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for Animal Health
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National Bridging Workshop for One Health

Capitalizing on IHR and PVS



Ukraine

18-20 September 2024 - Lviv, Ukraine



Acknowledgments

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

Organizers and participants would like to acknowledge the United States Agency for International Development (USAID) for co-funding this workshop.

The project or effort depicted was also sponsored by the United States Department of Defense, Defense Threat Reduction Agency (DTRA). The content of the information does not necessarily reflect the position or the policy of the Federal Government of the United States, and no official endorsement should be inferred. We would also like to acknowledge the United States DoD DTRA Cooperative Threat Reduction Program's support of project HDTRA-1-23-1-0007 "Second Phase of the NBW Program – From planning to implementation for improved country preparedness at the human-animal-environment interface.

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ABBREVIATIONS & ACRONYMS

AI	Avian Influenza
AMR	Anti-microbial Resistance
FAO	Food and Agriculture Organization of the United Nations
HAE	Human-Animal-Environment
HQ	Headquarters
IHR	International Health Regulations (2005)
JEE	Joint External Evaluation
MEF	Monitoring and Evaluation Framework
MoAPF	Ministry of Agrarian Policy and Food
MoES	Ministry of Education and Science
MoEP	Ministry of Environmental Protection
MoH	Ministry of Health
MoU	Memorandum of Understanding
NAPHS	National Action Plan for Health Security
NBW	National Bridging Workshop
PHC	Public Health Center of the Ministry of Health of Ukraine
PVS	Performance of Veterinary Services
SEI	State Ecological Inspection
SOP	Standard Operating Procedures
SPAR	IHR States Parties Self-Assessment Annual Report
SSUFSCP	State Service of Ukraine on Food Safety and Consumer Protection
TOR	Terms of Reference
UNEP	United Nations Environment Programme
WHO	World Health Organization
WOAH	World Organisation for Animal Health

INTRODUCTION

BACKGROUND

The intricate relationship between human and animal health is undeniable. Many emerging and endemic diseases affecting humans originate from animals, whether transmitted directly, through food, or via the environment. Leading international bodies such as the World Health Organization (WHO), the World Organisation for Animal Health (WOAH), the Food and Agriculture Organization (FAO), and the United Nations Environment Programme (UNEP), play pivotal roles in offering guidance and references for managing zoonotic diseases and other health risks at the human-animal-environment (HAE) interface.

WHO and WOAH collaborated to establish the National Bridging Workshop (NBW), aiming to unite stakeholders across human, animal, and environmental health sectors. This innovative approach fosters mutual understanding among sectors, facilitating discussions on collaboration, its strengths and weaknesses, and the formulation of a joint, consensual roadmap. This roadmap serves to operationalize One Health collaboration, empowering the sectors to prevent, detect and control health threats at the HAE interface more effectively. In 2020, FAO joined the NBW Program and the three organizations initiated a second phase of the NBW Program, focusing on the implementation of the NBW Roadmap, providing in-country support (both technical and financial), and ensuring the follow-up of NBWs. Since 2023, UNEP, as the new member of the Quadripartite, has been contributing and bringing valuable technical inputs related to the environment sector.

On 18-20 September, Ukraine became the 58th country to conduct its NBW. The agenda of the workshop is available at [Annex 1](#).

OBJECTIVES OF THE WORKSHOP

Specific objectives include:

- To provide an opportunity for national human health, animal health and environmental health services to meet and discuss specifically on their collaboration.
- To increase awareness and understanding on capacity assessment tools used by the different sectors (ex: SPAR, JEE, PVS), how they can be connected and used to explore joint strategic and operational planning.
- To evaluate the current collaboration between the three sectors in 16 key technical areas.
- To plan for strategic and operational activities to strengthen One Health collaboration.

EXPECTED WORKSHOP OUTPUTS

In addition to the NBW Report which summarizes all the discussions and working exercises of the workshop, the NBW provides two key outputs:

- **One Health Diagnosis of the strengths and weaknesses** of the collaboration between the three sectors for 16 key technical areas.
- **NBW Roadmap:** a consensual, operational roadmap developed jointly by the three sectors to strengthen their collaboration and operationalize the One Health approach.



The NBW road poster illustrates the process, with actors from relevant sectors coming together to embark on 7 sessions that lead to the development of a joint NBW Roadmap

REPORT ON THE SESSIONS

From 18 to 20 September 2024, Ukraine conducted its National Bridging Workshop (NBW) for One Health in Lviv, Ukraine. The Workshop was hosted at the kind invitation of the Government of Ukraine, with organizational support from the World Health Organization (WHO), the World Organisation for Animal Health (WOAH), the Food and Agriculture Organization (FAO) and the United Nations Environment Programme (UNEP).

The Workshop was attended by a total of 76 participants, including 64 national actors from key national institutions for One Health with representatives from national and oblast levels. 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 group exercises, expected outcomes of each session etc. Sessions were structured in a step-by-step process as detailed in the following pages of this report.

OPENING SESSION

Welcoming of the participants and opening remarks were provided from national Ministries by Mrs Tetiana Skapa (acting Director of the Public Health Department, MoH), Mr Oleg Osian (First Deputy Head of the State Service of Ukraine on Food Safety and Consumer Protection (SSUFSCP), Ms Kateryna Litvishko (Head of the Department of State Environmental Supervision of Waste Prevention and Management, Hazardous Chemicals Management, Senior State Inspection of Ukraine on Environment Protection). This was followed by opening remarks from Dr Aron Aregay (acting Head of Health Programmes, WHO Ukraine), Dr Volodymyr Polischuk (National Consultant, FAO Ukraine), Pablo Sagredo (One Health Associate Officer, UNEP, joined online), and Dr Barbara Alessandrini (Head of Capacity-Building Department, WOAH, recorded video).

Opening speakers highlighted the importance of the multisectoral collaboration in the prevention, detection, and response to health threats at the animal-human-environment interface. Recent examples of the international spread of zoonotic diseases illustrate the urgent need to strengthen the One Health approach. By organizing this NBW, the three sectors show their strong dedication to improving their multisectoral collaboration at all required levels, not only for zoonoses but also for other threats at this delicate interface, such as food safety issues or anti-microbial resistance.

All participants then took turns in a round of introductions, stating their name, affiliation, and one interesting fact about themselves. This was followed by a group photo.

SESSION 1: THE ONE HEALTH CONCEPT AND NATIONAL PERSPECTIVES

Workshop methodology – Presentation (Dr Guillaume Belot, NBW Program Coordinator, WHO Headquarters).

The workshop approach and methodology were presented and the participant handbook was introduced. The workshop's objectives include sharing information through case studies, diagnosing strengths and weaknesses in intersectoral collaboration, and developing a strategic plan to improve cooperation. The process is interactive, using case studies and group work to guide participants through a logical sequence of sessions. These sessions focus on setting the scene, identifying collaboration challenges, and building a roadmap for future joint activities. The workshop emphasizes practical, homegrown solutions rather than evaluations or formal training.

Introduction to One Health - Video/Quiz: A first documentary video presented the One Health approach, its history, rationale and purpose and how it became an international paradigm. This video was combined with a live quiz game to test participants knowledge on the One Health concept and to make the session more engaging.

Human health services and One Health - Presentation (Mrs. Nataliia Sokurenko - Head of the Division for the Safety of the Human Environment Department of Public Health of the Ministry of Health of Ukraine).

The presentation provides an overview of Ukraine's public health system, focusing on both the current state and the future target model. It describes the roles of various national and regional stakeholders involved in public health, including the Ministry of Health (MOH), the State Service for Food Safety and Consumer Protection, the State Emergency Service, and other governmental organizations. These institutions are tasked with ensuring public health and safety through disease monitoring, environmental safety, food security, and health promotion.

The current system operates on three levels: national, regional, and local. Each level plays a distinct role in health promotion, disease prevention, epidemiological surveillance, and emergency responses. The Centers for Disease Control and Prevention (CDC) at the regional level are responsible for monitoring health indicators, responding to emergencies, and coordinating efforts with local health departments and other agencies. Their core activities include epidemiological surveillance, data management, and promoting public health initiatives.

The presentation emphasizes the importance of interagency cooperation, international collaboration with organizations like WHO, and the need for regulatory reforms and capacity building. It also highlights the necessity of updating laboratory infrastructure to meet international biosafety standards (BSL-3), decentralizing laboratory functions, and enhancing data-driven decision-making.

Additionally, the presentation outlines the ongoing efforts to develop and implement policies that support the improvement of public health systems, focusing on infectious and non-infectious diseases, antimicrobial resistance, and health promotion strategies.

Veterinary services and One Health - Presentation (Mr. Mykhailo Tuyakhov - Deputy Head of the Unit of Animal Health and Welfare, Organisation of Anti-Epizootic Measures of the Animal Health and Welfare Department of the SSUFSCP):

The presentation from the SSUFSCP focuses on the "One Health" approach, emphasizing the importance of collaboration between various sectors to manage and prevent zoonotic diseases. The structure of the organization includes regional laboratories and control institutions tasked with monitoring and ensuring food safety, veterinary medicine, and consumer protection.

The presentation highlights several key priorities, including the management of zoonotic diseases like anthrax, rabies, and COVID-19, based on a prioritization workshop held in 2023 using CDC tool. Additionally, the document outlines the role of intersectoral cooperation and international coordination with organizations such as WHO and FAO. It discusses regulations for veterinary medicine, food safety, and responses to outbreaks, as well as the role of the national emergency committees in managing animal disease crises.

