



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

26-28 November 2018
Buchanan, Liberia



Organized by WHO, OIE, the Ministry of Health, the Ministry of Agriculture, Environment Protection Agency, National Public Health Institute of Liberia

Acknowledgments

In order to strengthen the capacity of the country to address priority diseases, including zoonoses, and to build synergies between human and animal health systems, the World Health Organization (WHO) and the World Organization for Animal Health (OIE) have jointly developed an approach to conduct national workshops to encourage and facilitate a One Health approach. In line with this, WHO Health Emergencies Programme at the WHO Regional Office for Africa in September 2018 requested the support of the WHO Country Office in Liberia to jointly organize with the Health Sector, Ministry of Agriculture (MOA), the Environmental Protection Agency (EPA) and partners a three-day national bridging workshop in Liberia which was held in Buchanan, Grand Bassa from 26 -28th November 2018. The workshop was aimed at eliciting views from the three sectors and partners, and learning from the results of the assessments conducted in the human health (IHR monitoring and evaluation framework, including the Joint External Evaluation mission) and animal health (PVS Pathway missions) sectors respectively. The results from these assessments will be used to stimulate a discussion on the possibility of translating this into strategic governance and operational directions in order to improve the national capacities at the interface between the human health, animal health and the environment.

The organizers of the workshop would therefore like to express sincere gratitude to the leadership of the human, animal and environmental sectors of the Republic of Liberia as well as partner organizations for their commitment and support in successfully organizing this all-important national event. The organizers and participants would also like to acknowledge the Department for International Development (DFID) for funding this workshop through one of its' major initiatives: Tackling Deadly Diseases in Africa Programme (TDDAP) and the World Bank through the REDISSE project coordinated by the West African Health Organization (WAHO) for sponsoring this National Bridging Workshop. Finally, special thanks to the WHO Country Office in Liberia for coordinating all the efforts throughout the process.

TABLE OF CONTENTS

TABLE OF CONTENTS	1
ABBREVIATIONS & ACRONYMS	2
INTRODUCTION	3
Background	3
Objectives of the workshop and expected outcomes	4
REPORT ON THE SESSIONS	6
Opening session	6
Session 1: The One Health Concept and National Perspectives	7
Session 2: Navigating the Road to One Health – Collaboration Gaps	9
Session 3: Bridges along the Road to One Health	11
Session 4: Crossroads – PVS Pathway and IHR MEF reports	12
Session 5: Road Planning	13
Session 6: Fine-tuning the road-map	14
Session 7: Way forward	15
Closing Session	16
WORKSHOP OUTPUTS	17
Output 1: Assessment of levels of collaboration for 15 key technical areas	17
Output 2: Objectives and actions identified per technical areas	18
Output 3: Prioritization results	24
WORKSHOP EVALUATION	25
APPENDIX	26
Annex 1: Workshop agenda	26
ANNEX 2: LIST OF PARTICIPANTS: VENUE: ST. PETER CLAVER HALL, GRAND BASSA COUNTY	29

ABBREVIATIONS & ACRONYMS

AAR	After Action Review
AH	Animal Health
AI	Avian Influenza
CDC	Centers for Disease Control and Prevention (USA)
CCM	Chemicals Control and Management
CME	Country Monitoring and Evaluation, WHO Health Emergency programme
EPA	Environmental Protection Agency
EOC	Emergency Operating Center
FP	Focal Point
GHSA	Global Health Security Agenda
HQ	Headquarters
HPCO	Health Promotion/Communication Officer
IFRC	International Federation of Red Cross and Red Crescent Societies
IHR	International Health Regulations (2005)
JEE	Joint External Evaluation
MOA	Ministry of Agriculture
MEF	Monitoring and Evaluation Framework
MOH	Ministry of Health and Sanitation
MOU	Memorandum of Understanding
NAPHS	National Action Plan for Health Security
NFP	National Focal Point
NOHSC	National One Health Steering Committee
NPHIL	National Public Health Institute of Liberia
OH	One Health
OIE	World Organisation for Animal Health
PAVA	Plant/Animal (Veterinary Services, Agriculture)
PH	Public Health
PVS	Performance of Veterinary Services
REDISSE	Regional Disease Surveillance Systems Enhancement
SOP	Standard Operating Procedures
ToR	Terms of Reference
USAID	United States Agency for International Development
WAHO	West African Health Organisation
WASH	Water Sanitation and Hygiene
WHO	World Health Organization

INTRODUCTION

BACKGROUND

The World Health Organization (WHO) and the World Organisation for Animal Health (OIE) are the two main international organizations responsible for proposing references and guidance for the public health and animal health sectors respectively. WHO and OIE have been active promoters and implementers of an intersectoral collaborative approach between institutions and systems to prevent, detect, and control diseases among animals and humans. They have developed various frameworks, tools and guidance materials to strengthen capacities at the national, regional and global levels.

WHO Member States adopted a legally binding instrument, the International Health Regulations (IHR, 2005), for the prevention and control of events that may constitute a public health emergency of international concern. Through these regulations, countries are required to develop, strengthen and maintain minimum national core public health capacities to detect, assess, notify and respond to public health threats and as such, should implement plans of action to develop and ensure that the core capacities required by the IHR are present and functioning throughout their territories. Various assessment and monitoring tools have been developed by WHO such as the IHR Monitoring and Evaluation Framework (MEF), which includes *inter alia* the Annual Reporting Questionnaire for Monitoring Progress and the Joint External Evaluation (JEE) Tool.

The OIE is the intergovernmental organization responsible for developing standards, guidelines and recommendations for animal health and zoonoses; these are laid down in the OIE Terrestrial and Aquatic Animal Codes and Manuals. In order to achieve the sustainable improvement of national Veterinary Services' compliance with these standards, in particular on the quality of Veterinary Services, the OIE has developed the Performance of Veterinary Services (PVS) Pathway, which is composed of a range of tools to assist countries to objectively assess and address the main weaknesses of their Veterinary Services.



These support tools shift away from externally driven, short-term, emergency response type 'vertical' approaches addressing only specific diseases, and contribute to a more sustainable, long term 'horizontal' strengthening of public and animal health systems. The WHO IHR MEF and the OIE PVS Pathway approaches enable countries to determine strengths and weaknesses in their respective functions and activities and promote prioritization and pathways for improvement. Furthermore, they engage countries in a routine monitoring and follow up mechanism on their overall level of performance and help to determine their needs for compliance with internationally adopted references and standards.

The use of the WHO IHR monitoring tools and OIE PVS Pathway results in a detailed assessment of existing weaknesses and gaps, with the better alignment of a capacity building approach and strategies at country level between the human and animal health sectors. The two organizations have developed a workshop format (the IHR-PVS National Bridging Workshops) that enables countries to further explore possible overlapping areas addressed in their PVS and IHR capacity frameworks and develop, where relevant, appropriate bridges to facilitate coordination. A structured approach using user-friendly materials enables the identification of synergies, reviews gaps and defines the operational strategies to be used by policy makers for concerted corrective measures and strategic investments in national action plans for improved health security.

In Liberia:

- a PVS Evaluation mission was conducted in January 2013;
- a PVS Gap Analysis mission was conducted in July 2016;
- a Veterinary Legislation Identification mission (VLSP) was conducted in November 2018
- a Joint External Evaluation (JEE) mission was conducted in September 2016.

OBJECTIVES OF THE WORKSHOP AND EXPECTED OUTCOMES

The main objective of the IHR-PVS Pathway National Bridging Workshop (IHR-PVS NBW) is to provide an opportunity to the human and animal health services of hosting countries to build on the reviews of performance, gaps and discussions for improvement conducted in their respective sectors, and to explore options for improved coordination between the sectors, to jointly strengthen their preparedness for, and control of, the spread of zoonotic diseases.

