



Report of the

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

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9-11 May 2017  
Islamabad, Pakistan



Organized by WHO and OIE  
in collaboration with the Ministry of National Food Security & Research and the  
Ministry of National Health Services, Regulations & Coordination

## **Acknowledgments**

*The organizers of the meeting would like to express their gratitude to the authorities of Pakistan for their support in the preparation and conduction of the event*

*and more particularly to*

- *Dr Malik Muhammad Safi, Director Programs, Ministry of National Health Services, Regulation & Coordination*
- *Dr Qurban Ali, Animal Husbandry Commissioner, Chief Veterinary Officer, Ministry of National Food Security and Research*
- *The WHO country office, with a special thanks to Dr Mohammad Assai Ardakani, WHO representative a.i. in Pakistan and Dr Farah Sabih whose commitment and support at all stages of the preparation has been an invaluable support.*

*This workshop was funded by the European Commission's Directorate-General for International Cooperation and Development, as one of the component of the project "IFS/2014/350-752 One Health Project in Pakistan"*

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## ABBREVIATIONS & ACRONYMS

AI	Avian Influenza
AJK	Azad Jammu and Kashmir
CCHF	Crimean-Congo Hemorrhagic Fever
FATA	Federally Administered Tribal Areas
FAO	Food and Agriculture Organization of the United Nations
FELTP	Field Epidemiology and Laboratory Training Program
FP	Focal Point
HQ	Headquarters
IHR	International Health Regulations (2005)
IDSR	Integrated Disease Surveillance & Response
IT	Information technology
JEE	Joint External Evaluation
KPK	Khyber Pakhtunkhwa
LIMS	Laboratory Information Management System
MEF	Monitoring and Evaluation Framework
MNFSR	Ministry of National Food Security and Research
MNHSRC	Ministry of National Health Services Regulations and Coordination
NAP	National Action Plan
NIH	National Institute of Health
OIE	World Organisation for Animal Health
PH	Public Health
PMDC	Pakistan Medical and Dental Council
PVMC	Pakistan Veterinary Medical Council
PVS	Performance of Veterinary Services
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 among institutions and systems to prevent, detect, and control diseases among animals and humans. They have developed various frameworks, tools and guidance material 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, States Parties 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 mainly 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 those standards, in particular on the quality of Veterinary Services, the OIE has developed the Performance of Veterinary Services (PVS) Pathway, which is composed of different tools to assist countries to objectively assess and address the main weaknesses of their Veterinary Services.



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. 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 propose to engage the countries in a routine monitoring and follow up mechanism on the overall level of performance and help to determine the needs for compliance with internationally adopted references or standards.

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

In Pakistan,

- a PVS Evaluation was conducted in November-December 2014 and
- a JEE mission was organized in April-May 2016.

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## OBJECTIVES OF THE WORKSHOP AND EXPECTED OUTCOMES

The main objectives of the National IHR-PVS bridging workshop are to provide an opportunity to human and animal health services to share their views on the current level of coordination between the two sectors, jointly review the gaps identified through respectively the PVS Pathway and the IHR MEF (including the JEE), and build on these results to jointly develop strategic actions to strengthen their preparedness for and control of zoonotic diseases.

The workshop aims were:

- to increase awareness and understanding of WHO's IHR MEF and of OIE's PVS Pathway;
- to discuss the outcomes of IHR and PVS Pathway country assessments and identify ways to use the outputs;
- to facilitate the intersectoral coordination through improved understanding of respective roles and mandates;
- to facilitate the identification of possible synergies through facilitated discussion on technical expertise, data, best practices, and resources;
- to provide comprehensive and realistic information from international organizations in order to identify tools to facilitate the institutionalization of coordination mechanisms and intersectoral cooperation including in terms of funding, aligning national priorities and strategies.

The agenda of the Workshop is available at [Annex 1](#). It was attended by over 70 national participants ([Annex 2](#)), with approximately one half from the Ministry of National Health Services Regulations and Coordination and the other half from the Ministry of National Food Security & Research with representatives from the Federal and each Provincial / Regional level attending the three-day discussions. Representatives of the environmental sector, legal sector, media and health development partners were also present.

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## PREPARATORY WORK

The agenda of the workshop was developed in close collaboration between the WHO and the OIE based on the experience acquired during similar workshops held in Azerbaijan, Thailand and Costa Rica, with inputs from representatives of the MNHSRC and MNFSR. The agenda and technical inputs for the different sessions were finalized during on-site pre-workshop meetings.

## REPORT ON THE SESSIONS

The workshop uses an interactive methodology and a structured approach with user-friendly material, case studies, videos and facilitation tools. Sessions were structured in a step-by-step process as follows:

### OPENING SESSION

The opening ceremony was attended by high level national representatives, namely Dr Assad Hafeez - Director General and Dr Malik M Safi - Director Programs, MNHSRC; Dr Khurshid Ahmad – representing the Chief Veterinary Officer/ Animal Husbandry Commissioner, MNFSR and Dr Yusuf Zafar - Chairman Pakistan Agricultural Research Council. Also participating in the opening ceremony were Dr Mohammad Assai, WHO Representative in Pakistan, Dr Muhammad Afzal, representing FAO, Dr John Woodford – PVS experts, representing the OIE and Dr Stephane de La Rocque, head of the One Health Team in the department “Country Health Emergency Preparedness and IHR”, WHO HQ.

