

**State Institute “Agriculture Entrepreneurship Development”**  
**One Health for Pandemic Prevention Food Systems Resilience and Ecosystem Health in**  
**Central Asia Project (OHP)**

**TERMS OF REFERENCE**

**Establishing a cross-sectoral data exchange on outbreaks and climate-related risks for  
inclusion in the online platform being developed for the NOHCS**

**I. BACKGROUND**

The One Health approach is an integrated and unifying framework that aims to achieve optimal health for people, animals, and ecosystems. It recognizes the interdependence between human, animal, plant, and environmental health, and it mobilizes various sectors and communities to address global challenges, such as pandemic prevention, antimicrobial resistance (AMR), food safety, and environmental sustainability. This approach is essential for fostering well-being and tackling complex health issues in interconnected systems.

Phase 1 of the One Health for Pandemic Prevention Food Systems Resilience and Ecosystem Health in Central Asia Program for Tajikistan is funded from a US\$31.79 million grant, with US\$30 million sourced from the International Development Association (IDA) and an additional US\$1.79 million from the Pandemic Fund. This initiative, part of the World Bank's Multiphase Programmatic Approach (MPA), aims to support the five Central Asian countries (Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan, and Uzbekistan) in addressing prevalent challenges related to zoonotic diseases, AMR, and food safety.

The One Health Program in Tajikistan, implemented as part of Phase 1 under the World Bank's Multiphase Programmatic Approach (MPA), is designed to strengthen the country's capacities for preventing, detecting, and responding to zoonotic diseases, AMR, and food safety risks. It supports investments across national and regional One Health coordination, communication, information sharing, regulatory frameworks, knowledge development, workforce capacity, risk-based surveillance, prevention and response systems, laboratory capacity, and data systems.

The project includes four key components:

**1.Strengthening One Health Governance** – Establishing a cross-sectoral governance structure to enhance coordination and policy alignment.

**2.Enhancing One Health Knowledge and Workforce Capacity** – Developing and implementing workforce training programs and research initiatives.

**3.Improving One Health Prevention, Detection, and Response Systems** – Strengthening national and regional laboratory networks, enhancing risk-based surveillance, and supporting digital information systems.

**4.Project Management, Monitoring & Evaluation, and Learning** – Establishing systems to manage and track project progress, ensure compliance, and facilitate knowledge dissemination.

The One Health Program in Tajikistan is implemented by the State Institute “Agriculture Entrepreneurship Development” (SI AED). The implementing agency works closely with national and regional stakeholders to ensure effective and sustainable implementation of the One Health approach.

**II. OBJECTIVE OF THE ASSIGNMENT**

The primary objective of this consultancy is to support the MOHSPP, in close coordination with the CFS and CEP, in establishing a functional cross-sectoral data exchange mechanism on zoonotic disease outbreaks that will serve as the technical foundation for the future NOHCS online platform.

For purposes of this assignment, priority zoonotic pathogens include: brucellosis, anthrax, CCHF, rabies, leishmaniasis, dengue, salmonellosis, and any additional pathogens identified during the situational analysis in consultation with MOHSPP, CFS, and CEP.

**Specific objectives include:**

1. Support the establishment of a multi-sectoral Technical Working Group (TWG) comprising representatives of MOHSPP, CFS, and CEP by preparing and submitting to MOHSPP a complete package of inputs, comprising: a draft MOHSPP Order; proposed membership list (MOHSPP, CFS, CEP); draft TWG mandate and regulations; operating procedures and decision-making framework, to guide the development of cross-sectoral data exchange mechanism on zoonotic disease outbreaks for integration into the online platform being developed for the NOHCS;
2. Conduct a comprehensive assessment of existing surveillance and information systems in the MOHSPP, CFS, and CEP. The review aims to describe the current landscape of data exchange between MOHSPP, CFS, and CEP and identify gaps to enable cross-sectoral data exchange on incidences and epidemiological of zoonotic disease outbreaks. The review would include legal and regulatory framework assessments, workflow analyses, and data quality check;
3. Conduct a comprehensive review of international best practices for cross-sectoral data sharing, with a specific focus on the SIS OT (Surveillance and Information Sharing Operational Tool) developed by the Quadripartite (WHO, FAO, WOA, and UNEP). SIS OT shall not be used as a design template. The conceptual design shall be developed from assessment findings.
4. Develop a comprehensive Conceptual Design and Data Sharing Framework for the cross-sectoral mechanism, defining technical operating principles, standardized data categories, exchange protocols (frequency and channels), and clearly defined roles and responsibilities for MOHSPP, CFS, and CEP.
5. Develop recommendations for institutionalization, governance, and long-term sustainability of the cross-sectoral data exchange, including staffing, technical capacity, and legal instruments.