The IHR-PVS NBWs focus on the following 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 actions and a synergistic approach;
- **Building Sustainable Networks:** contribute to strengthening the inter-sectoral collaboration through improved understanding of respective roles and mandates;
- **Strategic planning:** inform planning and investments (including the National Action Plan for Health Security) based on the structured and agreed identification of needs and options for improvement.

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, their 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 **joint national roadmap** to strengthen collaboration and coordination.

The agenda of the Workshop is available at [Annex 1](#). It was attended by 78 participants (25 staff from the Ministry of Health and the National Public Health Institute of Liberia, 27 staff from the Ministry of Agriculture, 15 staff from the Environmental Protection Agency, 8 WHO national technical staff, 3 representatives from partner organizations ([Annex 2](#)). Majority of the participants were from the animal and human health sectors with representatives from the Central, County and District levels attending the three-day discussions. Significant numbers of participants from environmental sector were also present.

REPORT ON THE SESSIONS

The workshop used an interactive methodology and a structured approach with user-friendly materials, case studies, videos and facilitation tools. All participants received a *Participant Handbook and USB memory sticks* 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 as follows:

OPENING SESSION

The opening ceremony was attended by high level national representatives from three Ministries (including Health, Agriculture and Environment). All participants were given the opportunity to briefly introduce themselves.

Opening speeches were given by Dr. Anthony Tucker, CHO, Grand Bassa County Health Team, who welcomed the team to Bassa, Mme Sophie Muset, EBO-SURSY Project Lead, World Organization for Animal Health (OIE), Dr. Ahmadou Niang, Animal Health Adviser, MOA, ECTAD/FAO, Dr. April Baller, Emergency Preparedness and Response (EPR) Officer, WHO Liberia Country Office, Dr. Morlu Korsor, Director, Livestock/Animal Production Services, Ministry of Agriculture (MOA), Mr. Edward G. Wingbah, Assistant Manager, Administration, Environmental Protection Agency (EPA), Hon. Henry O. Williams, Executive Director, the National Disaster Management Agency (NDMA) and Mr. P. Wisdom Fayiah from the Water Sanitation and Hygiene (WASH) Commission, who officially opened the workshop. After the opening speeches, participants were invited to take a group photograph. Mr. Thomas K. Nagbe, Director of Infectious Diseases & Epidemiology at the National Public Health Institute of Liberia (NPHIL), who previously attended the Regional IHR-PVS Workshop held on 12 to 13 October 2017 in Dar es Salaam, Tanzania was instrumental in monitoring the workshop. His commitment and engagement, along with strong participation of national experts were crucial through this national workshop.

SESSION 1: THE ONE HEALTH CONCEPT AND NATIONAL PERSPECTIVES

The workshop approach and methodology were explained, and the participant handbook was presented. A documentary video initiated the first technical session with a description of the One Health (OH) Concept, its history, rationale and purpose and how it became an international paradigm. The video also introduced the workshop in the global and national context by providing high level background information on the collaboration between WHO, OIE and FAO, globally and at the regional level. Following the first video, overview of the structures and role of the Environment Protection Agency (EPA) and the Liberia Veterinary Services (LVS) were provided by Mrs. Kweeta M. Tamba Talawally and Mr. Eddie Miaway Farnvalo, respectively.

In her presentation, Mrs. Kweeta M. Tamba Talawally emphasised the importance of more active holistic approach to address One Health related issues including zoonotic diseases and other public health events. She also outlined some of the most key recent coordination efforts of the EPA using One Health approach in Liberia.

Mr. Eddie Miaway Farnvalo, Director, Central Veterinary Epidemiology Unit, MOA presented the current status, activities, priorities, perspectives and challenges of the Liberia Animal Health and Veterinary Services. Although Liberia has some great livestock potentials, there are several constraints including weak veterinary workforce in both urban and rural areas. Deficiencies exist in animal disease surveillance, inter-agencies coordination, human resources, funding, infrastructure and administration. Despite numerous challenges, in recent years, the Ministry of Agriculture (MOA) and its partners have made substantial efforts to identify a set of key priority activities in order to improve animal health including animal disease surveillance in Liberia.

On behalf of the human sector, two presentations were provided by experts from the National Public Health Institute of Liberia (NPHIL). Mr. Thomas K. Nagbe (Director of Infectious Diseases & Epidemiology, NPHIL), presented a review on the establishment of the NPHIL and its' core functions in providing critical support to the public health system of Liberia. In his presentation, Mr. Nagbe emphasised on the role of NPHIL in the implementation of International Health Regulations (IHR, 2005) that are both sustainable and suitable for local context. The presentation done by Hon. Sonpon Blamo Sieh, Sr. (One Health Coordinator) covered mainly three general areas: an overview of the structure of One Health platform in Liberia, review of achievements and perspectives, challenges and recommendations.

Regardless the limited capacity in both animal and environmental health sectors for laboratory, surveillance, preparedness and response, Liberia has made substantial progress to establish governance and leadership structures for the One Health Platform. In addition, several strategic documents were developed to guide the implementation of the One Health approach. The key strategic instruments or implementation guidelines and action plans include: the One Health Governance Manual, the National Action Plan for Health Security (NAPHS), the National Action for Antimicrobial Resistance (AMR), the National Action Plan for Rabies Prevention and control (draft), and the One Health Strategic Plan (draft). Despite the establishment of these governance documents and policies to guide the implementation of One Health, there are many challenges related to the collaboration between the animal, environmental and human health sectors in Liberia.

Substantial progress has been made to operationalise the One Health approach at the central level in Liberia, but there is still a need to support and strengthen the establishment of the One Health structure at county and district levels. Decentralisation of One Health approach will require sustainable financial support. However, several ongoing activities including provision of operational support to counties and districts, development of integrated laboratories, financial support, livestock population census, workforce

development etc. have been put in place under the Regional Disease Surveillance Systems Enhancement (REDISSE) project. Funded by the by the World Bank, this project aims to strengthen capacity in surveillance and response to priority diseases taking into account the “One Health” approach nationwide using the existing tools.

From Mr. Sieh’s presentation, it was clear that additional efforts are still needed to strengthen a multisectoral, One Health approach to tackle zoonotic and public health events at the human-animal-environment interface. Operationalisation of One Health approach to attain optimal health for people, animal and the environment will require extensive collaboration and coordination between human, animal and environmental health sectors, and other sectors involved in the management of zoonotic disease outbreaks and other important public health events in Liberia.

The second documentary video provided participants with concrete worldwide examples of intersectoral collaboration in addressing health issues at the human-animal interface, focusing on several key technical areas such as surveillance, response operations, risk communication etc.

Outcomes of Session 1:

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

- Intersectoral 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 – COLLABORATION GAPS

Participants were divided into five working groups of approximately 10 to 14 mixed participants from three sectors (MOA, MOH and EPA) and from different levels (Central, County, and District). Groups were provided with one of five case study scenarios (Table 1) based on diseases relevant to the Liberia context (rabies, yellow fever, brucellosis, Lassa fever, and Ebola) developed in collaboration with MOA, MOH and EPA representatives during the pre-meeting session in Buchannan.

Table 1: Scenarios used for the different case studies

Rabies (note: this case is entirely fictitious) - A stray dog which was known to have bitten two cows and was behaving aggressively towards people was reported to have bitten some children in the same neighbourhood. It was killed by the community in Margibi County two days later. The carcass of the dog cannot be located to facilitate veterinary investigation.