### SESSION 1: THE ONE HEALTH CONCEPT AND NATIONAL PERSPECTIVES

A documentary video introduced the One Health 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.

Both MNHSRC and MNFSR then provided comprehensive presentations on their respective structure and experiences in responding to One Health related challenges. The workshop approach and methodology were explained and participants had the opportunity to introduce themselves.

### SESSION 2: INTERACTIONS ON THE ROAD TO ONE HEALTH

Through a documentary video, the second session provided participants with concrete worldwide examples of intersectoral collaboration in addressing health issues at the human-animal interface. The session concluded with a plenary discussion on experience sharing regarding past intersectoral collaborations in preventing or managing zoonotic disease outbreaks.

### SESSION 3: NAVIGATING THE ROAD TO ONE HEALTH – COLLABORATION GAPS

Participants were divided into 8 working groups of mixed participants from both sectors (MNHSRC and MNFSR) and from different levels (Federal, Provincial, Regional). Groups were provided with one of four case study scenarios based on diseases relevant to the Pakistan context; Avian influenza, Brucellosis, Crimean Congo Hemorrhagic Fever (CCHF) and rabies (Table 1), developed in collaboration with MNHSRC and MNFSR representatives.

**Table 1: Scenarios used for the different case studies**

<p><b>Rabies</b> – A stray dog which was known to have bitten two cows and was behaving aggressively towards members of the public and was reported to have bitten some children in the same neighborhood was shot dead by Police in the outskirts of Rawalpindi two days ago. The carcass of the dog was destroyed before the Veterinary authorities were able to take the head of the dog for confirmation of diagnosis.</p>
<p><b>CCHF</b> – One week prior to the Eid-ul Azha celebrations six butchery workers from the District of Zhob (Balochistan) who had been involved in the routine slaughter of sheep died having developed acute haemorrhagic symptoms. Another person from the same butchery was admitted to hospital in Quetta and was diagnosed as having contracted CCHF.</p>
<p><b>Brucellosis</b> – During the last month three cows all belonging to a small-holder dairy farmer in Kasur District (Punjab) 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. However, the third abortion took place a day before market day and he happened to be in town, where he met the District vet and he mentioned that 3 of his cows had recently aborted their calves. The veterinarian quickly went to the farm and carried out a Milk Ring Test on the three animals which had aborted and found them all to be positive for Brucellosis.</p>
<p><b>Avian Influenza</b> – Two persons were admitted at the Faisalabad Allied Hospital with pneumonia. Laboratory testing by RT-PCR resulted positive for H7N9 subtype of avian influenza. One of the patients is a semi-commercial broiler producer who sells his birds three times a week at the local live bird market. The other patient reported having visited the same market 7 days prior to disease onset and having bought four quails.</p>

Using experience from previous outbreaks of zoonotic diseases, the groups discussed on how they would have realistically managed these events, and evaluated the level of collaboration between the veterinary and the public health services for 16 key technical areas: coordination, investigation, surveillance, communication, etc. (Table 2). These activities/areas of collaboration were represented by color-coded *technical area cards*: green for “good collaboration”, yellow for “some collaboration”, and red for “collaboration needing improvement” (Figure 1).



**Figure 1:** Results obtained from one of the groups working on the Avian Influenza scenario. The level of the 16 key technical areas for collaboration has been assessed with 3 green, 10 yellow and 3 red cards.

During an ensuing plenary session, each group provided feedback on their work. Table 2 summarizes the results from the 8 working groups.

**Table 2:** Summary of results obtained from the Session 3 working group exercise:

Technical area (cards)	Rabies (1)	Rabies (2)	Brucellosis (1)	Brucellosis (2)	CCHF (1)	CCHF (2)	Influenza (1)	Influenza (2)
Coordination at high Level	Yellow	Red	Yellow	Yellow	Green	Yellow	Green	Red
Coordination at local Level	Yellow	Red	Yellow	Yellow	Yellow	Red	Yellow	Yellow
Coordination at technical Level	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Green	Red
Legislation / Regulation	Yellow	Red	Yellow	Yellow	Yellow	Yellow	Red	Yellow
Finance	Yellow	Red	Yellow	Yellow	Yellow	Yellow	Yellow	Red
Emergency funding	Yellow	Red	Yellow	Yellow	Yellow	Red	Yellow	Green
Communication w/ media	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Red
Communication w/ stakeholders	Yellow	Red	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow
Field investigation	Yellow	Yellow	Yellow	Yellow	Green	Red	Yellow	Yellow
Response	Yellow	Red	Yellow	Yellow	Green	Yellow	Yellow	Yellow
Risk assessment	Red	Red	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow
Joint surveillance	Red	Red	Yellow	Yellow	Yellow	Yellow	Red	Red
Lab	Red	Red	Yellow	Yellow	Yellow	Yellow	Yellow	Green
Education and training	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow
Human resources	Yellow	Red	Yellow	Yellow	Yellow	Yellow	Green	Yellow
Logistics	Yellow	Red	Yellow	Yellow	Yellow	Yellow	Red	Green

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”.

