

Acknowledgments

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ABBREVIATIONS & ACRONYMS

AI	Avian Influenza
CDC	Communicable Disease Control
DGOH	Directorate General of Health Services
DLS	Department of Livestock Services
FP	Focal Point
HQ	Headquarters
IEDCR	Institute of Epidemiology, Disease Control and Research
IHR	International Health Regulations (2005)
JEE	Joint External Evaluation
MEF	Monitoring and Evaluation Framework
MOFL	Ministry of Fisheries and Livestock
MOHFW	Ministry of Health and Family Welfare
MOU	Memorandum of Understanding
NAPHS	National Action Plan for Health Security
OIE	World Organisation for Animal Health
PH	Public Health
PVS	Performance of Veterinary Services
SEARO	South-East Asia Regional Office of the World Health Organization
SOP	Standard Operating Procedures
TOR	Terms of Reference
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 Bangladesh,

- a PVS Evaluation was conducted in 2011;
- a Joint External Evaluation (JEE) was conducted in 2016;
- The NAPHS will be drafted this year, meaning the outputs of the IHR-PVS NBW can be injected in the NAHS.

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 (incl. 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 77 participants from MOHCDGEC, MOLF and PMO with representatives from the Central, Provincial and District level attending the three-day discussions. Representatives of the environmental sector, legal sector, media and health development partners (DTRA, CDC, USAID, University of Minnesota) were also present.

REPORT ON THE SESSIONS

The workshop used an interactive methodology and a structured approach with user-friendly material, case studies, videos and facilitation tools. All participants received a *Participant Handbook* which comprised of 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 initiated and chaired by Dr Sanya Tahmina (Director and IHR focal point, CDC). Welcome speeches were given by Dr Rajesh Sreedharan (Team leader JEE secretariat, WHO/HQ), Dr Ainul Haque (Director, DLS), Pr Meerjady Sabrina Flora (Director, IEDCR), Dr Hammam El Sakka (Team leader, WHO/Bangladesh), Pr Nasima Sultana (Additional Director General, DGOH), Dr Heeresh Ranjan Voumik (Director General, DLS) and Mr Asadul Islam (Secretary, MOHFW). The workshop was officially opened by Honorable State Minister Dr Murad Hasan (MOHFW).

Dr Sanya Tahmina (Director, CDC) gave an overview of the main zoonotic diseases in Bangladesh. Particular emphasis was given on the epidemiological situation for avian influenza, rabies, anthrax and Nipah virus disease. Dr Tahmina then elaborated on the status of preparedness of the country and gave some examples of ongoing advocacy, communication and social mobilization activities. Dr Gyanendra Gongal gave a presentation on the One Health Concept, its history, rationale and purpose and how it became an international paradigm. The presentation also introduced the workshop in the global and regional context by providing high level background information on the collaboration between WHO, OIE and FAO.

SESSION 1: THE ONE HEALTH CONCEPT AND NATIONAL PERSPECTIVES

The workshop approach and methodology and the participant handbook were presented by Dr Guillaume Belot (WHO).

Dr Abu Sufian (Assistant Director, DLS) presented the vision and mission of the DLS, as well as its organizational structure. Emphasis was also made on the importance and the growth of the livestock sector in the country. Dr Sufian then presented an overview of the results of the PVS Evaluation and PVS Gap Analysis conducted in Bangladesh as well as an update on the capacities of the country's veterinary services.

A documentary video provided participants with concrete worldwide examples of intersectoral collaboration in addressing health issues at the human-animal interface.

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 four working groups of mixed participants from both sectors and from different levels (Central, Provincial, District). Groups were provided with a case study scenario (Table 1) based on diseases relevant to the local context developed in collaboration with national representatives.

Table 1: Scenarios used for the different case studies

Rabies – 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 Mymensingh City. The dog was killed by local people two days ago and the carcass was destroyed before the Veterinary authorities were able to confirm the diagnosis.
Avian Influenza H5N1 – Two persons were admitted at the Kurmitola General Hospital, Dhaka, with pneumonia. IEDCR Laboratory testing confirmed H5N1 subtype of avian influenza by RT-PCR. One of the patients is a semi-commercial broiler producer who sells his birds three times a week at the local live bird market in Savar. The other patient reported having visited the same market 7 days prior to disease onset and having bought four ducks.
Anthrax – At least 60 people who allegedly ate uninspected meat at Ullahpara Upazila, Sirajganj District, have been screened for anthrax. The victims were rushed to primary health care center after some developed symptoms associated with anthrax and cutaneous lesions. The man who sold the uninspected meat disappeared after learning that his neighbours had fallen sick.
Salmonellosis – 90 people in the capital sought medical attention when they suffered high fever, nausea, diarrhoea and severe abdominal pain, 12-36 hours after eating breakfast at a prominent hotel in Gazipur. Of these, 7 were hospitalised. The Managing Director of the hotel said that it sourced its eggs from a reputable supplier, and that the hotel stored its eggs according to food safety standards.

