.

Expected outcomes of the workshop include

1. Increased awareness and understanding on the IHR (2005) and the role of WHO, the mandate of the OIE, the IHRMEF and the OIE PVS Pathway, the differences, and connections.

2. Understanding of the contribution of the Veterinary Services in the implementation of the IHR (2005) and how the results of the PVS Pathway and IHRMEF can be used to explore strategic planning and capacity building needs.

3. A diagnosis of current strengths and weaknesses of the collaboration between the animal health and public health services.

4. Identification of practical next steps and activities for the development and implementation of a joint national roadmap to strengthen collaboration and coordination.

The agenda of the workshop is available in Annex 1. The meeting was attended by 65 participants from various sectors and institutions as shown in Annex 2.

Proceedings of the Workshop

The NBW on the IHR and the OIE PVS Pathway was held in Lake Naivasha Resort on 16th -19th November 2021. The workshop was attended by 65 participants who included representatives from the national human and animal health sectors as well as the environment sector. Specifically participants were from public health services, veterinary services, agriculture, environment services, representatives from WHO – HQ and AFRO, OIE – HQ and (sub-) regional offices, FAO regional offices, technical and financing partners (local or global) as observers including USAID, GIS and the UK HSA.

The workshop was facilitated by active participant involvement based on adult learning principles and methodology as well as table top simulation exercises (SIMEX). All participants received a Participant Handbook, which comprised all necessary information such as the objectives of the workshop, instructions for working groups, expected outcomes of each session, etc. Sessions were structured in a step-by-step process and are summarised in the figure below:

Figure 1: Key Steps to build the roadmap to One Health

OPENING SESSION

Dr. Mathew Muturi from the Kenya Zoonotic Disease Unit welcomed the participants. He set the climate by explaining the COVID-19 protocols to be followed during the meeting and lead the opening prayer. All the participants introduced themselves and mentioned their expectations for the workshop. Dr. Muturi then welcomed the representatives of the participating agencies seated at the high table including the WHO, FAO, OIE, DVS, MoH. He highlighted the importance of the workshop in gathering national experts from various sectors to operationalize the One Health approach in Kenya.

Opening remarks made by partners

1. Dr. Nollascus Ganda, National Professional Officer in charge of health emergencies at the WHO Kenya Country Office (WCO) reminded the workshop participants about the WHO's role in the global governance of health and disease through its core global functions of establishing, monitoring and enforcing international norms and standards, and coordinating multiple actors toward common goals. He emphasized that surveillance is the back-borne of all health.

2. Dr. Serge Nzietchueng spoke on behalf of the FAO He talked about the importance of the OH approach in Kenya and the important role of the NBW in building the capacity for OH implementation in Kenya.

3. Dr. Chadia Wannous spoke on behalf of the OIE. Her remarks were focused on the linkages between human and animal health and the need to work together.

4. Dr. Francis Kuria, the Director in charge of the Directorate of Disease Surveillance and Response spoke on behalf of the Director General, Ministry of Health. He emphasized the importance of collaboration in advancing the implementation of the OH approach.

5. The meeting was officially opened by the Director of Veterinary Services in Kenya: Dr. Obadiah Njagi. Dr. Njagi welcomed the participants and thanked all the partners for the support provided. He stated that "this meeting will set the groundwork leading to the establishment of the National One Health platform". He concluded by urging the participants to make the most of the workshop by coming up with strong objectives to be implemented jointly to strengthen the OH. He then declared the workshop officially open.

[1] 1-Setting the scene; 2-Identification of collaboration gaps; 3-IHR-PVS tools and their bridging; 4-Extraction of assessment results; 5-Joint road-planning; 6-Finalization of the joint roadmap; 7-Way forward

SESSION 1:THE ONE HEALTH CONCEPT AND NATIONAL PERSPECTIVES

Workshop objectives: Session 1 set the scene of the workshop by providing background information on the OH concept and the subsequent OIE-WHO collaboration. It was followed by comprehensive presentations from both ministries in charge of public and animal health Services on their respective structure and their experiences in responding to OH related challenges.

Movie 1 on Tripartite OH collaboration and vision: This highlighted the key principles in the Manhattan OH strategic framework, building a robust public and animal health system to improve response capacity and it explained the Tripartite concept.

Presentation on Public health services and One health: Dr. Athman Mwatondo
Dr. Mwatondo gave a talk on the Kenya Human Health services. He also expounded on devolution of the health services at county and national levels and the level of care at the community, primary health facilities, county level and national level.

Presentation on the Veterinary Services and One health: Dr. David Mwangangi,
Dr. Mwangangi, a Deputy Director at the DVS, presented a summary of the organizational structure of the DVS and the various divisions, its mandate, strategic objectives and legal frameworks. He elaborated on the priority diseases in the sector, the ongoing animal health control programs, partners in collaboration and area of priority at the DVS.

Institutionalization of One Health: Dr. Mathew Muturi extrapolated on the successes and challenges experienced in the implementation of One Health in Kenya.

Figure 2: Dr. Muturi summarizing the implementation of OH in Kenya

Movie 2: Driving successful interactions- this documentary provided concrete worldwide examples of fruitful intersectoral collaboration, showing how the two sectors share a lot in terms of approaches, references and strategic views.

Plenary session: discussions on inclusion of neglected and emerging diseases such as MERS-CoV among priority zoonotic diseases. How to collaborate at the national level through forming TWGs and having collaborative and complementary roles. How to manage external and local agendas through prioritizing diseases of high risk jointly. Management of funds allocated to ZDU.

Outcomes of Session I

At the end of the session, the audience agreed that:

- Inter-sectoral collaboration between animal and human health sectors happens, but mainly during outbreaks; with a better preparedness, much more could be done at the human-animal interface.
- The two sectors have common concerns and challenges and conduct similar activities. Competencies exist and can be pooled. This needs to be organized through a collaborative approach.
- WHO, OIE and FAO are active promoters of One Health and can provide technical assistance to countries to help enhance inter-sectoral collaboration at the central, local and technical levels.

