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

30th October - 1st November 2019

Belgrade, Serbia



Organized by the Ministry of Health, the Ministry of Agriculture, Forestry and Water Management, WHO and OIE

Acknowledgments

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ABBREVIATIONS & ACRONYMS

AI	Avian Influenza
DAH	Department for Animal Health of Ministry of Agriculture
DG	Directorate General
DPH	Department for Public Health of Ministry of Health
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)
IPHS	Institute of Public Health of Serbia
IT	Information technology
JEE	Joint External Evaluation
JRAWG	Joint Risk Assessment Working (sub-)Group
JSWG	Joint Surveillance Working (sub-)Group
JWGRI	Joint Working (sub-)Group for joint Response and field Investigation
JWGTSE	Joint Working (sub-)Group for Trainings and Simulation Exercises
JWGZ	Joint Working Group on Zoonoses
MAFWM	Ministry of Agriculture, Forestry and Water Management
MEF	Monitoring and Evaluation Framework
MoH	Ministry of Health
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
SimEx	Simulation Exercise
SOP	Standard Operating Procedures
TOR	Terms of Reference
WNF	West Nile Fever
WHO	World Health Organization

INTRODUCTION

BACKGROUND

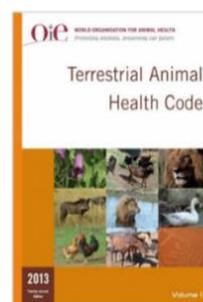
The World Health Organization (WHO) and the World Organisation for Animal Health (OIE) are the two main international organizations responsible for proposing references and guidance for the public health and animal health sectors respectively. WHO and OIE have been active promoters and implementers of 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.

International Legal Framework

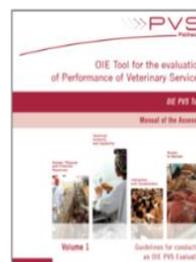


IHR (2005)



OIE Standards

Assessment tools for country capacities



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 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 policymakers for concerted corrective measures and strategic investments in national action plans for improved health security.

In the Republic of Serbia,

- a PVS Evaluation was conducted in March 2013 and a PVS Gap Analysis in April 2016;
- a Joint External Evaluation (JEE) was conducted in October 2018;
- The National Action Plan for Health Security (NAPHS) is currently under development and is planned to be validated in 2020.

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 of 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 the contribution of the veterinary services in the implementation of the IHR (2005) and how the results of the PVS Pathway and IHRMEF can be used to explore strategic planning and capacity building needs.
3. A diagnosis of current strengths and weaknesses of the collaboration between the animal health and public health services.
4. Identification of practical next steps and activities for the development and implementation of a joint national roadmap to strengthen collaboration and coordination.

The agenda of the Workshop is available at [Annex 1](#). It was attended by 53 participants from the Ministry of Agriculture, Forestry and Water Management, Ministry of Health, and Ministry of Defense with representatives from the central, provincial, district, and local levels participating in the three-day discussions. The representative of the health development partner (Friedrich Loeffler Institute) was also present.

REPORT ON THE SESSIONS

From October 30th to November 1st, 2019, Belgrade welcomed the National Bridging Workshop (NBW) on the International Health Regulations (IHR) and the OIE Performance of Veterinary Services (PVS) Pathway for the Republic of Serbia. The Workshop was hosted at the kind invitation of the Government of Serbia, with organizational support from the WHO Country Office in Serbia. Attended by 53 participants from the Ministry of Health (MoH), National Institute for Public Health (NIPH), district Institutes of Public Health, municipal authorities, and the Ministry of Agriculture, Forestry and Water Management (MAFWM), the Veterinary Directorate, Regional Scientific and Specialist Veterinary Institutes, as well as representatives of the World Health Organization (WHO) and the World Organisation for Animal Health (OIE). The observer from the Friedrich-Loeffler-Institute also attended the workshop.

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

Dr Vesna Knjeginjic, Assistant Minister for the Sector of Public Health and Programmed Health Care, Ministry of Health, Mr Senad Mahmutovic, Secretary of State of the Ministry of Agriculture, Forestry and Water Management, Dr Marijan Ivanusa, Head of the WHO Country Office in Serbia, Dr Dorit Nitzan, Coordinator of the WHO Health Emergencies Programme in WHO Regional Office for Europe, Dr. Verica Jovanovic, Director of the National Institute for Public Health and IHR National Focal Point, and Dr Djahne Montabard, OIE Regional Representation for Europe welcomed the participants. To introduce the workshop, they stressed the importance of the partnership of human and animal health sectors, emphasizing that two natural partners cooperate with a real trust to implement the concept of One Health. They succinctly unveiled the content of the next three days, dedicated to both sectors to work together in order to find areas for improvement, enable synergies, identify gaps, and collaborative strategies. The targeted outcome, a realistic national roadmap will identify objectives and activities to inform the strategic national plan for human health security and will build the bridges between the two sectors of animal and human health.

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.

Representatives of both sectors, Dr Dragana Plavska (IHR National Focal Point) and Dr Boban Duric (Head of the Animal Health Department), briefly presented structures and achievements of the Public Health and Veterinary Services. Various examples of existing collaboration were presented to the participants. West Nile Fever (WNF) was taken as an example to present the coordinated activities in disease reporting, the role of the Intersectoral Committee and the multisectoral working group on vector infectious disease control. Under the coordination of the National Institute for Public Health, with a focus on vector control, this national committee enhances and shares early warning on the circulation of the West Nile Virus and other emerging infections such as Zika in animals and mosquitoes. Harmonized legislation, case definition, sharing of

surveillance data, yearly updated plans, coordinated animal health capacity of the national reference laboratories and entomological surveillance were highlighted as strengths in collaboration for WNF control. The strategy on foodborne and zoonotic diseases was also presented as a domain of real exchange of information, with an already established Protocol on Cooperation between the Ministry of Agriculture and the Ministry of Health. Another good example of collaboration between two sectors is influenza surveillance system. However, challenges still need to be faced in the coordination of surveillance programs between the two sectors, procurement procedures for vector control services and harmonization of entomological surveillance legislation.

