Food and Agriculture Organization of the United Nations

World Health Organization

World Organisation for Animal Health
Founded as OIE

Workforce Development Operational Tool (WFD OT) Workshop Technical Report

23-25 January 2024
Almaty, Kazakhstan

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Special gratitude is extended to the dedicated members of the national technical team for their invaluable contributions: the Ministry of Health - Ms. Olga Demushkan, Chairperson of the Board of Directors of the «National research center for health development named after Salidat Kairbekova»; the Ministry of Agriculture - Mr. Tulegenov Samat Beksultanovich , Deputy Chairman of the Veterinary Control and Supervision Committee, Mr. Umirkul Azamat Kalybekovich and Ms. Taurbayeva Saltanat Nurlanovna, Chief Experts of the Biological Safety Department of the Veterinary Control and Supervision Committee the Ministry of Ecology and Natural Resources - Ms. Alipbayeva Meruert Berdibayevna, Head of the Human Resources Department.

EXECUTIVE SUMMARY

In agreement with its partners to start piloting the Workforce Development Operational Tool (WFD OT) in Kazakhstan, a workshop was held on January 23-25, 2024, in Almaty, Kazakhstan to assess and strengthen the multisectoral workforce for effective zoonotic disease management in the country. The tool built on the results of the situation analysis across sectors, and further recommendations were developed for the application of the WFD OT in Kazakhstan.

The workshop brought together more than thirty representatives from the national, sub-national, and local level from the Ministry of Health of the Republic of Kazakhstan (MoH), Ministry of Agriculture of the Republic of Kazakhstan (MoA), Ministry of Ecology and Natural Resources of the Republic of Kazakhstan (MoEco). These included technical staff from the human/public health, animal health, and environmental sectors involved in zoonotic disease management, authorities, and decision-makers involved in One Health-related workforce activities. Technical experts of the Quadripartite Cooperation on One Health i.e., Food and Agriculture Organization of the United Nations (FAO), United Nations Environment Program (UNEP), World Health Organization (WHO), World Organisation for Animal Health (WOAH) were the technical organizers and facilitators of the event.

The workshop followed the stepwise approach outlined in the draft WFD OT and consisted of plenary presentations and discussions in groups and plenary. During the process, participants reviewed functions, occupations and competency packages required for zoonotic disease management. They mapped the functions against occupations and assessed the competencies in the current workforce involved in the management of zoonotic diseases in Kazakhstan. This led to identification of needs for workforce strengthening including training to strengthen the necessary competencies and changes in the enabling environment for the workforce to improve the performance of its functions.

At the end of the workshop, participants agreed incorporate the following steps for developing the capacity of the workforce responsible for managing zoonotic diseases into workforce planning;

1) Formalize the technical team with representatives from all three sectors for further follow-up of activities outlined in this report,
2) Review the legal frameworks covering workforce functions and operating procedures to manage zoonotic diseases in all three sectors,
3) Review post descriptions and terms of references of occupations of personnel managing zoonotic diseases in the three sectors that require a One Health approach,
4) Integrate prioritized functions and competencies from the workshop into the post descriptions of the relevant occupations in each sector,
5) Review national qualifications for each sector and professional standards and propose revision to incorporate additional relevant competencies,
6) Revisit university curriculums to streamline the approach and incorporate relevant competencies according to the national qualifications and professional standards,
    a. This effort is already ongoing for human health and animal health sectors. An effort to bring in the environmental/ wildlife sector is recommended.

7) Leverage different resources between sectors to make the resources more available within and across sectors,
    a. Each participating Ministry to share the results of the workshop with their respective Ministries
    b. Engage with other agencies and sectors, such as universities and other ministries, which provide training for civil servants in general, to facilitate non-technical training sessions as needed.
8) Involve MoEco universities in the work conducted by the MoH and MoAg with the technical support of the WHO,
9) Document workforce needs to facilitate requests for support from Quadripartite, donors, Ministries, etc. For example,
    - To translate existing materials to local languages
    - To make trainings available for other units within own sectors or across sectors
10) Finalize and endorse the workforce plan that incorporates the findings in this report, including training recommendations, addressing areas of the enabling environment using the recommended tools and resources, and workforce planning, and
11) Adapt an M&E framework and incorporate into existing plan(s)

The workshop stands as a significant milestone to empower national authorities with an evidence-based strategy for strategically organizing and mobilizing a diverse workforce, thereby enhancing Kazakhstan's zoonotic disease management through the application of the One Health approach. The collaborative efforts of the national technical team and technical experts from the Quadripartite for One Health align with existing and forthcoming government initiatives in Kazakhstan. Notably, successful single-country and multi-country Pandemic Fund applications that Kazakhstan will receive for 2024-2027 prioritize workforce development and capacity-building activities, recognizing their pivotal role in pandemic preparedness.

Through comprehensive assessments of specific workforce needs, functions, occupations, and competency packages and the formulation of recommendations through trainings and resources to address challenges in the enabling environment, the workshop has assumed a pivotal role in supporting a skilled workforce. There is a way forward to integrate these recommendations into national workforce planning. Consequently, these efforts significantly strengthen Kazakhstan's capacity to comprehensively manage zoonotic diseases within the framework of One Health, ensuring a more robust and sustainable approach to public health challenges.

BACKGROUND

The Food and Agriculture Organization of the United Nations (FAO), the World Health Organization (WHO), and the World Organisation for Animal Health (WOAH), as part of their work on the Tripartite Zoonoses Guide's (TZG) Workforce Development Operational Tool (WFD OT) supports national and sub-national authorities and other relevant stakeholders to use an evidence-based approach to plan for and mobilize a multisectoral workforce for effective zoonotic disease management. The WFD OT provides a stepwise approach to assess current official workforce needs, review the necessary workforce functions (particularly at the interface between sectors) required by the workforce (via occupations) for effective zoonotic disease management, and then use this information to propose evidence-based actions for workforce strengthening (this includes human resource needs and competency-based education and training strategies for current and future personnel). A resulting report with detailed workforce competency and strengthening options along with the outlined needs for improvements in the enabling environment for the workforce to manage zoonotic diseases will allow countries to conceptualize their One Health workforce and elaborate next steps for workforce planning.

In May 2023, the WHO Country Office in Kazakhstan convened a working meeting with representatives from the Ministry of Health and the Ministry of Agriculture of the Republic of Kazakhstan to discuss collaborative initiatives for 2023-2024 under the framework of One Health. Throughout the meeting, participants underscored the critical importance of enhancing the capacity of human resources to apply the One Health approach in their respective fields, recognizing it as a key priority area for concerted efforts. This imperative for capacity building has consistently emerged, notably during the National Bridging Workshop (NBW) between the IHR and the Veterinary Services Evaluation System (2018), as well as in subsequent assessments such as the Survey on implementation of the NBW roadmap and update of activities and priorities on One Health (2021), and the Evaluation and Action Plan of the Intersectoral Coordination Mechanism (MCM) (2021).

The workshop established a solid foundation for national authorities in adopting an evidence-based approach in planning and mobilizing a multidisciplinary workforce, thereby enhancing the nation's preparedness and response to zoonotic diseases using One Health approach. The Workshop aligned well with several ongoing activities in Kazakhstan such as successful single country and multi-country Pandemic Fund applications that allocates a significant portion to workforce development activities. Moreover, the Ministry of Health and the Ministry of Agriculture are working on ongoing efforts to integrate a One Health course into the curriculum of medical and veterinary universities in Kazakhstan. By assessing specific needs and proposing competency-based education and training strategies, the workshop contributed to the development of a skilled workforce, fostering effective zoonotic disease management in the country.