SESSION 2: NAVIGATING THE ROAD TO ONE HEALTH – WORKING

Participants were divided randomly in 4 working groups and provided an opportunity to work on the presented concepts. Each group national and county representatives from both sectors and focused on a fictitious disease scenario, relevant to the country's context. Each group handled one case scenario: Rabies, Anthrax, Brucellosis and Rift Valley Fever (Table 1)

Table 1: Scenarios used for the different case studies

Rabies (note: this case is entirely fictitious) A stray dog that was known to have bitten two cows and was behaving aggressively towards people was reported to have also bitten some children in the same neighbourhood. It was killed by the community in Kisumu two days later. Unfortunately, the carcass of the dog, cannot be located to facilitate Veterinary investigation. However, one of the children bitten by the dog is currently admitted at JMOORH level five Hospital with neurological symptoms.
Rift Valley Fever (note: this case is entirely fictitious) Two persons were admitted to Wajir Hospital with headache, fever, muscle aches and jaundice. Laboratory testing by RT-PCR was positive for Rift Valley Fever virus. One of the patients is a commercial farmer who is regularly involved in the transboundary livestock trade between Somalia and Kenya. The other patients reported having visited the same rural market.
Brucellosis (note: this case is entirely fictitious) Three goats, all belonging to a small ruminant farmer in Kitui, had abortions. At the first two abortions, the farmer did not bother to report the problem to his local veterinary officer as his farm was too far away from the District Veterinary Office. In parallel, seven persons from the same village have developed clinical signs of headaches, fever and muscle cramps. As a result, two of them were hospitalized, and laboratory testing confirmed that they were infected by Brucella melitensis.
Anthrax (note: this case is entirely fictitious) At least 60 people who allegedly consumed uninspected meat in Nakuru County have been screened for anthrax. The victims, including backyard slaughterers, were rushed to the primary healthcare centre after they developed symptoms associated with anthrax and cutaneous lesions. The man who sold the uninspected meat disappeared after learning that his neighbours had fallen sick. Episodes of sudden death in cattle were also reported in the vicinity.

Using diagrammatic arrows to represent the progression of the situation, the groups identified joint activities and areas of potential collaboration and assessed their current functionality using one of three color-coded cards (green, orange, red). Based on the colour choices for the functionality, at least two reasons were provided.

Output: For each disease, the performance of the collaboration between the human health and the animal health sectors were color-coded green for "good collaboration", **orange** for "some collaboration", and **red** for "collaboration needing improvement". The score uses a semi-quantitative scale (2 points for a red card, 1 for a yellow card and 0 for a green card). Technical areas marked in bold were selected and addressed in-depth throughout the rest of the workshop.

Figure 3a Results for the evaluation made by the working groups, level of collaboration for 15 technical areas from each case study scenario: Rift Valley fever, rabies, brucellosis and anthrax

Figure 3b: Participants working in groups to assess the level of collaboration among the relevant sectors.

Figure3c: Prof. Dilys guiding the group on navigating the road to One Health

During an ensuing plenary session, each group presented and justified the results of their work in **Output 1** which summarized the results from the four groups with the contributions of all the participants. The groups also further discussed the reasons given for each of the level selected **(Output 2).**

Outcomes of Session 2

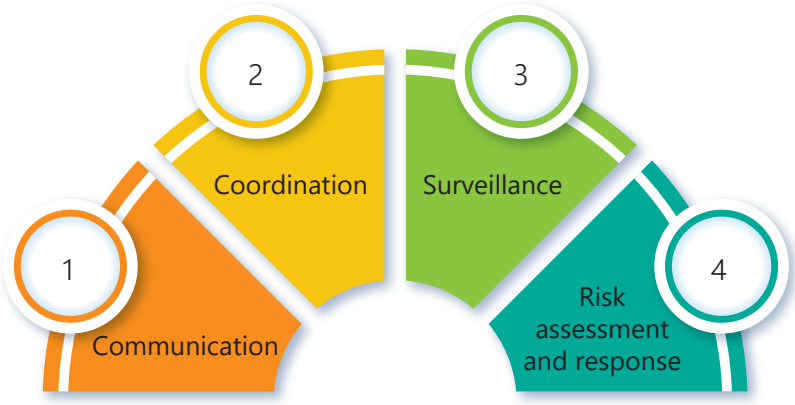
- Areas of collaboration were identified, and joint activities discussed.
- Level of collaboration between the two sectors for 15 key technical areas was assessed.
- The main gaps in the collaboration were identified.

SESSION 3: BRIDGES ALONG THE ROAD TO ONE HEALTH

In this session, a series of documentary videos introduced the international legal frameworks, followed by human health (IHR, 2005) and animal health (OIE standards) as well as tools available to assess the country's capacities: the IHR MEF in particular the JEE and the OIE PVS Pathway of the Veterinary Services. The differences and convergences between these operational tools were explained. A large matrix (IHR-PVS matrix), cross-connecting the indicators of the IHR MEF (in rows) and the indicators of the PVS Evaluation (in columns) was introduced to participants. Through an interactive approach, representatives from each working group were invited to plot their technical area cards onto the matrix by matching them to their corresponding indicators. A plenary discussion of the outcomes enabled participants to map and visualize the main gaps identified in each key technical area cards (surveillance, field investigation, risk communication, coordination, etc.) (Figure 4).

Figure 4: Dr. Muturi explaining the use of the giant IHR-PVS matrix in mapping the level of collaboration (strength and weakness) for 15 technical areas

The mapping enabled participants to better visualize and identify specific technical areas to improve collaboration, and it was agreed that the rest of the workshop would focus on the following priorities thematic areas:



Outcomes of Session 3

- Understanding that tools are available to explore operational capacities in each of the sectors.
- Understanding of the contribution of the veterinary sector to the IHR.
- Understanding of the bridges between the IHRMEF and the PVS Pathway. Reviewing together the results of capacities assessment may help in identifying synergies and optimize collaboration.
- Understanding that most gaps identified are not disease-specific but systemic.
- Identification of the technical areas to focus on during the next sessions.

SESSION 4: EXTRACTION OF ASSESSMENT RESULTS

This session used the IHR/PVS giant matrix which helped to make a link between the identified gaps and the corresponding IHRMEF and PVS Pathway indicators. It provided an opportunity to share views and outputs resulting from the country assessments conducted in the animal health and public health sectors, particularly on the main gaps identified on the matrix. This exercise enabled to explore the improvement plans already proposed in the respective assessments and identify what can be synergised and improved jointly (Figure 5).

Figure 5: The group working on technical area Communication to extract the main weaknesses and recommendations from JEE and PVS reports.

Outcomes of Session 4

- Good understanding of the assessment reports for both sectors, their purpose and their structure.
- Main gaps relevant to each technical area were extracted.
- Main recommendations from existing reports were extracted.
- A common understanding of the effort needed started to emerge.

SESSION 5: JOINT ROAD PLANNING (Vision and Strategic Actions)

Using the same working group as for the session 4, participants were asked to identify, for each technical area, a maximum of three objectives to improve the intersectoral collaboration. For each objective, they fill a table of Activity Cards, detailing specific joint activities, their dates of expected implementation, difficulty of implementation and the expected impact, the focal points responsible, and the implementation process (Figure 6). Additionally, the difficulty of implementation and the expected impact of each activity were evaluated using red and blue stickers respectively and a semi-quantitative scale (1 to 3).

Figure 6: The group working on the technical area "Communication" identified three objectives and practical activities to improve the collaboration between the human and animal health sectors

Outcomes of Session 5

- Clear and achievable joint activities were identified to improve inter-sectoral collaboration between the two sectors for all technical areas selected.
- For each activity, the impact, difficulty (cost), timeline, focal points and process of implementation have been identified.