The workshop approach and methodology were explained and the participant handbook was presented.

A second 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 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 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 (West Nile fever, salmonellosis, trichinellosis, brucellosis, and Q-fever) developed in collaboration with national representatives.

Table 1: Scenarios used for different case studies

West Nile Fever (disclaimer: this incident is completely fictional)

23 people were hospitalized last week at the local hospital of Belgrade with symptoms of fever, severe headache, and muscle tremor. All were found to be seropositive for WNF virus. After this was broadcasted at the national prime-time news, the general public became very concerned. Veterinary Services shared the recent seroprevalence data from a study on WNF in Pozarevac. It was reported that 5 out of 12 horses located near this city were found seropositive for WNF. Furthermore, epidemiological investigation suspected WNFV spillover from the resting places of wild migratory birds located near Veliko Ratho Ostrvo.

Salmonellosis (disclaimer: this incident is completely fictional)

90 people in the capital sought medical attention when they suffered high fever, nausea, diarrhea and severe abdominal pain, 12-36 hours after eating breakfast at a prominent hotel in Zlatibor. Of these, 7 (5 children and 2 elderly) were hospitalized. All recovered within a week. 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.

Trichinellosis (disclaimer: this incident is completely fictional)

The 12-year old child was admitted to the Infectious Diseases Clinic of Novi Sad with complaints of fever, generalized remittent myalgia, and pain in right thigh for 3 weeks. The patient reportedly consumed wild boar meat in the past 1 month, following which she had a self-limited episode of diarrhea, dyspepsia, and myalgia for 4 days. Investigation revealed that the meat was procured by a hunter. The serology tests were found to be positive for IgM antibodies to *Trichinella* species. This case is 7th reported from Novi Sad Vojvodina during this year.

Brucellosis (disclaimer: this incident is completely fictional)

Multiple abortions were recently registered in pigs in 7 holdings in the municipality of Raska. Local veterinarians sampled animals, and Veterinary Institute Kraljevo confirmed presence of *Brucella suis* in those samples. Public Health was notified and epidemiological investigation found three family members seroconverted.

Q Fever (disclaimer: this incident is completely fictional)

Five people who are neighbors in village Elemir were admitted to a general hospital in Zrenjanin with severe pneumonia, non-productive cough, high fever, headache, muscle aches, vomiting, pain in chest and stomach. Epidemiological investigation showed that 3 weeks before a sheep had an abortion in one the backyard households in village Elemir where all patients came from. All five patients tested positive for *Coxiella burnettii* using serological and immunofluorescence tests.

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 16 key technical areas: coordination, investigation, surveillance, communication, etc. 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: Participants working on a case study scenario and evaluating the level of collaboration between the sectors for 15 key technical areas.

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

Outcomes of Session 2:

- Areas of collaboration are identified and joint activities discussed.
- The level of collaboration between the two sectors for 16 key technical areas is assessed (Output 1).
- The main gaps in the 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 (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 gaps by positioning the selected technical area cards 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 capacities:

- Priority technical area 1: Joint risk assessment and joint surveillance
- Priority technical area 2: Coordination at all levels
- Priority technical area 3: Joint response and field investigation
- Priority technical area 4: Education, training and human resources

'Finance' came-up as one of the technical areas needing the most improvement. However, participants agreed that the audience of this workshop would not be able to provide substantial improvements in that domain. It remains nonetheless one of the major gaps to impair the efficiency of the intersectoral collaboration.

Outcomes of Session 3:

- Understanding what 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 four priority technical areas (Figure 3).

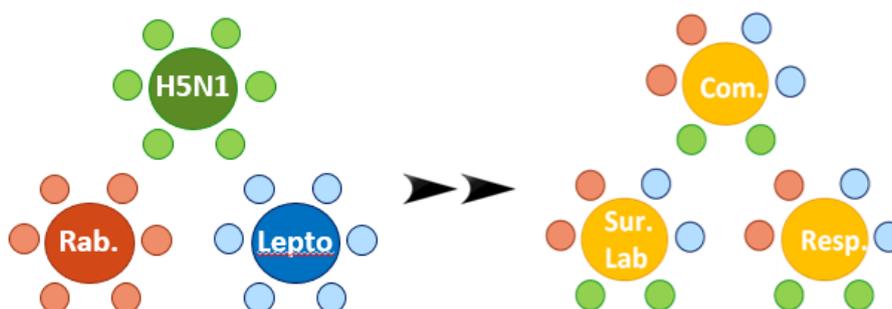


Figure 3: Generic graph describing the organization of working groups for Session 2-3 (left) and Session 4-5 (right).

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 (JEE, PVS Follow-up) and extracted the main findings and recommendations relevant to their technical area (Figure 4).



Figure 4: 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.
- The 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

Participants continued to work in the same working groups as in the previous session. Based on the results of the previous sessions (case study exercises, extraction from reports) and their own experience, participants were asked to brainstorm on the identification of joint activities to improve their collaboration.

After drafting the activities on the flip-charts, participants were asked to provide additional details on the activities by filling an *Activity card* for each one. The required information included the expected date of achievement, an assignment of responsibility and a detailed process of implementation. The difficulty of implementation and the expected impact of each activity were also evaluated using red and blue stickers and a semi-quantitative scale (1 to 3). Activities that were linked were then regrouped under specific objectives (Figure 5).