### **III. SCOPE OF SERVICES, TASKS (COMPONENTS) AND EXPECTED DELIVERABLES**

#### **3.1. Preparation and Planning**

- i. The firm will develop a detailed plan for the implementation of the terms of reference, detailing the deadlines and responsible persons for each stage of the project.
- ii. Assessment of the necessary resources, including human, financial and material, planning their allocation throughout the assignment.
- iii. Definition of the management structure, including team building.
- iv. Conduct consultations with MOHSPP, CFS, and CEP to identify specific TWG members by position/name, agree on their mandate, and prepare a draft MOHSPP Order for TWG establishment. Draft TWG Regulations covering: mandate and scope; member roles and responsibilities; decision-making procedures; meeting frequency.

**Expected Outcome:**

- A detailed implementation plan has been developed, including a stakeholder engagement strategy, a timeline for implementation, and the identification of responsible persons.
- A submitted proposal to the MOHSPP on the establishment of technical working group consist of specialist in the relevant areas.

#### **3.2. Assessment of Existing Surveillance and Information Systems**

- i. Conduct a structured assessment of existing zoonotic disease surveillance systems, outbreak alert mechanisms, data management tools, reporting formats, and information flows in the MOHSPP, CFS and CEP including for wild animal and migratory bird populations.
- ii. Assess current data sharing practices among MOHSPP, CFS, and CEP, including facilitating and restricting factors - technical, organizational, existing formal or informal mechanisms, inter-agency agreements, and institutional coordination arrangements as well as a sample-based data quality check.
- iii. Conduct a comprehensive legal and regulatory analysis of existing constraints, data privacy laws, and institutional policies that may impact or restrict cross-sectoral data sharing among the MOHSPP, CFS, and CEP.
- iv. Evaluate the technical infrastructure (software, databases, connectivity) available across all three institutions for data sharing and interoperability, as well as assess digital literacy and IT capacity of data entry and reporting staff.
- v. Identify priority zoonotic diseases as listed in Section 2 and the minimum dataset to be shared per disease (case definition, notification date, geographic location, laboratory confirmation status, etc.). Climate and environmental data should be considered where relevant to CEP's surveillance mandate. Prioritisation should be based on combined criteria: disease risk (incidence, severity, cross-border potential, etc.) and surveillance system maturity
- vi. Conduct site visits to a representative sample of national and regional units in the human health, veterinary, and environmental sectors (at least 2 per agency).
- vii. Conduct a comparative analysis of the existing national surveillance and data sharing architecture against international standards (SIS OT) and regional best practices from comparable countries (e.g., Kazakhstan, Uzbekistan, Kyrgyzstan).

#### **Expected Outcomes:**

- A comprehensive situational analysis report documenting existing systems, data flows, gaps, and technical capacities across MOHSPP, CFS, and CEP, covering all three data streams: domestic animal zoonotic disease data, outbreak alerts, and wildlife zoonotic disease surveillance data and climate-related risks.
- A prioritized list of zoonotic diseases and climate-related risks (if feasible) recommended for inclusion in the cross-sectoral data exchange mechanism, covering human, domestic animal, and wildlife disease surveillance.

### **3.3. Conceptual Design of the Cross-Sectoral Data Sharing Mechanism**

- i. Based on assessment findings, develop a practical and technically feasible conceptual design for the cross-sectoral data sharing mechanism among MOHSPP, CFS, and CEP. This shall include: a description of the proposed mechanism and its operating principles; a data flow diagram between the three agencies (at a conceptual level, without programming code); roles and responsibilities of each party; agreed data categories and exchange formats; frequency and channels of data exchange. Functional requirements shall explicitly describe integration interfaces with existing information systems at MOHSPP, CFS, and CEP.
- ii. Conduct consultations with stakeholders to agree on the conceptual design and incorporate feedback and adjust recommendations accordingly.
- iii. Based on the agreed conceptual design, formulate platform-agnostic functional requirements for the cross-sectoral data exchange mechanism, including data flows, user roles, access control, exchange triggers, and data formats. These requirements shall be technology-neutral and shall serve as the primary technical input document for the future NOHCS platform development procurement. The consultant shall not assume a specific software architecture.