SESSION 6: FINALIZATION OF THE JOINT ROAD-MAP

A World Café exercise was organised in a form of a plenary session, to contribute to the action points of all technical areas. Due to COVID-19 situation and in order to avoid sanitary risks, the methodology was adapted and instead of having participants rotating and leaving post-it notes, a "digital" world café methodology was used to enable participants to contribute to all technical areas to consolidate the joint-roadmap by harmonizing all concrete and achievable activities.

Each objective and corresponding activities were reviewed and discussed during a plenary session.

Participants were given approximately 45 minutes to address the comments and suggestions made, and this has provided all participants with the opportunity to read, comment and make suggestions to the activities proposed to improve inter-sectoral collaboration. The final joint roadmap is fully detailed in **Output 2.**

In summary, the following comments were made for each group:

Coordination group:

- Objective 1: include terms of reference for the One Health units, timelines for the establishment of One Health units is too short. Clarification was sort on the process of establishing a directorate. It was recommended to specify institutions responsible and the lead institution.
- Objective 2: information sharing is better alternative. Develop mechanisms for data sharing and management.

Communication group:

- Objective 1: suggestions to replace multi-sectoral with One Health risk communication plan, include development of structures in risk communication training as part of the process.
- Objective 2: suggestion-Media stakeholders' sensitization was a broader term, which is all-inclusive. Include policy makers as well.
- Objective 3: suggestions-instead of 10 counties, cluster the counties into blocks and specify in the process as a cascaded training (ToTs) to target reaching the whole country. Include the community in the activities

Surveillance group:

- Objective 1: may fit better in the coordination group. So as not to leave out other sectors, use the word "relevant sectors" through-out and include other players as responsible parties.
- Objective 2: instead of developing a new system, consider relational database that is interoperable and take advantage of already existing data platforms instead of developing a new one and include dashboard.
- Objective 3: consider using in house expertise instead of a consultant.

Response group:

- Objective 1: remove the Tripartite partners and include other players specifying the divisions.
- Objective 2: for the Multi-sectoral Rapid Response Teams (RRTs) ensure that it is a cascade activity to the whole country.
- Objective 3: there are already existing SOPs and procedures, so clarify the activity to bring out aspects of inclusion on of the animal health sector.

Prioritization of Objectives

Due to COVID-19 situation and in order to avoid sanitary risks, an online or digital voting system was developed/piloted. The voting was done using a Google form, and a total of 47 responses were received. The participants were expected to vote for the top 5 objectives that they considered as of highest priority **(Output 3).**

Outcomes of Session 6

- Harmonized, concrete and achievable joint roadmap to improve the collaboration between the animal, environmental, and human health sectors in the prevention, detection and response to zoonotic disease outbreaks.
- Buy-in and ownership of all participants who contributed to all areas of the roadmap.
- Prioritization of the objectives and corresponding activities.

SESSION 7: WAY FORWARD AND CLOSING SESSION

The last session drew the way forward by identifying the next steps and by inscribing the developed roadmap into other mandated plans such as the National Action Plan for Health Security (NAPHS). The needs from the country were addressed depending on the status of the country in terms of IHR-MEF and on the level of One Health capacity by engaging participants in constructive discussions on various challenges relating to the proposed current national One Health platform (Figure 7).

The five objectives were:

1. To have in place a robust risk analysis framework with competencies in Joint Risk Assessment
2. To set up an operational framework for OH surveillance in the country between the animal and human health sectors
3. To enhance the capacity for improved response to events requiring a OH approach
4. Establish and operationalize a national OH Directorate domiciled at the office of the President
5. To harmonize risk communication among relevant line agencies involved in disease management

Outcomes of Session 7

- Linkages with NAPHS.
- Identification of immediate and practical next steps.
- Identification of opportunities for other components of the IHRMEF

CLOSING SESSION

Dr. Daniel Lang'at on behalf of the Director General, Ministry of Health.

Dr. Langat commended the participants for attending the workshop and making the same very interactive. He was confident that the road map will be used to enhance the One Health collaborations and strengthen the various Ministries. He wished all a safe journey home as they continue deliberating on the exercises done and the outputs. He thereafter closed the workshop.

Dr. Lang'at officially closing the workshop

WORKSHOP OUTPUTS

Output 1: Assessment Of Levels Of Collaboration For 15 Key Technical Areas

Technical area(Cards)	Card No	RVF	Rabies	Brucellosis	Anthrax	Score
Cordination at high level	1	0	0	2	0	0
Cordination at local level	2	1	2	2	1	6
Cordination at technical level	3	0	1	2	0	3
Legislation/Regulation	4	1	1	2	1	5
Finance	5	2	2	2	2	8
Commucation w/media	6	0	1	2	1	4
Commucation w/stakeholders	7	1	2	2	1	6
Field Investigation	8	1	1	2	1	5
Risk assessment	9	1	2	2	1	6
Joint surveillance	10	0	1	1	1	3
Labaratory	11	0	1	1	1	3
Response	12	0	2	2	1	5
Education and training	13	1	1	1	1	4
Emergency funding	14	2	2	2	2	8
Human resources	15	0	2	1	1	4

Key

2

1

0

For each disease, the performance of the collaboration between the human health and the animal health sectors is color-coded: green for "good collaboration", yellow for "some collaboration", and red for "collaboration needing improvement". The score uses a semi-quantitative scale (2 points for a red card, 1 for a yellow card and 0 for a green card). Technical areas marked in bold were selected and addressed in-depth throughout the rest of the workshop.

Output 2: Objectives and actions identified per technical area-coordination

Difficulty of implementation in relation to cost: Low +, Moderate ++, Very high costs +++
Impact: Low impact +, Moderate impact ++, High impact +++

Activities	Date	Cost	Impact	Responsible	Process
COORDINATION					
Objective 1: Establish and operationalize a national One Health Directorate domiciled at the office of the President					
1.1. Establish and operationalize a national One Health directorate domiciled at the office of the president	Feb 2023	+	+++	PS MOH PS SDL PS Environment ZDU	• Establish a OH joint steering committee (OHJSC) • Establish a OH joint secretariat (OHJS) • Develop TOR for the OHJS • Convene a Planning meeting of the OHJS
1.2. Strengthen, establish and operationalize a County OH Units/committees	June 2022	++	+++	CoG Intergovern mental forum DG- MOH DVS CECM	• Establish procedures to promote One Health approach at the county • Sensitize County policy makers on One Health • Form and train County One Health Units (COHUs) • Advocate for appointment of OH focal persons by Counties • Sensitize the County OH focal persons • Hold annual regional review meetings for COHUs