In agreement with its national partners, a workshop was held on January 23-25, 2024, in Almaty, Kazakhstan to assess and strengthen the multisectoral workforce for effective zoonotic disease management in the country. A situation analysis was conducted prior to the workshop. The concept note and agenda can be found in **Annex 1.**

The workshop brought together more than thirty representatives from the national, sub-national, and local level from the Ministry of Health of the Republic of Kazakhstan (MoH), Ministry of Agriculture of the Republic of Kazakhstan (MoAg), Ministry of Ecology and Natural Resources of the Republic of Kazakhstan (MoEco). The list of participants can be found in **Annex 2.** These included technical staff from the human/public health, animal health, and environmental sectors involved in zoonotic disease management, authorities, and decision-makers involved in One Health-related workforce activities. Technical experts of the Quadripartite Cooperation on One Health (FAO, UNEP, WHO, WOAH) were the technical organizers and facilitators of the event.

GOAL AND OBJECTIVES

Goal of the WFD OT workshop:

The overall goal of the workshop was to contribute to strengthen the capacity of the current and future workforce involved in zoonotic disease management in Kazakhstan.

The objectives of the workshop were to

1) Review the multisectoral, One Health functions (responsibilities) required by the official workforce to facilitate effective zoonotic disease management;
2) Outline occupations and possible needs to appropriately cover the functions required for zoonotic disease management;
3) Make recommendations for further human resource/staffing needs and competency-based education and training strategies, and
4) Reach a consensus on validation, implementation, and evaluation of recommended actions to strengthen the capacity of the workforce involved in zoonotic disease management and the enabling environment in which they work.

As a pilot workshop for the WFD OT, feedback on the tool and workshop itself was also collected.

METHODS

Prior to the workshop, a coordination call was held to establish the technical team (refer to Annex 2 list of participants) consisting of members of the Ministries, FAO, UNEP, WHO, and WOAH. The technical team completed a situation analysis on workforce development for each sector.

A facilitator training was held the day before the workshop where the technical team as well as facilitators from FAO (global and national), WHO (global, regional, and national), and WOAH (regional) convened. During the training, the facilitators reviewed the agenda, the exercises, and the breakout group assignments for the workshop.

Over the course of the three-day workshop, the modules and steps of the WFD OT were introduced and participatory exercises were undertaken in facilitated breakout groups. The approach and materials presented in Kazakhstan had been developed in an iterative process with a Tripartite Advisory Group (FAO, WHO and WOAH) and previously pilot tested in Ethiopia and Albania:

Day	Module	Step
Pre-Workshop	Module 1: Setting up	1. Generate buy-in and secure agreements to use the WFD OT
		2. Identify WFD OT steering committee and technical team
		3. Conduct situation analysis and set the scope
Day 1	Introduction	Introduction to WFD OT
	Module 2: Workforce Analysis	4. Select and revise priority functions of the workforce
Day 2		5. Match and rate occupations to priority functions
		6. Identify needs and challenges
	Module 3: Workforce Planning	7. Rate competency packages required for priority functions
Day 3		8. Identify resources for development of competency packages
		9. Plan by linking critical needs, competencies, and resources
Post-workshop		10. Adapt an M&E framework and incorporate into existing plan(s)
		Prepare workshop report and incorporate into existing plan(s)

Outputs of the participatory exercises were collected, and discussion points noted for incorporation into this workshop report. Concrete outputs by the end of the workshop included:

- List of workforce functions for effective zoonotic disease management
- Ten priority functions to be strengthened by the occupations
- List of occupations relevant to zoonotic disease management by sector
- Analysis of needs and critical challenges within the workforce
- Competency packages to be strengthened within institutions
- List of recommended training options at global and national levels

- Workforce strengthening plan
- Recommendations for improvements in the enabling environment for zoonotic disease management

Participants had the opportunity to submit feedback on the workshop and on the tool via an online evaluation form after the workshop was completed.

OUTCOMES AND RESULTS

General outcomes

A main achievement of the workshop was the involvement of the Ministry of Ecology and Natural Resources, where representatives were given an equal voice in discussions on One Health. The joint effort and engagement between three sectors in the workshop were welcomed by participants. All participants participated actively and had an opportunity to express their independent opinions and perspectives.

A key observation was that the participants from the environment sector were not sufficiently sensitized to concepts on One Health and the role of the environment and wildlife professionals in zoonotic disease management prior to the workshop. Therefore, key outcomes include activities to strengthen One Health awareness among all sectors.

Outcomes and results are presented here according to the modules and steps of the WFD OT:

Module 1: Setting up

3. Conduct situation analysis and set the scope

The technical team worked on conducting the situation analysis of the workforce to zoonotic diseases management using One Health approach prior to the Workshop. The situation analysis covered matters of existing workforce training strategies or frameworks, involvement of the wildlife and environment sector, current human resource capacity to address zoonotic diseases, intersectoral collaboration on this, competencies of their sector specialists that need to be strengthened. The summary of each sector's analysis can be found in Annex 3.

As the result of discussions, participants noted the importance of strenthening the capacity of human resources at the regional and local level to manage zoonotic diseases and agreed that the scope of the use of the WFD OT would be at regional and local level.

Module 2: Workforce Analysis

4. Select and revise priority functions of the workforce

In four breakout groups consisting of representatives of mixed sectors, the participants reviewed a zoonotic-disease outbreak scenario and proceeded to place the functions into categories. The objective of the exercise was to help participants conceptualize functions needed for cross-sectoral coordination for zoonotic disease management. Participants then revised the complete list of thirty-six functions provided. Each group then selected ten priority functions for discussion in plenary. Through plenary discussion, a consensus on ten priority functions was reached (See **Annex 4**).

After the workshop, the ten priority functions were further simplified for future reference in workforce development and are presented here:

Category	Function number	Function
Strategic planning and emergency preparedness	1	Coordinate zoonotic disease management using a defined framework and/ or multisectoral coordination mechanism

Strategic planning and emergency preparedness	8	Jointly review and adjust, as needed, legislation and regulations
Surveillance and information sharing	14	Coordinate joint early warning based on zoonotic disease signals and the multisectoral development of surveillance reports
Surveillance and information sharing	13+17	Facilitate coordination and sharing between laboratories, harmonize protocols and reporting across sectors (including specimen collection, sample submission forms, packaging, transport, test algorithms and protocols, results reporting and shared data analysis), and evaluate laboratory capacities
Coordinated investigation and response	18 + 19	Participate in and/or lead joint outbreak investigation and response activities during zoonotic disease outbreaks, including participation in incident management systems and taking biosafety and biosecurity measures with animal welfare considerations
Joint risk assessment	23	Conduct routine and as-needed joint risk assessments for (prioritized) zoonotic disease threats and develop relevant recommendations for risk management
Risk reduction, risk communication, and community engagement	24 + 25	Coordinate and/ or participate in joint development and implementation of harmonized risk communication and community engagement for risk reduction, of situation updates, and of recommendations to interested parties and the public
Research	31	Conduct, promote, and share operational research and results for zoonotic disease management at the human-animal-environment interface, involving stakeholders in the process
Workforce development	34	Foster multisectoral capacity development programmes and continuing education for relevant staff
Monitoring and Evaluation	36	Monitor and evaluate the effectiveness of zoonotic disease management activities

5. Match and rate occupations to priority functions

In three breakout groups by sector, the participants first revised a list of occupations needed for zoonotic disease management according to the country context. Participants then proceeded to rate these occupations at institutional level according to the ten priority functions identified from the previous exercise using the following criteria:

GREEN	The function is covered well by the occupation (more than 75 %)
YELLOW	The function is partially covered (25-75 %)
RED	The function is minimally covered (less than 25 %)

Examples of results of the exercise can be found in **Annex 5.** The most critical functions identified through the exercise by each sector are as follows:

6. Identify needs and challenges

Each breakout group engaged in an open discussion on the needs and challenges associated with the functions and occupations they identified as most critical from the previous exercise.