Special attention is given to the ongoing efforts to mitigate the consequences of the Kakhovka dam destruction, focusing on animal health, food safety, and public health, including the disposal of animal carcasses and water safety monitoring.

Environment services and One Health - Presentation (Mr. Vasyl Stryshchak - Deputy Head of the Lvivska Regional State Ecological Inspection of Ukraine)

The presentation outlines the responsibilities and activities of the State Environmental Inspection of Ukraine in environmental protection and waste management. The agency oversees the implementation of laws related to the protection of air, water resources, land, forests, and biodiversity. It also monitors waste handling, including hazardous substances, pesticides, and industrial pollution.

A major focus is on the new Law on Waste Management, which came into effect in July 2023. The law establishes a hierarchy for waste management, prioritizing prevention, recycling, and recovery to reduce the harmful impact on human health and the environment. The State Environmental Inspection is responsible for monitoring compliance with these regulations.

The presentation also highlights Ukraine's international cooperation efforts, including participation in global environmental forums and collaboration with organizations like the UN and the European Union. Additionally, it mentions the significant role of animal by-product management, which is regulated based on risk categories and supervised by the State Service for Food Safety and Consumer Protection

One Health collaboration examples - Video/Quiz: Following the sector presentations, a second documentary video provided participants with concrete worldwide examples of intersectoral collaboration in addressing health issues at the human-animal-environment interface for various key technical areas such as surveillance, response, and communication, among others. This video was also combined with a live quiz game.



Figure 1: During Session 1, videos were used to set the scene of One Health, and participants tested their knowledge in a live quiz game using their smartphones.

Outcomes of Session 1: This initial session laid the foundation by introducing the One Health concept and the collaborative efforts of the Quadripartite organizations. Following this, in-depth presentations from each sector provided a comprehensive understanding. A supplementary documentary showcases successful intersectoral collaborations worldwide, highlighting shared approaches, references, and strategic visions.

SESSION 2: NAVIGATING THE ROAD TO ONE HEALTH – COLLABORATION GAPS

Participants were divided into five working groups of mixed participants from each sector and from different levels (Central, Oblast, District). Groups were provided with a scenario (Table 1) based on diseases relevant to the local context developed in collaboration with national representatives.

Table 1: Scenarios used by the different groups for the identification of strengths and weaknesses in the multisectoral collaboration

Rabies A stray dog, which was known to have bitten two cows and behaved aggressively toward humans, was reported to have bitten several children in the same area. Two days ago, police shot and killed it on the outskirts of the town of Radyvyliv, Rivne region. The dog's corpse was destroyed before the State Service of Ukraine for Food Safety and Consumer Protection could take the dog's head for laboratory diagnosis of rabies.
Avian influenza H5N1 Two people were hospitalized in Myronivska Central District Hospital, Obukhiv district, with pneumonia. PCR laboratory testing gave a positive result for the H5N1 subtype of avian influenza. One of the patients is a broiler producer who sells his birds three times a week at the local market. The other patient reported that he had been to the same market 7 days before the onset of illness and bought four quails. Veterinary laboratories diagnosed 2 species of wild birds also affected in the area.
Salmonellosis 32 people in the capital sought medical help after experiencing nausea, diarrhea, severe abdominal pain, and high fever 12-36 hours after breakfast at a well-known hotel. Seven of them were hospitalized. All of them recovered within a week. The managing director of the hotel stated that the eggs were sourced from a reliable supplier and that the hotel stored the eggs in accordance with food safety standards.
Crimean–Congo hemorrhagic fever Six employees of a meat processing plant from Volovets district, Zakarpattia region, who participated in a planned sheep slaughter, died with acute hemorrhagic symptoms. Another person from the same meat processing plant was hospitalized in Volovets with a confirmed diagnosis of CCHF.
River ecosystem collapse The Southern Buh River has seen a massive death of fish, birds, and other aquatic bioresources. Over a 15 km stretch, the river's ecosystem has been completely destroyed, and dead organisms and frothy, strongly odorous spots continue to float down the river, affecting villages and towns downstream. This large-scale die-off event has been covered by national and international media and has gone viral on the Internet. There are reports of dead cattle being found along the river.

Using the experiences from previous outbreaks, the groups discussed how they would have realistically managed these events, and evaluated the level of collaboration between the three sectors for 16 key technical areas: prevention, coordination, investigation, surveillance, communication, etc. These areas of collaboration were represented by color-coded *technical area cards*: green for “good collaboration”, yellow for “some collaboration”, and red for “collaboration strongly needing

improvement” (Figure 2).

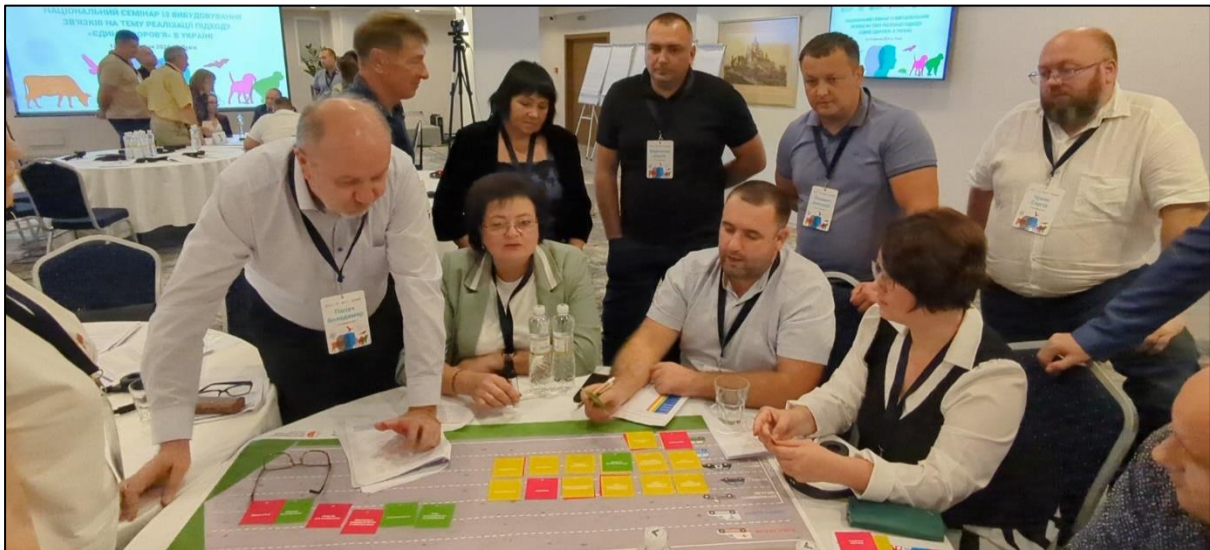


Figure 2: Participants working on a disease scenario are evaluating the level of collaboration between the three sectors for 16 key technical areas.

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

Outcomes of Session 2:

- Areas of collaboration were identified, and joint activities discussed.
- Level of collaboration between the three sectors in 16 key technical areas was assessed (Output 1).
- The main gaps in the collaboration were 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 ([WOAH standards](#)) as well as the tools available to assess the country's capacities: the SPAR and JEE tools for public health services and 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 3).

A third documentary video was presented by UNEP. The presentation highlighted the "Triple Planetary Crisis" of climate change, biodiversity loss, and pollution, emphasizing their interconnectedness and impacts on human health. It stresses the need for a holistic approach to addressing these crises, using tools and international frameworks to ensure sustainable environmental and health outcomes.

Through an interactive approach, working groups were then 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.

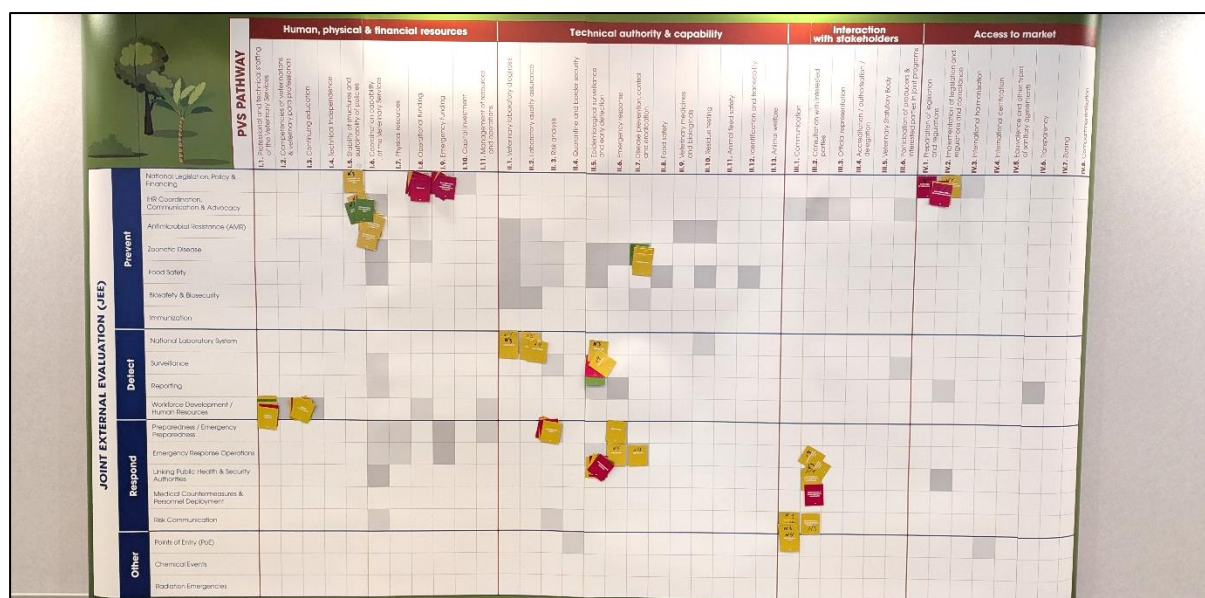


Figure 3: Mapping of the gaps by positioning the selected cards from all scenario groups on the NBW Matrix provides a snapshot of the strengths and weaknesses in the collaboration between the three sectors across all technical areas

The main gaps (clusters) identified were discussed, this time on a systemic level (all diseases combined). The evaluation of collaboration across Ukraine's public health, animal health, and environment sectors shows mixed results. Areas with the best collaboration include high-level coordination (total score 7/10) and prevention (6/10), indicating good collaboration, especially in decision-making processes.