## SESSION 4: 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 (Figure 2).

Through an interactive approach, working groups were invited to plot their *technical area cards* onto the matrix by matching them to their corresponding indicators. A plenary analysis of the outcome showed clear gap clusters and illustrated that most gaps were not disease-specific but systemic.



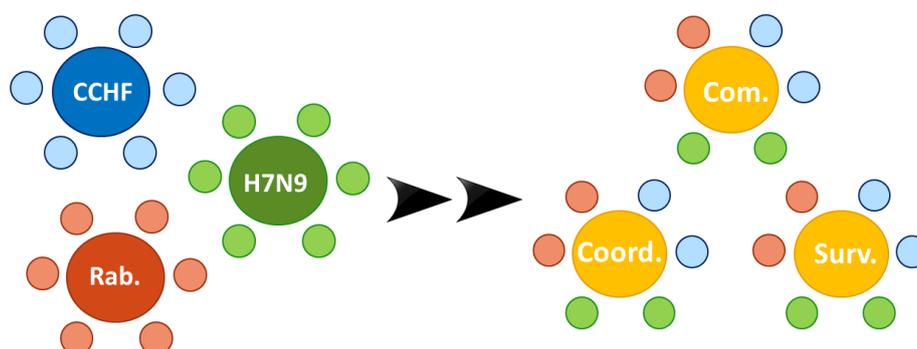
**Figure 2:** Mapping of the technical area cards on the IHR-PVS matrix and plenary discussion

The main gaps (clusters) identified were associated with the following capacities:

- Coordination
- Field investigation and response
- Surveillance and laboratory
- Communication
- Human resources and training

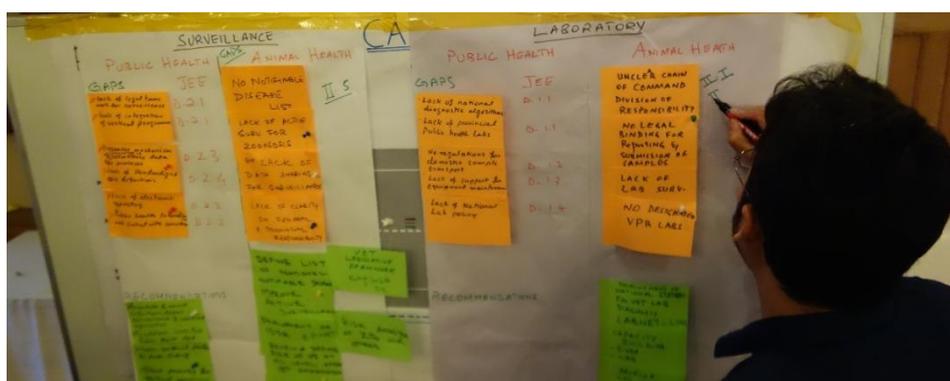
## SESSION 5: CROSSROADS – PVS PATHWAY AND IHR MEF REPORTS

New working groups with representation from all previous groups were organized for each of the five priority technical areas (Figure 3).



**Figure 3:** Generic graph describing the organization of working groups for Session 3 (left) and Session 5-6 (right).

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 (annual reporting, JEE, PVS Evaluation) and extracted the main findings and recommendations relevant to their technical area (Figure 4). To facilitate the process, the participants were suggested to use the *WHO-OIE Handbook for the assessment of capacities at the human-animal interface*<sup>1</sup> in which the linkage between the indicators of the IHR MEF and the PVS Pathway are highlighted.



**Figure 4:** Results obtained for the technical group focusing on Surveillance and Laboratory. The reporting panel is split into two columns (public health and animal health), orange and green post-its summarize respectively the gaps and the recommendations described in the assessment reports.

<sup>1</sup> <http://www.who.int/ihr/publications/9789241511889/en/>

## SESSION 6: ROAD PLANNING

Using the same working groups as for the previous session, participants were asked to identify, for each technical area, three joint objectives to improve their collaboration. For each objective, they filled *Action Cards*, detailing the activities, their dates of expected implementation, the focal points responsible, the required support as well as measurable indicators (Figure 5).



*Figure 5: Identification of joint objectives and activities to improve collaboration between the sectors for surveillance.*

The feasibility and cost of each action were evaluated using blue and red stickers respectively and a semi-quantitative scale (1 to 3). The session ended with a World Café exercise: each group nominated a rapporteur whose duty was to summarize their outputs to the other groups. Each group rotated between the different boards to contribute and provide feedback on all technical areas. At the end of the cycle, each group returned to their original board and the rapporteur summarized the feedback and changes or additions suggested by the other participants (Figure 6).



*Figure 6: World café exercise: the group on Communication is providing feedback to the rapporteur of the group working on Investigation/Response.*

The following paragraphs summarize the results of the discussions of all working groups, which are fully detailed in [Output 1](#).

### **Technical area: Coordination**

The development of effective intersectoral coordination mechanisms was recognized as a critical need and a key objective. This could be reached in part by the identification of focal points at all levels, with defined terms of reference (TOR), the development of standard operating procedures (SOPs) for coordination between the sectors and the implementation of effective information sharing mechanisms. Regular intersectoral coordination meetings should be held at the different levels and joint simulation exercises conducted on a yearly basis.