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, surveillance, risk communication, etc. These areas of collaboration were represented by color-coded cards: green for “good collaboration”, yellow for “some collaboration”, and red for “collaboration needing improvement” (Figure 1).



Figure 1: Participants working on a case study scenario and evaluating the level of collaboration between the sectors for 15 key technical areas.

Output 1 summarizes the results from the five disease groups.

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 (Output 1).
- The main gaps in the collaboration are identified.

SESSION 4: CROSSROADS – PVS PATHWAY AND IHR MEF REPORTS

New working groups with representation from all previous groups were organized for each of the three 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 Follow-up) and extracted the main findings and recommendations relevant to their technical area (Figure 3).



Figure 3: Participants extracting results from the PVS and JEE 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, joint activities to implement in order to improve the collaboration between the two sectors. For each activity, participants filled cards to specify the date of expected implementation, the focal points responsible and a detailed process for implementation (Figure 4).



Figure 4: The group working on “Coordination” identified 4 key activities to improve the collaboration between the two sectors in this domain.

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 are identified to improve inter-sectoral 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

A World Café exercise was then organized to enable participants to contribute to the action points of all technical areas (Figure 5). Each group nominated a rapporteur whose duty was to summarize the results of their work to the other groups. Each group rotated between the different boards to contribute and provide feedback on all technical areas. Rotating groups had the possibility of leaving post-it notes on the activities of other groups when they felt that an amendment or a clarification was necessary.

At the end of the cycle, each group returned to their original board and the rapporteur summarized the feedback received. Groups were given 20 minutes to address changes or additions suggested by the other participants. Activities were fine-tuned accordingly, and a final plenary session was conducted to discuss the outstanding points.



Figure 5: World café exercise: the group on “Response and Investigation” is providing feedback to the rapporteur of the group on “Coordination”.

Overall, the three groups identified a total of 18 activities. The detailed results are presented in [Output 2](#).

Prioritization of Activities

To prioritize the activities identified by the technical working groups, participants were given 5 stickers and were asked to identify which five activities they considered as of highest priority.

38 participants participated in the vote and results of the vote can be found in [Output 2](#).

Outcomes of Session 6:

- Harmonized, concrete and achievable road-map to improve the collaboration between the animal health 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 activities.

SESSION 7: WAY FORWARD

A final plenary session was held to discuss on the way forward and on how to ensure that this road-map will be implemented. It was mentioned that the upcoming National Action Plan for Health Security will be drafted in the coming weeks and that the outcomes of the NBW will contribute to its development. It was also decided that the road-map should be brought up to the relevant directors for their validation and follow-up.



Figure 6: final plenary session to discuss on the way forward.

Outcomes of Session 7:

- Understanding of how the outputs of the workshop can feed into other existing plans.
- Way forward is presented and discussed.
- Ownership of the workshop results by the country.

CLOSING SESSION

The closing session was conducted by Dr Tahmina Akhter, with speeches from Dr Rajesh Sreedharan (Team leader JEE secretariat, WHO/HQ), Dr Pasang Tshering (Consultant, OIE), Dr Hammam El Sakka (Team Leader, WHO/Bangladesh), Dr Woodford (PVS expert, OIE), Dr Ainul Haque (Director, DLS) and Dr Nasir Ahmed Khan (Senior Advisor, DGOH).

All the material used during the workshop, including movies, presentations, documents of references, results from the working groups and pictures were copied on a memory stick distributed to all participants.