Moderate collaboration is seen in human resources, response, laboratory work, joint surveillance, local coordination, and media communication (all scoring 5/10). These areas show some cooperation but need improvement, particularly in critical response and surveillance activities.

However, poor collaboration is evident in finance, emergency funding, legislation, technical

coordination, risk assessment, stakeholder communication, field investigation, and education (all scoring below 4/10). Addressing these deficiencies is crucial for building a more resilient and responsive health system that can effectively manage zoonotic diseases and environmental challenges.

New working groups were made for the second half of the workshop, this time by technical area, to try and cover all aspects of collaboration where improvement is needed:

- Group 1: Coordination (High, Local and Technical Level) and Legislation
- Group 2: Surveillance, Laboratory, and Risk Assessment
- Group 3: Response and Field Investigation
- Group 4: Prevention and Risk Communication

Additionally, each group was asked to integrate 'Finance', 'Human Resources', and 'Education and training' aspects related to their designated technical areas.

Outcomes of Session 3:

-Assessment tools used by the different sectors (ex: SPAR, JEE, PVS) were presented.
-Joint areas and activities identified for each scenario were mapped onto a giant matrix, enabling participants to visualize the gaps identified in each essential capacity and to distinguish disease-specific versus systemic gaps.

SESSION 4: CROSSROADS – PVS PATHWAY AND IHR MEF REPORTS

The matrix was used to link the identified gaps to their relevant indicators in the IHR MEF and the PVS Pathway. Each working group then opened three available assessment reports (JEE Ukraine, PVS Evaluation Ukraine, One Health Disease Prioritization Tool Ukraine) and extracted the main gaps and recommendations relevant to their technical area.



Figure 4: Participants extract some of the key identified gaps and recommendations from the JEE, PVS, and OHZDPT reports.

Outcomes of Session 4:

- Participants got a better understanding of the assessment reports for each sector, as well as their purpose and structure.
- The main gaps and recommendations relevant to each technical area group were extracted from the reports.

SESSION 5: ROAD PLANNING

Using the same working groups as for the previous session, participants were asked to identify, for each technical area, priority activities that the sectors should implement to improve their collaboration in the future. This brainstorming used several items as information sources:

- The report sheets from Session 2, which highlight the key gaps for all technical areas and for the different diseases / case studies used.
- The key gaps and recommendations extracted from the reports during Session 4.
- The technical activity cards, which give several examples of possible joint activities.
- and most importantly, the experiences of all the participants in working on a daily basis in the human health, veterinary, and environmental health sectors.



Figure 5: The technical working group on “Surveillance, Laboratory and Risk Assessment” is using the results of the previous sessions to identify joint activities to improve the collaboration between the sectors in this domain.

Outcomes of Session 5:

- Clear and achievable activities were identified to improve inter-sectoral collaboration between the sectors for all technical areas selected.

SESSION 6: FINE-TUNING THE ROADMAP

For each identified activity, participants were asked to fill out an *Activity Card* detailing the desired date of implementation, the responsible lead focal points, as well as the detailed process of implementation of an activity, the importance of identifying an activity that is as operational as possible, with very clear and precise actionable steps.

The difficulty of implementation and the expected impact of each activity were evaluated using red and blue stickers respectively using a semi-quantitative scale (1 for less difficult to implement or less impact to 3 for most difficult to implement or high impact).

Activity cards that were linked (by theme, or by process) were then regrouped under one Objective card, to start structuring the roadmap.

A World Café exercise was then organized to enable participants to contribute to the action points of all technical areas (Figure 6). Each group had 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 used the post-it note pad to leave their comments on the objectives and activities of other groups when they felt that an amendment or a clarification was necessary.

At the end of the World Café, 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.

Overall, the groups identified a total of 12 key objectives and 37 activities. The detailed results are presented in [Output 2](#).

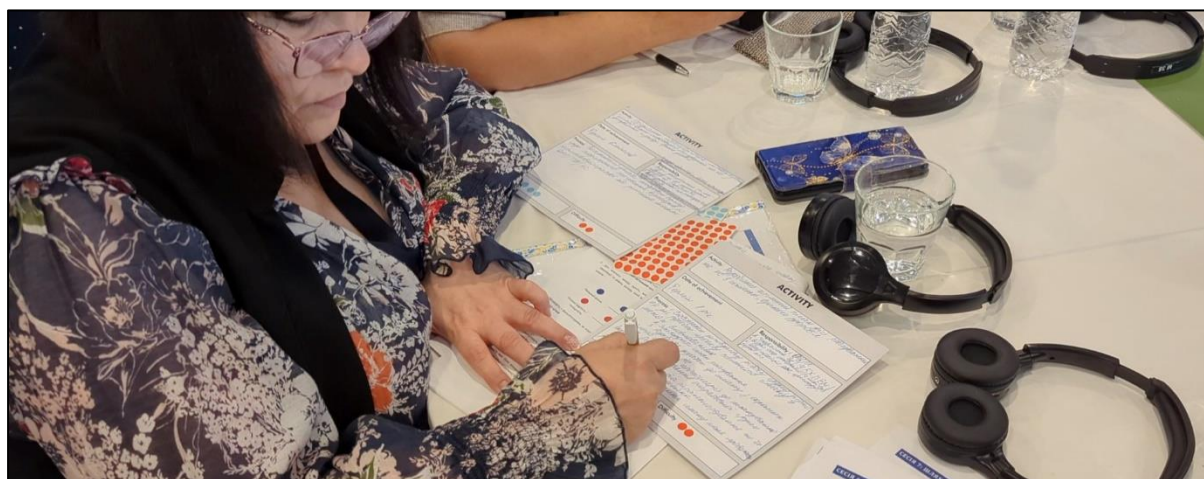


Figure 6: Participants fill out a detailed Activity Card for each joint activity that they identified to improve the collaboration between the three sectors.



Figure 7: A world café session is organized, during which participants rotate through each group to provide comments and inputs on the different Roadmap sections.

Prioritization of Objectives

To prioritize the objectives identified by the technical working groups, participants were given five small white stickers each, to identify which five objectives (and their constituting activities) they considered as of highest priority.

Outcomes of Session 6:

- Harmonized, concrete and achievable roadmap to improve the coordination and collaboration between the animal health, human health and environmental sectors in the prevention, detection and response to zoonotic diseases and food safety outbreaks was developed.
- Buy-in and ownership of all participants who contributed to all areas of the roadmap was confirmed.
- Prioritization of the activities was conducted.

SESSION 7: WAY FORWARD

A final plenary session was organized to discuss the way forward and give all participants a chance to express themselves on the resulting roadmap and what they thought would be the best way to start its implementation. This session was entirely facilitated by national stakeholders.

The session was led by a key representative from each of the three sectors: Mr. Mykhailo Tuyakhov - Deputy Head of the Unit of Animal Health and Management, Organisation of Anti-Epizootic Measures of the Animal Health and Welfare Department of the SSUFSCP; Mrs Natalia Vydayko - Head of the National Reference Laboratory for Diagnostics of Tuberculosis, Parasitic, Bacterial, and Especially Dangerous Pathogens of the Public Health Center of MoH of Ukraine; and Mrs. Antonina Moviak - Head of the Department of State Ecological Supervision (Control) of Land Resources and Subsoil - Senior State Inspector for Environmental Protection of Volyn Oblast.

Comment from Natalia Piven, Unit Lead on Public Health and IHR/Preparedness, WHO Country Office in Ukraine:

"The recommendations from the IHR Joint External Evaluation (JEE) should serve as a guide for us to formulate initiatives to strengthen the country's capacity within the IHR, and also serve as a tool for all international partners and donors to mobilize the necessary financial and technical assistance. We will ensure that the outcomes of this workshop are aligned with the development of the National Action Plan for Health Security (NAPHS). This plan will act as an advocacy tool to drive forward the proposed interventions. At both the political level (Cabinet of Ministers, Ministry of Health for technical matters) and the expert level (according to the Public Health System Law, the Public Health Center is designated as the coordinator for IHR in Ukraine), we are progressing. We will soon publish a concept note and recommendations for the country to strengthen the security agenda and the importance of NAPHS. World Health Organization (WHO) recommends establishing technical advisory groups with top experts, structured into specialized technical working groups (TWGs) by specific areas. These groups will provide evidence-based proposals to higher political levels, ensuring a continuous dialogue between experts and decision-makers. The coordination mechanism should be multi-tiered, and WHO expresses readiness to participate in these technical groups, offering expertise and facilitation in implementation."