Activities	Date	Cost	Impact	Responsible	Process
1.3. Coordinate joint OH response activities including Zoonotic diseases, food safety, AMR, chemical and environmental hazards	Start Feb 2022	+++	+++	ZDU County OH committee	• Conduct training for joint rapid response teams (National and County) • Develop a repository and database for all OH events • Conduct after action review for major OH events • Participate in cross –border OH simulation exercises
1.4. Engage COG to get support for OH approach	Feb 2022	+	++	COG Intergovern mental forum DG- MOH DVS CECM	• Develop advocacy material • Convene a meeting with CoG • Convene meetings with the relevant CECM/Cos
Objective 2: Strengthen linkages of OH data across all sectors					
2.1. Establish mechanisms for information sharing between human, animal and environmental health sectors at National and County levels	Feb 2022	++	+++	DG- MOH DVS CECM	• Develop advocacy material • Convene a meeting with CoG • Convene meetings with the relevant CECM/Cos

Output 5: Objectives and actions identified per technical area-communication

Activities	Date	Cost	Impact	Responsible	Process
COMMUNICATION					
Objective 1: To harmonize risk communication among relevant line agencies involved in disease management(activity 1,3)					
1.1. Develop national multi-sectorial risk communication plan	By 2022 December	+	+++	ZDU	• Conduct a situation analysis • Stakeholder engagement • Develop draft Risk communication plan(RCP) • Validate the RCP • Launch and implement the plan
1.2. Develop MoUs with relevant stakeholders to establish communication channels on matters of one health	By 2022 December	+	+++	ZDU	• Conduct stake holder mapping • Hold a stakeholder workshop • Draft/Revise MOU • Validate and sign
Objective 2. To develop capacity in risk communication skills among relevant stakeholders(2,4)					
2.1. Conduct training on risk communication	2023 December	++	+++	ZDU	• Conduct training needs assessments among technical communication officers to national and subnational levels on risk communication • Conduct a national training of trainers (TOT ten technical staff) on risk communication • Conduct training of two technical officers per county on risk communication

Activities	Date	Cost	Impact	Responsible	Process
2.2 Conduct sensitization of media on risk communication	Dec 2022	+	+++	MOH/MALFC communication departments	• Map all media entities • Conduct a needs assessment • Conduct 3 sensitization meetings targeting both print and electronic media • Develop structures for the training
Objective 3. To enhance community based information sharing(5,6)					
3.1. Conduct sensitization meetings on risk communication in order to enhance inter-county information sharing	December 2023	++	+++	MOH/MALFC communication departments	• Conduct 2 meetings targeting COG committees for health, agriculture and environment • Conduct 1 meeting targeting county assembly forum
3.2. Conduct ten sensitization meeting with local community leaders	December 2023	++	+++	MOH/MALFC communication departments	• Identify 10 high risk counties on zoonotic diseases and AMR • Stakeholder meetings • Develop materials for sensitization • Conduct 10 sensitization meetings • Include the community in the activities

Activities	Date	Cost	Impact	Responsible	Process
SURVEILLANCE					
Objective 1: To strengthen coordination mechanisms and funding for joint surveillance in all relevant sectors					
1.1. Establish and operationalize COHUs in all the 47 counties	December 2024	++	+++	ZDU	• Conduct baseline assessment • Develop MoUs between line departments/ministries • Signing of MoUs • Develop TORs • Conduct Sensitization meetings for county leadership • Roll out OH trainings amongst the technical county officers • Monitor and evaluate progress
1.2 Establish an annual platform for engagement with relevant county leadership (CECM, CO, CS, COG, CA, Community and relevant national and international agencies) on resource allocation for joint surveillance (before commencement of budget cycle).	At the start of every budget cycle (January-March).	+	+++	ZDU	• Organize an advocacy meeting
1.3. Develop and submit at least two quarterly funding proposals for joint surveillance activities	End of Every Quarter	+	+++	ZDU	• Develop concept note • Internal validation • Submit to the identified partner • Follow up.

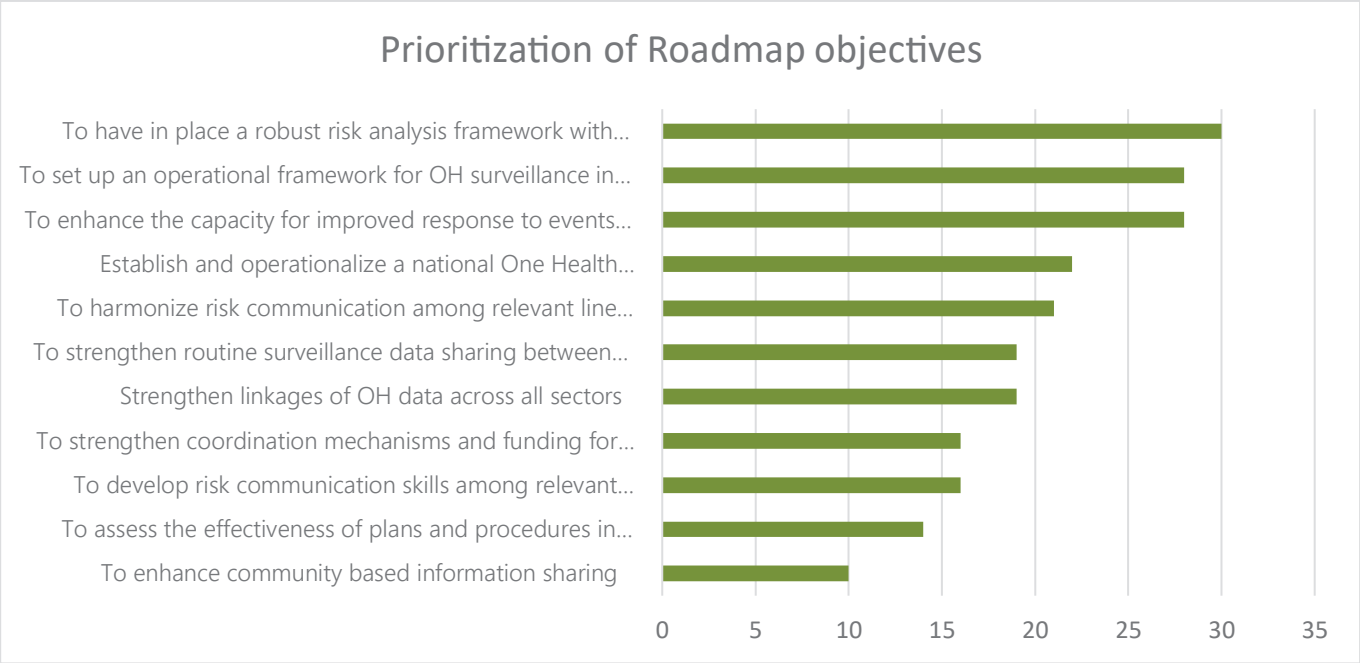
Activities	Date	Cost	Impact	Responsible	Process
Objective 2. To strengthen routine surveillance data sharing between the relevant sectors					
2.1. Develop relational database that is interoperable to enhance data sharing across the existing surveillance systems in the relevant sectors	December 2024	++	+++	ZDU	• Conduct consultative meetings to present requirements • Leverage on already existing data platforms • Identify and engage an IT developer • Develop a prototype • Conduct validation (hackathon validation) • Include development of the dashboard • Deployment
Objective 3. To set up an operational framework for OH surveillance in the country between the relevant sectors					
3.1. Develop a joint food safety surveillance protocol	December 2022	++	+++	ZDU,DIVISION OF ENVIRONMENTAL HEALTH (LEAD), DVS-VEES (LITS)	• Consultative meetings • Engage a consultant • Validate the protocol
3.2. Develop a One Health data sharing protocol to strengthen information sharing among the relevant sectors	December 2024	++	+++	ZDU, DIVISION OF HEALTH INFORMATICS, DVS-VEES, SDL-ICT	• Consultative meetings • Engage a consultant • Validate the protocol
3.3. Develop a harmonized sample referral protocol	JUNE 2023	+	++	ZDU, DVS-DSET, NPHLS	• Consultative meetings • Develop draft protocol • Validate the protocol