WORKSHOP OUTPUTS

OUTPUT 1: ASSESSMENT OF LEVELS OF COLLABORATION FOR 16 KEY TECHNICAL AREAS

Technical area (cards)	Anthrax	Rabies	HPAI	Salmonellosis	Score
Emergency funding	Red	Red	Red	Red	8
Risk assessment	Red	Yellow	Red	Red	7
Joint surveillance	Yellow	Red	Red	Red	7
Legislation / Regulation	Red	Red	Yellow	Yellow	6
Finance	Yellow	Yellow	Red	Red	6
Communication w/ media	Red	Yellow	Red	Yellow	6
Field investigation	Yellow	Red	Yellow	Red	6
Coordination at local Level	Yellow	Yellow	Yellow	Red	5
Laboratory	Yellow	Red	Yellow	Yellow	5
Response	Yellow	Red	Yellow	Yellow	5
Human resources	Red	Yellow	Yellow	Yellow	5
Coordination at high Level	Green	Green	Red	Red	4
Communication w/ stakeholders	Yellow	Yellow	Yellow	Yellow	4
Coordination at technical Level	Green	Yellow	Green	Red	3
Education and training	Green	Yellow	Yellow	Yellow	3

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 AREAS

Action	Timeline	Difficulty (1-3 scale)	Impact (1-3 scale)	Resp.	Process	Priority
COORDINATION						
1.1. Reactivate Central level One Health Coordination Committee	One year	++	++	MoHEW, MoFL & MoEFC	<ol style="list-style-type: none"> 1) One Health Secretariat will take initiative to arrange a meeting 2) Review of ToRs for strengthening coordination & collaboration 3) Define frequency for regular meeting arrangements for information sharing 4) Distribution of meeting decisions among the stakeholders 5) Monitoring District level coordination activities 	41%
1.2. Set up a District level coordination committee in each District (1 representative from each relevant sector for all 64 districts)	One Year	++	+++	One Health Secretariat	<ol style="list-style-type: none"> 1) Identification of Stakeholders 2) Identification of Focal points 3) Formation and approval of Committee 4) Formulate ToRs for Committee members 5) Selection of Chairperson & Secretary(ies) 6) Re-elect Chairperson & secretaries every 3 years 	27%
1.3. Mapping of Human resources pool for notifiable zoonotic diseases in all relevant sectors	One Year	++	+++	Joint Technical Working Group	<ol style="list-style-type: none"> 1) Develop database of human resources & categories 2) Identify needs / gaps 3) Evaluate HR needs 4) Conduct annual M&E based on defined indicators 	41%
1.4. Compile and adapt existing Guidelines for detection, prevention & control of zoonotic diseases and develop any missing guidelines		++	++	Joint Technical Working Group	<ol style="list-style-type: none"> 1) Collect existing Guidelines 2) Review existing Guidelines 3) Update the reviewed Guidelines, as necessary 4) Develop zero draft(s) for the missing Guidelines 5) Hold consultative workshop with relevant stakeholders / SMEs to review zero drafts 6) Compile, update and adapt the Guidelines 	22%
SURVEILLANCE, LABORATORY & RISK ASSESSMENT						
2.1. Develop and/or adopt a joint strategy for surveillance and Laboratory diagnosis for zoonotic diseases and AMR	June 202	++	++	Director CDC-DGHS, IECDR, DGDA, DLS, IPH, DoF	<ol style="list-style-type: none"> 1) Director General / Director from each sector will select technical persons on surveillance and laboratory diagnosis to develop a joint strategy and plan 2) Develop draft of joint strategic plan 3) Validation and dissemination through workshop 4) Approval of strategy 	43%
2.2. Develop SOPs for joint surveillance and laboratory diagnosis for zoonotic diseases and AMR as per the joint strategy	December 2020	++	++	Joint Technical Working Group	<ol style="list-style-type: none"> 1) Establish a core committee 2) Draft Draft SOPs by Core Committee 3) Validate the SOPs the workshops with experts 4) Approval of SOPs with relevant stakeholders 	38%
2.3. Conduct a Training Needs Assessment (TNA) for joint surveillance at the field level	August 2019	+	+++	DGHS, DG DLS	<ol style="list-style-type: none"> 1) Develop a TNA Questionnaire relating to field surveillance and Laboratory diagnosis 	14%