Yellow fever (note: this case is entirely fictitious) - Two persons were admitted at Rally Town Hospital, Grand Kru, with headache, fever, muscle aches and jaundice. Laboratory testing by RT-PCR revealed positive for Yellow fever virus. One of the patients is a commercial farmer who regularly trade in both rural and urban markets. 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 Nimba County aborted. At the time of 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 developed clinical signs such as headaches, fever and muscle cramps. Two of them were hospitalized and laboratory testing confirmed that they were infected by *Brucella melitensis*.

Lassa fever (note: this case is entirely fictitious) - Two persons were admitted at the Phebe Government Hospital with haemorrhagic symptoms. These persons came from a rural area in Salala. The first person was tested PCR positive for Lassa, few weeks later he died. The death of this person generated panic in the community. Case two was taken back to the community by family members against medical advice. This action by the family generated fear and panic in the community.

Ebola (disclaimer: this case is entirely fictitious) - Three children from Grand Kru County were admitted to Barclayville Health Center with bleeding symptoms. Preliminary history revealed that over thirty people attended funeral ceremony of a famous farmer. Following this funeral, the community recorded 11 deaths from the funeral attendees some of whom were from Monrovia, Sinoe, Margibi, and Grand Bassa counties. Samples were collected and sent to the National Reference Laboratory. The entire country was in panic. The presence of Ebola Virus Disease was not confirmed.

Using experience from previous outbreaks of zoonotic diseases, the groups discussed how they would have realistically managed these events, and evaluated the level of collaboration between the Veterinary and the Public Health Services for 15 key technical areas: Coordination at high Level, Coordination at local Level, Coordination at technical Level, Legislation/Regulation, Finance, Communication with media, Communication with stakeholders, Field investigation, Risk assessment, Joint surveillance, Laboratory, Response, Education and training, Emergency funding, and Human resources. The status of the level of collaboration was represented by color-coded *technical area cards*: green for “good collaboration”, yellow for “some collaboration”, and red for “collaboration needing improvement” (Figure 1).

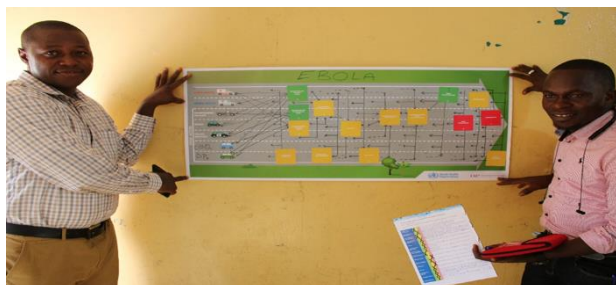


Figure 1a: Results of the evaluation made by a group of participants, of the level of collaboration between the two sectors for 15 key technical areas from a case study scenario on Ebola.



Figure 1.b: Participant justifying the choice of the colour coding while assessing the level of collaboration between the two sectors for 15 key technical areas from one of the case study scenario.

During an ensuing plenary session, each group presented and justified the results of their work. Output 1 summarizes the results from the five groups.

Each group also reported the major gaps identified on a report sheet to be used for road-planning (session 5).

Outcomes of Session 2:

- Areas of collaboration are identified, and joint activities discussed.
- Level of collaboration between the two sectors for 15 key technical areas is assessed.
- Strengths and weaknesses in the intersectoral collaboration are identified.

SESSION 3: BRIDGES ALONG THE ROAD TO ONE HEALTH

Documentary videos introduced the international legal frameworks followed by human health ([IHR 2005](#)) and animal health ([OIE standards](#)) as well as the tools available to assess the country's capacities: the annual reporting and JEE tools for public health services and OIE PVS Pathway for Veterinary Services.

The differences and connections between these 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 set-up and introduced to the participants. Through an interactive approach, working groups were invited to plot their *technical area cards* onto the matrix by matching them to their corresponding indicators (Figure 2). A plenary analysis of the outcomes showed clear gap clusters and illustrated that most gaps were not disease-specific but systemic.



Figure 2: Participants mapping the collaborative strengths and weaknesses on the IHR-PVS matrix.

The main gaps (clusters) identified were discussed and it was agreed that the rest of the workshop would focus on the following priorities:

- Coordination at local level
- Laboratory
- Response
- Surveillance and Field Investigation
- Risk Communication

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 IHR MEF 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: CROSSROADS – PVS PATHWAY AND IHR MEF REPORTS

New working groups with representation from all previous groups were organized for each of the five priority technical areas.

The matrix was used to link the identified gaps to their relevant indicators in the IHR MEF and in the PVS Pathway. Each working group then opened the assessment reports (JEE, PVS Evaluation and PVS Gap Analysis) and extracted the main findings and recommendations relevant to their technical area (Figure 3).

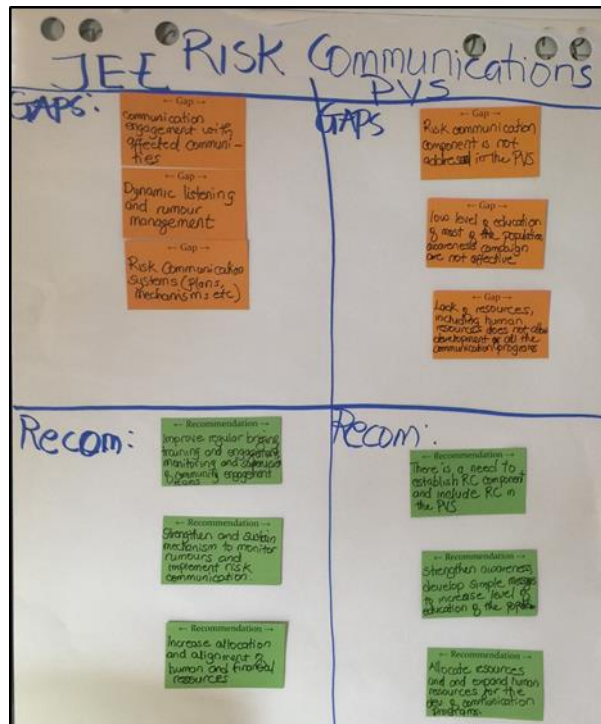


Figure 3: The group working on technical area 'Risk Communication' extracted the main weaknesses and recommendations from JEE and PVS reports.

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 have been extracted.
- Main recommendations from existing reports have been extracted.
- A common understanding of the effort needed starts to emerge.

SESSION 5: ROAD PLANNING

Using the same working groups as for the previous session, participants were asked to identify, for each technical area, up to three joint objectives to improve their collaboration. For each objective, they filled *Activity Cards*, detailing the activities, their dates of expected implementation, difficulty of implementation and the expected impact, the focal points responsible, and the implementation process (Figure 4).

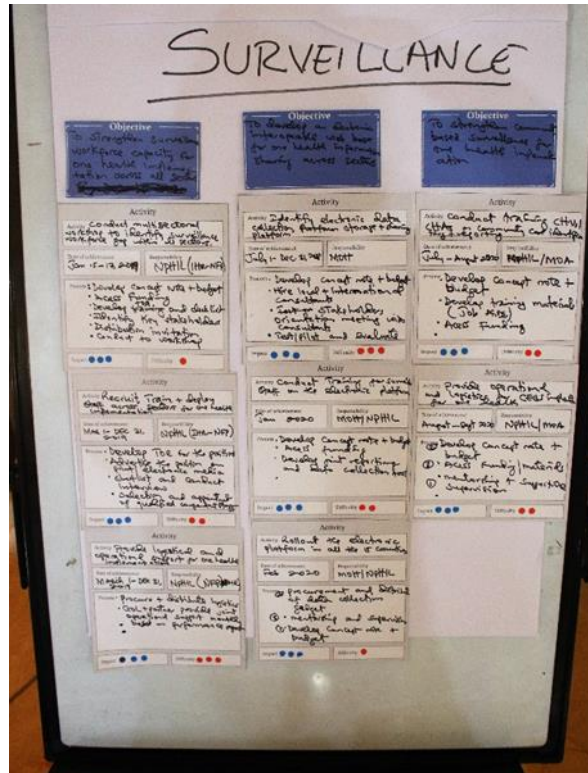


Figure 4: The group working on the technical area “Surveillance and Field Investigation” identified three objectives and practical activities to improve the collaboration between the human and animal health sectors.