### **Technical area: Human resources and training**

Three main actions were identified to fill the gaps in terms of human resource and training:

- the establishment of a National Institute for Infectious and Zoonotic Diseases (after a feasibility study);
- the training and capacity building of animal and human health professionals, including para-medics and para-vets, through frequent on service and refresher trainings; and
- a need-based revision of the curricula at national level by the Pakistan Medical and Dental Council (PMDC) and the Pakistan Veterinary Medical Council (PVMC).

### **Technical area: Investigation and response**

A key priority identified was the establishment of real-time intersectoral disease surveillance and response mechanisms, using One Health coordination units located at all levels with dedicated and trained staff from public health, animal health and environmental Ministries.

The development of multi-sectoral contingency plans for zoonotic diseases, clarifying the lines of command, the roles and the responsibilities in all sectors was also identified as a critical need.

The development of a joint IT system for the identification of outbreaks in both human or animal populations and the need to ensure availability and allocation of resources for investigation and response (following a needs assessment) were also discussed.

### **Technical area: Surveillance and laboratory**

The main objectives identified to strengthen the intersectoral coordination for surveillance and laboratory related activities included the establishment of a One Health Hub at Federal, Provincial and District level; the establishment and strengthening of a joint laboratory network with a harmonized LIMS (Laboratory information management system); and the implementation of a cross-sectoral IDSR (Integrated Disease Surveillance & Reporting) mechanism, following a preliminary pilot study at District level.

### **Technical area: Communication**

For communication actions, the highest priority was set for the development of a functional mechanism for joint communication, with dedicated units established at all levels, and identification of clear mechanisms for information sharing within and across sectors. The need for capacity building of communication staff through regular trainings and simulation exercises to enable mass communication in a harmonized and effective way was also recognized.

## SESSION 7: ROADMAP – REACHING CONSENSUS

### Prioritization

Participants were asked to connect via computers or smartphones to a web application (Figure 7) to prioritize the previously defined objectives by assessing their level of priority from 'very low' to 'very high'. Fifty nine (59) participants voted (29 from 'animal health', 26 from 'public health', 1 from 'environment', 1 from 'legal', 1 from 'communication' and 1 from 'other') and the final results are detailed in [Output 2](#).



Figure 7: Voting web-application for prioritization of objectives (left) and extract of voting results (right).

### Linkage with the IHR National Action Plan for Pakistan

A presentation followed by a plenary discussion showed how the prioritized actions could be linked to the IHR National Action Plan (IHR-NAP) and how outcomes of the workshop and particularly the identified actions could directly feed into it and contribute to reaching its objectives ([Output 3](#)).

### After meeting actions

A final province wise group session was organized to discuss the next steps and the implementation of identified One Health action. Groups were asked the following questions:

- As a follow up of this meeting what will be the immediate action to improve the coordination for One Health?
- What should be the main points of a post workshop press release?

Results are documented in [Output 4](#).

## CLOSING SESSION

The closing session started by a presentation of the terms of reference for a One Health Hub ([Output 5](#)) as well as coordination mechanisms for surveillance and information sharing, coordinated response and overall risk mitigation ([Output 6](#)). Key workshop recommendations were also presented ([Output 7](#)).

The workshop ended with statements from MNHSRC and MNFSR indicating that both sectors took ownership of the outcomes of the workshop. They also ensured joint engagement in addressing the gaps identified for collaboration at the human-animal interface. Both the WHO and the OIE (represented by PVS expert John Woodford) reiterated their full commitment to support the country in improving this collaboration.

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. In addition, a short movie of the workshop is accessible at the following link:

[https://drive.google.com/file/d/0B\\_FQSk1UzlipbUNTWkFCajQybFk/view](https://drive.google.com/file/d/0B_FQSk1UzlipbUNTWkFCajQybFk/view)

# WORKSHOP OUTPUTS

## OUTPUT 1: OBJECTIVES AND ACTIONS IDENTIFIED PER TECHNICAL AREAS

Action	Date of achievement	Feasibility (1-3 scale)	Cost (1-3 scale)	Responsibility	Required support	Indicators
<b>Coordination</b>						
<b>Objective 1: Develop effective intersectoral coordination mechanisms</b>						
1.1. Identification and notification of FPs and coordination taskforce with defined TORs at all levels in all sectors	December 2017	+++	+	MoH and all allied departments and ministries	Political, technical, retaining of notified and skilled person	-FPs notified -TORs defined -Taskforce notified
1.2. Develop SOPs for coordination between the different sectors	June 2018	++	+	Lead by MoH, approved by taskforce	Technical, Financial	-SOPs approved by taskforce and implemented in relevant sectors
1.3. Conduct regular intersectoral coordination meetings	December 2017	+++	+	MoH and all allied departments and ministries	Financial	-Number of quarterly meetings -Number of emergency meetings
1.4. Conduct advocacy and awareness raising activities for the strengthening of multisectoral coordination	Continuous	++	++	IHR/One Health taskforce	Financial	-Meeting minutes -Session reports -Advocacy material developed
1.5. Develop effective intersectoral information sharing mechanisms	Continuous	++	+++	M&E Cell	IT linkages	Joint reporting
1.6. Conduct regular multisectoral simulation exercises at all levels	Yearly	++	+++	MoH and all allied departments and ministries	Financial, Logistics, Mobility	-Simulation exercise reports
1.7. Promulgate legislation at provincial and federal level for coordination	December 2018	+	+	FPs of relevant departments and taskforce	Technical from experts and law department	-Legislation passed by assembly -Regulations notified and implemented
1.8. Ensure sustainable allocation and availability of financial resources to implement the action plan	Continuous	+	+++	All ministries and departments	Political commitment, technical	-Allocation of required funds -Availability of required funds -Timely release of funds
1.9. Monitoring and evaluation of coordination	Continuous	+++	+++	M&E Cell	IT linkages	Joint reporting
<b>Human resources and training</b>						
<b>Objective 2: Establishment of National Institute for Infectious and Zoonotic Diseases</b>						
2.1. Conduct a feasibility study	December 2018	++	+++	MNFSR	Financial, Technical, Political will	-Consultant hired -PC-1 approved -PC-1 executed
2.2. Develop PC-1						
2.3. Approval and execution						
<b>Objective 3: Capacity building of Animal and Human health professionals</b>						
3.1. Training of trainers	June 2018	++	++	CEO of National Institute of Infectious and Zoonotic Diseases	Financial, HR, Experts of WHO, OIE and GOP	-Human resources trained
3.2. On service / refresher trainings						
3.3. Trainings of para-meds / para-vets						