					2) Field test TNA questionnaire 3) Identify appropriate field officers responsible for surveillance and laboratory diagnosis of zoonotic diseases and AMR 4) Undertake TNA with identified personnel 5) Evaluate TNA and develop Training course module(s) accordingly	
2.4. Train identified technical persons on joint surveillance as per TNA	June 2020	+++	++	CDC-DGHS, DLS, FD	1) Validate and disseminate Training course module through workshop 2) Identify trainers and conduct ToT 3) Identify technical person involved in field and laboratory investigation for surveillance by official order 4) Trained trainers to conduct surveillance / Laboratory diagnosis training	38%
2.5. Develop or adopt an existing Joint Risk Assessment (JRA) tool(s)	Nov 2019	+	+++	DLS, DGHS, FD	1) DG/Directors Disease Control (human health/Public Health) will select technical persons to draft Risk Assessment tools as per WHO / OIE guidelines 2) Validation and dissemination of Risk Assessment tools through	5%
2.6. Identify and train sector specific technical focal persons for JRA	August 2009	+	+++	DGHS, DLS, FD	1) DG/Director each sector to identify one technical person from each sector for JRA 2) Develop ToRs for focal persons 3) Train focal persons on Risk Assessment 4) Trained focal persons will facilitate the JRA through workshop with development of tools / SOPs & validation	11%
2.7. Conduct regular JRA exercises	As required from 2020 onwards	+	+++	Technical focal persons for JRA	1) Identify areas of shared risks across all sectors 2) Conduct frequent Joint Risk Assessments	11%
2.8. Joint training of Laboratory staff in all sectors on: Biosafety / biosecurity, Laboratory Quality Assurance / QC and Laboratory diagnostic techniques for zoonotic diseases and AMR	March 2020	+++	++	CDC-DGHS, IEDCR, IPH, NIMS, CDIL, FDIL, BLRI, Diagnostic lab of FD	1) Develop standardized guideline and SOPs on Laboratory biosafety and biosecurity 2) Validation and dissemination of guidelines / SOPs 3) Training of respective laboratory technologists/technicians in all sectors	16%
2.9. Develop agreement for sharing of logistics and emergency supplies between human health and animal health laboratories	6 months / Aug 2019	+	++	DGHS & DG-DLS	1) Develop LoA between the DGHS & DLS 2) Establish logistics sharing committee 3) Establish emergency stock of important supplies to deal with emergency situations 4) Maintain inventory of emergency supplies	8%
FIELD INVESTIGATION AND RESPONSE						
3.1. Develop Guidelines / SOPs for Joint Investigation and Emergency response to any outbreak involving both sectors	December 2019	+	++	Joint Technical Working Group of DGHS / DLS	1) Joint Technical Committee to formulate Guidelines / SOPs for surveillance, field investigation and response to suspected zoonotic disease outbreak / other emergencies 2) Organise a validation workshop for official endorsement	54%
3.2. Establish Joint investigation team at national (1), and Divisional (8) levels using the One Health	June 2019	+	+++	DGHS / DLS	1) Meeting with relevant stakeholders 2) Identify members of Joint Investigation and Emergency Response	30%

approach					Teams	
3.3. Train a Joint response team at national level who will be available on 24/7 basis	January 2020	++	++	DGHS / DLS	1) Develop training modules based on Guidelines / SOPs 2) Training of Trainers 3) Training of Teams 4) Establish emergency supplies of PEP etc for Joint Investigation and ERTs	27%
3.4. Develop a joint web-based information management system to link DGHS and DLS and other relevant stakeholders	June 2021	+++	+++	DGHS / MoHFW DLS / MoFL BCC	1) Establish an information management working group 2) In collaboration with IT / MIS Consultant Develop ToRs for Information Management system 3) Develop and test information management system 4) Conduct end-user training 5) Commission Information Management system	51%
3.5. Conduct regular (annual) Joint simulation exercises on priority zoonotic diseases to test contingency plans and SOPs	From March 2020 onwards	+	++	DGHS / DLS	1) Plan and budget for annual simulation exercises 2) Implement and evaluate simulation exercises 3) Modify Guidelines and SoPS based on evaluation	30%

Difficulty of implementation: Low +, Moderate ++, Very difficult +++

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

Priority: Percentage of participants who evaluated the activity as one of the top 5 priorities

WORKSHOP EVALUATION

An evaluation questionnaire was completed by 40 participants (Figure 7) in order to collect feedback on the relevance and utility of the workshop.

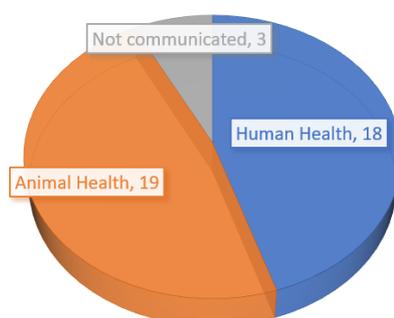


Figure 7: Answers to the question "which sector are you from?"