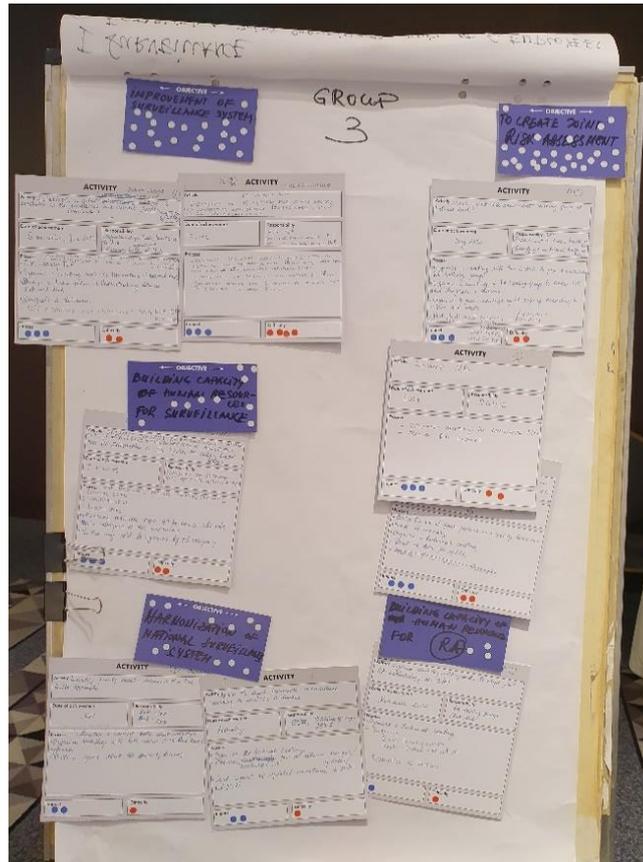


Figure 5: The group working on “Joint risk assessment and joint surveillance” identified 3 objectives and 9 activities to improve the collaboration between the two sectors in this domain.

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, the 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

Working groups from the previous session were given more time to finalize their objectives and activities. A World Café exercise was then organized to enable participants to contribute to the action points of all technical areas (Figure 6). 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 objectives and 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. Objectives and activities were fine-tuned accordingly, and a final plenary session was conducted to discuss the outstanding points.



Figure 6: World café exercise: the group on “Coordination at all levels” is providing feedback to the rapporteur of the group on “Joint response and field investigation”.

Overall, the four groups identified a total of 11 key objectives and 27 activities. The detailed results are presented in [Output 2](#).

Prioritization of Objectives

To prioritize the objectives identified by the technical working groups, participants were invited to vote to identify which objectives (and their constituting activities) they considered as of the highest priority. 40 participants participated in the vote. Each participant had five votes and voted using white stickers (Figure 7). The results of the prioritization showed that all technical areas selected in the course of the workshop were crucial to strengthen intersectoral collaboration. Each group had a predominant objective(s) gained almost an equal number of votes indicating the highest priority.

The full results of the vote can be found in [Output 3](#).

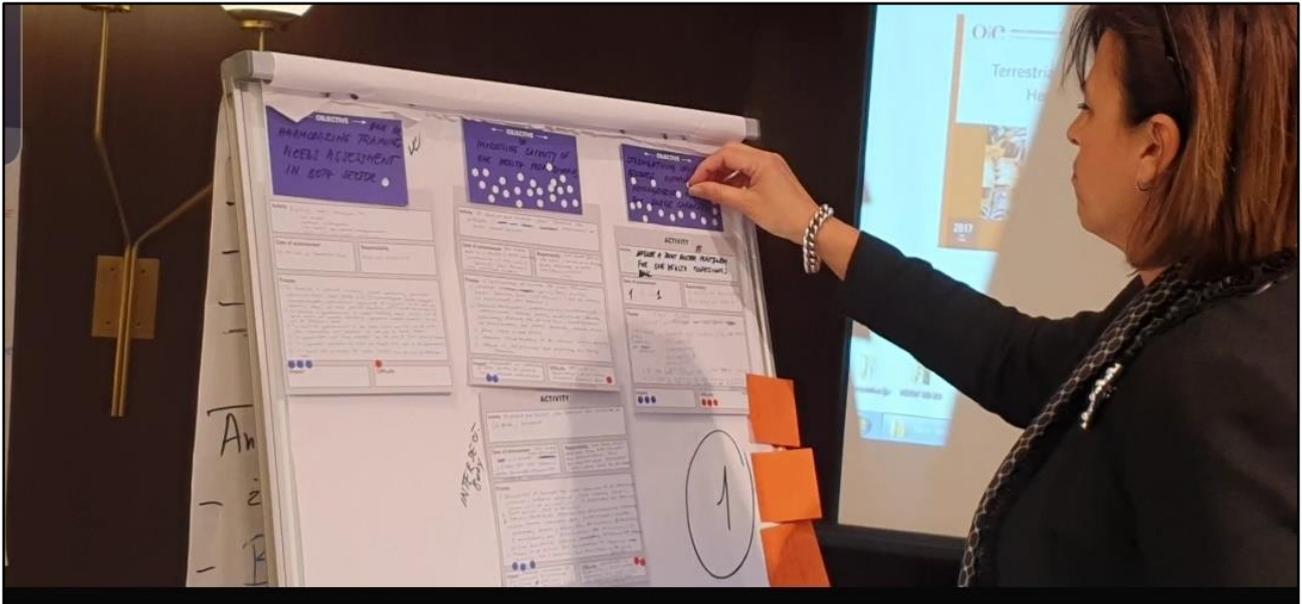


Figure 7: Participants were using white stickers to vote for their priority objectives.

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

Results of the prioritization vote were presented and discussed. The participants recognized that the prioritized technical areas are vital critical points to foster collaboration between both sectors. Defined activities are the key instruments to gain synergy in the work of medical and veterinary services for the benefit of public and animal health in Serbia.

This session gave the two sectors the opportunity to express their point of view regarding the implementation of the outcomes of the workshop.

The discussion of the Session 7 was led by the representative of the Ministry of Health, Dr. Verica Jovanovic and Dr. Tatjana Labus, representative of the Veterinary Directorate of the Ministry of Agriculture, Forestry and Water Management. They both recognized the importance of a One Health approach. They highlighted the most important conclusions of the workshop including the most priority objectives developed jointly by both sectors in all technical areas identified by the participants during the course of the workshop which constituted the roadmap (coordination, joint risk assessment and surveillance, joint response and field investigation, as well as in human resources and education).