Activities	Date	Cost	Impact	Responsible	Process
RISK ASSESSMENT AND RESPONSE					
Objective 1: To have in place a robust risk analysis framework with competencies in JRA					
1.1. Develop a structured One Health risk analysis guidelines (hazard identification, risk assessment, risk management and risk communication)	Dec 2022	++	+++	ZDU, DG, Health (DDSR) DVS (VEES)	• Identify relevant stakeholders • Map existing capacity • Establish a TWG of 10 subject matter specialists • Engage a consultant for technical assistance to develop the structured RA guidelines • Validation and adoption of the Risk Assessment guidelines
1.2. Conduct a sub-national Joint Risk Assessment training for 3 priority zoonotic and food-borne diseases	Dec 2022	++	++	ZDU DG, Health (DDSR) DVS (VEES)	• Identify relevant experts from the relevant departments • Conduct a JRA training/ operationalization workshop at sub-national level • Carry out an Evaluation
Objective 2: To enhance the capacity for improved response to events requiring a one health approach					
2.1. Map and produce a database of specialist staff available for one health response and surge capacity annually	June 2022	+	++	ZDU & PHEOC	• Establish a TWG to develop a database of available personnel • Identify the expertise available and what skills they have

Activities	Date	Cost	Impact	Responsible	Process
2.2. Set up a non-disease specific (Generic) national and county multi-sectoral Rapid Response Teams (RRTs)	June 2022	+	++	ZDU	• Identify animal and human health personnel with appropriate skills along with support staff • Train the teams • Provide the appropriate resources
2.3. Conduct a joint training on One Health outbreak investigation and response	August 2022	++	++	DVS, DG Health (ZDU)	• Update the existing One Health curriculum • Develop a training plan for animal and human health personnel • Identify and engage trainers • Conduct a training workshop(s) at sub-national level
Objective 3: To assess the effectiveness of plans and procedures in place to respond to events requiring a One Health approach					
3.1. Review existing Public Health Emergency Operations Center (PHEOC) procedures, plans, guidelines and SOPs to ensure a one health approach	June 2022	+	++	ZDU, PHEOC	• Identify procedures, guidelines and SOPs to be reviewed • Identify human and animal health specialists to review to ensure animal health experts are represented
3.2. Conduct a national and subnational One Health table top simulation exercise on a zoonotic disease every year to test contingency plan and procedures in place	Dec 2022	++	++	ZDU, PHEOC, WHO, FAO	• Identify simulation coordinators/facilitator • Develop scenario and content for simulation • Identify participants & trainers • Conduct the table simulation exercise
3.3. Conduct a joint After Action Review (AAR) following the completion of a simulation exercise	Dec 2022	++	+	ZDU, PHEOC	• Identify One Health experts to facilitate the AAR • Conduct AAR • Report writing

Output 3: Prioritization Results

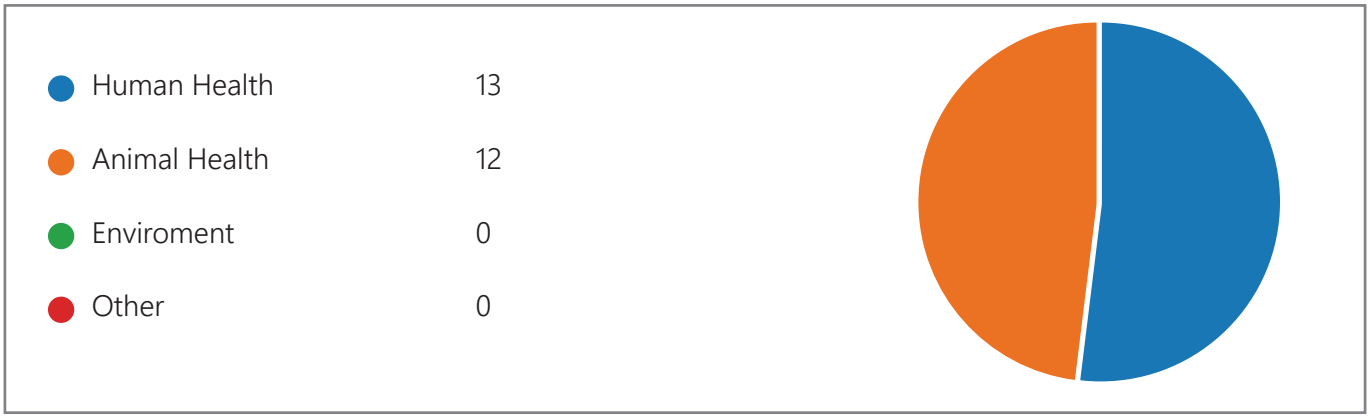
All participants were asked to select which five objectives of the 11 objectives they considered of highest priority. Total of 47 participants contributed to the vote.