Figure 8: With the NBW Roadmap completed and displayed, a plenary session was led by national representatives from the three sectors to discuss with participants on the way forward to ensure implementation of the Roadmap.

Outcomes of Session 7:

- Way forward for the implementation of the roadmap was presented and discussed.
- Ownership of the workshop results by the country was confirmed.

CLOSING SESSION

Closing remarks made by the three session chairpersons, key points included:

- Ukraine is the 58th country to conduct its NBW and to develop a joint NBW Roadmap.
- Over the three-day workshop, everyone from central and subnational levels, particularly professionals working in the field, gained the same level of understanding of One Health and its importance in effectively mitigating the risk of future pandemics and in preventing and controlling zoonotic diseases and food safety outbreaks.
- Everyone worked hard to build the excellent NBW Roadmap for strengthening One Health capacity in the country, and everyone from all sectors must make concerted efforts to work together.
- The NBW has enabled the building of a network amongst professionals from different sectors; therefore, working together will be easier and more effective.
- Every participant was urged to spread through word of mouth the importance of One Health and how different sectors should work together for the prevention and control of zoonotic diseases, including other hazards like chemical contamination and food safety.
- In this regard a “One Health Mural” – card game, developed by the WOAHC Collaboration Center and translated into Ukrainian by WHO CO in Ukraine was presented to each participant together with the short guiding note.

MATERIAL AND VIDEO

All the material used during the workshop, including movies, presentations, documents of references, results from the working groups, photos, videos were uploaded on a shared drive with a link shared to all participants (accessible at: <https://shorturl.at/4oBZY>).

A short video of the event was compiled and is available at: www.bit.ly/NBWUkraine or by scanning the QR code below:



WORKSHOP OUTPUTS

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

Technical area	Rabies	Salmonellosis	CCHF	H5N1	River system collapse	Total Score
Coordination at high Level	1	1	1	2	2	7
Prevention	1	1	1	2	1	6
Coordination at local Level	1	1	1	1	1	5
Communication w/ media	1	1	1	1	1	5
Joint surveillance	1	1	1	0	2	5
Laboratory	1	1	1	1	1	5
Response	1	1	1	1	1	5
Human resources	1	2	1	0	1	5
Communication w/ stakeholders	1	1	1	0	1	4
Field investigation	2	0	1	0	1	4
Education and training	1	1	1	1	0	4
Coordination at technical Level	1	0	0	1	1	3
Risk assessment	1	0	1	0	1	3
Legislation / Regulation	1	0	1	0	0	2
Finance	1	0	0	0	0	1
Emergency funding	0	0	0	0	1	1

For each disease, the performance of the collaboration between the human health and the animal health sectors is color-coded: green for “good collaboration”, yellow for “some collaboration”, and red for “collaboration needing improvement”. The score uses a semi-quantitative scale (2 points for a green card, 1 for a yellow card and 0 for a red card).

OUTPUT 2: NBW ROADMAP - OBJECTIVES AND ACTIONS IDENTIFIED PER TECHNICAL AREAS

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

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

Action	Timeline	Difficulty (1-3 scale)	Impact (1-3 scale)	Responsibility	Process
COORDINATION AND LEGISLATION					
Objective 1: To introduce one health approach into Ukrainian legislation (46 priority dots)					
1.1 To submit the draft law of Ukraine "On biosafety and biosecurity" for the consideration of the Cabinet of Ministers of Ukraine	Till the end of 2024	+++	+++	MoH	- The draft law is developed - To conduct the procedure of intergovernmental agreement with the central executive bodies and other social partners - To receive the compliance conclusion from the Ministry of Justice, Ministry of Finance, Ministry of Digitalization and a Secretariate of the Cabinet of Ministers of Ukraine - Finalise the draft law and submit to the Cabinet of Ministers
1.2 To update the resolution of the cabinet of ministers of Ukraine No 893 "On the sanitary protection of the territory of Ukraine"	Till the end of 2024	+++	+++	Dept of Public Health, State Border Service, Ministry of Foreign Affairs, Ministry of Environmental Protection, State Custom Service, SSUFSCP	- To develop amendments to the resolution - To conduct the procedure of intergovernmental agreement with the central executive bodies and other social partners - To receive the compliance conclusion from the Ministry of Justice, Ministry of Finance, Ministry of Digitalization and a Secretariate of the Cabinet of Ministers of Ukraine
1.3 To introduce amendments to the Resolutions of the Cabinet of Ministers of Ukraine No 1056 of 06.10.2023 and No 479 dated of 19.04.2022 "On the approval of the terms of reference of the State Emergency Antiepidemiological Commission at the CMU level, and the typical terms of reference of the local State Emergency Antiepidemiological Commission"	Till the end of 2024	++	+++	Cabinet of Ministers of Ukraine, MoH, SSUFSCP, Ministry of Agrarian Policy and Food of Ukraine,	- MoH to initiate and draft amendments in particular "to include Chief Sanitary Doctor of the Oblast/region to the list of the State Emergency Antiepidemiological Commission (representative of the regional Center for Disease Control and Prevention) - To conduct the procedure of intergovernmental agreement with the central executive bodies and other social partners - To receive the compliance conclusion from the Ministry of Justice, Ministry of Finance, Ministry of Digitalization and a Secretariate of the Cabinet of Ministers of Ukraine
1.4 To adapt Ukrainian legislation on by security to the international standards	3 years (2024-2026)	+++	+++	MoH, MoAPF, Ministry of Environmental Protection, State Border Service	- To conduct evaluation/audit of the national legislation jointly with international experts (WHO, CDC etc) - to obtain conclusion and suggestions - to improve preparedness and response on the emergency (zoonosis) - to improve intersectoral cooperation
1.5 To develop the Memorandum of Understanding between 3 ministries on regularly data exchange and surveillance results	December 2025	+	+++	MoH, PHC, MoAPF, SSUFSCP, MoEP	- to organize a meeting with representatives of the three sectors - to establish a coordination working group - to develop a MoU between 3 ministries on surveillance for prioritized zoonotic diseases - to organize a working meeting for official approval signing of the MoU - To initiate the development of unified methodologies for laboratory testing and surveillance procedure

Objective 2: To enhance coordination and cooperation between stakeholders (17 priority dots)					
2.1 To develop legislative act one cooperation and organization of work in the points of entry through the state border	1 year	+++	+++	MoH, MoAPF, MoEP, State Border Service, SSUFSCP, State Custom Service	- To establish an expert working group (MoH, SBS SSUFSCP, SCS) - To detect the list of participants - To develop the terms of reference on the expert working group - To conduct working meetings on the monthly basis online and/ or offline - To develop a working plan - To develop a draft legal act with a strict algorithm of interaction and organization of work in the points of entry through the state border for each service/institution
2.2 To Create an expert group on drafting the National Program of Cooperation and Coordination of Actions on the Prioritized Zoonotic Diseases	2025	++	+++	Dept of Public Health of the MoH, MoAPF, MoEP, Ministry of Finance, SSUFSCP, State Border Service,	- MoH to initiate the creation of the expert working group - to determine the list of the group of experts - to draft the terms of reference of the expert working group - to develop the plan of actions for the expert working group (tasks deadline functions involvement of other responsible organizations) - to develop the national program of cooperation and coordination (objective, vision, tasks, responsible actors, deadlines, expected outcomes, financial support, risks/threats, pplan of actions)
2.3 To develop educational curriculum/programs to integrate One Health	2025	+++	+++	MoH, MoES, MoAPF, MoEP, SSUFSCP	- MoH to initiate the development process to draft joint educational curriculums/ disciplines according to needs of the universities/ higher education - To provide methodological support to educational institutions in implementing One Health modules in curricula and program
Objective 3: To finance programs linked to One Health (26 priority dots)					
3.1 To create the single joint budget program for financial support of activities concerning prioritized zoonotic diseases	2025-2026	+++	+++	CMU, Ministry of Finance, Ministry of Economy, MoH, MoAPF, MoEP, SSUFSCP, SBS	- Institutions and Ministries to submit the request on calculations on the amount of funding with division for articles - To draft and submit the explanatory note with clarifications and ground funding on the financial support and the amount of funding of the planned actions - To discuss the draft of the budget program - to follow the procedure of adoption - To receive the conclusions and agreements of the Ministry of Finance and the Ministry of Justice
3.2 While formulate the State Budget to foresee the compensation for emergency response from the reserved fund (prioritized zoonotic diseases)	Annually while formulate the State Budget	+++	+++	Dept of PH of the MoH (initiate), CMU, MoF, MoEconomy, MoEP, SSUFSCP, SBS	- Institutions and Ministries to submit the request on calculations on the amount of funding with division for articles - To draft and submit the explanatory note with clarifications and ground funding on the financial support and the amount of funding of the emergency response actions - To discuss the draft of the budget program - to follow the procedure of adoption - To receive the conclusions and agreements of the Ministry of Finance and the Ministry of Justice - To approve

SURVEILLANCE, LABORATORY, RISK ASSESSMENT

Objective 4: To enhance cooperation for unified surveillance between PH, AH, EH sectors (29 priority dots)