The priority objectives should be seen as a pathway to follow, a robust understanding of how to convert the gaps identified in the collaboration between the two sectors into strengths to be better prepared for future health emergencies. Actively involved in the discussion of Session 7, the participants agreed on the important work done during the 3-days workshop. They recognized its lively format and the opportunity given to all of them to express their needs and ideas to improve the existing interlink between the sectors. However, although the dynamic is recognized, the shortage in human resources remains a major concern, already given as a recommendation from the Coordinating Committee of the Government, to supplement the number of specialists and to increase their skills.

All the participants consider this workshop as a fundamental chapter in the development of the strategic plan within the One Health concept. The two ministries reaffirmed their strong support. As a vision after the workshop, they ensured that the priorities highlighted will be outlined in the respective sections of the yet to be drafted NAPHS (National Action Plan for Health Security). Planned to be available by February 2020, it will include the required changes and gaps. The Environmental and Defense sectors, participating in the discussions, reaffirmed their willingness to also be active components of this important One Health actions in Serbia.

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

Summarizing the workshop, the participants thanked the WHO and the OIE for the opportunity of constructive work to improve the communication and coordination between the Human and Animal Health sectors. They acknowledged many ideas and solutions developed during the 3-day course of the workshop and recognized the methodology proved to be successful. Dr. Abeyayehu Mengistu (WHO Emergency Program Coordinator of the Balkan Hub in the WHO office in Serbia) warmly thanked all the participants for their strong involvement and the organizers, facilitators, and observers for the support they provided.

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.

A three-minute movie of the workshop was shown and is available at the following link: www.bit.ly/NBWSerbia.

WORKSHOP OUTPUTS

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

Technical area (cards)	Q fever	Brucellosis	Salmonellosis	Trichinellosis	West Nile Fever	Score
Risk assessment	Orange	Red	Red	Orange	Orange	7
Coordination at high Level	Red	Orange	Orange	Orange	Orange	6
Response	Orange	Orange	Orange	Orange	Red	6
Coordination at local Level	Green	Orange	Orange	Red	Orange	5
Finance	Red	Green	Red	Green	Orange	5
Communication w/ media	Green	Orange	Red	Orange	Orange	5
Field investigation	Green	Orange	Orange	Orange	Red	5
Joint surveillance	Orange	Orange	Orange	Orange	Orange	5
Education and training	Orange	Orange	Orange	Green	Red	5
Emergency funding	Red	Green	Red	Green	Orange	5
Coordination at technical Level	Orange	Green	Orange	Orange	Orange	4
Legislation / Regulation	Orange	Orange	Green	Orange	Orange	4
Communication w/ stakeholders	Orange	Green	Red	Green	Green	3
Laboratory	Green	Orange	Orange	Orange	Green	3
Human resources	Green	Green	Orange	Orange	Orange	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”, orange for “some collaboration”, and red for “collaboration needing improvement”. The score uses a semi-quantitative scale (2 points for a red card, 1 for an orange 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)	Responsibility	Process
JOINT RISK ASSESSMENT & JOINT SURVEILLANCE					
Objective 1: Build capacities to strengthen the surveillance system and sharing of information between both sectors					
1.1 Establish a joint surveillance working (sub-)group (JSWG) at national (ministerial) and institutional levels	June 2020	++	+++	Joint Working Group on Zoonoses (JWGZ), Department for Public Health of MoH (DPH), Department for Animal Health of MoA (DAH)	<ol style="list-style-type: none"> 1) Establish joint surveillance working groups at national and institutional levels 2) Develop ToR for JSWGs at all levels 3) Develop working plans for JSWGs at all levels 4) Nominate members of JSWGs (six experts including chairman at the national level)
1.2 Develop an electronic surveillance system for the public health sector and integrate it with existing electronic surveillance system for the animal health sector at all health care levels	April 2021	+++	+++	JSWG, DPH, DAH	<ol style="list-style-type: none"> 1) The integrated electronic surveillance system should ensure routine sharing of data related to priority zoonoses 2) National JSWG to agree on the type and format of data to be shared between the sectors 3) National JSWG to develop technical specifications including databases, interface, incorporation of GIS, etc. 4) Tender an IT company 5) Develop and test the electronic system 6) Legitimize and implement 7) Train relevant personnel at all levels
Objective 2: Harmonize national surveillance system					
2.1 Identify priority zoonotic diseases of joint concern	2021	+	++	JSWG, DPH, DAH	<ol style="list-style-type: none"> 1) Develop concept note 2) Develop/adapt methodology (encountering results of strategic risk assessment (activity 4.3)) 3) Conduct a joint workshop on prioritization of zoonotic diseases 4) Prepare workshop report and approve by both sectors
2.2 Revise the operational framework for evidence-based surveillance in both sectors	April 2020	+	++	JSWG, DPH, DAH, Veterinary Institutes Belgrade, IPHS Batut	<ol style="list-style-type: none"> 1) To prepare a draft version of an operational framework conduct a meeting with six representatives, three from each sector: <ol style="list-style-type: none"> a. one representative from each ministry, MoH and MoA, b. two representatives from the epizootiology units from Veterinary Institutes Belgrade and c. two epidemiologists from IPHS Batut 2) Clearly define an operational framework with terms of reference that will be applicable in both sectors