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).

Outcomes of Session 5:

- Clear and achievable objectives and activities were identified to improve intersectoral collaboration between the two sectors for all technical areas selected.
- For each activity, a desired completion date, focal points, required support and measurable indicators have been identified.
- The impact and the difficulty of implementation of all proposed activities have been estimated.

SESSION 6: FINE-TUNING THE ROAD-MAP

In-between Sessions 5 and 6, the team of external experts circulated through the different panels to discuss about the results at this stage. When there was a need for further clarification or for discussion on the objectives and activities identified by participants, post-it notes were left on the panels. At the beginning of Session 6, participants were given approximately two hours to address the comments made with the assistance of the external experts.

A World Café exercise was then organized to enable participants to contribute to the action points of all technical areas. Each group nominated a rapporteur whose duty was to summarize the results of their work rather than to explain their results to the other groups. Each group rotated between the different boards to contribute and provide feedback on all technical areas by noting down their suggestions or comments on post-it notes (Figure 5). At the end of the cycle, each group returned to their original board and addressed all changes or additions suggested by the other participants. Objectives and activities were fine-tuned accordingly.



Figure 5: World café exercise: the group working on the technical area “Laboratory” is reviewing and providing comments and suggestions to the “Response” group.

The final joint road-map is fully detailed in [Output 2](#).

Prioritization of Objectives

A total of 15 objectives were identified. To prioritize them, participants were given five stickers and asked to select the five objectives they considered as of highest priority.



Figure 6: Prioritization of the three Objectives provided by participants to improve collaboration between animal and human health sectors in the technical area 'Risk Communication'

Outcomes of Session 6:

- Harmonized, concrete and achievable joint road-map 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 road-map.
- Prioritization of the objectives and activities.

SESSION 7: WAY FORWARD

Results of the prioritization vote were presented and discussed. Only a total of 57 out of 80 participants voted, results can be found in [Output 3](#).

Dr. Morlu Korsor, Director, Livestock/Animal Production Services, MOA presented the way forward on how intersectoral collaboration could be improved using the results of the IHR-PVS National Bridging Workshop. Adoption of the suggested recommendations for the relevant sectors indicated that further investigation is needed on how best to incorporate the results of the workshop into both the National Strategic Plan for One Health (NSPOH) and the National Strategic Plan for Health Security (NAPHS), especially for the management of zoonosis. Following the presentation, a plenary discussion on the way forward was held. It was generally agreed that the outputs of the workshop should be used to strengthen the implementation of One Health approach at central and local levels in Liberia. Consequently, additional effort is required to improve the collaboration in the other technical areas including: Finance, Human resource, Legislation/Regulation, Risk

Outcomes of Session 7:

- Linkages between the joint road-map and Liberia’s National Action Plan for Health Security.
- Linkages between the joint road-map and Liberia’s One Health Strategic Plan.
- Identification of opportunities to improve collaboration in the other remaining technical areas.
- Discussion on the way forward.

CLOSING SESSION

The workshop ended with statements from the following national key representatives Mr. Edward G. Wingbah, Assistant Manager for County Coordination and Administration (EPA); Hon. Henry O. Williams, Executive Director (NDMA);

The Chief Veterinary Officer and OIE Delegate Mr. Joseph Anderson from the MOA, on behalf of all the participants indicated that the country took ownership of the outcomes of the workshop. He also ensured that multisectoral, One Health approach will be strengthened to address the objectives and activities identified on the roadmap.

WHO, OIE and FAO reiterated their full commitment to support the country in improving this collaboration.

All the materials used during the workshop, including movies, presentations, documents of references, and results from the working groups were copied on USB memory sticks and distributed to all participants.

WORKSHOP OUTPUTS

OUTPUT 1: ASSESSMENT OF LEVELS OF COLLABORATION FOR 15 KEY TECHNICAL AREAS

Technical area	Rabies	Brucellosis	Yellow fever	Ebola	Lassa fever	Score
Coordination at high level	Green	Red	Yellow	Green	Yellow	4
Communication w/ media	Green	Red	Yellow	Green	Yellow	4
Communication w/ stakeholders	Yellow	Red	Green	Yellow	Green	4
Coordination at local level	Yellow	Yellow	Green	Yellow	Yellow	4
Coordination at technical level	Yellow	Green	Red	Yellow	Yellow	5
Education and training	Yellow	Yellow	Red	Green	Yellow	5
Emergency funding	Yellow	Green	Yellow	Yellow	Yellow	4
Field investigation	Red	Red	Yellow	Yellow	Yellow	7
Finance	Yellow	Yellow	Red	Yellow	Red	7
Human resources	Yellow	Yellow	Red	Yellow	Red	7
Joint surveillance	Yellow	Red	Red	Yellow	Red	8
Laboratory	Red	Red	Red	Yellow	Green	7
Legislation / Regulation	Yellow	Red	Red	Yellow	Red	8
Response	Red	Yellow	Red	Yellow	Red	8
Risk assessment	Red	Red	Red	Yellow	Red	9

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

Difficulty of implementation: Low +, Moderate ++, Very high costs +++

Impact: Low impact +, Moderate impact ++, High impact +++

Activities	Date	Cost	Impact	Responsible	Process
COORDINATION AT LOCAL LEVEL					
Objective 1: Establish a funding mechanism to support inter-sectorial coordination at the local level					
1.1. To establish a trust fund to support the One Health Platform	Feb 2019	++	+++	MoH	<ul style="list-style-type: none"> Conduct consultative meetings with relevant line ministries at the county and district (local) levels Develop policies to establish the trust fund Write a letter to the Ministry of Finance and Development Planning to approve the trust fund budget Operationalise the trust fund using the costed work plan
1.2. To conduct awareness advocacy workshop with decision makers from both sectors at the local level	Mar 2019	+	+++	MoH	<ul style="list-style-type: none"> Draft a concept note, budget and agenda, for the workshop Acquire funding for the workshop Send out invitation letter to all participants Conduct the workshop
Objective 2: Establish information sharing system involving all sectors and stakeholders concerned using the OH approach					
2.1. To establish an integrated information sharing platform	Mar 2019	++	+++	MoH	<ul style="list-style-type: none"> Identify partners and stakeholders for the platform Conduct consultative meeting for the consensus or approval of the platform members Develop ToR for the platform Validate the ToR for implementation Operationalise the platform
2.2. To establish technical committees in all sectors for communication sharing	Mar 2019	+	+++	MoH, Min Information	<ul style="list-style-type: none"> Identify members to form part of the technical committee Conduct consultative meeting for the approval of the technical committee members Develop ToRs for the technical committee Validate the ToR for implementation Operationalise the Technical Committee
2.3 To produce joint communication strategies	Mar 2019	+	+++	MoH	<ul style="list-style-type: none"> Identify members to produce the communication strategy Conduct consultative meeting Hire a consultant to draft the communication strategy Review update and validate the strategy for implementation