The main challenges and needs highlighted by groups include:

1. Lack of adequate legislation and normative acts to define and emphasize these functions within job descriptions.
2. Lack of standard operation plans to ensure consistency, compliance, safety, efficiency, and continuous improvement in to address zoonotic diseases.
3. Insufficient personnel to perform discussed functions and duties within various occupations.
4. Issues related to funding and resources, such as:
    - Shortage of vehicles and transportation means in the rural areas.
    - Lack of essential laboratory equipment and materials.
    - Poor infrastructure.
5. Limited technical capacities of specialists that need for more capacity building activities.

Module 3: Workforce Planning

7. Rate competency packages required for priority functions

In three breakout groups by sector, the participants were provided with a list of competency packages associated with each of the ten priority functions. Participants then proceeded to rate these competency packages at institutional level according to the ten priority functions using the following criteria:

GREEN	This competency package is strong in the agency(ies)/ institution(s) for that function
YELLOW	This competency package is strong enough in the agency(ies)/ institution(s) for that function
RED	This competency package needs to be strengthened in the agency(ies)/ institution(s) for that function

Examples of critical competency packages identified through the exercise by each sector are described in **Annex 6**.

8. Identify resources for development of competency packages

In three breakout groups by sector, participants identified in-country trainings and tools to strengthen the critical competency packages identified from the previous exercise (i.e., those that appear frequently with red dots). This exercise revealed that there were gaps in available trainings in the country and in Russian language, especially for the non-technical competency packages. In the realm of hard skills, multisectoral professionals engage in various activities to enhance their expertise. This includes quarterly scientific-production councils where certificates are awarded, an annual republican course for retraining laboratory technicians, as well as collaborative planning of infectious disease events with veterinary services at the regional level. Moreover, ongoing professional development courses are conducted on preventive and epidemiological measures against zoonotic infections, along with specialized training and internships focusing on laboratory diagnostics of particularly dangerous and zoonotic infections. At the same time, soft skills development initiatives encompass addressing emotional burnout, ethical conduct for government officials, self-management as a core component of disease management programs, leadership schools, trainer trainings, and periodic retraining courses tailored to both new recruits and managerial staff with an emphasis on biosecurity and biosafety.

Recommendations from the discussion that followed included:

- Leverage different resources between sectors to make the resources more available within and across sectors

        - Each participating Ministry to share the results of the workshop with their respective Ministries
        - Engage with other agencies and sectors, such as universities and other ministries, which provide training for civil servants in general, to facilitate non-technical training sessions as needed.
- Document what is needed to ask for support from Tripartite, donors, Ministries, etc.
    - To translate existing materials to local languages
    - To make trainings available for other units within own sectors or across sectors

9. Plan by linking critical needs, competencies, and resources

In an open plenary discussion with all participants, participants discussed and identified priority actions and recommendations consulting the results from steps 5 to 8. The results of this exercise can be found in **Annex 7.**

Categories of recommended actions included

- Training of existing personnel
- Recruitment of additional personnel at different levels and in different locations
- Refinement of national workforce plans
- Address challenges in the enabling environment
- Others

- Resources are available in the *Guidance for countries to identify and address challenges in the enabling environment* **(Annex 10).**
- Participants can note additional resources beyond those provided in the guidance, such as national-level resources, that may help them with further recommendations.

10. Adapt an M&E framework and incorporate into existing plan(s)

This step of the WFD OT will be completed by the technical team.

Evaluation Results

Thirteen participants submitted feedback on the workshop and tool through an online evaluation form.

Ministry	Number of submissions
MoH	6
MoA	5
MoE	2

These results of the evaluation are summarized in **Annex 8.**

RECOMMENDED NEXT STEPS

I. General recommendations

Efforts to sensitize representatives of the environment sector to One Health and the role of environment and wildlife professionals in zoonotic disease management are a priority.

II. Trainings to address critical competency packages

Recommendations to address critical competency packages include:

- Engaging national counterparts in trainings at institutional level by competency packages. The global-level trainings available in Russian and Kazakh languages can be found in **Annex 9.** In the draft WFD OT training database version 06 Feb 2024,
    - 34 WHO trainings available in Russian
    - 19 WHO trainings available in Kazakh
- A gap analysis of global-level WHO trainings revealed few trainings available in Russian and Kazakh for the non-technical competency packages **(Annex 9).** Therefore, it is recommended that opportunities to translate existing trainings that cover these competency packages into Russian and Kazakh be explored, or new trainings should be developed by FAO, UNEP, WHO, WOAH and/or partners.
- Online courses in Russian language that introduce the One Health concept, especially for representatives of the environment sector are recommended. The following are options offered by WHO and FAO:
    - OpenWHO "Response Preparedness for Zoonotic Disease Outbreaks Using a One-Health Approach" (subtitles available in Russian): https://openwho.org/courses/reprep-zoonotic-outbreaks
    - WHO Health Security Learning Platform "ONE HEALTH: Basics of multisectoral collaboration at the Human – Animal – Environment interface": https://extranet.who.int/hslp/training/course/view.php?id=310
    - FAO Virtual Learning Center "One Health" courses (in development)
- A digital platform for national One Health coordination and resources is needed

III. Resources to address areas of the enabling environment

The following tools and resources can be used to address the needs and challenges summarized above in Step 6:

Need and challenge	Area of the enabling environment	Available tools and resources
Lack of adequate legislation and normative acts to define and emphasize these functions within job descriptions.	Policy/ Legislation/ Strategies	• Global strategy on human resources for health: workforce 2030 • National Health Workforce Accounts Handbook (Phase II Operationalization; Part IV) • Legal Hub – Sustainable Wildlife Management Program • One Health Joint Plan of Action and Implementation Guide • Health Emergency and Disaster Risk Management Framework
Lack of standard operation plans to ensure consistency, compliance, safety, efficiency, and continuous improvement in to address zoonotic diseases.	Standard Operating Procedures (SOPs)	• Good emergency management practice: The essentials – A guide to preparing for animal health emergencies • REPREP (to outline SOPs during joint outbreak response) • ISAVET SOPs for Animal handling and sampling (part of Frontline curriculum Instructor manual)

Insufficient personnel to perform discussed functions and duties within various occupations.	Labour Market	• Workforce indicators for staffing needs • Health labour market analysis (HLMA) Guidebook • National Health Workforce Accounts (Module 1: Stock and flow)
Issues related to funding and resources, such as: • Shortage of vehicles and transportation means in the rural areas. • Lack of essential laboratory equipment and materials. • Poor infrastructure.	Funding	• Global strategy on human resources for health: workforce 2030 (Objective 2; pgs 23-28) • Health labour market analysis (HLMA) Guidebook • Working for Health 2022-2030 action plan • Africa Health Workforce Investment Charter
	Infrastructure	• National Health Workforce Accounts (Module 2-06 and 2-07: Education Accreditation and Standards) • One Health Systems Mapping and Analysis Resource Toolkit (OH-SMART) • Resource Mapping for IHR and health security (Remap)
Limited technical capacities of specialists that need for more capacity building activities.	Institutional functions and competencies	• Global-level trainings offered by the Quadripartite by competency package (see Annex 9) • In-country trainings (see WFD OT Module 3 Step 8) • Additional tools for workforce capacity assessment can be found in the situation analysis guidance (Step 3)

The organizations encourage countries to contact their national, regional, or global focal points for tailored guidance to workforce development and planning using these tools and resources. A more comprehensive list of tools and resources to address areas of the enabling environment identified in "Step 6. Identify needs and challenges" can be found in **Annex 10.**