4.1 to develop a national program on the improvement of material and technical base (MTB) laboratory network of PH, SSUFSCP, MoEP	December 2026	+++	+++	MoH, PHC, MoAPF, SSUFSCP, MoEP	- to create a working group including three sectors representation - to conduct the assessment of the current MTB and identify prioritized needs 2 enhance capacity linking to tasks of laboratory testing and avoiding overlapping - to select the financial system - to approve the program
4.2 To conduct an audit of the current IT systems, to evaluate the capacity and to develop a plan of integration	December 2026	+++	+++	Unit of Digital development digital transformations and digitalization of the MOH, SSUFSCP, MoEP	- To establish a working group with representatives from three sectors - to conduct an audit of the current IT systems - to identify the financial sources - to develop the terms of reference and SOP - to draft sub legal act to coordinate the exchange of information between the sectors - to conduct the bidding to select the technical implementing partner of the program - to select pilot regions to test the program and to correct uncertainties - to conduct training of staff using the program and implement the program
4.3 To improve the program of the external quality assessment for national regional laboratories	December 2026	++	++	PHC, MoH, SSUFSCP	- to conduct accreditation of the regional laboratories in compliance with ISO 17043, 17034 - To improve cooperation between national regional laboratories and international regional centers in the scope of external quality assessment (regarding certain nosologies) - To develop mechanism of external quality assessment
4.4 To create joint training program of PH, AH, EH staff in the system of the continuous professional development	II Q 2025	+++	+++	Working group (MoH, MoAPF, MoEP, PHC, SSUFSCP)	- to establish a working group (MoH, MoAPF, MoEP, PHC, SSUFSCP) to evaluate current resources and current programs of continuous professional development of three sectors at the national level - to develop a certification program to be used jointly for three sectors over the prioritized zoonotic diseases applying the One Health approach - to implement program of joint trainings of continuous professional development for PH, AH, EH at the basis of the PHC

Objective 5: To ensure joint risk assessment for all One Health sectors in order to develop preventive measures (11 priority dots)

5.1 To create joint working group on the risk assessment at the national level regarding the prioritized zoonotic diseases in order to ensure the systematic approach on the periodical risk assessment involving academia and scientific experts	December 2025	+	+++	Dept PH of the MoH, PHC of the MoH, Unit of the Coordination of the SSUFSCP, MoEP	- to engage responsible staff who was trained on the risk assessment to be included to the working group at the level of ministries and scientific institutions - To identify the chairman, the secretary and institutions who will coordinate the wo working activity - To develop tasks, deadlines to conduct risk assessment (planned and the circumstances for unplanned) - to develop a methodology and algorithms on risk assessment
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					5. to ensure advocacy implementation of the risk assessment system in fields
5.2 To conduct training of trainers (cascade training) at the international and national levels on laboratory diagnostic, risk assessment of prioritized zoonotic diseases	December 2026	+++	+++	Int Coop Dept of the MoH, Dept PH of the MoH, International Expert Center of the MoH, Unit of the Coordination of the SSUFSCP, HR of the SSUFSCP, MoEP,	1. to engage international partners and donors to organize and conduct ToT 2. to select representatives of the three sectors to be trained as trainers 3. to elaborate the training program 4. to conduct the cascade trainings, workshops at the national and sub-national levels
5.3 To approve the list of risks based on the results of joint risk assessments in terms of intersectoral cooperation in the following areas: AMR (antimicrobial resistance), endemic zoonoses, food safety, emergency response, outbreak response and ensure the preparation of communication packages	I Q 2025	++	+++	Dept of PH MoH, Dept of food safety and veterinary medicine SSUFSCP, SEI	1. to establish a working group out of senior leadership and detect technical staff (Dept of PH MoH, Dept of food safety and veterinary medicine SSUFSCP, SEI) to identify and approve the list of risks as a result of conducted risk assessments 2. to bring the list of risks to the attention of the responsible ministries for the development of appropriate communication interventions to approve the list of risks by the joint order of the ministries 3. create expert multisectoral groups to develop communication materials for the identified risk groups 4. conduct trainings for communication specialists of the MoH, PHC, the CDCPs, SSUFSCP, and the SEI on communication of identified risks 5. to develop and initiate communication campaigns
Objective 6: To create and set up the production of biological products in Ukraine (7 priority dots)					
6.1 To create and set up the production of diagnostical products in Ukraine	December 2027	+++	+++	CMU, MoH, MoAPF, MoEP, SSUFSCP	1. to create the coordination group 2. to determine the list of diagnostic products, test systems, other consumables which are not produced in Ukraine or those in need to improve the production process 3. To identify the financial sources 4. to select the industrial bases for the production process 5. to set up the production process to conduct testings and registration of the biological products in compliance with the current national legislation 6. to list new biological products into legal acts (instructions, resolutions)

FIELD INVESTIGATION AND RESPONSE

Objective 7: Improved response at multisectoral level (26 priority dots)

7.1 To Create a Joint Emergency Response Plan for the multiple threats in the context of One Health (include the specified annex for the prioritized zoonotic diseases)	2025	++	+++	MoH, MoAPF, MoEP, SSUFSCP, State Border Service, State Emergency Service, local communities	1. to create an intersectoral working group to develop and summarize the proposals of the draft joint response plan 2. to develop a response plan (define tasks for each involved institution of the Ministry, timelines, risks, financial support, expected results) 3. to approve the response plan 4. to develop proposals for budget planning 5. to conduct post-action analysis and make appropriate adjustments to the plan
7.2 To establish a standing multisectoral emergency joint rapid response group in the context of One Health	6 months	++	+++	Unit for emergency response and monitoring of the oCDC, Unit of organization of the antiepidemic activities of the Regional SSUFSCPS, Unit of the operational Control (ecology)	1. define the goals, purpose and objectives of the inter-sectoral joint emergency response team in the context of the "One Health" concept 2. define the list of positions for the rapid response team in accordance with the legislative framework or by making a decision at the local emergency response commissions 3. approve the list of the group by a joint order 4. formulate the group's work plan and frequency of meetings 5. ensure documentation and monitoring of the group's decisions implementation
7.3 To adapt multisectoral SOPs for the emergency joint rapid response group with a strict division of responsibilities and tasks	December 2025	++	+++	Staff authorized by Director of the oCDC, Regional SSUFSCP, Directors of the Regional Ecological Inspections	1. to establish a standing working group 2. to organize a meeting with representatives of three sectors at regional level 3. to develop SOPs per certain topics identified in advance 4. following the trials, to conduct the after action reviews and correct the SOP, to approve the SOP by director of oCDC and oblast SSUFSCP, Ecological Inspection 5. To share sops with the emergency joint rapid response group representatives 6. To review SOPs periodically, including after SimEx (annually or if applicable)
7.4 To conduct trainings of staff of the local level regarding SOP	Periodically, once every 6 months	+	+++	oCDC, Regional SSUFSCP, Regional Ecological Inspections	1. to select the responsible person within the scope of authority 2. to develop a training plan 3. to conduct a training (TTX, field/functional) 4. to conduct a test (evaluation) of the local staff regarding the conducted training
7.5 To introduce and to institutionalize the after action review following the outbreak (emergency)	Periodically annually	+++	+++	All interested stakeholders (agencies, ministries)	1. develop a unified methodological approach for the implementation of post-action response analysis 2. conduct trainings on conducting after-action analysis 3. conduct after-action analysis and generate reports with relevant recommendations to inform actions to address identified gaps and/or disseminate best practices

Objective 8: To enhance the competencies of staff in emergency response (6 priority dots)					
8.1 To do a training of national experts on how to conduct the simulation exercises	Up to 6 months	+	+++	Intersectoral working group, oCDCs, MpH, PHC, SSUFSCP, SEI,	- to select a list of responsible staff within the scope of authority to become a national expert to conduct a training on SimEx - To calculate and approve the budget for the training - To identify national and if needed international experts for facilitation - to develop a plan of trainings for national experts - to conduct a thematical trainings - to conduct an evaluation of the quality of trainings
8.2 To conduct simulation exercises for multi sectoral teams of rapid response (RRT)	during the first quarter after creation of the rapid response group	++	+++	Deputy Director of the oCDC (authorized staff), oblast SSUFSCP, SEI	- to develop a thematical training plan with a selection of participants, timeline and responsible persons - To develop materials for trainings (scenario, injects presentations, valid epidemiological information) considering recommendations of WHO and WOAHA - To select venues for trainings - to conduct trainings by the lead of the rapid response group at the national level - To identify gaps and find the way for improvement
8.3 To conduct joint simulation exercises of the emergency rapid response group and field epidemiology (operational-based: drills)	1 year	+++	+++	oCDC (epidemiologist), Regional SSUFSCP, Unit for operational control (SEI), National Police, State Emergency Service, SBS, State Forestry Agency	- to establish a multi sectoral joint working group of experts to develop the plan for a joint simulation exercise - To develop the training plan - to approve training plans - to conduct trainings once every six months - to calculate the budget jointly to conduct simulation exercises - to analyze the conducted trainings and share the proposals for improvements
8.4 To conduct joint full scale field intersectoral exercises with the facilitation of international experts	Periodically once a year	+++	+++	MoH, PHC, SSUFSCP, National Police, State Emergency Service, SBS, State Forestry Agency	- create a group to plan, conduct simulation exercises and analyze the results and formulate recommendations (different types of SimEx, including TTX) - develop a training plan to prepare groups of trainers/facilitators - develop plans for simulation exercises and calculate the budget - integrate the plans of simulation exercises into the annual national plan of major civil protection measures of Ukraine (to be approved by the CMU) - conduct simulation exercises - Analyze the results of the conducted simulation exercises, develop an improvement plan to address identified gaps
Objective 9: To train (prepare) rapid response groups (17 priority dots)					
9.1 To institutionalise the programme of the field epidemiology for PH, AH experts	Up to 2 years	+++	++++	MoES, MoH, PHC, MoAP, other executive bodies and higher education	- to develop and approve a certified 6 months' program of the field epidemiology on the basis of higher education at the PH and AH faculties - To develop and approve a master curriculum 1,5 year of field epidemiology