Graphical presentation of the prioritized objectives for prioritization

WORKSHOP EVALUATION

An online evaluation questionnaire was piloted due to COVID 19 where the original methodology was adapted. It was completed by 25 participants in order to collect feedback on the relevance and utility of the workshop. There was a good representation of members from the human and animal sectors with none from the environment with majority from the national level as shown in figures below;



Overall, the workshop was rated highly with all respondents answered that they were "satisfied" or "fully satisfied" with the content, the structure, the facilitation and the organization of the workshop, see tables below;

Workshop evaluation	Satisfied' or 'Fully satisfied'
Overall assessment	100%
Content	100%
Structure / format	96%
Facilitators	88%
Organization (venue, logistics...)	100%

Participants had to choose between 1=Highly unsatisfied – 2=Unsatisfied – 3=Satisfied – 4=Highly satisfied

Impact on	'Significant impact' or Highest' impact
Your technical knowledge	100%
The work of your unit	100%
AH-PH collaboration in country	100%

Participants had to select between 1=No impact at all – 2=Minor impact – 3=Significant impact – 4=Major impact

Satisfied' or 'Fully satisfied'						
Session 1	Session 2	Session 3	Session 4	Session 5	Session 6	Session 7
100%	100%	100%	100%	100%	100%	100%

Participants had to choose between 1=Highly unsatisfied – 2=Unsatisfied – 3=Satisfied – 4=Highly satisfied

Would you recommend this workshop to other countries?	
Absolutely	100%
Probably	0%
Likely not	0%
No	0%

APPENDIX

Annex 1: Workshop Agenda

WHO-OIE IHR-PVS National Bridging Workshop	
DAY 1	
08:30 – 09.00	Registration of participants
09.00 – 10.00	**Opening Ceremony** • Representative of the Ministries - Public Health + Agriculture (20') • Regional Representative of WHO + OIE +FAO etc. (20') • Introduction of participants (10') • Group Photo(10')
09.00 – 10.00	**Session 1: Workshop Objectives and National Perspectives** Session 1 sets the scene of the workshop by providing background information on the One Health concept and the subsequent OIE-WHO collaboration. It is followed by comprehensive presentations from both Ministries in charge of public and animal health services on their respective structure and their experiences in responding to One Health related challenges. A second documentary provides concrete worldwide examples of fruitful intersectoral collaboration, showing how the two sectors share a lot in terms of approaches, references and strategic views.
	• MOVIE 1: Tripartite One Health collaboration and vision (10') Coffee break (20') • Veterinary Services and One Health – PPT (15') • Public Health Services and One Health – PPT (15') • Workshop approach and methodology – PPT (10') • MOVIE 2: Driving successful interactions - Movie (20')
	Lunch (12:00-13:30)
13.30 – 17.00	**Session 2: Navigating the road to One Health (Working Groups)** Session 2 divides participants in working groups and provides an opportunity to work on the presented concepts. Each group will have central and provincial representatives from both sectors and will focus on a fictitious disease scenario, relevant to the country's context. Using diagrammatic arrows to represent the progression of the situation, groups will identify joint activities and areas of collaboration and assess their current functionality using one of three color-coded cards (green, orange, red).
	• Presentation and organization of the working group exercise – PPT (15') • Case study - Working groups by disease (90') • Restitution (75')
Expected outcomes of Sessions 1 and 2: • Understanding of the concept of One Health, its history, its frameworks and its benefits • Understanding that a lot of areas for discussion and possible improvements do exist and can be operational - not only conceptual • Collaboration gaps identified for each disease	

DAY 2	
08:45 – 9:00	Feedback from day 1
09.00 – 10.00	**Session 3: Bridges along the road to One Health** Session 3 presents the tools from both sectors (IHR MEF, JEE, PVS) and uses an interactive approach to map the joint areas and activities identified for each case study onto a giant magnetic matrix consisting of the indicators of the IHR MEF and of the PVS Pathway. This process will enable participants to visualize the main gaps identified in each essential capacities (surveillance, field investigation, risk communication, coordination, etc).
	• MOVIE 3: Tools for human health (15') • Presentation on IHR/JEE results (15') • MOVIE 4: Tools for animal health (15') • Presentation on PVS results (15') • MOVIE 5: Bridging the tools (10') • Mapping gaps on the IHR/PVS matrix + Coffee break (60') • Discussion – Plenary (20')
Expected outcomes of Sessions 3: • Understanding that frameworks exist, they position the work at the human-animal interface in a strategic / politic agenda and have a real potential to facilitate engagement in the discussion • Understanding that assessment tools exist and can be beneficially used • Understanding that most of the gaps identified are not disease-specific, but systemic • Identification of technical areas that most require an improvement in intersectoral collaboration	
Lunch (12:00-13:00)	
13:00 - 15:00	**Session 4: Crossroads - IHR MEF, JEE and PVS Pathway reports (Working groups)** The use of the IHR/PVS matrix helps to make a link between the identified gaps and the corresponding IHR MEF and PVS Pathway indicators. Session 5 provides an opportunity to share views and outputs resulting from the country assessments conducted in the animal health and public health sectors, particularly on the main gaps identified on the matrix. This exercise enables to explore the improvement plans already proposed in the respective assessments and identify what can be synergized and improved jointly.
	• Presentation and organization of the working group exercise (15') • Extract main results from the PVS and IHR reports (including the JEE), in relation to gaps identified on the matrix and review what has been proposed in the NAPHS (90')
Expected outcomes of Sessions 4: • The existing strategies discussed in the IHR action plans and in the PVS pathway are shared and discussed • A common understanding of the effort needed starts to emerge • Understanding that there is a political momentum and this should be used as an opportunity to build synergies and fill identified gaps	
15:00–17:30	**Session 5: Vision and strategic actions (Working groups)** Participants will be divided into working groups by technical topic (surveillance, investigation, communication, coordination, etc) and work together on addressing the gaps previously identified. The aim is to use the results obtained from the case studies in Session 2 and from the assessment reports as support for the development of a joint action plan highlighting complementarities of actions, pooling of resources, realistic timeframes and identifying the main needs as well as constrains that can be expected. Participants will be provided with a template for the reporting.
	• Presentation and organization of the working group exercise (15') • Objectives and Activities (Working groups by technical topic) (120')

DAY 3	
09:30 – 14:00	Feedback from day 2
	Session 5: Vision and strategic actions (Working groups continued) • Objectives and Activities (Working groups by technical topic) (120′)
Lunch (14:00-15:00)	
15:30 - 16:30	**Session 6: Fine-tuning the roadmaps** The objective of Session 6 is to have all participants contribute to all technical areas and to consolidate the joint-road map by making sure it is harmonized, concrete and achievable.
	• Collective assessment of priority and feasibility levels (10′) • Prioritization of actions points (10′) • Next steps (integrating the action points into the IHR-MEF process) (20′) • Possible contributions of international partners
	Closing Session 7 • Presentation of the final roadmap (20′) • Presentation of countries' experiences: Mozambique, and Kenya • Presentation of the Multisectoral Coordination Mechanism (MCM) • Presentation of Sub-regional activities and One Health initiatives (WAHO) • Evaluation of the workshop (20′) • Closing ceremony (45′) • Way forward

Annex 2: Participants list for the IHR-PVS National Bridging Workshop (NBW) 16-19 November 2021 Lake Naivasha Resort