Activities	Date	Cost	Impact	Responsible	Process
					<ul style="list-style-type: none"> Disseminate the strategy to relevant stakeholders
Objective 3: Improve collaboration among public health, animal health and environment health sectors at local level using the OH platform					
3.1. Establish field level multisectoral coordination mechanism	Mar 2109	+	+++	MoH	<ul style="list-style-type: none"> Identify the institutions Conduct consultative meetings Establish technical working group Conduct workshop to develop SOPs for field level coordination
LABORATORY					
Objective 4: Strengthen joint expertise of staff in laboratories					
4.1. Carry out joint staff training needs assessment	2019	+	+++	MoA lead, NPHIL, MoH	<ul style="list-style-type: none"> Develop concept note Develop joint needs assessment tools Recruit and train joint assessors Conduct joint assessment Jointly analyse data for decision making
4.2. Recruitment of specialised lab staff	2019	++	+++	MoA (lead), NPHIL, MOH	<ul style="list-style-type: none"> Develop Terms of Reference Advertise the positions Review credentials of appointee and short list them Conduct interview and select qualified candidates for animal and human laboratories Deploy qualified candidates
4.3. Organize joint training on zoonotic disease diagnostic	2019 onwards	+++	+++	MoA, NPHIL, MoH	<ul style="list-style-type: none"> Based on needs assessments: Refresher trainings Joint in-service training Joint facility-based training Join on-site mentor ship
Objective 5: Improve laboratory information sharing on zoonotic disease among key sectors					
5.1. Develop a MoU on Information sharing between Public Health and animal health	2019	+	+++	MoA,NPHIL, MoH	<ul style="list-style-type: none"> Identify key stakeholders Call stakeholders meeting Create communication network Email Social media groups Regular updates meeting
5.2. Develop guidelines and SOPs for joint field investigations	2019	+	+++	MoA, MoH, NPHIL	<ul style="list-style-type: none"> Identify guidelines and SOPs to be developed Conduct joint working session on SOPs development Validate SOPs and guidelines
Objective 6: Improve joint laboratory testing capacity on zoonotic disease detection					

Activities	Date	Cost	Impact	Responsible	Process
6.1. Create a joint procurement mechanism for laboratory supplies	2019 onwards	+++	+++	MoA, MoH, NPHIL	<ul style="list-style-type: none"> Jointly identify equipment, materials, supplies and consumables Jointly identify vendors Conduct jointly procurement Install equipment and train users
RESPONSE					
Objective 7: To establish a sustainable financing mechanism to strengthen response to public health events					
7.1. Develop a draft consolidated budget using One Health Platform	Sep 2019	+	+++	MOH, MOA, EPA, NPHIL, partners	<ul style="list-style-type: none"> Invite relevant stakeholders to a meeting Agree on activity/budget lines to be funded Every agency will review for approval Submit the approved budget to Ministry of finances and development planning
7.2. Conduct high level advocacy meeting with legislature and national financial authorities	May 2019	+++	++	MOA	<ul style="list-style-type: none"> Invite committees that have oversight responsibilities for agencies that make up the OH platform Submit the finalized consolidated budget for approval
7.3 Develop a budget implementation plan	Jun 2019	+	++	MOH, MOA, NPHIL, EPA, partners	<ul style="list-style-type: none"> Conduct a meeting with agencies Develop the draft plan Validate the plan
Objective 8: To build capacities for joint emergency preparedness and response to public health events and threats at all levels					
8.1. Recruit and train intersectoral response teams at all levels	Dec 2019	+	++	MOH, MOA, NPHIL, partners	<ul style="list-style-type: none"> Develop TORs/Concept note Develop training material Identify Response teams Conduct training for response teams Map response teams at all levels
8.2. Provide adequate supplies and logistics for intersectoral response	Jun 2019	+	++	Technical Committee, One Platform	<ul style="list-style-type: none"> Develop budget Procure logistics and supplies Distribute Jointly monitor supplies and logistics
8.3. Conduct joint simulation activities	Aug 2019	+	++	MOH, MOA, NPHIL, partners	<ul style="list-style-type: none"> Set up rapid response teams Develop SOPs Conduct training on response Conduct joint simulation exercise
Objective 9: To improve multi-sectoral coordination during response at all levels					
9.1. Prepare multisectoral response Plan	Feb 2019	+	++	MOH, MOA, NPHIL, EPA, partners	<ul style="list-style-type: none"> Develop disease-specific plans Validate plans

Activities	Date	Cost	Impact	Responsible	Process
9.2. Jointly develop documents and guidelines for joint response to public health threats	Mar 2019	+	+	MOH, MOA, NPHIL, EPA, partners	<ul style="list-style-type: none"> • Prepare SOPs • Prepare TORs • Prepare guidelines • Develop response chain of command document
9.3. Conduct multisectoral needs assessment	Aug 2019	+	++	MOH, MOA, NPHIL, partners	<ul style="list-style-type: none"> • Conduct joint needs assessments for response to public health threats • Identify assessors • Develop joint assessment tools • Conduct orientation training
SURVEILLANCE AND FIELD INVESTIGATION					
Objective 10: To strengthen surveillance workforce capacity for implementation at all levels					
10.1. Conduct multisectoral training for surveillance workforce for all sectors	Jan 2109	+	+++	NPHIL (IHR-NFP)	<ul style="list-style-type: none"> • Develop concept note and budget • Access funding • Identify personnel to be trained • Distribution if invitations • Conduct training
10.2. Recruit, train and deploy multisectoral teams across sectors for joint surveillance	Dec 2019	++	+++	MoH, EPA, MoA	<ul style="list-style-type: none"> • Establish technical working group • Identify and recruit surveillance officers from various sectors • Develop ToR for the positions • Deploy surveillance staff • Provide logistics
10.3 Provide surveillance logistics and operational support to national and subnational multisectoral surveillance officers	Dec 2019	+++	+++	MoH, MoA, EPA	<ul style="list-style-type: none"> • Procure and distribute logistics • Available operations funding • Government + partners to provide joint operational support monthly based on performance
Objective 11: To develop an electronic intersectoral web base for surveillance information sharing across sectors					
11.1. Identify electronic data collection across sectors, storage and sharing platform	Dec 2019	+++	+++	MOH, MOA, NPHIL, EPA, partners	<ul style="list-style-type: none"> • Develop concept note and budget • Hire local + international consultant • Stakeholders orientation meeting with consultants • Test/pilot and evaluate
11.2. Conduct joint training for surveillance officers and data management on the e-IDSR platform	Jan 2020	++	+++	MoH, NPHIL	<ul style="list-style-type: none"> • Develop concept note and budget • Develop and update joint surveillance reporting and data collection • Access funding
11.3 Rollout the electronic web base in all the 15 counties	Feb 2020	+	+++	MoH/NPHIL	<ul style="list-style-type: none"> • Procurement and distribution of data collection gadgets • Mentorship and supervision • Develop concept note + budget