Tables 2-5: Results of the evaluation of the event by participants

Workshop evaluation	'Satisfied' or 'Fully satisfied'	Average score (/4)
Overall assessment	100%	3.4
Content	100%	3.4
Structure / Format	98%	3.4
Facilitators	100%	3.6
Organization (venue, logistics, ...)	98%	3.5

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

Impact of the workshop on...	'Significant' or 'Major'
Your technical skills / knowledge	95%
The work of your unit/department	90%
The intersectoral collaboration in Bangladesh	77%

Participants had to choose 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
3.2	3.5	3.3	3.4	3.5	3.3	3.3

Would you recommend this workshop to other countries?	
Absolutely	60%
Yes	40%
Likely not	0%
No	0%

APPENDIX

ANNEX 1: WORKSHOP AGENDA

Day	Start	End	Session	Topic
DAY - 1	9:00 AM	9:30 AM		Registration
	9:30 AM	10:50 AM		Welcome Speech and Inauguration by the Chief Guest
	10:50 AM	11:00 AM	SESSION-1 Setting the scene	The workshop approach and methodology including the handbook
	11:00 AM	11:20 AM		Video 1 - Introduction to One Health Concept, the global and national context of the workshop and collaboration between WHO, OIE and FAO
	11:20 AM	11:40 AM		Photo Session
	11:40 AM	12:00 PM		- <i>Tea Break</i>
	12:00 PM	12:15 PM		An overview on the epidemiological situation of the main zoonotic diseases whether endemic
	12:15 PM	12:30 PM		Highlights on JEE
	12:30 PM	12:45 PM		Highlights on PVS Assessment & PVS Gap Analysis
	12:45 PM	1:10 PM		Movie 2: worldwide examples of inter-sectoral collaboration in addressing health issues at the human-animal interface.
	1:10 PM	1:20 PM	SESSION-2 Identification of collaboration gaps	Creating 4-5 mixed working groups (according to prioritized zoonotic diseases, Assign case study scenarios to groups)
	1:20 PM	1:30 PM		Assigning case study scenarios to groups
	1:30 PM	2:30 PM		- <i>Lunch & Prayer Break</i>
	2:30 PM	4:00 PM		Ex-1: Participants discuss the level of collaboration for the management of zoonotic diseases
	4:00 PM	4:20 PM		- <i>Tea Break</i>
	4:20 PM	4:40 PM	SESSION-3 IHR-PVS tools and their bridging	Restitution of the group work
	4:40 PM	5:20 PM		Movie 3-5: Videos on IHR MEF, JEE, PVS tools
	5:20 PM	5:40 PM		- <i>Tea Break</i>
5:40 PM	6:40 PM	Ex-2: Mapping activities and joint areas by Group (IHR-PVS Matrix)		
6:40 PM	7:15 PM		Distinguishing disease-specific vs systemic gaps	
DAY - 2	9:00 AM	9:20 AM	SESSION-4 Extraction of assessment results	Formation of new working groups with representation from all previous groups + instructions
	9:20 AM	10:50 AM		Ex-3: Extracting main findings and recommendations from JEE self-evaluation, PVS Evaluation, PVS Gap Analysis
	10:50 AM	11:10 AM		- <i>Tea Break</i>
	11:10 AM	11:20 AM	SESSION-5 Joint Road Planning	Working group instructions
	11:20 AM	1:20 PM		Ex-4: Brainstorming on joint activities for each technical area
	1:20 PM	2:20 PM		- <i>Lunch & Prayer Break</i>

2:20 PM	3:30 PM	SESSION-6 Finalization of the joint road-map:	Ex-5: Filling out of activity cards
3:30 PM	3:50 PM		Grouping of activities under specific objectives (Fine tuning of the Joint Road Map)
3:50 PM	4:20 PM		Ex-6: World Café
4:20 PM	4:40 PM		- <i>Tea Break</i>
4:40 PM	5:00 PM		Finalization of the road-map
5:00 PM	5:15 PM		Ex-7: Prioritization of Objectives
5:15 PM	5:30 PM	SESSION-7 Way Forward	Discussion on prioritization results
5:30 PM	5:45 PM		Discussion on how the outputs of the workshop can feed into other plans
5:45 PM	6:00 PM		Discussion on way forward on the implementation of the road-map
6:00 PM	6:30 PM		Closing Session
7:00 PM	8:00 PM		Dinner