<b>Objective 4: Need based revision and implementation of curricula at National level</b>						
4.1. Joint meeting of PMDC and PVMC for review of need based curricula	Continuous			HEC	Subject specialists / academicians	-Training needs assessed -Need-based curricula developed
4.2. Implementation under the umbrella of HEC		++	+			
<b>Investigation and Response</b>						
<b>Objective 5: Establish real time integrated disease surveillance &amp; response mechanisms based on One Health approach</b>						
5.1. Establish a one health coordination unit at all levels (federal, provincial, district)	December 2017	++	++	-MNFSR and MNHSRC -Provincial Health and Livestock departments	Political commitment	-TORs developed -Identification of labs, offices and space
5.2. Placement of dedicated staff from public health, veterinary and environmental Ministries at all levels (rapid response units)	December 2017	++	+++			-Notified people from all levels -Contact list
5.3. Capacity building at all levels		+	+++			
<b>Objective 6: Development of multi-sectoral contingency plans for zoonotic diseases</b>						
6.1. Clarify line of command and control in both public health and veterinary health sectors	December 2017	+++	+		Physical spaces and staff	-Line of command clarified in case of emergencies
6.2. Identify alert thresholds for escalation	December 2017	++	++	-Identified staff at all levels	Staff time	-Alert thresholds defined
6.3. Development of IT system of identification of outbreaks for both sectors	June 2018	++	+	-Provincial disease surveillance & response unit	IT support, Financial	-System developed -Number of alerts generated -Reports produced
6.4. Clarify roles and responsibilities for emergencies	December 2017	++	+		Human resources	
<b>Objective 7: Ensure availability and allocation of resources for investigation and response</b>						
7.1. Development of joint training based on competence	June 2018	++	++	One Health Coordinator	Training coordination, Finances	-Training package developed -Training delivered
7.2. Need assessment and mapping of existing resources	December 2017	++	+		Technical, Academia support	-Need assessment done at all levels
<b>Surveillance and Laboratory</b>						
<b>Objective 8: Establish and strengthen laboratory network</b>						
8.1. Develop harmonized LIMS and LINK with One Health Dashboard at Provincial and Federal Levels	June 2019	++	+++	Ministries / Departments	Technical, trainings, IT support, Financial	-Functional LIMS -Number of trainings and participants -OH Dashboard functional -Recruited staff
8.2. Capacity building (Lab and field)	Continuous	+++	++	Relevant Ministries/Departments	Technical, Financial, Recruitment, Trainings	-Number of trainings -Number of participants -Recruited staff
8.3. Need assessment in both sectors	December 2017	+++	+	Ministries / Departments	Technical	-List of gaps identified -SWOT conducted