IV. Recommended activities as a result of the workshop

1. Incorporate competencies/ functions into professional standards for each specific specialty that works on zoonotic disease management (through National Qualification System/ sectoral frameworks of all ministries).
    a. Review and analyze all normative legal acts on workforce (by sector).
    b. Review and revise all functions and competences of specialists and prepare proposals (can be in the context of the normative legal acts).
    c. Establish a multisectoral technical working group that will work on strengthening the workforce to address zoonotic diseases using a One Health approach.
2. Strengthen the human resource capacity in zoonotic diseases management using One Health approach and include One Health education materials in the curricula of higher education institutions.
    a. For WHO to continue working with the MoH and the MoAg on introducing One Health materials into the curriculum of medical and agricultural universities in Kazakhstan.
    b. Involve MoEco in joining this work on introducing One Health materials and training programs in their universities.
3. Conduct trainings for cross-sectoral specialists of human health, animal health and ecology.
    a. Quadripartite for One Health to continue to support the three ministries in conducting multisectoral trainings to strengthen a better understanding of the One Health and systems thinking.
    b. Use the existing platforms of ministries on trainings in Russian language on the intersectoral approach/ intersectoral collaboration.

V. Next Steps

At the end of the workshop, participants agreed incorporate the following steps for developing the capacity of the workforce responsible for managing zoonotic diseases into workforce planning;

1) Formalize the technical team with representatives from all three sectors for further follow-up of activities outlined in this report,
2) Review the legal frameworks covering workforce functions and operating procedures to manage zoonotic diseases in all three sectors,
3) Review post descriptions and terms of references of occupations of personnel managing zoonotic diseases in the three sectors that require a One Health approach,
4) Integrate prioritized functions and competencies from the workshop into the post descriptions of the relevant occupations in each sector,
5) Review national qualifications for each sector and professional standards and propose revision to incorporate additional relevant competencies,
6) Revisit university curriculums to streamline the approach and incorporate relevant competencies according to the national qualifications and professional standards,
    a. This effort is already ongoing for human health and animal health sectors. An effort to bring in the environmental/ wildlife sector is recommended.
7) Leverage different resources between sectors to make the resources more available within and across sectors,
    a. Each participating Ministry to share the results of the workshop with their respective Ministries
    b. Engage with other agencies and sectors, such as universities and other ministries, which provide training for civil servants in general, to facilitate non-technical training sessions as needed.
8) Involve MoEco universities in the work conducted by the MoH and MoAg with the technical support of the WHO,
9) Document workforce needs to facilitate requests for support from Quadripartite, donors, Ministries, etc. For example,
    - To translate existing materials to local languages
    - To make trainings available for other units within own sectors or across sectors
10) Finalize and endorse the workforce plan that incorporates the findings in this report, including training recommendations, addressing areas of the enabling environment using the recommended tools and resources, and workforce planning, and
11) Adapt an M&E framework and incorporate into existing plan(s)

A Coordination meeting of the Inter-sectoral Technical Working Group "One Health for Sustainable Healthcare System in Kazakhstan" took place on February 8-9, 2024 in Astana, Kazakhstan. Organized by the Ministry of Health, the meeting aimed to enhance collaboration among ministries and international organizations involved in One Health initiatives. Following the workshop, a resolution was drafted, and an interagency working group on One Health is set to be established in Kazakhstan.

During the coordination meeting, the multisectoral national technical group formed for facilitating the workshop presented the results of the seminar in Almaty. They discussed their efforts to analyse, plan, and mobilize the workforce for effective zoonotic disease prevention measures in Kazakhstan. Olga Demushkan detailed the exercises and steps taken by participants from the Ministries of Health, Agriculture, and

Ecology in developing an evidence-based approach to strengthen multidisciplinary One Health workforce capacity, considering the country's zoonotic disease preparedness and response needs.
Participants of the Coordination meeting acknowledged the timeliness of this work, which will support their capacity building activities planned for 2024, including those funded by two Pandemic Fund grants that Kazakhstan received for 2024-2027.

CONCLUSIONS

The workshop stands as a significant milestone to empower national authorities with an evidence-based strategy for strategically organizing and mobilizing a diverse workforce, thereby enhancing Kazakhstan's zoonotic disease management through the application of the One Health approach. The collaborative efforts of the national technical team and technical experts from the Quadripartite for One Health align with existing and forthcoming government initiatives in Kazakhstan. Notably, successful single-country and multi-country Pandemic Fund applications that Kazakhstan will receive for 2024-2027 prioritize workforce development and capacity-building activities, recognizing their pivotal role in pandemic preparedness.

Through comprehensive assessments of specific workforce needs, functions, occupations, and competency packages and the formulation of recommendations through trainings and resources to address challenges in the enabling environment, the workshop has assumed a pivotal role in supporting a skilled workforce. There is a way forward to integrate these recommendations into national workforce planning. Consequently, these efforts significantly strengthen Kazakhstan's capacity to comprehensively manage zoonotic diseases within the framework of One Health, ensuring a more robust and sustainable approach to public health challenges.

ANNEX 1 – Concept Note and Agenda

CONCEPT NOTE

Pilot of the Workforce Development Operational Tool (WFD OT)

Republic of Kazakhstan

January 23-25, 2024

Background and justification

Most countries recognize the benefits of taking a multisectoral, One Health approach to effectively prevent, prepare for, detect, assess, and respond to emerging and endemic zoonotic diseases and other health threats at the human-animal-environment interface. Despite an enthusiasm for One Health, many countries still meet difficulties in operationalizing multisectoral coordination, communication, and collaboration, and have limited or inadequate human resources available or accessible to do so.

In May 2023, the WHO Country Office in Kazakhstan convened a working meeting with representatives from the Ministry of Health and the Ministry of Agriculture of the Republic of Kazakhstan to discuss collaborative initiatives for 2023-2024 under the framework of One Health. Throughout the meeting, participants underscored the critical importance of enhancing the capacity of human resources in the field of One Health in their respective fields, recognizing it as a key priority area for concerted efforts. This imperative for capacity building has consistently emerged, notably during the National Bridging Workshop (NBW) between the IHR and the Veterinary Services Evaluation System (2018), as well as in subsequent assessments such as the Survey on implementation of the NBW roadmap and update of activities and priorities on One Health (2021), and the Evaluation and Action Plan of the Intersectoral Coordination Mechanism (MCM) (2021).

The Tripartite Zoonoses Guide's (TZG) Workforce Development Operational Tool (WFD OT) supports national and sub-national authorities and other relevant stakeholders to use an evidence-based approach to plan for and mobilize a multisectoral workforce for effective zoonotic disease preparedness and response. The WFD OT provides a stepwise approach to assess current official workforce needs, review the necessary workforce functions (particularly at the interface between sectors) required by the workforce (via occupations) for effective zoonotic disease preparedness and response, and then use this information to propose evidence-based actions for workforce strengthening (this includes human resource needs and competency-based education and training strategies for current and future personnel. A resulting report with detailed workforce competency and strengthening options will allow countries to conceptualize their One Health workforce and elaborate next steps for workforce planning.

Objective of the 3-day WFD OT workshop:

The WFD OT will be useful to Kazakhstan in establishing an evidence-based approach for strengthening their multisectoral workforce based on needs for zoonotic disease management.

Objectives

The objectives of the WFD OT are to:

- Strategically review the multisectoral, One Health functions (roles and responsibilities) required by the official workforce to ensure effective zoonotic disease management;
- Detail occupations and possible needs to appropriately cover the functions required for zoonotic disease management; and
- Plan for further human resource/staffing needs and competency-based education and training strategies as appropriate.