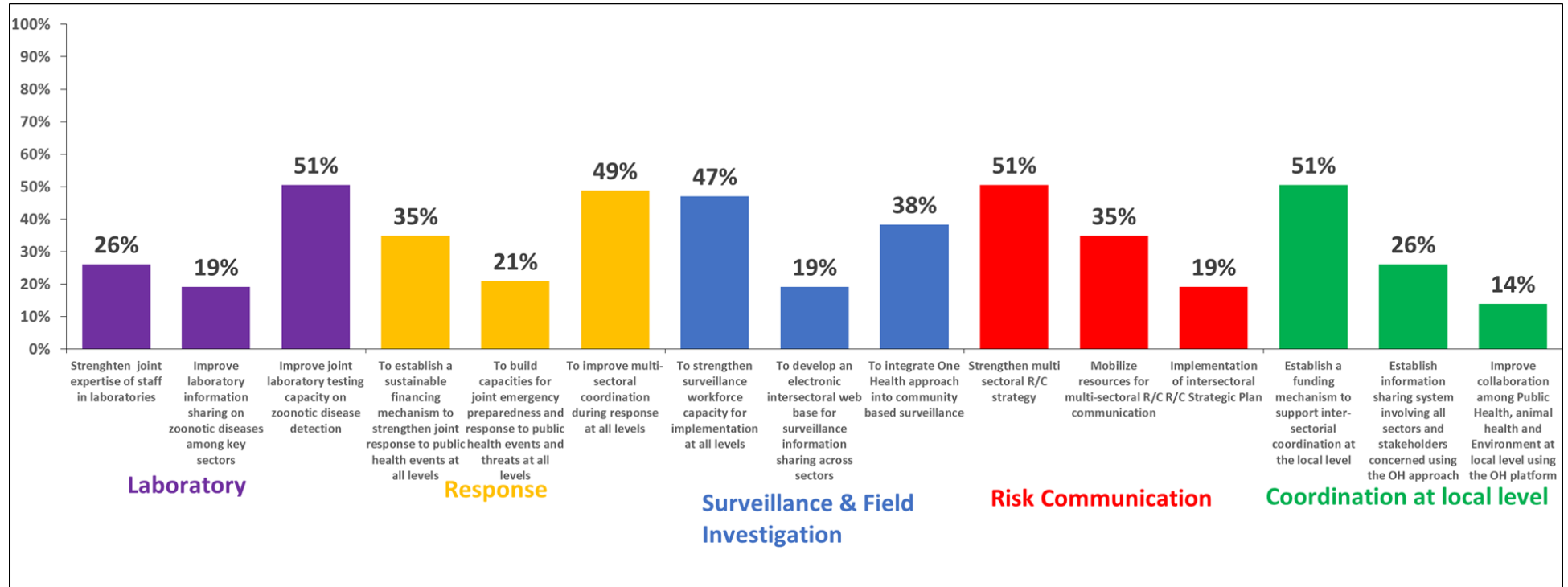
Activities	Date	Cost	Impact	Responsible	Process
Objective 12: To strengthen Community Based Surveillance for One Health implementation					
12.1. Conduct joint surveillance training for CHV/CHA on community case identification and reporting	Aug 2020	++	+++	NPHIL, MoA, EPA, MoH	<ul style="list-style-type: none"> Develop concept note and budget Develop/update training materials Access funding
12.2. Provide operational and logistics for multisectoral surveillance	Aug – Sep 2020	++	+++	MOH, MOA, NPHIL, EPA, partners	<ul style="list-style-type: none"> Joint surveillance supervision and mentorship Develop concept note and budget Access funding / materials
12.3. Joint monitoring and evaluation of surveillance activities across relevant sectors	Oct – Nov 2020	+	++	MOH, MOA, NPHIL, EPA, partners	<ul style="list-style-type: none"> Develop concept note and budget Develop M&E tools Develop training materials Conduct training Develop SOPs for M&E
12.4. Integrated field surveillance investigation	Nov – Dec 2020	++	++	MOH, MOA, NPHIL, EPA, partners	<ul style="list-style-type: none"> Develop SOP for joint field surveillance Develop investigation tool for joint surveillance activities Logistical support for joint surveillance
RISK COMMUNICATION					
Objective 13: Strengthen multi sectoral Risk Communication (RC) strategy					
13.1. Activate joint Health Promotion Technical Working Group (TWG)	Feb 2019	+++	+++	MOA, MOH, NPHIL, MoA, EPA, MoH	<ul style="list-style-type: none"> Identify responsible representatives from human, Animal and Environment health Develop concept note and budget and an integrated ToR for TWG members Develop/Establish meeting schedules Elect chair person Provide meeting update training materials Access funding
13.2. Develop a joint intersectoral Risk Communication Plan	Jun 2019	+++ +	++++	MoH, MoAMOA, MOH, Health Prom, NPHIL, EPA	<ul style="list-style-type: none"> Request a consultant from development partners Develop concept note and budget ToR for Consultant Conduct intersectoral assessment Develop M&E tools draft strategic plan Develop training materials Conduct training Develop SOPs for M&E Jointly review strategic plan Finalize draft plan Validate RC plan
Objective 14: Mobilize resources for multi-sectoral R/C communication					
14.1. Conduct intersectoral advocacy meeting with legislature, policy makers for resource mobilization for RC	Dec 2020	+++	+++	MOA, MOH, NPHIL, EPA	<ul style="list-style-type: none"> Identify available resources within each sector Identify resources gap

Activities	Date	Cost	Impact	Responsible	Process
					<ul style="list-style-type: none"> Develop a joint costed operational plan Advocate for increase Government of Liberia (GOL) budget allocation
14.2. Develop a joint proposal for financial support	Dec 2020	+++	+++	MOA, MOH, NPHIL, EPA	<ul style="list-style-type: none"> Request consultant for proposal writing Develop a joint proposal Submit proposal for ToR Submit proposal to DP Follow up on progress of proposal
Objective 15: Implementation of intersectoral R/C Strategic Plan					
15.1. Scale up intersectoral human resource capacity for RC at all levels	2024	+	+++	MOA, MOH, NPHIL, EPA	<ul style="list-style-type: none"> Establish a joint criteria for recruitment Conduct joint recruitment of 60 RC Develop joint ToR Train 60 RC officers Deploy RC officers at all levels Review and revise RC materiel and messages Engage community in materiel & messages produce
15.2. Monitor and evaluate the multisectoral implementation of RC activities at all levels	2019	++	+++	MOA, MOH, NPHIL, EPA, partners	<ul style="list-style-type: none"> Develop joint monitoring and evaluate tools Conduct joint monitoring using tool Gather data Analyse data Use data for next action/step

NB: Participants have made progress to identify the key objectives and their corresponding activities to be achieved in order to improve the collaboration between public health and veterinary sectors, little emphasis was made to document the level of difficulty and or impact of each activity.

OUTPUT 3: PRIORITIZATION RESULTS

All participants were asked to select which five of the 15 objectives they considered as of highest priority. Total of 57 participants contributed to the vote.



WORKSHOP EVALUATION

An evaluation questionnaire was completed by 66 participants in order to collect feedback on the relevance and utility of the workshop.

Tables 2-5: Results of the evaluation of the event by participants (66 respondents)

Workshop evaluation	Satisfied' or 'Fully satisfied'	Average rating (/4)
Overall assessment	97%	3.3
Contents	94%	3.3
Structure / format	97%	3.3
Facilitators	88%	3.2
Organization (venue, logistics)	95%	3.2

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

Impact of the workshop on	High' or 'Very High' impact	Average rating (/4)
Your technical knowledge	97%	3.2
The work of your unit	90%	3.3
AH-PH collaboration in country	75%	2.9

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

Average score for each session (/4)						
Session 1	Session 2	Session 3	Session 4	Session 5	Session 6	Session 7
3.3	3.2	3.3	3.2	3.4	3.3	3.5

Would you recommend this workshop to other countries?	
Absolutely	79%
Most likely	14%
Likely not	0%
No	0%
Not completed	8%