<b>Objective 9: Develop and implement a cross-sector IDSR (Infectious Disease Surveillance &amp; Reporting) mechanism</b>						
9.1. Establishment of One Health Hub at Federal/Provincial/District Level Link EPINET-LABNET	2020	++	+	Ministries / Departments	Technical, Financial, IT	-Functional OH Hub
9.2. Pilot testing of IDSR at District Level	December 2018	+	+++	Ministries / Departments	Technical, Financial	-Pilot test conducted
9.3. Develop joint list of notifiable diseases	December 2017	++	+	Ministries / Departments	Technical, Financial	-Joint list of notifiable diseases notified
9.4. Raise awareness of stakeholders and build capacity of field staff	Continuous	+++	++	Ministries / Departments	Technical, Financial	-Number of awareness sessions conducted -Number of trainings conducted -Trained participants
<b>Objective 10: Develop and implement legal framework for disease surveillance, prevention and control</b>						
10.1. Advocacy of policy makers and other stakeholders	December 2017	+++	+	Ministries / Departments	Technical, Financial, Political Commitment	-Number of meetings/awareness sessions
10.2. Review draft 2010 PH Act and other laws/act, amend as needed and adopt	2021	+	++	Ministries / Departments	Technical, Financial	-Reviewed Act -Approved Act
<b>Communication</b>						
<b>Objective 11: Develop a functional mechanism for joint communication</b>						
11.1. Establish a communication unit at all levels	June 2017	+	+++	National/Provincial concerned Departments	Financial, Infrastructure	-TORs developed -Official notification of focal points -Physical presence of com. units in respective departments
11.2. Develop a mechanism for information sharing/communication	June 2017	+++	++	Focal points for communication	Financial, Technical	-Communication plan available
11.3. Advocate for PVS/IHR communication across all sectors of One Health	2017-2021	+++	++	National/Provincial taskforce + concerned department	Financial, Political commitment, IT support	-Number of meetings/awareness sessions -Reports
<b>Objective 12: Capacity building of communication staff</b>						
12.1. Develop a standardized mechanism for early warning system and disease alerts	2017-2019	++	++	Focal points DSRU / DIOs	Financial, Technical, IT support	-Data analysis report -Periodic disease warning alerts
12.2. Conduct simulation exercises for reporting	2017-2020	+++	++	National, Provincial focal points + CEP unit	Financial, Technical	-CEP established -Training reports and attendance -M&E reports
<b>Objective 13: Implement effective mass communication</b>						
13.1. Raise public awareness through electronic, print and social media	2017-2020	+++	+++	Communication FPs, social mobilizers	Financial, Technical	-3rd party evaluation reports -Media advertisements

**Feasibility:** Low +, Moderate ++, Highly feasible +++

**Cost:** Low +, Moderate ++, Very costly +++

## OUTPUT 2: PRIORITIZATION RESULTS

Objective	Priority rating
<b>Objective 1:</b> Develop effective intersectoral coordination mechanisms	3.5
<b>Objective 5:</b> Establish real time integrated disease surveillance & response mechanisms based on One Health approach	3.4
<b>Objective 8:</b> Establish and strengthen laboratory network	
<b>Objective 9:</b> Develop and implement a cross-sector IDSR (Infectious Disease Surveillance & Reporting) mechanism	3.3
<b>Objective 3:</b> Capacity building of Animal and Human health professionals	3.2
<b>Objective 10:</b> Develop and implement legal framework for disease surveillance, prevention and control	
<b>Objective 7:</b> Ensure availability and allocation of resources for investigation and response	
<b>Objective 6:</b> Development of multi-sectoral contingency plans for zoonotic diseases	3.1
<b>Objective 11:</b> Develop a functional mechanism for joint communication	3.0
<b>Objective 4:</b> Need based revision and implementation of curricula at National level	2.9
<b>Objective 13:</b> Implement effective mass communication	2.8
<b>Objective 2:</b> Establishment of National Institute for Infectious and Zoonotic Diseases	
<b>Objective 12:</b> Capacity building of communication staff	2.7

The priority rating is the average rating obtained from the 59 voters, using the following semi-quantitative scale:

Priority Level	Score
Very Low	0
Low	1
Moderate	2
High	3
Very High	4

Results show that while the development of effective intersectoral coordination mechanisms was selected as the most important objective, the range of priority levels between the various objectives was relatively narrow (2.7 - 3.5), indicating that participants focused on objectives that are all somewhat important.



## OUTPUT 4: IMMEDIATE FOLLOW-UPS BY PROVINCE / REGION

As a follow up of this meeting, what will you do tomorrow when back in your office to improve the coordination for One Health?	
<b>FEDERAL</b>	<ol style="list-style-type: none"> <li>1. One Health hub is being established, We (both Health &amp; Livestock sector) will acquaint with One health Platform TORs shared by NIH.</li> <li>2. Arrange intra &amp; inter-sectoral meetings to develop coordination mechanisms.</li> <li>3. Both sectors (NIH &amp; NARC/NVL) will share already existing LIMS software and work together to develop harmonized LIMS for further actions.</li> </ol>
<b>PUNJAB</b>	<ol style="list-style-type: none"> <li>1. Sensitize colleagues about IHR-PVS, its importance &amp; implementation.</li> <li>2. Report immediately any problem relating to public health to all concerned quarters.</li> <li>3. Publish the editorials relating to IHR-PVS to educate the masses.</li> <li>4. Review and amendment of disease outbreak response protocols.</li> <li>5. Contact sharing between different departments of One Health.</li> </ol>
<b>FATA</b>	<ol style="list-style-type: none"> <li>1. Notification of Task Force.</li> <li>2. Plan for Coordination meetings.</li> <li>3. Gap analysis pertaining to One Health.</li> <li>4. Meetings for development of mechanisms, TORs, SOPs.</li> </ol>
<b>BALUCHISTAN</b>	<ol style="list-style-type: none"> <li>1. To write a letter DHO/Dy. Director Livestock regarding coordination under One Health.</li> <li>2. Data sharing at district and provincial level.</li> <li>3. Fortnightly meetings at district and divisional level.</li> <li>4. Monthly meetings at provincial level.</li> <li>5. Press release at district and divisional level regarding minutes of meetings</li> <li>6. Strengthening of already existing isolation ward in FJCH Quetta.</li> </ol>
<b>SINDH</b>	<ol style="list-style-type: none"> <li>1. Will arrange a meeting with colleagues to share the objectives &amp; outcomes of One Health.</li> <li>2. Report to higher authorities.</li> <li>3. Future scheduling/Planning.</li> </ol>
<b>KHYBER PAKHTUNKHWA</b>	<ol style="list-style-type: none"> <li>1. Public Health will lead provincial IHR</li> <li>2. Meetings will be called to discuss the issues related to One Health approach and actions will be recommended.</li> <li>3. The proposal will be presented to provincial IHR task force for future actions.</li> <li>4. Focal persons at provincial &amp; district level will be notified.</li> <li>5. A mechanism for periodical review will be developed.</li> </ol>
<b>GILGIT-BALTISTAN</b>	<ol style="list-style-type: none"> <li>1. To request notification of focal point for One health (lead by Health department)</li> <li>2. Coordination of all stakeholders from public health, animal health, environment, food and agriculture and schedule meetings for all stakeholders.</li> <li>3. Develop a provincial action plan in line with the national action plan.</li> <li>4. Notification of district focal points led by health.</li> <li>5. Dissemination of provincial action plan to district level and to all stakeholders.</li> </ol>
<b>AZAD JAMMU &amp; KASHMIR</b>	<ol style="list-style-type: none"> <li>1. We will have a meeting with concerned people of health department to define a program on how to work together in the future, especially for the upcoming event of EID QURBAN to minimize the chances of CCHF outbreak in our region.</li> <li>2. Follow up of IHR Task Force.</li> </ol>