Output

A workshop report/ plan detailing workforce functions, occupations, competencies and relevant training resources and tools to effectively manage zoonotic diseases in the country

Participants

The 3-day WFD OT workshop will benefit from the full participation of those reflecting relevant occupations for zoonotic disease management, as well as those oriented toward health workforce management and development. Guidance for participant selection is attached with this concept note.

Agenda

The WFD OT workshop will be conducted over 3 days.

Day 1		
Time	**Session**	**Facilitator/ Presenter**
09:00-09:30	Registration	WHO CO KAZ
09:30-10:00	Official opening and Welcome speeches **Ministry of Health of Kazakhstan** – Izdenov Aset Kayratovich, Head of the Medical Education Department of the Department of Science and Human Resources of the Ministry of Health of Kazakhstan **Ministry of Agriculture of Kazakhstan** – Tulegenov Samat Beksultanovich, Deputy Chairman of the Veterinary Control and Supervision Committee of the Ministry of Agriculture of Kazakhstan **Ministry of Ecology and Natural Resources** **Quadripartite for One Health** – WOAH on behalf of the Quadripartite	WHO CO KAZ
10:00-10:15	Introduction of participants	All participants
10:15-10:40	Introduction to the WFD OT	WHO HQ

	Module 1: Setting up Q&A	
10:40-11:00	**Coffee Break** **Group Photo**	
11:00-11:30	Country context: Review of results of the situation analysis Q&A	Ministry representatives
11:30-11:40	Module 2 Workforce Analysis: • Introduction to Workforce functions for zoonotic disease management Introduction to disease scenario	WHO HQ
11:40-12:30	Exercise 1: Disease outbreak scenario – conceptualize functions • Russian and Kazakh interpretation available	Group work Mixed sectors
12:30-14:00	**Lunch**	
14:00-15:30	Exercise 1 (cont'd): Revise, add, and select 10 priority functions according to the country context	Group work Mixed sectors
15:30-15:45	**Coffee break**	
15:45-16:30	Plenary presentation and agree on prioritized functions in terms of capacity building (10 min per group, 4 groups)	Moderator: Aim, Kurmazhan, Carla
16:30-16:40	Wrap up Day 1 (10 min)	WHO HQ/EURO

Day 2		
Time	**Session**	**Facilitator/ Presenter**
09:00-09:10	Welcome and Day 1 recap	WHO HQ
09:10-09:20	Module 2 Workforce Analysis: Introduction to occupations to address zoonotic diseases	WHO HQ
09:20-10:15	Exercise 2 Review occupations according to the country context	Group work (by sector)
10:15-10:30	**Coffee / Tea**	

10:30-10:45	Introduction to Exercise: Match and rate occupations and functions	WHO HQ
10:45-12:00	Exercise 2 (cont'd): Match and rate functions and occupations using the flip charts	Group work (by sector)
12:00-12:30	Plenary sharing and discussion (10 minutes per group)	Plenary
12:30-14:00	**Lunch**	
14:00-14:20	Module 2 Workforce Analysis: • Introduction to competencies and competency packages associated with functions • Introduction to Exercise 3	WHO HQ
14:20-15:45	Exercise 3: Review and prioritize competencies, Assessment of competency packages by function	Group work (by sector)
15:45-16:00	**Coffee / Tea**	
16:00-16:30	Plenary sharing and discussion (10 min per group)	Plenary
16:30-17:00	Wrap up Day 2	WHO HQ/EURO

Day 3		
Time	**Session**	**Facilitator/ Presenter**
09:00-09:20	Welcome and Day 2 recap	WHO HQ
09:20-10:15	Module 3 Planning: Overview of education and training resources and options to strengthen identified competencies	WHO HQ
10:15-10:30	**Coffee / Tea**	
10:30-11:00	Exercise 4: Identify resources and match to competency packages	Group work
11:00-12:00	Module 3 Planning: Workforce planning and monitoring and evaluation (M&E)	WHO HQ Group work

12:00-12:15	Plenary discussion, recommendations, and next steps	Plenary
12:15-12:30	Evaluation of workshop and tool	All participants
12:30	Closing Ceremony	WHO HQ WHO EURO

ANNEX 2 – List of Participants

Kazzhol Park Hotel Almaty 108 Nauryzbai Batyr Street, Almaty, Kazakhstan

January 23-25, 2024

LIST OF PARTICIPANTS
Multisectoral Workforce Development Operational Tool (WFD OT) Workshop in Kazakhstan

	Name	Title
Ministry of Agriculture		
1	Tulegenov Samat Beksultanovich	Deputy Chairman of the Veterinary Control and Supervision Committee of the Ministry of Agriculture of Kazakhstan
2	Taurbayeva Saltanat Nurlanovna	Chief Expert of the Biological Safety Department of the Veterinary Control and Supervision Committee of the Ministry of Agriculture of Kazakhstan
3	UmirkulAzamat Kalybekovich	Chief Expert of the Biological Safety Department of the Veterinary Control and Supervision Committee of the Ministry of Agriculture of Kazakhstan
4	Abulhalikov Sembai Bagdatshovich	Director of the Republican Anti-Epizootic Unit of the Veterinary Control and Supervision Committee of the Ministry of Agriculture of Kazakhstan
5	Berdikulov Maksat Amanbekovich	Director General of RSE on PCV "National Veterinary Reference Center" of the Committee for Veterinary Control and Supervision of the Ministry of Agriculture of Kazakhstan
6	Mukazhanov Saken Suyindykovich	Head of Biological Safety Department of Akmola Regional Territorial Inspection of the Committee for Veterinary Control and Supervision of the Ministry of Agriculture of Kazakhstan

7	Imanbaev Darkhan Serikkalievich	Head of Biological Safety Department of Karaganda Regional Territorial Inspection of the Committee for Veterinary Control and Supervision of the Ministry of Agriculture of Kazakhstan
8	KaribayevTalgat Bolatovich	Head of the Laboratory of Infectious Diseases Diagnostics RSE on PCV "National Veterinary Reference Center" of the Committee for Veterinary Control and Supervision of the Ministry of Agriculture of Kazakhstan
9	BeiseitovSayat Tulebayevich	Head of Methodology Department and Educational Center of RSE on PCV "Republican Veterinary Laboratory" of the Committee for Veterinary Control and Supervision of the Ministry of Agriculture of Kazakhstan

10	Nasyrkhanova Bakhyt Kayirgazinovna (online)	Chief Manager of the Department of Education and Dissemination of Knowledge NAO "National Agrarian Scientific and Educational Center"
11	TagaevArman Abayevich	Head of the Epizootic Event Organization Department of the Turkestan Oblast Veterinary Department of the Ministry of Agriculture of Kazakhstan
Ministry of Ecology and Natural Resources		
12	Alipbayeva Meruert Berdibayevna	Head of the HR Department of the Ministry of Ecology and Natural Resources of Kazakhstan
13	Rakhmetov Adilbek Ruslanovich	Chief Expert of the Department of International Cooperation of the Ministry of Ecology and Natural Resources of Kazakhstan
14	Urgenishbayeva Zhansulu Ikhlaskyzy	Republican Association of Fisheries and Aquaculture "Qazaq balyk" (Almaty)
15	Zhumanov Bakytzhan Mukhametkalievich	Head of the Forest and Specially Protected Natural Territories Department of the Almaty Regional Territorial Inspectorate of Forestry and Wildlife of the Ministry of Ecology and Natural Resources of Kazakhstan
16	Ormanbekov Nurlan Auelbekovich	Chief Specialist of Hunting and Wildlife Department of the Almaty Regional Territorial Inspection of Forestry and Wildlife of the Ministry of Ecology and Natural Resources of Kazakhstan
Ministry of Health		