PREVENTION, RISK COMMUNICATION

Objective 10: Development and implementation of the National Communication Strategy (19 priority dots)

10.1 To develop the Joint National Communication Strategy for 2026-2030	December 2025	+++	+++	Dept PH MoH, MoAPF, MoEP, PHC, Dept of Food Safety and Veterinary Medicine SSUFSCP, SEI	- to establish a standing working group to coordinate activities and prepare strategy - to organize a meeting with representatives of all sectors to develop a strategy - to develop the draft strategy and the operational plan of its implementation with the responsible offices and deadlines by the standing working group - to send the draft strategy and its operational plan for the intergovernmental agreement to all involved ministries - to submit the draft strategy and its operational plan for the approval by the cabinet of ministers of Ukraine
10.2 To develop and implement the joint SOPs on communication with media, local government, general public	I Q 2025	+++	+++	Dept of PH MoH, Dept of food safety and veterinary medicine SSUFSCP, SEI	- to create working group out of unit leads on communication - The draft joint SOP - to share SOP for approval to the responsible ministries - to conduct training with senior leadership, unit leads on communication of the oblast level - do select responsible staff for implementation of SOP at the regional level - you need leads on communication

Objective 11: To build capacity of human resources on communication (6 priority dots)

11.1 To select 2 staff (main and alternate) from each sector responsible for communication	December 2024	++	+++	Directors of oCDCs, Heads of oblast SSUFSCPs, Heads of oblast SEI	- to draft and issue the order at the regional levels of oCDCs, oSSUFSCPs, oSEIs that provide a list of responsible staff for communication and their tasks and responsibilities - To develop or amend job descriptions of thy selected staff
11.2 To conduct joint certified trainings on communication 2 times a year	March 2025, September 2025 and on the annual basis	+	++	Directors of oCDCs, Heads of oblast SSUFSCPs, Heads of oblast SEI	- to develop joint training program by the working group for the period of three years covering the selected list of risks - To invite international organizations, NGO, associations to conduct and organize joint trainings - to conduct joint trainings of trainers on risk communication and prevention - to conduct cascade certified trainings of staff at the regional level by trainers
11.3 To integrate to the higher educational program the discipline on risk communication	Up to 01.07.2025	++	+++	MoES, MoH, SSUFSCP, MoEP	- to establish a working group with representatives of all stakeholders - to develop suggestions to the educational program plans - to send draft educational program plans for consideration and comments to all interested institutions - To revise the educational program plans and submit for approval to the MoES - To prepare educational materials by MoES - To implement program

Objective 12: To improve public awareness and enhance prevention (34 priority dots)

12.1 To conduct joint briefings each quarter	Quarterly 2026-2030	+	+++	Unit leads on communication oCDCs, oSSUFSCPs, oSEIs	1. to organize and conduct quarterly meetings at the platform of oblast government sharing the actual problems and issues on prevention
12.2 To organize informational campaign on preventive measures	On a monthly basis 2026-2030	++	+++	Certified staff (trainers). oCDCs, oSSUFSCPs, oSEIs	1. to develop program for different target groups of joint informational campaign by selected and trained staff 2. do share problematic issues in the media, in the social media add the websites following the main objective on preventive measures of the different target groups 3. do distribute printed copies of informational materials for the specific target groups 4. to conduct joined field visits to communicate with the general public.

WORKSHOP EVALUATION

An evaluation questionnaire was completed by 51 participants (25 from public health, 23 from animal health, and 3 from the environment sector) to collect feedback on the relevance and utility of the workshop.

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%	3.9

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	98%	3.7
The work of your unit/department	98%	3.6
The intersectoral collaboration in the country	94%	3.6

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

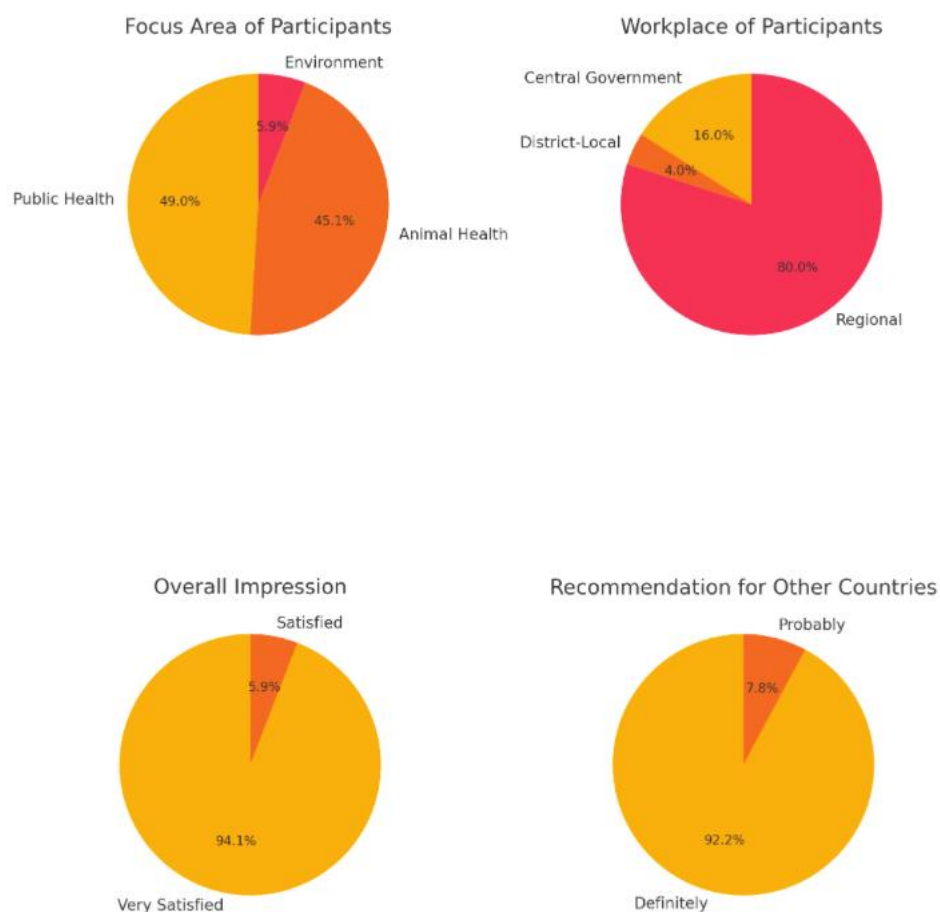
Would you recommend this workshop to other countries?	
Absolutely	92%
Probably	8%
Likely not	0%
No	0%

Participants represented diverse sectors, including human, animal, and environmental health, fostering a rich exchange of ideas and expertise. While the workshop was commended for its high level of organization, engaging content, and expert facilitation, several areas for improvement were identified. Key strengths included the effective involvement of multiple health sectors, interactive methodologies, and participants' commitment. However, weaknesses such as limited representation from decision-makers and ecological experts, time constraints, and uncertainties regarding

implementing outcomes were noted. This evaluation aims to provide insights for refining future workshops to maximize impact and collaboration.

This report presents key responses from workshop participants regarding various aspects of the event. The focus area revealed that the majority of participants concentrated on the public health and animal health, while a lesser proportion addressed environmental issues. Regarding workplace representation, most participants came from regional positions, with fewer representing central government and district-local levels.

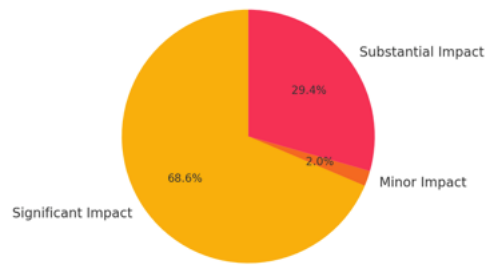
Overall, a significant majority expressed high satisfaction with the workshop, highlighting its effectiveness. Furthermore, there was a strong consensus among participants regarding the workshop's value, as most indicated they would definitely recommend it to other countries. (Fig. 1)



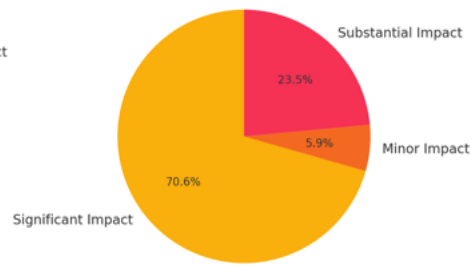
The majority of participants reported either a significant or substantial impact on their technical skills and knowledge.