## OUTPUT 5: TORS OF THE ONE HEALTH HUB

- I. Provide a platform of coordination to share and discuss information, experiences and findings of zoonotic diseases and to devise future strategies.
- II. Serve as an informational resource for emerging & re-emerging zoonotic diseases, environmental factors such as climate and disasters, and latest news, including professional opinions on particular topics.
- III. Coordinate through Technical Experts Advisory Group (TEAG) for planning implementation and strategize to handle zoonotic diseases of national and international concern.
- IV. Strengthen a network for communication between stakeholders and professionals and streamline the information regarding any zoonotic event.
- V. Play a coordinating role during outbreak investigations and develop liaison between human, animal and environment health sectors & partners to detect and respond to events of zoonotic origin.
- VI. Issue alerts, advisories and suggestions on zoonotic disease events.
- VII. Provide technical support to provincial human & animal health management teams to develop and implement provincial preparedness and response plans for zoonotic interventions.
- VIII. Conduct advocacy and awareness campaigns, joint studies and implementation of One Health concept.
- IX. Provide Support to the training of provincial and district One Health teams.

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## **OUTPUT 6: COORDINATION MECHANISMS**

### **Surveillance and information sharing**

Step 1: Identify contacts for surveillance and information sharing in both sectors

Step 2: Identify events and incidents where information sharing is required

Step 3: Determine the roles and responsibilities of each sector

Step 4: Evaluate and revise the protocol where necessary

### **Coordinated response**

Step1: Identify the events, scenarios and locations where coordinated responses are required

Step 2: Identify activities to be coordinated in these events, scenarios and locations

Step 3: Clarify each sector's roles and responsibilities in these events, scenarios and locations

Step 4: Evaluate progress and revise the protocol where necessary

### **Risk reduction**

Step 1: Identify high-risk areas, populations at risk, practices and behaviors

Step 2: Identify measures to reduce risks

Step 3: Determine roles and responsibilities for risk reduction measures

Step 4: Evaluate and revise the plan for risk reduction interventions/activities where necessary

### Key Workshop Recommendations

1. The workshop recognized the need for **institutionalization of joint coordination mechanisms for One Health** with defined roles and responsibilities and operating procedures between human health and veterinary sectors at all levels;
2. There is need for **strengthening technical collaboration** between both human health and veterinary sectors for:
  - i. Integrated disease surveillance
  - ii. Response including laboratory network
  - iii. Communication (regular and risk communication)
  - iv. Human Resource development including capacity building/ training
3. We expect that the **recommendations will contribute to the implementation** of IHR through supporting the IHR MEF, IHR NAP and the PVS Pathway (Gap Analysis).

### Way Forward

1. Establishment of **One Health Hub** with inclusion of human health, veterinary, agriculture and environment sectors with **finalization and endorsement of ToRs**;
2. **Nomination of focal points for One Health** at the Federal and Provincial/ Regional levels from health and veterinary sectors;
3. Share workshop **recommendations with the health and veterinary departments** at the provincial and regional levels to allocate necessary resources for implementation;
4. **Capacity building** of the nominated focal persons to take forward the approach of One Health in their provinces/ regions;
5. Ensure **implementation of the recommendations/** next steps defined by the provincial and regional working groups; and,
6. Introduction of **joint periodic reviews** at all levels.

## WORKSHOP EVALUATION

Many participants pointed out that this workshop marked the first time that MNHSRC and MLDD had liaised in such a collaborative exploration of a better One Health strategy, and the participants agreed that they now felt well-placed to explore joint strategies to address, within the next year, many of the major gaps identified.

An evaluation questionnaire was completed by 74 participants in order to collect feedback on the relevance of such workshops. The vast majority of the national participants to the workshops rated the workshop highly, being for the most part “fully satisfied”, or otherwise “satisfied” with both the content and the format of the workshop (Table 3). In addition, when asked about the level of impact of the workshop, 91% and 85% of participants answered ‘high impact’ or ‘very high impact’ on their technical knowledge and on the work of their department/unit respectively.