APPENDIX

ANNEX 1: WORKSHOP AGENDA

DAY 1	
08:30 – 09.00	Registration of participants
09.00 – 10.00	<p>Opening Ceremony</p> <ul style="list-style-type: none"> • Welcome message from the Grand Bassa County Health Team • Introduction of participants (10') • Regional Representative OIE (5') • Representative of FAO (5') • Country Representative WHO (5') • Representative of MOA (5') • Representative of EPA (5') • Representative of the MOH (5') • Representative of NDMA (5') • Representative of WASH (5') • Group Picture (5') + Coffee Break (15')
10.00 – 12.00	<p>Session 1: Workshop Objectives and National Perspectives</p> <p>The first session sets the scene by providing background information on the One Health concept and the subsequent tripartite OIE-WHO-FAO collaboration. It is followed by comprehensive presentations from both Ministries on the national public and animal health services. 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.</p> <ul style="list-style-type: none"> • Workshop approach and methodology – PPT (10') • MOVIE 1: Tripartite One Health collaboration and vision (15') • Veterinary Services and One Health – PPT (20') • Public Health Services and One Health – PPT (20') • MOVIE 2: Driving successful interactions - Movie (25')
Lunch (12:00-13:30)	
13.30 – 17.00	<p>Session 2: Navigating the road to One Health</p> <p>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 emergency scenario.</p> <p>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).</p> <ul style="list-style-type: none"> • Presentation and organization of the working group exercise – PPT (15') • Case study - Working groups by disease (120') • Restitution (75')

DAY 2	
08:00 – 9:10	<ul style="list-style-type: none"> • Registration and breakfast (8:00am - 8:30am) • Recap from day 1 (8:30am - 9:40am) • Case study - Working groups by disease (9:40am – 10:55am; 15' each) • Restitution 10:55am -12:20pm (75')
09.10 –12.00	<p><u>Session 3: Bridges along the road to One Health</u></p> <p>Session 3 presents the tools from both sectors (IHR MEF, JEE, PVS) and uses an interactive approach to map activities identified earlier onto a giant IHR-PVS matrix. This process will enable to visualize the main gaps, to distinguish disease-specific vs systemic gaps and to identify which technical areas the following sessions will focus on.</p> <ul style="list-style-type: none"> • MOVIE 3: IHR Monitoring and Evaluation Framework (25') • MOVIE 4: PVS Pathway (25') • MOVIE 5: IHR-PVS Bridging (10') • Mapping gaps on the IHR/PVS matrix (45') + Coffee break (20') • Discussion – Plenary (30')
12:00 - 13:00	<p><u>Session 4: Crossroads - IHR MEF, JEE and PVS Pathway reports</u></p> <p>Participants will be divided into working groups by technical topic (surveillance, communication, coordination, etc) and will explore the improvement plans already proposed in the respective assessments (IHR annual reporting, JEE, PVS Evaluation, etc.), extract relevant sections and identify what can be synergized or improved jointly.</p> <ul style="list-style-type: none"> • Presentation and organization of the working group exercise (15') • Extract main gaps and recommendations from the PVS and IHR reports (including the JEE), in relation to gaps identified on the matrix (45')
Lunch (13:00-14:00)	
14:00 - 15:00	<p><u>Session 4 (continued)</u></p> <ul style="list-style-type: none"> • Extract main gaps and recommendations from the PVS and IHR reports (including the JEE), in relation to gaps identified on the matrix (continued, 60')
15:00–17:15	<p><u>Session 5: Road planning</u></p> <p>Participants will use the results obtained from the case studies and from the assessment reports to develop a realistic and achievable road-map to improve the collaboration between the sectors.</p> <ul style="list-style-type: none"> • Presentation and organization of the working group exercise (15') • Objectives and Activities (Working groups by technical topic) (120')

DAY 3	
09:00 – 9:10	Feedback from day 2
9:10 - 12:15	<p><u>Session 6: Fine-tuning the roadmap</u></p> <p>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.</p>
	<ul style="list-style-type: none"> • Fine-tuning objectives and activities (90') Coffee break (15') • World Café (90')
Lunch (12:15-13:30)	
13:30 - 15:30	<p><u>Session 7: Way forward</u></p> <p>In the last session, representatives from the key Ministries take over the leadership and facilitation of the workshop to discuss with participant about the next steps and how the established roadmap will be implemented.</p> <p>Linkages with other mandated plans such as the National Action Plan for Health Security are discussed. This is also where any need from the country can be addressed. This will depend greatly on the current status of the country in terms of IHR-MEF and on the level of One Health capacity.</p>
	<ul style="list-style-type: none"> • Prioritization vote (30') • Integrating the outcomes in the NAPHS (20') • Integrating the outcomes in the One Health Strategic Plan (20') • Discussion on the way forward (20')
15:30 - 16:30	<p><u>Closing Session</u></p> <ul style="list-style-type: none"> • Evaluation of the workshop (20') • Closing ceremony (40')

ANNEX 2: LIST OF PARTICIPANTS: VENUE: ST. PETER CLAVER PARISH HALL, GRAND BASSA COUNTY

Last name	First name	Designation	Agency/ Institution	Telephone	County	E-mail
Nuwolo	Sumo	Surveillance Officer	NPHIL	777563299	Montserrado	nuwolo@gmail.com
Jah	Oliver	Communication Officer	NPHIL	777638190	Montserrado	oliverjahb@gmail.com
Doe	Elizabeth	SA Coordinator, EPI	MOH	886621863	Montserrado	elizabethjdoe1982@gmail.com
Sieh	Sonpon G.	One Health Coordinator	NPHIL	886774166	Montserrado	sblamosieh@yahoo.com
Jawara	Lahannah	Message & Material Coordinator	MOH	886634247	Montserrado	lahannahvillejawara@gmail.com
Jetoh	Dr. Ralph	Deputy Director DIDE	NPHIL	777372655	Montserrado	ralphica2000@gmail.com
George	Roseline	Rabies Focal Person	NPHIL	886549805	Montserrado	rncgeorge05@gmail.com
Thomas	Phebe J.	Port Health Coordinator	NPHIL	0886408115	Montserrado	phebenstomas@gmail.com
Cole	Lasee	Data Officer	NPHIL	0886818548	Montserrado	laseec@yahoo.com
Gbayeah	Josephine	Community Health Division	MOH	776337070	Montserrado	igbayea77@yahoo.com
Tucker	Dr. Anthony	County Health Officer	MOH	886516620	Grand Bassa	anthonyt09@gmail.com
Yeiah	Dr. Adolphus	County Health Officer	MOH	886812584	Bong	adolphusyeiah@yahoo.com
Whesseh	Faith K.	Acting Training Lead Director	NPHIL	778279732	Montserrado	ftkamara85@yahoo.com
Vonhm	Dr. Benjamin	Medical Advisor	NPHIL	0886622971	Montserrado	btvonhm@gmail.com
Yeiah	Dr. Adolphus	County Health Officer	MOH	886812584	Bong	adolphusyeiah@yahoo.com
Dahn	Gonleyen	M and E Officer	MOH	776353557	Nimba	djgonleyen@gmail.com
Rancy W.	Leesala	County Health Services Admin.	MOH	886472819	Lofa	rancywl@gmail.com
Wapoe	Dr. Yatta	County Health Officer	MOH	886514262	Montserrado	ywapoedr@gmail.com
Gortor	Wilfred T.	Vector Coordinator	NPHIL	0777061979	Montserrado	sayegortor54@yahoo.com