Similarly, most participants indicated that the workshop had a significant or substantial impact on sector collaboration within their country. (Fig. 2)

Impact on Technical Skills and Knowledge



Impact on Sector Collaboration



APPENDIX

ANNEX 1: WORKSHOP AGENDA

DAY 1 - 18.09.2024 (WED)	
08:30 – 09.00	Registration of participants
09.00 – 10.20	<u>Opening Ceremony</u> • Mrs. Tetiana SKAPA, Acting Director of the Public Health Department of the Ministry of Health of Ukraine • Mr. Oleg OSIIAN, First Deputy Head of the State Service of Ukraine on Food Safety and Consumer Protection • Ms. Kateryna LITVISHKO, Head of the Department of State Environmental Supervision (Control) of Waste Prevention and Management, Hazardous Chemicals Management, Senior State Inspector of Ukraine on Environmental Protection (20') • Dr. Aron AREGAY, Acting Head of Public Health Programme, WHO CO in Ukraine • Volodymyr POLISHSCHUK, National Consultant, FAO in Ukraine • Pablo SAGREDO-MARTIN, One Health Associate, Europe Office UNEP, online • Barbara ALESSANDRINI, Head of Capacity Building Department, WOAHA, video (20') • Introduction of participants (10') • Group Picture (10') • Coffee break (20')
10.20 – 12.00	<u>Session 1: One Health Concept & National Perspectives</u> This initial session lays the foundation by introducing the One Health concept and the collaborative efforts of the Quadripartite organizations. Following this, in-depth presentations from each sector provide a comprehensive understanding. A supplementary documentary showcases successful intersectoral collaborations worldwide, highlighting shared approaches, references, and strategic visions. • Workshop approach and methodology – PPT (10') • MOVIE 1: Tripartite One Health collaboration and vision (15') • Animal Health Sector and One Health – PPT (15') • Public Health Sector and One Health – PPT (15') • Environment Sector and One Health – PPT (15') • QnA (10') • MOVIE 2: Driving successful interactions - Movie (20')
Lunch (12:00-13:30)	
13.30 – 17.00	<u>Session 2: Identification of collaboration gaps</u> Participants are divided into working groups; each assigned a hypothetical scenario of a zoonotic or food-borne disease outbreak. They engage in discussions on response strategies and assess the level of collaboration across the three sectors for 16 key technical areas. • Presentation and organization of the working group exercise (15') • Working groups by disease (120')

	• Coffee break (15') • Restitution (60)
17.00 – 18.30	Facilitators and moderators only: Briefing Session 3-4-5 and compilation of results from Session 2

DAY 2 - 19.09.2024 (THU)	
08.30 – 11.00	<u>Session 3: Bridging the assessment tools</u> Assessment tools used by the different sectors (ex: SPAR, JEE, PVS) are presented. Joint areas and activities identified for each case study are mapped onto a giant matrix consisting of the indicators of WHO's IHR MEF and WOA's PVS Pathway. This process enables participants to visualize the gaps identified in each essential capacity and to distinguish disease-specific versus systemic gaps.
	• MOVIE 3: IHR, SPAR and JEE (20' with discussion) • MOVIE 4: PVS Pathway (20' with discussion) • MOVIE 5: Environment framework and tools (20' with discussion) • Mapping gaps on the IHR/PVS matrix (50') • Coffee break (20') • Discussion – Plenary (20')
11.00 – 12.30	<u>Session 4: Extraction from assessment tools</u> Participants 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 and improved jointly.
	• Extract main gaps and recommendations from the PVS and IHR reports (including the JEE), in relation to gaps identified on the matrix (60')
Lunch (12:00-14:00)	
14:00– 17:15	<u>Session 5: Collaborative road-planning</u> Results obtained from the case studies, the various discussions and the assessment reports are used to develop a realistic and achievable Roadmap to improve the collaboration between the sectors.
	• Presentation and organization of the working group exercise (15') • Identification of Activities (Working groups by technical topic) (150')
17.15 – 19.00	Facilitators only: Compilation of results from Session 5 (drafting of the road-map) and preparation of Session 6

DAY 3 - 20.09.2024 (FRI)	
9:00 - 12:30	<u>Session 6: Fine-tuning the roadmap</u> Activities are fine-tuned, and, through a world-café exercise, participants contribute to all technical areas to consolidate the NBW Roadmap by making sure it is harmonized, operational and achievable.
	• Fine-tuning of the road-map: Objectives and filling out of Activity cards (90') Coffee break (15') • World Café (90') • Prioritization vote (20')
Lunch (12:30-13:30)	
13:30 - 14:30	<u>Session 7: Way forward</u> The concluding session outlines next steps, linking the developed NBW Roadmap with mandated plans such as the National Action Plan for Health Security or the Joint Plan of Action. Participants also address any country-specific needs, contingent upon the country's current status regarding IHR-MEF, PVS Pathway and One Health capacity.
	• Next steps (60') (lead by Ministry representatives)
14:30 - 15:30	<u>Closing Session</u> • Evaluation of the workshop (20') • Closing ceremony (40')
15.30 – 16.30	Facilitators: Capturing the NBW Roadmap

ANNEX 2: LIST OF PARTICIPANTS

No	Full name	Organization/Agency	Position
1	Iryna Yakovenko	State Environmental Inspection of Ukraine	Chief Specialist of the Department of State Environmental Supervision (Control) - State Inspector of Ukraine for Environmental Protection.
2	Diana Bolila	State Environmental Inspection of Ukraine	Chief Specialist of the International Cooperation and Protocol Activities Sector
3	Mikhailo Tuyakhov	State Service of Ukraine on Food Safety and Consumer Protection	Deputy Head of the Department of Organization of Anti-Epizootic Measures of the Animal Health and Welfare Directorate, Organization of Anti-Epizootic Measures of the Department of Food Safety and Veterinary Medicine State Service of Ukraine for Food Safety and Consumer Protection
4	Nataliia Kuryata	State Research Institute for Laboratory Diagnostics and Veterinary Expertise	Deputy Director of the SRIIPRTF - Head of the Testing Center
5	Serhii Lehkun	Main Directorate of the State Service of Ukraine for Food Safety and Consumer Protection in Vinnytsia region	Head of the Department for Organization of Anti-Epizootic Work
6	Anna Synia	Main Directorate of the State Service of Ukraine for Food Safety and Consumer Protection in Volyn Oblast	Chief Specialist of the Department of Organization of Anti-Epizootic Measures, Animal Health and Welfare of the Department of Food Safety, Animal Health and Welfare
7	Oleksandr Vengerenko	Main Directorate of the State Service of Ukraine for Food Safety and Consumer Protection in Dnipropetrovs'k region	Chief Specialist of the Department of Organization of Anti-Epizootic Work of the Food Safety and Veterinary Medicine Department
8	Tetiana Lutsiv	Kramatorsk City Department of the Main Directorate of the State Service of Ukraine for Food Safety and Consumer Protection in Donetsk Oblast	Chief Specialist of the Food Safety and Veterinary Medicine Department

9	Svitlana Khudiakova	Main Directorate of the State Service of Ukraine for Food Safety and Consumer Protection in Zhytomyr region	Chief Specialist of the Department of Organization of Anti-Epizootic Work of the Food Safety and Veterinary Medicine Department
10	Anatolii Okayevych	Main Department of the State Service of Ukraine for Food Safety and Consumer Protection in Transcarpathian region	Head of the Mukachevo District Department
11	Oleksandr Liubarskyi	The Main Department of the State Service of Ukraine for Food Safety and Consumer Protection in Zaporizhzhya region	Chief Specialist of the Department for Organization of Anti-Epizootic Work of the Food Safety and Veterinary Medicine Department
12	Ivan Vaskiv	Main Directorate of the State Service of Ukraine for Food Safety and Consumer Protection in Ivano-Frankivsk region	Head of Food Safety and Veterinary Medicine Department
13	Oleh Ruban	Main Department of the State Service of Ukraine for Food Safety and Consumer Protection in Kyiv	Head of the Main Department of the State Service of Ukraine for Food Safety and Consumer Protection in Kyiv
14	Mykola Sonko	Main Directorate State Service of Ukraine for Food Safety and Consumer Protection in Kyiv region	First Deputy Head of the of the Main Directorate of the State Service of Ukraine for Food Safety and Consumer Protection in Kyiv region
15	Valentyna Mitina	Main Directorate of the State Service of Ukraine for Food Safety and Consumer Protection in Kirovograd region	Head of the Department for the Organization of Anti-Epizootic Work of the Food Safety and Veterinary Medicine Department
16	Vitaliy Morozov	Main Directorate of the State Service of Ukraine for Food Safety and Consumer Protection in Luhansk Oblast	Head of the Department of Product Safety and Veterinary Medicine
17	Yuliia Storchak	Main Directorate of the State Service of Ukraine for Food Safety and Consumer Protection in Lviv region	Chief Specialist of the Department of Organization of Anti-Epizootic Work of the Food Safety and Veterinary Medicine Department