*Table 3: Results of the overall assessment of the event by participants (74 respondents)*

Overall assessment of the event	Participants 'satisfied' or 'fully satisfied'	Average rating (/4)
Content	96%	3.4
Structure / Format	92%	3.3
Organization	95%	3.6

*"This was the first time that so many representatives from both sectors sat together and worked on how to improve their collaboration. It was very motivational"*

*"This innovative approach creates a very conducive environment for these important discussions"*

*"The workshop was very well structured and very interactive. It was great to gather so many stakeholders and a lot was achieved"*

# APPENDIX

## ANNEX 1: WORKSHOP AGENDA

Day 1: 09 May 2017		
0830-0900	Registration of participants	
<b>Opening Session</b>		
0900-1030	Recitation of Holy Quran Opening Remarks <ul style="list-style-type: none"> <li>DG Health MNHSRC</li> <li>Chief Veterinary Officer/ Animal Husbandry Commissioner MNFSR</li> <li>Chairman Pakistan Agricultural Research Council</li> <li>Remarks from HQ WHO</li> <li>WHO Representative Pakistan</li> </ul>	Dr Assad Hafeez Dr Khurshid Ahmad  Dr Yusuf Zafar Dr Stephane de La Rocque Dr Muhammad Assai
<b>Session 1: Workshop Objectives and National Perspectives</b>		
1030-1230	Introduction of participants	
	The OIE - WHO collaboration and vision	Movie
	<b>Tea Break</b>	
	Coordination Mechanisms & One Health challenges under IHR& PVS Pathway <ul style="list-style-type: none"> <li>Human Health Perspective</li> <li>Veterinary Health Perspective</li> <li>Workshop approach and methodology</li> </ul>	Dr Malik M Safi Dr M Azeem Khan Dr Guillaume Belot
<b>1230-1400</b>	<b>Lunch Break</b>	
<b>Session 2: The Road to One Health</b>		
1400-1500	<ul style="list-style-type: none"> <li>Movie: interaction do happen when needed</li> <li>Plenary discussion (experience sharing)</li> </ul>	Dr Malik Safi Dr Khalid Naeem
<b>Session 3: Navigating the Road to One Health (Working Groups)</b>		
1500 - 1730	<ul style="list-style-type: none"> <li>Presentation of the working group exercise</li> <li>Working groups: Case study (working groups by disease)</li> </ul>	WHO HQ Facilitators

Day 2: 10 May 2017		
0900-0915	Feedback from day 1	Dr Jamil Ansari Dr Stéphane De La Rocque
0915-1015	<ul style="list-style-type: none"> <li>Restitution of working groups</li> <li>Plenary discussion</li> </ul>	Working groups Dr Najam Baig
<b>1015-1045</b>	<b>Coffee break</b>	
<b>Session 4: Bridges along the road to One Health</b>		
1045-1300	<ul style="list-style-type: none"> <li>Presentation of the tools (1/2) (IHR MEF including JEE, PVS Pathway)</li> <li>Mapping gaps on a IHR/PVS matrix</li> <li>Plenary Discussion</li> </ul>	Movie  Dr Stephane De La Rocque & Dr Salman
<b>1300-1400</b>	<b>Lunch</b>	

<b>Session 5: Crossroads - IHR MEF, JEE and PVS Pathway reports</b>		
1400-1630	<ul style="list-style-type: none"> <li>• Presentation of the tools (2/2) (Handbook)</li> <li>• Presentation of the working group exercise</li> <li>• Working groups: Extract main results from the PVS and IHR reports (including JEE), in relation to gaps identified on the matrix and discuss operational options (groups organized by technical topic)</li> </ul>	Movie Dr Guillaume Belot All Facilitators

### Day 3: 11 May 2017

0900-0915	Feedback from day 2	Dr Jamil Ansari Dr Stéphane De La Rocque
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#### Session 6: Roadmap – Joint objectives and activities

0915- 1200	<ul style="list-style-type: none"> <li>• Presentation of the working group exercise</li> <li>• Working groups: Identification of joint objectives and practical activities to implement</li> <li>• World café</li> <li>• Finalization of the objectives/activities for each technical area</li> </ul>	Dr Guillaume Belot All Facilitators All Facilitators All Facilitators
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#### 1200-1300 Lunch

#### Session 7: Roadmap - Reaching consensus

1300-1500	<ul style="list-style-type: none"> <li>• Assessment of priority level for each activity and prioritization</li> <li>• Linkages with the National Action Plan for Health Security</li> <li>• Working group exercise by Province</li> </ul>	Dr Guillaume Belot Dr Stéphane De La Rocque All Facilitators
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#### 1500-1530 Coffee break

#### Closing Session

1530-1550	Sharing of Draft TORs for One Health Hub	Dr Najam Baig/ Dr Mumtaz Khan
1550-1610	Final plenary discussion: Key workshop recommendations	Dr Malik Safi Director Programs
1610-1630	Closing Remarks Vote of Thanks	Dr Johar Ali Member ASD PARC Dr Mukhtar Ahmed ED NIH Dr Khurshid Ahmad Rep AHC/CVO

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