17	Gulnara Utepergenovna Kulkayeva (online)	Chairperson of the Board of Directors of the «National research center for health development named after Salidat Kairbekova» of the Ministry of Health of Kazakhstan
18	DemushkanOlga Yurievna	Head of the National Observatory of Human Resources for Health of the «National research center for health development named after Salidat Kairbekova» of the Ministry of Health of Kazakhstan
19	KasymovaAnara Muratovna	Chief Specialist of the National Observatory of Human Resources for Health of the «National research center for health development named after Salidat Kairbekova» of the Ministry of Health of Kazakhstan
20	Bisagalieva Aliya Tolegenovna	Leading Specialist of the National Observatory of Human Resources for Health of the «National research center for health development named after Salidat Kairbekova» of the Ministry of Health of Kazakhstan
21	TurlievZangar Serikbaevich	Head of the Department of Prevention of Infectious and Parasitic Diseases of the branch "Scientific and Practical Center of Sanitary-Epidemiological Expertise and Monitoring" the National Center of Public Health" of the Ministry of Health of Kazakhstan.
22	Ratbek Saylaubekuly	Director of RGU "Shymkent Anti-Plague Station" of the Committee of Sanitary and Epidemiologic Control of the Ministry of Health of Kazakhstan (hereinafter - the Committee).
23	Mustapaev Yerkin Serikovich	Director of RGU "Aralomorsk Anti-Plague Station"of the Committee.
24	Nurmagambetova Larisa Berdimuratovna	Director of RGU "Atyrau anti-plague station" of the Committee.
25	Maikanov Nurbek Smagulovich	Director of RGU "Ural Anti-Plague Station" of the Committee.
26	Dzhusieva Zhanat Tnyshtykbaevna	Specialist of RSE on PCV "National Center of expertise" of the Committee.
27	Toktasynova Gulnur Bauyrzhankyzy	Specialist on expertise RSE on PCV "National Center of expertise" of the Committee.
28	IzdenovAset Kayratovich	Head of the Medical Education Department of the Department of Science and Human Resources of the Ministry of Health of Kazakhstan
Observers		
29	Olena Kuriata	WHO Country Office in Ukraine

30	Alex Doubrov	Deputy Director for Defense Threat Redaction Office DTRA KAZ
Facilitators		
31	Ong-orn Prasarnphanich	Technical Officer, World Health Organization (WHO) Headquarters
32	Carla Stoffel	Consultant on One Health, WHO Headquarters
33	HoejskovPeter Sousa	Technical Officer for Food Safety and Zoonotic Diseases, WHO Regional Office for Europe
34	Laura Utemissova	National Professional Officer on Public Health, WHO Country Office in Kazakhstan
35	Yerbol Spataev	Project Officer (Data and Digital Health), WHO Country Office in Kazakhstan
36	Kurmanzhan Dastanbek kyzy	One Health Catalyst, WHO Country Office in Kazakhstan
37	Nadja Muenstermann	Technical Officer, Headquarters of the United Nations Environment Program (UNEP)
38	Mereke Taitubayev	Head of WOAH (OIE) Sub Regional Office for Central Asia
39	Mario Latini	Consultant, World Organization for Animal Health (OIE) sub-regional office for Central Asia
40	Gunel Ismailova	Technical Adviser on Zoonotic Diseases, Food and Agriculture Organization of the United Nations (FAO) headquarters
41	Duriya Charypkhan	Consultant of the FAO Country Office in Kazakhstan

ANNEX 3 – Summary of Situation Analysis

MINISTRY OF HEALTH OF THE REPUBLIC OF KAZAKHSTAN

A comprehensive framework, in alignment with key healthcare regulations in Kazakhstan such as the Health Code, State Healthcare Development Program (2020-2025), and global standards, aim to build human capital, ensuring quality healthcare services, advanced technology adoption, and system efficiency. Regionally modern management methods are implemented, alongside the development of Human Resource Management Programs.

National policy emphasizes intersectoral collaboration, education, and experience exchange to enhance healthcare coordination. Medical personnel play a crucial role in coordinating efforts to manage zoonotic diseases in the country. They educate other sectors and the public on zoonoses, contribute expertise to intersectoral committees, and assist in developing and implementing medical monitoring systems. Collaboration with veterinary services enhances disease control, while participation in planning and implementing strategies strengthens epidemic response.

Additionally, they facilitate information exchange and joint research projects to improve coordination in preventing and combating zoonoses. To bolster personnel in managing zoonotic diseases, focus on enhancing the following competencies is suggested: understanding zoonotic diseases, effective collaboration across sectors, proficiency in medical monitoring and diagnosis, expertise in epidemiological modeling, teaching and learning abilities for knowledge transfer, adept communication with the public and media, crisis planning and management, data collection and analysis skills, readiness for international collaboration, and a commitment to ongoing learning and development.

MINISTRY OF AGRICULTURE OF KAZAKHSTAN

The state veterinary policy in Kazakhstan aims to protect against the spread of infectious animal diseases, improve veterinary practices based on scientific rationale, and ensure coordinated government interaction. Training workshops for veterinary specialists are planned under the FAO project for 2023 to 2028, with an upcoming collaboration with USAID to enhance qualifications in line with WOAH's reporting standards.

The National Reference Center for Veterinary Affairs conducts wildlife epizootic monitoring to prevent disease spread, covering various habitats. Immediate notification protocols are in place for diseases like anthrax, with joint epidemiological investigations for diseases such as brucellosis and listeriosis, involving containment planning, and public awareness campaigns.

To strengthen veterinary management of zoonotic diseases, key competencies include epidemiological surveillance, post-mortem examinations, sample collection protocols, laboratory diagnostics, outbreak management, and inter-agency cooperation strategies.

MINISTRY OF ECOLOGY AND NATURAL RESOURCES OF KAZAKHSTAN

The role and involvement of representatives from the wildlife and environmental protection sector in managing zoonotic diseases across the regions of Kazakhstan include responsibilities held by regional territorial inspections of forestry and wildlife management under the Ministry of Ecology, Geology, and Natural Resources.

They oversee wildlife protection in hunting reserves, while state forest protection institutions manage wildlife in state forest lands, and specially protected natural areas are safeguarded by inspectorial staff. However, these entities lack expertise in managing zoonotic diseases, primarily focusing on wildlife population monitoring and providing preventive recommendations to hunting entities. They assist in sample collection for zoonotic infection testing and collaborate with the veterinary control committee on selecting samples from wild animals for diseases like rabies, tularemia, avian and swine flu.

Challenges in involving wildlife and environmental protection specialists in combating zoonotic diseases are due to the shortage of resources, trained personnel, and accredited laboratories for wildlife disease diagnosis at the regional level. Promptly determining the causes of wildlife deaths is hindered by the absence of accredited local laboratories, requiring samples to be sent to the national center for analysis. The delayed involvement of specialists from research institutions further complicates timely responses to wildlife health incidents.