					<p>3) Share the draft version between Batut and Veterinary Institute Belgrade and after that send the draft version for revision and approval to the two ministries.</p> <p>4) When the document is approved and signed by the two ministries share the document in paper form with both sectors.</p> <p>5) Share the document on the web page of both ministries, Batut and Veterinary Institute Belgrade</p>
Objective 3: Institutionalize system for continuous joint risk assessment and risk mitigation					
3.1 Establish a multisectoral working (sub-)group for joint risk assessment (JRAWG) at the national level	May 2020	++	+++	JWGZ, DPH, DAH	<p>1) Conduct a multisectoral meeting to establish JRAWG</p> <p>2) Nominate members from DPH, DAH, NRL, Institutes, academia, and identify chairman</p> <p>3) JRAWG to develop ToR</p> <p>4) Develop a working plan and modality of work</p>
3.2 Conduct workshop to adopt the methodology of WHO/OIE/FAO on joint risk assessment (JRA)	June 2020	+	++	JRAWG	<p>1) Request the workshop</p> <p>2) Nominate participants</p> <p>3) Organize and conduct the JRA workshop</p> <p>4) Adopt JRA methodology and develop recommendations / guidelines</p>
3.3 Conduct joint risk assessment	November 2020	++	+++	JRAWG	<p>1) Systematically conduct JRA for priority zoonoses</p> <p>2) Develop JRA reports</p>
3.4 Develop and implement a mechanism for integrating risk assessment and surveillance data	2021	++	+++	JRAWG	<p>1) Conduct technical meetings annually</p> <p>2) Systematically update surveillance operational framework (activity 2.2) using JRA outcomes</p> <p>3) Regularly inform JRA with surveillance data</p>
3.5 Develop a joint risk management strategy	December 2020	++	+++	JWGZ, JRAWG	<p>1) Develop coordinated procedures for risk management depending on type and levels of risks</p> <p>2) Draft joint risk management strategy including activities to mitigate defined risks</p> <p>3) Seek approval of the strategy by relevant Ministries</p>
JOINT RESPONSE AND FIELD INVESTIGATION					
Objective 4: Strengthen strategic planning and operationability for joint response and field investigation of priority zoonoses					
4.1 Establish a joint working (sub-)group for joint response and field investigation (JWGRI)	2020	+	+++	JWGZ, DPH, DAH, Veterinary Directorate of MoAFW	<p>1) Develop ToR for JWGRI, including analysis of zoonoses trends in Serbia, surveillance data, and JRA reports</p> <p>2) Nominate members including chairman (10 people) and define ToR for each member</p> <p>3) Develop a working plan</p> <p>4) Meet monthly</p>

4.2 Develop a joint national strategic response plan for zoonotic diseases	November 2020	++	+++	JWGRI, DPH, DAH, Veterinary Directorate of MoAFW	1) Map existing supporting documents (rulebooks, guidelines, strategic plans, continuous plans, etc.) 2) Draft a strategic plan 3) Discuss the draft strategic plan with all the stakeholders 4) Finalize the plan 5) Seek approval by both Ministries
4.3 Develop/update contingency and control plans for priority zoonoses	November 2020	++	+++	JWGRI, DPH, DAH, Veterinary Directorate of MoAFW	1) Map all existing contingency/control plans from all sectors for each priority zoonosis 2) Nominate disease technical experts for each priority zoonosis to the respective technical sub-committees of JWGRI (activity 4.1) 3) Develop or update existing contingency/control plans which will include joint actions 4) Make reference for the developed/updated contingency/control plans to the strategic joint response plan
4.4 Develop SOPs/protocols for joint response and field investigation of priority zoonotic diseases outbreaks	November 2020	++	+++	JWGRI, DPH, DAH, Veterinary Directorate of MoAFW	1) Map all existing SOPs/guidelines/rulebooks from all sectors for each priority zoonosis 2) Nominate disease technical experts responsible for the development of SOPs 3) Develop SOPs 4) Reference for the developed/updated SOPs/protocols to contingency/control plans and the strategic joint response plan to build a comprehensive system
Objective 5: Enable joint rapid response to priority zoonoses					
5.1 Establish a system of joint rapid response teams (JRRTs)	December 2019	++	+++	JWGRI, DPH, DAH, Veterinary Directorate of MoAFW	1) JWGRI to ensure legislative basis enabling the functioning of JRRTs across existing legislation 2) Develop ToR for JRRTs 3) Develop ToR for JRRTs members including the person responsible for communication with media 4) Establish JRRTs of all relevant levels 5) Nominate JRRTs members, permanent members should have replacement members 6) Publish all groups at the official websites of both Ministries
Objective 6: Reinforce human resource capacities for joint field investigation and response on priority zoonoses					
6.1 Conduct cascade trainings on joint field investigation and response (from national to local level)	1 year, until November 2020	+++	+++	JWGSZ, JWGRI, Joint Working Group on Trainings and SimEx (JWGTSE), DPH, DAH, Veterinary Directorate of MoAFW	1) Develop a training program covering all aspects of joint field investigation and joint response (according to Activities 4.2-4.4) in line with Activity 10.2 2) Nominate trainers and trainees 3) Conduct inception training to train the trainers (3-days) 4) Conduct a relevant number of cascade trainings on district level

6.2 Conduct regular simulation exercises on joint SOPs/protocols	March 2021	+++	+++	JWGZ, JWGRI, JWGTSSE, DPH, DAH, Veterinary Directorate of MoAFW	<ol style="list-style-type: none"> 1) Develop a plan including the type of exercises, number of participants for each SimEx, priorities, schedule, etc., in line with Activity 10.2 2) Develop content (scenarios, injects, etc.) for each exercise 3) Estimate budgets for each exercise 4) Identify participants for each exercise (JRRT members, epidemiologists, epizootologists, veterinarians, infectionists, hygiene experts, etc.) 5) Conduct table-top and full-scale field simulation exercises according to the plan
COORDINATION					
Objective 7: Establish coordination mechanism between sectors to introduce and promote One Health approach					
7.1 Establish a national joint working group for zoonotic diseases (JWGZ)	March 2020	++	+++	Veterinary Directorate of MoAFW, DPH, Department for Inspections of MoH	<ol style="list-style-type: none"> 1) Develop ToR with a detailed description of the tasks and objectives of JWGZ 2) Ministers of MoH and MoAFW to make an agreement on composition of JWGZ and appoint its members 3) Conduct inception meeting, elect chairman, adopt modality of work and decision-making procedure 4) Form sub-groups for: <ol style="list-style-type: none"> a. Joint surveillance (JSWG, Activity 1.1); b. Joint risk assessment (JRAWG, Activity 3.1); c. Joint response and field investigation (JWGRI, Activity 4.1) 5) Regular quarterly meetings
7.2 Establish JWGZ structure at all levels	June 2020	+	+++	JWGZ	<ol style="list-style-type: none"> 1) After the constitution of the JWGZ, responsible representatives from each sector at both national and local levels to be selected and nominated 2) Nominated professionals at a local level will be focal points and members of local intersectoral teams at Public Health Institutes and Veterinary Institutes 3) JWGZ to develop ToRs for representatives at all levels 4) JWGZ to develop ToR for local intersectoral teams
7.3 Develop SOPs to operationalize coordination mechanisms	December 2020	+	+++	JWGZ	<ol style="list-style-type: none"> 1) JWGZ to organize intersectoral consultations with One Health focal points at the district level 2) Develop SOPs and adopt them by JWGZ 3) Distribute SOPs to all stakeholders at all levels including municipalities
Objective 8: Raise awareness of One Health activities among the public and health professionals of both sectors					
8.1 Develop one jointly administered One Health web page(s)	December 2020	++	+++	JWGZ	<ol style="list-style-type: none"> 1) Define content of the web page(s) 2) Designate responsible staff to manage the web page(s) relevant content