Last name	First name	Designation	Agency/ Institution	Telephone	County	E-mail
Diana K.	Smith	AMR Focal Person/Pharmacist	MOH	886589918	Montserrat	mithdiana141@gmail.com
Toe	Felecia T.	Asst. CSO	MOH	776581921	Montserrat	felicia.toe25@gmail.com
Dolo	Prince	RIA PoE Supervisor	MOH	777032719	Margibi	princedolo12@gmail.com
Morris	Kebeh	Bo Water side PoE Supervisor	MOH	776808268	Grand Cape Mount	
Williams	Sampson	District Surveillance Officer	MOH	770042382	Montserrat	sampsonwilliams40@gmail.com
Jallah	Lawerence	District Surveillance Officer	MOH	776191906	Grand Bassa	
Williams	Nyemah	County Livestock Officer	MOA	775616422	Grand Kru	
Jolo	Jethro W.T	County Agriculture Coordination (CAC)	MOA	0775568268	River Gee	jethrojolo@gmail.com
Harris	Ben D.B.	County Livestock Officer	MOA		Nimba	
Wondah	Cisco N. Sr	County Livestock officer	MOA	0886607475	Bomi	1ciscowondah@gamil.com
Yarkpawolo	James S.	County Livestock Officer	MOA	0886590123	Sinoe	yarkpawolojames@gmail.com
Mulbah	Amos Y.	County Livestock Officer	MOA	0777451100	Bong	
Tuckolon	Vasselee B.	County Livestock Officer	MOA	886705695	Gparpolu	vesseleetuckolon@yahoo.com
Kamara	Abraham	County Livestock Officer	MOA	0777451084	Grand Bassa	abrahamkamara600@gmail.com
Kolvah	Joyce	County Agriculture Coordinator	MOA	777531868	Grand Bassa	joycekolvah200@gmail.com
Radisson	Paasewe	County Livestock Officer	MOA	886705695	Gbarpolu	vesseleetuckolon@yahoo.com
Mulbah	Alex Suah	County Agriculture Coordinator	MOA	0886400435	Grand Gedeh	amsuah2014@gmail.com

Last name	First name	Designation	Agency/ Institution	Telephone	County	E-mail
Mesah	Clarence G.	County Agriculture Coordinator	MOA	0777257573	Grand Kru	cmesah@gmail.com
Darkolon	Henry T.	County Agriculture Coordinator	MOA	0886521357	Lofa	htdarkolon77@gmail.com
Younn	Musu Tuah	County Agriculture Coordinator	MOA	0886385172	Margibi	emusuyounn@gmail.com
Boyeh	Alvin	County Livestock officer	MOA	0880624597	Maryland	
Zeon	Amos G.B	County Agriculture Coordinator	MOA	0886635373	Montserrado	agezeon2009@yahoo.com
George	Tamba Solomon	Central Vet. Surveillance Officer	MOA	886587910	Montserrado	georgesolomontamba@gmail.com
Kamokai	Nora Bendu	County Agriculture Coordinator	MOA	0886545343	River Cess	NoraBendu@yahoo.com
Anderson	Joseph	Chief Veterinary Officer	MOA/Central	886540023	Montserrado	joeelson2007@gmail.com
Morlu	Karsor	Director, Animal Production	MOA/Central	777439450	Montserrado	mkorsor@moa.gov.lr
Blackie	Aaron	Epidemiologist	MOA/Central	886570633	Montserrado	sasacsliberia255@gmail.com
Kamara	Varney	Director, Central Vet Lab	MOA/Central	886510194	Montserrado	vascomk1982@yahoo.com
Miaway Farnvalo	Eddie	Director, Central Vet Epidemiology Unit	MOA/Central	886484351	Montserrado	wonkehmie@gmail.com
Watta	Anthony	Virogist, Central Vet. Lab	MOA/Central	770483300	Montserrado	wattaanthony@yahoo.com
Tengbeh	Franklin	County Livestock Officer	MOA	777174377	Lofa	tengbeh@gmail.com
Karnuah	David	Director, Quarantine VPH	MOA	88660442	Nimba	
Brenda	Kofi M.	Lab technician, Veterinary Lab	MOA/Central	776562524	Montserrado	brendamusa18@gmail.com

Last name	First name	Designation	Agency/ Institution	Telephone	County	E-mail
Wingbah	Edward G.	Asst. Manager/County Coordination	Environmental Health Services (EHS)	0886576150	Montserrado	ewingbah@epa.gov.lr
Soko	Louise M.D.	Asst. Supervisor/Technical Services	EHS	0886677499	Montserrado	lmdsoko@yahoo.com
Cole	Charles D.	Asst. Supervisor/County Coordination	EHS	777343971	Montserrado	
Yarsiah	Forgbanah	Environmental Inspector	EHS	886667612	Bomi	
Wheaton	Richard	Environmental Inspector	EHS	775205874	Grand Bassa	
Kpehe	Ezekiel	Head Environmental Inspector	EHS	0880679178	Maryland	kpeheezekielhkpehe@gmail.com
Chea	Roland	Head Environmental Inspector	EHS	0886525393	Sinoe	rolandchea2005@yahoo.com
Mantor	Stephen	Environmental Inspector	EHS	880312768	Bong	-
Dugbe	Sam	Environmental Inspector	EHS	888894090	Montserrado	
Jamina	Ambrose ABC	Head Environmental Inspector	EHS	880694882	Lofa	ambrosejamina1976@gmail.com
P. Wisdom	Fayiah	Act. Director of Regulations	EHS	886908486	Montserrado	wisdomfayiah9020@gmail.com
Williams	Henry O.	National Disaster Mgt. Agency-MIA	Internal Affairs Ministry (MIA)	886908486	Montserrado	williamshenry036@gmail.com
Zackpah	Emma	National Disaster Mgt. Agency-MIA	MIA	0777044484	Montserrado	emmazackpah@gmail.com
Kiazulu	Trojan	Media	EHS	775505069	Montserrado	
Talawally	Kweeta	Ministry of Justice	EHS	777522948	Montserrado	ktamba@epa.gov.lr
Snoh	Zainab S.	National IPC Officer	WHO	0886551047	Montserrado	sirleafzainab2g14@gmail.com

Last name	First name	Designation	Agency/ Institution	Telephone	County	E-mail
Goll	Quincy	WASH Lead	WHO	0776077176	Montserrado	t.dgoll@yahoo.com
Monday	Julius Rude	Field Coordinator	WHO	0886880412	Montserrado	drmondayj@gmail.com
Mulbah	Gertrude J.	Laboratory Officer	WHO	0776794264	Montserrado	mulbahg@who.int
Yealue	Kwakuan	Epidemiologist	WHO	886400722	Montserrado	k34yealue@gmail.com
Hilter	Gennevie	Coordinator	WHO	886592754	Montserrado	hgennevie@gmailc.om
Lake	Vachel Harris	Health Promotion and Communication Officer	WHO	776532008	Montserrado	lakev@who.int
Kromah	Mohammed	Data Manger	WHO	776977166	Montserrado	kromahm@who.int
Freeman	Leelia A.	Vet. Epidemiologist	FAO	0777522003	Montserrado	leelia.andrews@fao.org
Ahmadou	Miang		FAO		Montserrado	hmadou.niang@fao.org
Mehdeh	Joseph	Coordinator	Riders for Health			jmehdeh@gmail.com

ORGANIZERS ET FACILITATORS

Last Name	First Name	Designation	Agency/Institution	Telephone	E-mail
Kora LAFIA	Brice	OIE	RROA, Bamako	+223 79798789	b.lafia@oie.int
Muset	Sophie	EBO-SURSY Project Manager	OIE	+33 1 44 15 19 49	s.muset@oie.int
Munstermann	Susanne	PVS Expert	OIE		s.munstermann@oie.int
Bolongei	Moses	National IPC Officer	WHO	0886-420-284	bolongeim@who.int
Nagbe	Thomas	Director DIDE	NPHIL	777442444	tnknue31112@gmail.com
Baller	April	WHE Cluster Coordination	WHO Liberia	0776-628-1126	ballera@who.int
Venn	Nearl Tawoe	IT Support Assistant	WHO	0886966152	vennn@who.int
Kimbi WANGO	Roland	CPI Planning, JEE and M&E	WHO/AFRO	+221 77 450-3311	wangokimbir@who.int
TRAORE	Tieble	Technical Officer, One Health	WHO/AFRO	+221774503312	traoret@who.int