ANNEX 4 – List of Ten Priority Functions

Category	Function number	Function
Strategic planning and emergency preparedness	1	Coordinate zoonotic disease management using a defined framework and/ or multisectoral coordination mechanism
Strategic planning and emergency preparedness	8	Jointly review and adjust, as needed, legislation and regulations
Surveillance and information sharing	14	Coordinate joint early warning based on zoonotic disease signals and the multisectoral development of surveillance reports
Surveillance and information sharing	13+17	Facilitate coordination and sharing between laboratories, harmonize protocols and reporting across sectors (including specimen collection, sample submission forms, packaging, transport, test algorithms and protocols, results reporting and shared data analysis), and evaluate laboratory capacities
Coordinated investigation and response	18 + 19	Participate in and/or lead joint outbreak investigation and response activities during zoonotic disease outbreaks, including participation in incident management systems and taking biosafety and biosecurity measures with animal welfare considerations
Joint risk assessment	23	Conduct routine and as-needed joint risk assessments for (prioritized) zoonotic disease threats and develop relevant recommendations for risk management
Risk reduction, risk communication, and community engagement	24 + 25	Coordinate and/ or participate in joint development and implementation of harmonized risk communication and community engagement for risk reduction, of situation updates, and of recommendations to interested parties and the public
Research	31	Conduct, promote, and share operational research and results for zoonotic disease management at the human-animal-environment interface, involving stakeholders in the process
Workforce development	34	Foster multisectoral capacity development programmes and continuing education for relevant staff
Monitoring and Evaluation	36	Monitor and evaluate the effectiveness of zoonotic disease management activities

ANNEX 5 – Critical Functions by Occupation

Critical functions by occupation at institutional level identified by each sector through the Step 5 exercise.

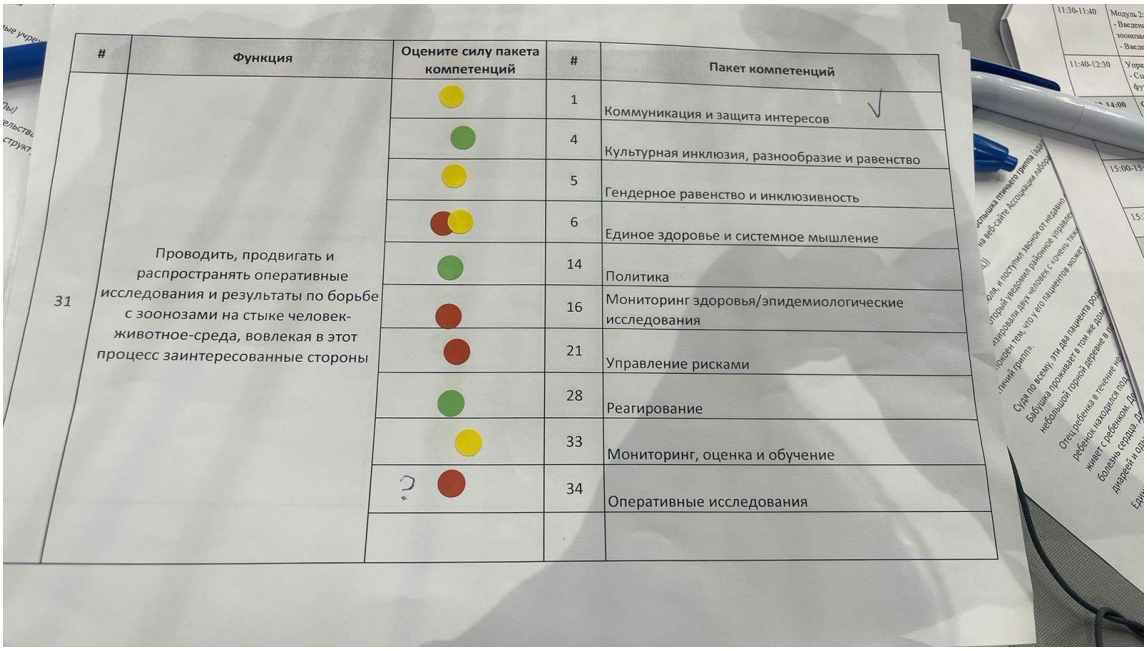
MINISTRY OF HEALTH OF KAZAKHSTAN
Representatives of the Ministry of Health noted that several key functions related to managing zoonotic diseases are only minimally covered by certain positions: • Function 1: Coordination of zoonotic disease management is minimally covered by microbiologists, lab technicians, personnel managers, biostatisticians, clinical pharmacologists, and financial managers. • Function 8: Joint development of legislative proposals is minimally covered by microbiologists, lab technicians, personnel managers, field nurses, biostatisticians, and clinical pharmacologists. • Function 13: Facilitating coordination between laboratories is marked as lacking for lab technicians, general practitioners, infectious disease physicians, and biostatisticians. • Function 14: Monitoring early warning signals of zoonotic diseases is covered by microbiologists, lab technicians, and personnel managers. • Function 18: Leading outbreak investigations is minimally covered, primarily by biostatisticians. • Function 23: Conducting joint risk assessments for zoonotic disease threats is minimally covered, mainly by clinical pharmacologists. • Function 24: Informing about risks and coordinating message dissemination is marked as insufficient for lab technicians, infectious disease physicians, biologists, and general practitioners. • Function 34: Developing capacity-building programs is minimally covered by epidemiologists, microbiologists, lab technicians, field nurses, biologists, and clinical pharmacologists.
MINISTRY OF AGRICULTURE OF KAZAKHSTAN
Representatives of the Ministry of Agriculture noted that there are many yellow dots in their table because during the discussion, it became apparent that not all functions are fully carried out by the selected positions. Thus, it is noted that function 8, which involves jointly developing and proposing amendments to the legislation and regulatory acts, is not covered by positions such as Laboratory Director and Director of the Republican Anti-Epizootic Squad and Coordinator for One Health.

Additionally, function 34, which aims to contribute to the development of inter-sectoral programs for capacity building and continuous education for relevant employees, is identified as minimally covered by the Chief Veterinary Officer, HR specialist, and Accountant. It is also important to mention that the selected functions are mostly covered by the Chief State Inspector.

MINISTRY OF ECOLOGY AND NATURAL RESOURCES OF KAZAKHSTAN

Representatives of the Ministry of Ecology and Natural Resources noted that they have a lot of yellow dots because many functions discussed are only partially covered by their sector, by 25-27%. However, function number 13, which involves facilitating coordination and exchange between laboratories, developing protocols, and assessing laboratory capabilities, jointly strengthening the harmonization of laboratory protocols and reporting between sectors, is marked in red for the following positions: wildlife officer, fisheries officer, laboratory staff, ornithologist, game warden. Additionally, it was noted that function 31, which involves conducting, promoting, and disseminating operational research and results on combating zoonoses at the intersection of human-animal-environment, involving stakeholders in this process, is marked as covered well by the occupation for many positions in their list.

ANNEX 6 – Critical Competency Packages by Function



#	Функция	Оцените силу пакета компетенций	#	Пакет компетенций
31	Проводить, продвигать и распространять оперативные исследования и результаты по борьбе с зоонозами на стыке человек-животное-среда, вовлекая в этот процесс заинтересованные стороны		1	Коммуникация и защита интересов
			4	Культурная инклюзия, разнообразие и равенство
			5	Гендерное равенство и инклюзивность
			6	Единое здоровье и системное мышление
			14	Политика
			16	Мониторинг здоровья/эпидемиологические исследования
			21	Управление рисками
			28	Реагирование
			33	Мониторинг, оценка и обучение
			34	Оперативные исследования

MINISTRY OF HEALTH OF KAZAKHSTAN

The only competency package needing strengthening in Ministry of Health institutions includes joint review of legislation related to zoonotic disease surveillance. However, many other competencies are highlighted with yellow color as aready covered well enouth by the sector. Thus, a competency on planning for surveillance in this category is colored yellow. In facilitating lab coordination, competencies such as systems thinking in One Health, and zoonotic disease surveillance are noted in yellow colors. For risk assessments and management, competencies include risk assessment and zoonotic disease surveillance are marked yellow. In the joint efforts to inform about risks highlight competencies like cultural inclusion, diversity, gender equality, and applied epidemiology as yellow color. Operational research on zoonoses within One Health underscores competencies in policy, risk management, monitoring, evaluation, and training as those that are covered enough by the sector (yellow).