					3) Web page(s) to contain interlinks to other One Health resources
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EDUCATION, TRAINING AND HUMAN RESOURCES

Objective 9: Harmonize training needs assessment in both sectors

9.1 Conduct needs assessment for trainings	September 2020	+	+++	JWGZ, MoH, MoAFWM	<ol style="list-style-type: none"> 1) Establish working (sub-)group to conduct a needs assessment on trainings in: <ol style="list-style-type: none"> a. lab sector, b. outbreak investigation, c. one health 2) By January 2020 nominate 8 specialists from both sectors (4+4): microbiologists, epidemiologists, epizootologists, veterinarian, hygiene expert. 3) Secure funding and IT-support 4) By February 2020 develop a questionnaire to assess training needs which will be sent online and embrace workforce, equipment, methods, education 5) By March 2020 send the questionnaire to each IPH and VSI (24+12) with clear instructions and deadline 6) By June 2020 collect data and conduct analysis 7) Share report with MoH, MoAFWM, and all participants 8) By September 2020 select and prioritize the needs
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Objective 10: Enhance human resource capacities for long-term sustainable implementation of One Health approach

10.1 Establish a multidisciplinary joint working (sub-)group to develop a sustainable program for trainings and simulation exercises (JWGTSSE)	2020	++	++	JWGZ, JWGRI, MoH, MoAFWM	<ol style="list-style-type: none"> 1) Develop ToR and approve by both Ministries 2) Nominate members from both sectors (medical doctors, veterinarians, environmental experts, biologists, epidemiologists, epizootologists, experts in SimEx)
10.2 Develop a sustainable long-term program for trainings and simulation exercises (align with Activities 6.1 and 6.2)	2020	++	++	JWGTSSE, JWGZ, JWGRI, MoH, MoAFWM	<ol style="list-style-type: none"> 1) Program to include generic and disease-specific trainings and SimExes 2) Request international support for the preparation and delivery of trainings and SimExes 3) Develop and present models of good practice in local communities
10.3 Develop and conduct joint training for outbreak investigations for vector-borne diseases	Twice a year	+	++	JWGTSSE, JWGZ, JWGRI	<ol style="list-style-type: none"> 1) Develop a program of the training (schedule, specific topic, budget, etc.) in line with Activity 10.2 2) Conduct twice a year at a regional level, 24 trainings in total, 30 participants per training 3) Include in participants: epidemiologists, epizootologists, veterinarians, medical doctors, inspectors (sanitary, veterinary), agencies for disinfection, representatives of authorities at the local, province, and national levels 4) Pilot in one region