S.NO	NAME	ORGANIZATION	EMAIL ADDRESS
Facilitators (F), trainee facilitators (TF) and observers (O)			
1	Serge Nzietchueng	FAO (F)	serge.nzietchuengo@fao.org
2	Kazuki Shimizu	WHO (TF)	shimizuk@who.int
3	Chadia Wannous	OIE (F)	c.wannous@oie.int
4	Osman Dar	UK HSA (F)	osman.dr@phe.gor.uk
5	Jayne Tusiime	WHO (TF)	tusiimej@who.int
6	Mario Algüerno	OIE (TF)	m.alguerno@oie.int
7	Tieble Traore	WHO (F)	traore@who.int
8	Dilys Morgan	UK HSA(F)	Dilys.Morgan@phe.gov.uk
9	Nolluscus Ganda	WHO (TF)	gandan@who.int
10	Athman Mwatondo	MOH/ZDU (TF)	amwatondo@yahoo.com
11	Mathew Muturi	DVS/ZDU (F)	muturimathew@gmail.com
12	Mark Nanyingi	FAO (TF)	mark.nanyingi@fao.org
13	Khadija Chepkorir	DVS/ZDU (TF)	drkhadijachep@gmail.com
14	Masika Sophie	DVS/VEES (TF)	masikasophie10@gmail.com
15	Andrew G. Thaiyah	USAID (O)	athaiyah@usaid.org
16	Mathew Mutiiria	MOH (TF)	mathewmutiiria@gmail.com
17	Elkanah Otiang'	GIS(O)	eotiang@giswirdwide.org
Participants			
18	Kahariri Samuel	DVS	drkahariri@gmail.com
19	Paul O. Oyieko	DVS	drpaulodhiambo@gmail.com
20	Kizito Lubano	KEMRI	lkiuto@kemri.org
21	Gathogo Stephen	DVS	gathogostephen@yahoo.com
22	Lekopien Argen	ZDU	leergezoia@gmail.com
23	George Ougo	MOH	georgeougo@gmail.com
24	Wilson Kuria	DVS	wilkur46@gmail.com
25	Jane Njuguna	DVS	janegatanga@yahoo.com
26	Maurice O. Owiny	FELTP	mowiny@feltp.or.ke
27	Titus Kaitho	KWS	tkaitho@gmail.com

Participants			
28	Mukami Ruoro	KWS	mukamiruoro@gmail.com
29	Osman Dar	UK HAS	osman.dr@phe.gor.uk
30	George Njogu	DVS	njorogen2003@yahoo.com
31	Peris Ngechu	DVS	perisngechu72@gmail.com
32	Agnes Kithinji	(MOH)	akmbuki@gmail.com
33	Timothy Mutugi	Meru County	Muttim777@gmail.com
34	Otieno Owino	CDVS Siaya	otienoowino75@gmail.com
35	Ruth Manase	DVS	ruthlinn25@yahoo.com
36	Jackson Njoroge	DDSR/MOH	Jknjoroge2009@gmail.com
37	Damaris Mwololo	DVS	damarismwololo@gmail.com
38	Benson O. Adul	DVS	adul1039@gmail.com
39	Josephat Maina	MOH	jkimaina@gmail.com
40	Daniel Chepkwony	ZDU	chepdan82@gmail.com
41	Mathew Mutiiria	MOH (ZDU)	mathewmutiiria@gmail.com
42	Eunice A. Oreri	MOH-SIAYA	euniceoren@yahoo.com
43	Annastacia K. Muange	MOH	annastaciamuange@gmail.com
44	Samuel Njenga	MOH	drknjenga@yahoo.com
45	Obadiah N.Njagi	DVS	infodvs@kilimo.go.ke
46	Francis Maweu	DVS	francismaweu1976@gmail.com
47	Danson M. Mwangi	MOH	dmwendia@gmail.com
48	Farida Geteri	MOH	geteriflo@gmail.com
49	Rosalia Kalani	MOH-DSRU	kalanizr@gmail.com
50	Konongoi Limboso	KEMRI	limbazso@gmail.com
51	Kizito Lubano	KEMRI	lkizito@kemri.org
52	Chris K. Mwangi	MOH	khrismwah2@yahoo.com
53	Samuel Kabochi Kamau	DVS	kamaukabochi@gmail.com
54	George Muchiri Njau	NPHL	gmuchiriri007@gmail.com
55	Francis Kuria	MOH	fsnkuria@gmail.com
56	Nassoro Mwanyalu	MOH-ZDU	namwanyalu@gmail.com
57	David Mwangangi	SDL-DVS	mwangangid@gmail.com
58	Boniface M. Mualuko	KEMR	bmwaluko@kemri.org
59	Ali Jattani	MOH	n/a
60	Okunga Emmanuel	MOH	okungae2012@gmail.com

Participants			
61	Millicent Ndia	MOH	ndianyakio@gmail.com
62	Grace Kangethe	WHO Kenya	kangetheg@who.int
63	Daniel Langat	MOH	langatdoc@gmail.com
64	Bridgit Muasa	DVS	bsmuasa@gmail.com
65	Josephat Maluki	CDVS-Kitui	josephatk65@gmail.com
66	Phillip Ngere	PHEOC	pngere@gmail.com

Annex 3: Reasons Provided For Choice Of Color-coded Cards Based On The Current Functionality

	Group 1 (RVF)	Group 2 (Rabies)	Group 3 (Brucellosis)	Group 4 (Anthrax)
Coordination at central level	Existence of multisector coordination and collaboration	National strategy on rabies control Joint activities MOU –MoH and DVS	Presence of inter-ministerial committee joint strategies planning for joint activities	Structures are in place for collaboration and coordination i.e joint strategies, guidelines, committees(TWG)
Coordination at local level	Poor structure (distinct structures for clinical care and public health	No joint SOPs No joint activities	Lack of public awareness No SOPs at local level for implementation of OH Lack of a joint activity in the field Lack of regular joint meetings at local level No committee or joint teams	Collaboration is present but is not optimal, changes from time to time and not all counties, some are better
Coordination at technical level	Existence of multisector coordination and collaboration	At national there are joint unit i.e ZDU and joint plans but lacking at local level	No joint plans (contingency, surveillance, communication) No SOPs for information sharing No procedures for joint field activities	There is knowledgeable technical capacity required at both national and local level and the collaboration and coordination is fairly good
Legislation and regulations	Laws available but require harmonization	Institutionalization of joint platforms TWGs Harmonization	Minimal/No OH budgetary allocation by line ministries Undefined cost sharing arrangements	Legislation and laws are present e.g Public Health Act, Animal Disease Act, Anthrax strategy etc., however there is a disconnect between these acts and also in the manner in which the laws are enforced