ANNEX 2: LIST OF PARTICIPANTS

Sl.	Participant	Ministry
1.	Mr Md. Motahar Hossain Deputy Secretary (Health Services Division), Ministry of Health & Family Welfare	Health and Family Welfare
2.	Mr Khandokar Zakir Hossain Deputy Secretary (WHO-2), Ministry of Health & Family Welfare	Health and Family Welfare
3.	Dr Nusaer Chowdhury Medical Officer (Co-ordination and Support Centre), Directorate General of Health Services (DGHS)	Health and Family Welfare
4.	Colonel Dr Mohammad Mohsin ADGMS (Health) Bangladesh Army	Health and Family Welfare
5.	Dr Md. Mahmood Hossain Assistant Registrar (Medicine), Kurmitola General Hospital (KGH)	Health and Family Welfare
6.	Dr Ahsan Tauhid Syed Junior Consultant (Paediatric), Infectious Disease Hospital (IDH)	Health and Family Welfare
7.	Dr Khondoker Mahbuba Jamil Virologist & In charge (National Polio & Measles Laboratory), Institute of Public Health (IPH)	Health and Family Welfare
8.	Dr Gobinda Chandra Banik Associate Professor (Dept. of Medicine), Dhaka Medical College	Health and Family Welfare
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14.	Dr Md. Abdul Jabber UH&FPO (Hakimpur), Upazila Health Complex Directorate General of Health Services (DGHS)	Health and Family Welfare
15.	Dr Mohammad Azizur Rahman Siddiqui Civil Surgeon (Chattogram), Civil Surgeon Office Directorate General of Health Services (DGHS)	Health and Family Welfare
16.	Dr Md. Harun-or-Rashid Harun Deputy Civil Surgeon (Jashore), Civil Surgeon Office Directorate General of Health Services (DGHS)	Health and Family Welfare

Sl.	Participant	Ministry
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18.	Dr Mohammad Sohel Samad Senior Scientific Officer (Medical Entomology), Institute of Epidemiology, Disease Control and Research (IEDCR)	Health and Family Welfare
19.	Dr Md Nasir Ahmed Khan Senior Adviser (International Health Regulations), Communicable Disease Control Division, DGHS	Health and Family Welfare
20.	Dr SM Golam Kaisar Sikder DPM (VH, ARC & Diarrhoea Control Program), Communicable Disease Control Division, DGHS	Health and Family Welfare
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22.	Dr Hafizul Islam Deputy Programme Manager (International Health Regulations), Communicable Disease Control Division, DGHS	Health and Family Welfare
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23.	Dr Tahmina Akhter Programme Manager (International Health Regulations), Communicable Disease Control Division, DGHS	Health and Family Welfare
25.	Dr Md. Sheikh Azizur Rahman Director (Extension), Department of Livestock Services (DLS)	Fisheries & Livestock
26.	Dr Md. Ainul Haque Director (Research, Training and Evaluation), Livestock Research Institute	Fisheries & Livestock
27	Dr Md. Shahid Ulla Deputy Director (Administration), Department of Livestock Services (DLS)	Fisheries & Livestock
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42.	Dr Prof Abdul Ahad Dean (Veterinary), Chattogram Veterinary & Animal Science University	Fisheries & Livestock
43.	K. B. M. Saiful Islam Chairman & Associate Professor (Dept. of Medicine & Public Health), Sher-e-Bangla Agricultural University	Fisheries & Livestock
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45.	Dr Golam Azam Upazila Livestock Officer (CDIL), Department of Livestock Services (DLS)	Fisheries & Livestock
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47.	Dr Mohammad Nizam Uddin Assistant Veterinary Surgeon (Wildlife & Nature Conservation Circle), Bangladesh Forest Department	Environment, Forest and Climate Change

ANNEX 3: LIST OF FACILITATORS

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3	Dr Guillaume Belot Technical Officer WHO HQ
4	Dr Pasang Tshering Consultant OIE
5	Dr Gyanendra Gongal Technical Officer WHE, WHO SEARO
6	Dr Stefany Ildefonso Acuna Consultant WHO PAHO
7	Dr Hammam El Sakka Team Leader HSE (WHO Health Emergencies Programme) WHE, WCO Bangladesh
8	Dr Muhammad Zahidur Rahim National Professional Officer (Emergency Humanitarian Action) WHE, WCO Bangladesh
9	Dr Kazi Mohammad Hassan Ameen National Consultant (Training & Risk Communication) WHE, WCO Bangladesh
10	Golam Kibria Nury National Consultant (Admin & FIN), WHE, WCO Bangladesh
11	Md. Shafiqul Islam Executive Assistant (Data Management), WHE, WCO Bangladesh
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