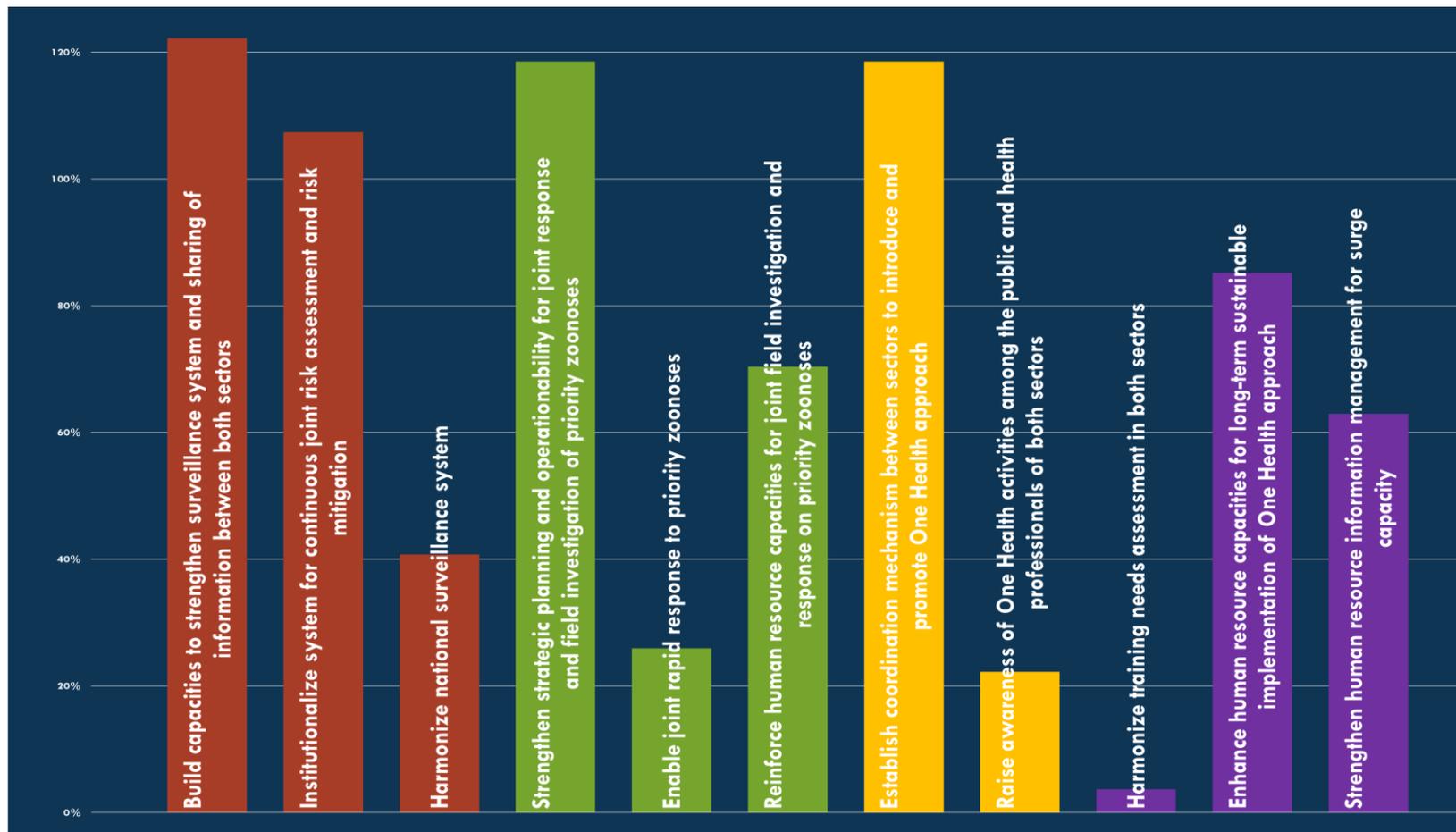
					5) Conduct training in all regions 6) Follow-up, analysis for future trainings
10.4 Develop and conduct joint training for Q-fever outbreak response	Twice a year	++	+++	JWGTSE, JWGZ, JWGRI	1) To be conducted after training on outbreak investigation 2) Develop training program (24 trainings in the capital and regional cities, in line with Activity 10.2) 3) Include all professionals involved in outbreak response: epidemiologists, epizootologists, veterinarians, medical doctors, inspectors (sanitary, veterinary), agencies for disinfection, disinsection, and deratization, representatives of authorities at local, provincial, and national levels, national institutions, labs. 4) 30 participants per training 5) Pilot in one region 6) Follow-up, analysis for future trainings
10.5 Develop and accredit an interdisciplinary (joint) postgraduate program/course on One Health at the university level	2022/23	+++	++	University of Belgrade, University of Novi Sad	1) Develop curriculum for "One Health" postgraduate course: a. Identify the current problem that would benefit from integrated perspective b. Identify individual disciplinary teaching areas c. Identify competencies expected to be attained by graduates d. Survey faculty members on their teaching areas e. Form a database of teaching competencies f. Form a database of teaching practical sites (veterinary and public health institutes) 2) Accredit at national accreditation body at national level 3) Seek for funding support from the Ministry of Education 4) Promote the "One Health" course through media, medical and veterinary faculties, veterinary and public health institutes
Objective 11: Strengthen human resource information management for surge capacity					
11.1 Develop a joint roster of One Health professionals	2021	+++	+++	MoH, MoAFWM	1) Develop a joint roster for experts in the following areas: a. Field investigation b. Outbreak response c. Laboratory diagnostics 2) Include in roster information: a. Availability b. Competencies c. Contact details d. Region

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

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

OUTPUT 3: PRIORITIZATION RESULTS

All participants were asked to vote to identify which objectives (and their constituting activities) they considered as of the highest priority. The results of the prioritization showed that all technical areas selected in the course of the workshop were crucial to strengthen intersectoral collaboration. Each group had a predominant objective(s) gained almost an equal number of votes indicating the highest priority.



WORKSHOP EVALUATION

An evaluation questionnaire was completed by 40 participants (Figure 8) in order to collect feedback on the relevance and utility of the workshop. Overall, the participants valued the workshop as very good and worth for recommendation for other countries. All workshop components such as the content, format, facilitation, and organization gained very high scores.

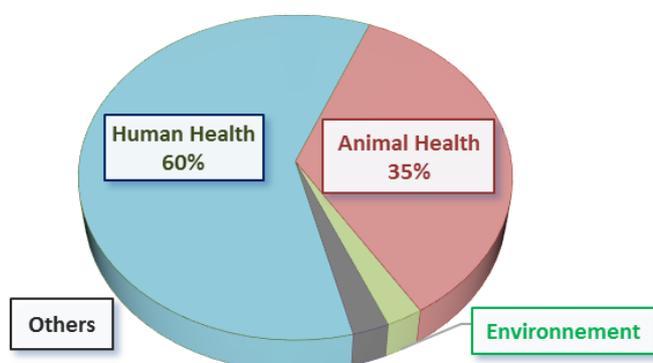


Figure 8: Answers to the question "which sector are you from?" (40 respondents)

Tables 2-5: Results of the evaluation of the event by participants (40 respondents)

Workshop evaluation	'Satisfied' or 'Fully satisfied'	Average score (/4)
Overall assessment	100%	3.9
Content	100%	3.9
Structure / Format	100%	3.9
Facilitators	100%	3.9
Organization (venue, logistics, ...)	100%	3.8

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

Impact of the workshop on...	'Significant' or 'Major'	Average score (/4)
Your technical skills/knowledge	100%	3.5
The work of your unit/department	98%	3.5
The intersectoral collaboration in Serbia	88%	3.4

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
3.9	3.9	3.8	3.7	3.8	3.9	3.8

Would you recommend this workshop to other countries?	
Absolutely	75%
Probably	25%
Likely not	0%
No	0%