MINISTRY OF AGRICULTURE OF KAZAKHSTAN

The Ministry of Agriculture identified 33 competencies marked in red as competency package that needs to be strengthened in the institutions focusing on enhancing lab coordination, harmonizing protocols, and improving surveillance for zoonotic diseases. These efforts emphasize understanding One Health approach and having the systems thinking, policy, and collaboration. Additionally, they prioritize conducting operational research, risk communication, and evaluating control measures. Key competencies marked as needed for strengthening include environmental and wildlife knowledge, risk management, monitoring, and evaluation. These efforts aim to strengthen intersectoral coordination and enhance the effectiveness of zoonotic disease management, ensuring a comprehensive response.

MINISTRY OF ECOLOGY AND NATURAL RESOURCES OF KAZAKHSTAN

In the Ministry of Ecology, competencies marked in red for improvement are only identified within the function of conducting, promoting, and disseminating operational research and results in combating zoonoses at the human-animal-environment interface, engaging stakeholders. Competency packages highlighted in red include One Health and systems thinking, health monitoring, epidemiological research, risk management, and operational research.

ANNEX 7 – Step 9 - Plan by linking critical needs, competencies, and resources

Шаг 9: Шаблон для кадрового планирования (связь между потребностями, компетенциями и ресурсами)

Рекомендуемые действия	**Сроки**	**Последующие шаги**	**Ответственное учреждение**	**Координатор**	**Ресурсы**	**Последующие действия**
Рекомендуемые действия могут включать: • *Обучение имеющегося персонала* • *Набор дополнительного персонала на разных уровнях и в разных местах* • *Уточнение национальных кадровых планов* • *Решение проблем в благоприятной среде* • *Другие*	*Укажите сроки, к которым это действие должно быть завершено. Это может быть:* - ***Краткосрочным** (например, действие должно быть реализовано в течение 6 месяцев)* - ***Среднесрочным** (например, действие должно быть реализовано в течение 1-2 лет)* - ***Долгосрочным** (например, действие, связанное с созданием благоприятно*	*Изложите конкретные шаги по реализации рекомендуемых действий*	*Определите агентство, которое будет руководить реализацией*	*Определите координатора в ведущих и сотрудничающих агентствах*	*Определите ресурсы, необходимые для реализации действия. Ресурсы могут включать:* - ***Результаты Шага 8 и Шага 9*** - *Человеческие ресурсы* - *Финансовые ресурсы* - *Физические ресурсы*	Отчет комитету X каждый квартал до завершения

	й среды, должно быть завершено в течение 5 лет)					
Пример: Проведение тренингов по расследованию вспышек заболеваний	К июню 2024 г. (краткосрочно)	1. Привлечь потенциальных инструкторов из МЗ и МСХ, МЭ, университета Х 2. Определить слушателей в организациях 3. Проанализировать учебные ресурсы и внести соответствующие изменения 4. Провести и оценить обучение	МЗ как ведущая организация	Г-н МЗ	- Курс OpenWHO - Материалы курсов от Университета Х и МСХ - Финансирование от МЗ (очное обучение и материалы) - Время и обязательства тренеров МЗ и МСХ	Отчет комитету Х каждый квартал до завершения
Закрепить компетенции/функции в профессиональные стандарты для каждой конкретной специальности (МЗ?) NB. национальная система квалификации	1. 2 месяца 2. 3 месяца 3. 1 год	1. проанализировать все НПА (по секторам) 2. Пересмотреть все функции и компетенции специалистов и подготовить предложения (могут быть в НПА)	1. Нанять консультанта (но мин-ва должны помочь с информацией) 2. Техническая группа	Technical group	Pending	3. Отчет о семинаре от четырех стороннего альянса 4. Утвердить участников технической рабочей группы (request to ministries from quadripartie/WHO)

/отраслевые рамки всех министерств		3. Закрепить компетенции (создать технич рабочую группу)				5. Представить материалы/реузльтаты на планерке 6. Принтяь во внимание комментарии об инструменте
Кадровый потенциал / учебные программы в ВУЗах	1.	1. Вовлечь МЭПР в пересмотр программ обучения (МЗ и МСХ уже начали)				
Рекомендуемые действия	**Сроки**	**Последующие шаги**	**Ответственное учреждение**	**Координатор**	**Ресурсы**	**Последующие действия**
Тренинги		1. МЭПР Платфорама с тренингами на русском языке (ме)жсекторальный подход/ межсекторальное взаимодействие 2. МЭПР тренинги для Комитета лесного хозяйства и животного мира/ экологич управления (экосистемы)/охрана окруж среды				

ANNEX 8 – Online participant evaluation results

Feedback form Results_WFD OT Worl

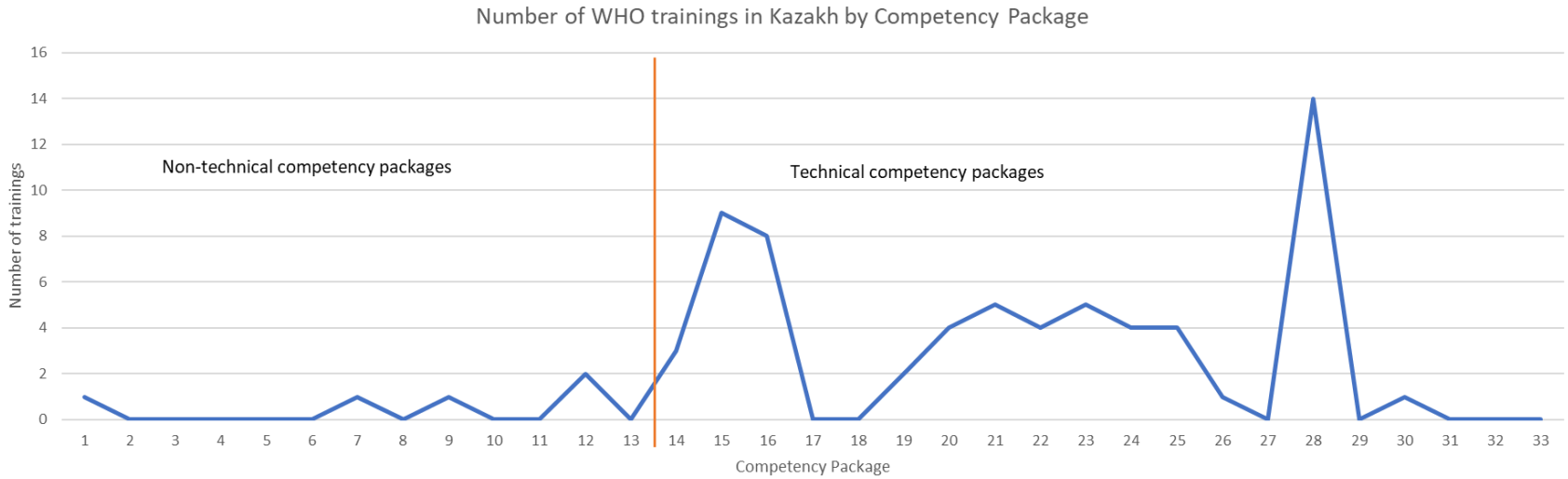
ANNEX 9 – Global-level trainings by competency package and gap analysis results

Global-level trainings available in Russian and Kazakh by competency package

KAZ_Results_WFDOT_Trainings by Competе

KAZ_Глобальные тренинги по пакетам

The results of the gap analysis of global-level WHO trainings available in Kazakh and Russian are presented here.



ANNEX 10 – Tools and resources for addressing areas of the enabling environment

Tools and resources for addressing areas of the enabling environment

The Enabling Environment for Work