18	Mykhailo Liapalo	Main Directorate of the State Service of Ukraine for Food Safety and Consumer Protection in Mykolaiv region	Chief Specialist of the Department of Organization of Anti-Epizootic Work of the Food Safety and Veterinary Medicine Department
19	Serhii Martyniuk	Main Directorate of the State Service of Ukraine for Food Safety and Consumer Protection in Odesa Oblast	Head of Food Safety and Veterinary Medicine Department
20	Nataliia Karpenko	Main Directorate of the State Service of Ukraine for Food Safety and Consumer Protection in Poltava region	Head of the Department for Organization of Anti-Epizootic Work
21	Volodymyr Novosad	Main Directorate of the State Service of Ukraine for Food Safety and Consumer Protection in Rivne region	Head of the Department for the Organization of Anti-Epizootic Work of the Food Safety and Veterinary Medicine Department
22	Vitalii Moiseyenko	Main Directorate of the State Service of Ukraine for Food Safety and Consumer Protection in Sumy region	Head of the Main Directorate of the State Service of Ukraine for Food Safety and Consumer Protection in Sumy region
23	Ivan Havryshkiv	Main Directorate of the State Service of Ukraine for Food Safety and Consumer Protection in Ternopil region	First Deputy Head
24	Yevhen Tiniayev	Main Directorate of the State Service of Ukraine for Food Safety and Consumer Protection in Kharkiv region	Head of the Department for the Organization of Anti-Epizootic Work of the Food Safety and Veterinary Medicine Department
25	Vitalii Boyarsky	Main Directorate of the State Service of Ukraine for Food Safety and Consumer Protection in Kherson region	Head of Food Safety and Veterinary Medicine Department
26	Serhii Zavorotnyi	Main Directorate of the State Service of Ukraine for Food Safety and Consumer Protection in Khmelnytsky region	Deputy Head of the State Control Department of the Food Safety and Veterinary Medicine Department

27	Iryna Chumak	Main Directorate of the State Service of Ukraine for Food Safety and Consumer Protection in Cherkasy region	Chief Specialist of the Department of Organization of Anti-Epizootic Work of the Food Safety and Veterinary Medicine Department
28	Anton Fil	Main Directorate of the State Service of Ukraine for Food Safety and Consumer Protection in Chernihiv Oblast	Chief Specialist of the Department of Sanitary and Epidemiological Surveillance and Organization of Outbreak Investigation of the Department of State Supervision over Compliance with Sanitary Legislation
29	Svitlana Melnykova	Main Directorate of the State Service of Ukraine for Food Safety and Consumer Protection in Chernivtsi region	Chief Specialist of the Department for Organization of Anti-Epizootic Work
30	Alla Hryshchyshena	State Service of Ukraine for Food Safety and Consumer Protection	Acting Head of the of the Department for Coordination of Institutions
31	Ihor Matkovskyi	State Institution "Vinnytsia Regional Center for Disease Control and Prevention of the Ministry of Health of Ukraine"	General Director
32	Larysa Dudkovska	State Institution "Volyn Regional Center for Disease Control and Prevention of the Ministry of Health of Ukraine"	Deputy General Director
33	Serhii Valchuk	State Institution "Dnipro Regional Center for Disease Control and Prevention of the Ministry of Health of Ukraine"	General Director
34	Tamara Bilomeria	State Institution "Donetsk Regional Center for Disease Control and Prevention of the Ministry of Health of Ukraine"	Deputy Director General for Infectious Disease Control and Prevention
35	Liudmyla Zimelich	State Institution "Zhytomyr Regional Center for Disease Control and Prevention of the Ministry of Health of Ukraine"	An epidemiologist at the district department of

36	Bohdan Melnyk	State Institution "Transcarpathian Regional Center for Disease Control and Prevention of the Ministry of Health of Ukraine"	
37	Nadiia Yurtseva	State Institution "Zaporizhzhia Regional Center for Disease Control and Prevention of the Ministry of Health of Ukraine"	Doctor - epidemiologist of the Department of Epidemiological Surveillance and Prevention of Infectious Diseases
38	Iryna Fedoriv	State Institution "Ivano-Frankivsk Regional Center for Disease Control and Prevention of the Ministry of Health of Ukraine"	Head of the Sanitary and Quarantine Department
39	Serhii Chumak	State Institution "Kyiv City Center for Disease Control and Prevention of the Ministry of Health of Ukraine"	General Director
40	Valerii Mayboroda	State Institution "Kyiv Regional Center for Disease Control and Prevention of the Ministry of Health of Ukraine"	Deputy Director General for Infectious Disease Control and Prevention
41	Nadiia Operchuk	State Institution "Kirovograd Regional Center for Disease Control and Prevention of the Ministry of Health of Ukraine"	General Director
42	Nadiia Yurkevych	State Institution "Luhansk Regional Center for Disease Control and Prevention of the Ministry of Health of Ukraine"	Head of the Department of Epidemiological Surveillance and Prevention of Infectious Diseases
43	Oleh Kohut	State Institution "Lviv Regional Center for Disease Control and Prevention of the Ministry of Health of Ukraine"	Head of the Sanitary and Quarantine Department
44	Serhii Kozulko	State Institution "Mykolaiv Regional Center for Disease Control and	Head of the Mykolaiv District Department of Transport

		Prevention of the Ministry of Health of Ukraine"	
45	Oksana Borysenko	State Institution "Odesa Regional Center for Disease Control and Prevention of the Ministry of Health of Ukraine"	Head of the Sanitary and Quarantine Department in the Odesa Commercial Sea Port of the Separate Unit for Sanitary Protection of Territories and Modes of Transport
46	Andrii Khailov	State Institution "Poltava Regional Center for Disease Control and Prevention of the Ministry of Health of Ukraine"	General Director
47	Nataliia Sedliar	State Institution "Rivne Regional Center for Disease Control and Prevention of the Ministry of Health of Ukraine"	Head of the Department of Epidemiological Surveillance and Prevention of Non-Communicable Diseases
48	Halyna Zaitseva	State Institution "Sumy Regional Center for Disease Control and Prevention of the Ministry of Health of Ukraine"	Deputy Director General of Biological Factors Research
49	Oksana Chaichuk	State Institution "Ternopil Regional Center for Disease Control and Prevention of the Ministry of Health of Ukraine"	General Director
50	Anna Sukhorukova	State Institution "Kharkiv Regional Center for Disease Control and Prevention of the Ministry of Health of Ukraine"	Head of the Department of Particularly Dangerous Infections
51	Svitlana Lohvinovska	State Institution "Kherson Regional Center for Disease Control and Prevention of the Ministry of Health of Ukraine"	Head of the Sanitary and Quarantine Department of the Emergency Response Department
52	Mykola Habrykevych	State Institution "Khmelnysky Regional Center for Disease Control and Prevention of the Ministry of Health of Ukraine"	General Director

53	Olga Mizinova	State Institution "Cherkasy Regional Center for Disease Control and Prevention of the Ministry of Health of Ukraine"	Deputy Director General for Biological Factors Research
54	Oksana Vakarchuk	State Institution "Chernivtsi Regional Center for Disease Control and Prevention of the Ministry of Health of Ukraine"	Head of the Hazard Monitoring and Response Department
55	Nataliia Vydayko	State Institution "Public Health Center of the Ministry of Health of Ukraine"	Head of the reference laboratory for the diagnosis of tuberculosis, bacterial, parasitic and especially dangerous pathogens
56	Olena Feniuk	State Institution "Public Health Center of the Ministry of Health of Ukraine"	Epidemiologist at the Department of Epidemiological Surveillance Organization
57	Alla Stavska	State Institution "Public Health Center of the Ministry of Health of Ukraine"	Bacteriologist of the bacteriological research sector of the reference laboratory for the diagnosis of tuberculosis, bacterial, parasitic and especially dangerous pathogens
58	Nataliia Sokurenko	Department of Public Health of the Ministry of Health of Ukraine,	Head of the Department for the Safety of the Human Environment
59	Volodymyr Papach	Cherkasy Regional Center for Control and Prevention of the Ministry of Health of Ukraine	Director General of the State Institution
60	Ihor Yarema	State Environmental Inspection of Ukraine	Head of the Department of State Ecological Supervision (Control) of Waste and Hazardous Chemicals Management - Senior State Inspector for Environmental Protection of Lviv Oblast
61	Olena Tkachuk	State Environmental Inspection of Ukraine	Chief Specialist of the Department of State Ecological Supervision (Control) of Waste and Hazardous Chemicals Management - State Environmental Inspector
62	Andrii Nebylovych	State Environmental Inspection of Ukraine	Head of the Department of State Ecological Supervision (Control) over Waste and Hazardous Chemicals Management of the State Ecological Supervision (Control) Department in

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63	Antonina Moviak	State Environmental Inspection of Ukraine	Head of the Department of State Ecological Supervision (Control) of Land Resources and Subsoil - Senior State Inspector for Environmental Protection of Volyn Oblast
64	Vasyl Stryshchak	State Environmental Inspection of Ukraine	
64	Guillaume BELOT	WHO HQ	Technical officer HQ/WHE/HSP/CCI/HAI
65	Nataliia Piven	WHO CO in Ukraine	IHR and PH Unit Lead
66	Artem Skrypnyk	WHO CO in Ukraine	Officer on Laboratories
67	Olena Kuriata	WHO CO in Ukraine	One Health officer
68	Yaroslava Maksymovych	WHO CO in Ukraine	Laboratory BS&S consultant
69	Vladyslav Zvol		interpreter
70	Svitlana Panteleimonova		interpreter
71	Karolina Ayrapetyan	WHO CO in Ukraine	National Consultant on Workforce
72	Aron Aregay	WHO CO in Ukraine	Acting Health Programs Lead
73	Anna Velychko	WHO CO in Ukraine	Team assisstant
74	Alina Kovalchuk	WHO CO in Ukraine	Health Information Management Officer
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