	Group 1 (RVF)	Group 2 (Rabies)	Group 3 (Brucellosis)	Group 4 (Anthrax)
Finance	Inadequate budgetary allocation	No direct budget allocation to OH No finance sharing mechanisms	lack of harmonized legislation/regulations No sharing of relevant draft legal and regulatory documents between sectors	There is no One Health budget (specific to OH). Most funding available is from donors
Communication with media	Coordinated joint press release	Joint messages on outbreak situations Joint plans	No joint communication on OH activities Lack of joint messages in outbreak situations Lack of a joint communication strategy	At the national level communication strategies and messages are developed and collaboration with large media houses is done, however at the local level where there is opportunities to work with local media, it is not being optionally done
Communication with stakeholders	Delayed communication	No regular stakeholder meetings No joint identification of stakeholders	Lack of communication focal persons in each sector Lack of regular stakeholder meetings with relevant sectors	There is communication with stakeholders but is mostly done during outbreaks and is not consistent/sustained
Field investigation	One health teams do joint investigations; though coordination is normally not well done	Joint investigation teams Sharing of logistics	Currently, no defined respective roles of each sector for brucellosis investigation Minimal sharing of logistics Lack of a joint disease investigation	Joint investigations have been done but not well structured, is largely activated and conducted at the national level. There are guidelines under development to standardize field investigations

	Group 1 (RVF)	Group 2 (Rabies)	Group 3 (Brucellosis)	Group 4 (Anthrax)
Risk assessment	Joint risk assessment, but more needs to be done about vector surveillance.	Weak collaborations Data exchange only on need basis	Inadequate information sharing Lack of joint risk assessments for brucellosis and effective communication strategies Limited collaborative studies/research	A few risk assessments done but results/data not shared. Also a few collaborative studies
Joint surveillance	Human, animal health and environmental health (especially vector sampling) collaboration	Sharing of data and logistics Focal points in each sector	Focal points in each sector for coordination Routine exchange of surveillance data	There is weakness in sharing of data (routine exchange of data)
Laboratory	Sharing sample results	There is standardization of protocols Exchange of results only on need basis	Exchange of lab results Exchange of reagents	There is no harmonization of laboratory capacities and use, however there is sharing of results
Response	Well joint coordinated response	Response done by individual sectors only; no collaboration Joint response plan present partially	Lack of coordinated response framework Lack of a brucellosis-specific joint response plan and after-action reviews Lack of field simulation exercises	Lack of TORs defining roles, joint response plans lacking. However some of these are in the pipeline i.e in the anthrax strategy
Emergency funding	No joint budget	No cost sharing mechanisms No joint emergency funds	Inadequate joint emergency fund Limited budgetary reallocation	Emergency funding not specific for zoonotic diseases and this can always be directed to other issues/areas

	Group 1 (RVF)	Group 2 (Rabies)	Group 3 (Brucellosis)	Group 4 (Anthrax)
Education and training	No joint training	One health curricula-for Vet, public health FELTP	OH modules in both Vet. And medical curricula Joint trainings for OH activities Joint platform with reference material	Is fairly great due to joint trainings e.g one health trainings, FELTP but there is no joint platform for resources and references
Human resources	No joint training	No database for professionals	OH surveillance focal personnel in each sector	Currently there are no OH focal persons at the county level and there is shortage of staff at both sectors

Annex 4: Gaps and recommendations from both sectors

CO-ORDINATION		
	Animal Health Gaps (PVS)	Public Health Gaps (JEE
1.	Difficult to make independent decisions	Multi-sectoral collaboration with other relevant ministries is not fully and systematically institutionalized
2.	Interference from higher levels on execution of technical decisions	No formal infrastructure exists for data/information sharing across human, animal and environmental health
3.	Weak linkages between the DVS and CDVS	Weak coordination of advocacy, resources allocation and utilization across relevant sectors
4.	No strong relationships between CDVS and external stakeholders at the county level	Weak coordination unit at the policy levels
	Recommendations	
1.	Finalize the review of animal legislations which will address the chain of command	Establish a cabinet subcommittee on One Health and elevate ZDU to a level of a OH directorate
2.	Strength coordination relationships at the county level	Establish OH coordination unit at the CoG , County and sub-county
3.	Formation of technical working groups at national, county and sub-county levels	Establish formalized mechanism for timely regular data sharing and information exchange between relevant sectors/stakeholders using OH approach
4.		Strength advocacy, awareness and resource allocations for implementation of IHR at the highest government levels and to all relevant stakeholders
COMMUNICATION		
	Animal Health Gaps (PVS)	Public Health Gaps (JEE
1.	No formal MOU with other relevant agencies apart from DVS/KVA	Lack of multi-sectorial risk communication plans
2.	Minimal communication between DVS and important stake holders in various agencies at both county and national level	Inadequate training in risk communication for technical staff
3.	No formal communication to/ from public and private institutions responsible for disease prevention and control, food safety animal , veterinary public health	Inadequate training on responsible media communication

	Recommendations	
1.	Develop, important communication plans with all relevant stakeholders	Develop, test a complete multi-sectorial risk communication plan
2.	County governments to share disease control programs to neighboring counties and public health sectors	Build capacity of technical communication officers at both levels on risk communication
3.	Invest in community engagement to encourage community participation	Continued engagement with media to reinforce their responsiveness in risk communication
4.	Develop MOU'S with other stakeholders for example environmental sector	
	SURVEILLANCE	
	Animal Health Gaps (PVS)	**Public Health Gaps (JEE**
1.	Inadequate surveillance coordination mechanisms at subnational level	Inadequate data analysis &sharing mechanisms
2.	Inadequate resources allocation for surveillance and response	Inadequate sample referral
3.	Unstructured implementations of Livestock Identification & Traceability System nationwide	Inadequate integration of surveillance & laboratory systems
4.	Inadequate surveillance coordination mechanisms at subnational level	Inadequate data analysis &sharing mechanisms
	Recommendations	
1.	Establish coordination mechanism at county levels	Establish standard data sharing framework
2.	Review resources allocation at all levels	Develop sample referral protocols
3.	Expedite the implementation of LITS	Establish mechanisms for integration of surveillance & lab system
	SURVEILLANCE	
	Animal Health Gaps (PVS)	**Public Health Gaps (JEE**
1.	Lack of structured risk analysis process to facilitate decision making	Nothing relevant to One Health identified in JEE
2.	Movement of potentially infected livestock with no risk assessment	No structured disease specific risk assessment process or guidelines
3.	Lack of specialized skills on risk analysis and risk based planning of disease surveillance, prevention and control	Inadequate resource allocation to emergency response
	Recommendations	
1.	Establish formal an defective risk analysis procedures for implementation of risk mitigation measures	Strengthen co-ordination linkages among stakeholders on One Health at sub national level
2.	Support the effective implementation of LITS to assist in management of risk s posed by animal movement	Develop structured multisector disease specific risk analysis process and guidelines
3.	Build capacity at the sub national level on risk mitigation measures.	Advocate for resource allocation to emergency response


WORLD ORGANISATION FOR ANIMAL HEALTH
Terrestrial Animal Health Code
2017
Volume I
INTERNATIONAL
HEALTH
REGULATIONS
(2005)
THIRD EDITION
World Health Organization