ANNEX 1: WORKSHOP AGENDA

OCTOBER 30 th - DAY 1	
08:30-09.00	Registration of participants
09.00-10.00	<p><u>Opening Session</u></p> <ul style="list-style-type: none"> • Representative of the Ministries MoH - Assistant Minister, Dr. Vesna Knjeginjc; MoAFWM - Secretary of State, Mr Senad Mahmutovic • IHR NFP – Dr. Verica Jovanovic • WHO WR and Head of WCO Serbia, Dr Marijan Ivanusa • WHO Regional Office for Europe, Dr Dorit Nitzan • OIE Regional Office for Europe, Dr Djahne Montabord • Introduction of participants • Group Photo
10.00-10.20	Coffee break
<p><u>Session 1: Workshop Objectives and National Perspectives</u></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>	
10.20-12.00	<ul style="list-style-type: none"> • Presentation on workshop approach and methodology • MOVIE 1: Tripartite One Health collaboration and vision • Presentation on Veterinary Services and One Health • Presentation on Public Health Services and One Health • MOVIE 2: Driving successful interactions
<p>Lunch (12:00-13:00)</p>	
<p><u>Session 2: Navigating the road to One Health</u></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>	
<p>Expected outcomes of Sessions 1 and 2:</p> <ul style="list-style-type: none"> • <i>Understanding of the concept of One Health, its history, its frameworks and its benefits.</i> • <i>Understanding that a lot of areas for discussion and possible improvements do exist and can be operational - not only conceptual.</i> • <i>Level of collaboration between the two sectors for 16 key technical areas is assessed. Collaboration gaps identified for each disease.</i> 	

13.00-13.30	<ul style="list-style-type: none"> • Presentation and organization of the working group exercise
13.30-14.30	<ul style="list-style-type: none"> • Case study - Working groups by disease
14.30-15.00	Coffee break
15.00-17.00	<ul style="list-style-type: none"> • Restitution in plenary
17.00	Closure of Day 1

OCTOBER 31st - DAY 2	
08:45-09:00	Opening of Day 2
<u>Session 3: Bridges along the road to One Health</u>	
<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.</p> <p>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>	
<p>Expected outcomes of Session 3:</p> <ul style="list-style-type: none"> • <i>Understanding that tools are available to explore capacities in each of the sectors.</i> • <i>Understanding of the contribution of the veterinary sector to the IHR.</i> • <i>Understanding of the bridges between the IHR MEF and the PVS Pathway</i> • <i>Identification of the technical areas to focus on during the next sessions.</i> 	
09.00-10.00	MOVIE 3: IHR Monitoring and Evaluation Framework MOVIE 4: PVS Pathway MOVIE 5: IHR-PVS Bridging
10.00-10.50	Mapping gaps on the IHR/PVS matrix
10.50-11.10	Coffee break
11.10-11.30	Discussion in plenary
<u>Session 4: Crossroads - IHR MEF, JEE and PVS Pathway reports</u>	
<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>	
<p>Expected outcomes of Session 4:</p> <ul style="list-style-type: none"> • <i>Good understanding of the assessment reports, their purpose and their structure.</i> • <i>Main gaps and recommendations from existing reports have been extracted.</i> • <i>A common understanding of the effort needed starts to emerge.</i> 	
11:30-13:00	<ul style="list-style-type: none"> • Presentation and organization of the working group exercise • Extraction of main gaps and recommendations from the PVS and IHR reports (including the JEE), in relation to gaps identified on the matrix
Lunch (13:00-14:00)	
<u>Session 4 (continued)</u>	
14:00-14:30	<ul style="list-style-type: none"> • Extraction of main gaps and recommendations from the PVS and IHR reports (including the JEE), in relation to gaps identified on the matrix (continued, 30')

Session 5: Road planning	
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.	
Expected outcomes of Session 5:	
<ul style="list-style-type: none"> • Clear and achievable objectives and activities are identified to improve inter-sectoral collaboration between the two sectors for all technical areas selected. • Timeline, focal points, needed support and indicators have been identified for each activity. The impact and the difficulty of implementation of proposed activities have been estimated 	
14.30-15.30	<ul style="list-style-type: none"> • Presentation and organization of the working group exercise • Activities and Objectives (Working groups by technical topic)
15.30-15.50	Coffee break
15.50-17.15	<ul style="list-style-type: none"> • Continuation of working group session
17.15	Closure of Day 2

NOVEMBER 1st - DAY 3	
09:00-09:10	Opening of Day 3
Session 6: Fine-tuning the roadmap	
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.	
Expected outcomes of Session 6:	
<ul style="list-style-type: none"> • Harmonized, concrete and achievable road-map. • Buy-in and ownership of all participants who contributed to all areas of the road-map. Prioritization of the activities. 	
09.10-10.40	<ul style="list-style-type: none"> • Fine-tuning of the road-map
10.40-11.00	Coffee break
11.00-12.30	<ul style="list-style-type: none"> • World Café
12.30-13.00	<ul style="list-style-type: none"> • Presentation of the prioritization vote • Prioritization vote
Lunch (13:00-14:00)	
Session 7: Way forward	
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.	
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.	
Expected outcomes of Session 7:	
<ul style="list-style-type: none"> • Linkages with NAPHS. • Identification of immediate and practical next steps. • Identification of opportunities for other components of the IHR ME 	

13.00-15.00	Plenary Discussion lead by Ministry representatives <ul style="list-style-type: none">• Next steps• Results of the prioritization vote• Integrating action points into the IHR MEF process
15.00-15.20	<u>Coffee break</u>
15:20-6:30	<u>Closing Session</u> <ul style="list-style-type: none">• Evaluation of the workshop• Closing remarks

APPENDIX

ANNEX 2: LIST OF PARTICIPANTS

2019

Национална радионица за повезивање јавноздравственог и ветеринарског сектора
(National IHR-PVS Bridging Workshop)
Хотел Метропол
30.октобар – 1. новембар 2019. године.

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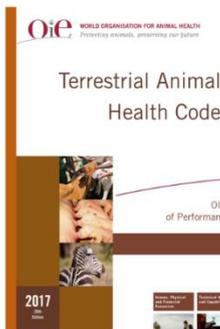
Бр. №	ИМЕ И ПУСИА	Планирање/дефекат/сектор/ управа/институција	Контакт подаци (име/адреса и бр. телефона)	ПОДАЦИ
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