To ensure interoperability without writing software code, this deliverable must include:

- User Stories and Use Cases (defining interactions between human, animal, and environmental health officers).
- The overall business logic and technical framework for trigger mechanisms (e.g., automated alerts), ensuring the architecture allows for future configuration of specific zoonotic thresholds by relevant authorities.
- Data Dictionary and Metadata Standards based on data elements and minimum dataset identified in Section 3.2.v and agreed with the TWG.
- Data quality standards across agencies, including completeness thresholds and validation rules
- System Access and Security Roles (defining who can view, edit, or validate cross-sectoral data).

Legal and regulatory considerations shall be integrated throughout all activities in this Section to ensure the conceptual design is compliant with Tajikistan's regulatory framework from the outset.

#### **Expected Outcome:**

- A detailed Concept Document for the three-stream cross-sectoral data sharing mechanism involving MOHSPP, CFS, and CEP, including a data flow diagram, and an operational data governance framework (data ownership, QA/QC accountability, roles and responsibilities), which will serve as the basis for the inter-agency agreement.
- Functional requirements for integration with the NOHCS online platform, ready to serve as a brief for the next-phase platform development contract.

### **3.4. Development of Legal, Institutional, and Governance Framework**

- i. Develop a draft Multi-Sectoral Memorandum of Understanding (MoU) or Service Level Agreement (SLA) between MOHSPP, CFS, and CEP, defining the legal basis for data sharing.
- ii. Draft detailed regulations for the data exchange process, including data entry timelines, validation workflows, and protocols for emergency alerts.
- iii. Provide recommendations for the institutional setup within each agency, including required staffing levels, job descriptions for data focal points, and technical capacity-building needs.
- iv. Define the governance structure for the NOHCS data exchange, including data ownership, access rights (Role-Based Access Control), and compliance with Tajikistan's Law "On Personal Data Protection".

#### **Expected Outcome:**

- Draft Inter-agency Agreement (MoU/SLA) for ministerial review and a roadmap for legislative amendments to formalize automated data exchange. The vendor's responsibility is limited to delivering the draft documents.
- Draft SOPs for data workflows, proposed staffing structures (focal points), and a data privacy/access framework compliant with national laws.

### **3.5. Final Report and Dissemination**

- i. Collection and consolidation of all project results: aggregating all data, reports, and materials developed throughout the project. Analysis of achievements and identified challenges.
- ii. Preparation and submission of the final report: compiling a final report with a comprehensive description of completed tasks and achieved results, including finalized legal instruments and a roadmap for the next phase (platform development). as a recommendation document, outlining in high-level: a

phased rollout sequence (including piloting); a stakeholder engagement strategy for transition to the new data sharing arrangement; IT infrastructure and HR capacity requirements; and a monitoring and accountability framework with performance benchmarks. Presentation of the final report to stakeholders and governing bodies, including the organization of a roundtable.

iii. The Final Report shall provide a strategic synthesis of the entire assignment. Content that duplicates previous interim deliverables will be presented in summary form with cross-references, rather than reproduced in full, to ensure focus on final recommendations and sustainability

#### **Expected Outcome:**

- Information package for the dissemination of results and a successfully conducted final roundtable with the participation of key stakeholders.
- Approved and submitted Final Report encompassing all project results and recommendations.

#### **IV. TEAM COMPOSITION AND QUALIFICATION REQUIREMENTS OF THE CONSULTING FIRM AND KEY EXPERTS**

Qualification requirements for the consulting firm:

- The consulting firm shall be legally registered and authorized to provide consulting and training services in the Republic of Tajikistan;
- The consulting firm shall have at least five (5) years of experience in providing consulting services related to digital health surveillance, public health, veterinary services, food safety, or environmental management;
- Successfully completed at least one (1) similar assignment during the last five (5) years involving the data-sharing mechanisms, and/or institutional, regulatory, or governance frameworks, including the preparation of technical concepts, SOPs, or operational guidelines;
- Familiarity with the regulatory and institutional framework of the Republic of Tajikistan relevant to public health, veterinary services, environmental management, and inter-agency coordination;
- Demonstrated experience working with government institutions of the Republic of Tajikistan especially MOHSPP, CFS, and CEP is required. Previous experience with projects financed by international development partners, including the World Bank, ADB, and UN agencies, will be considered an asset.
- The consulting firm's experts must be fluent in both Tajik and Russian languages. Working knowledge of English is required for the Team Leader.

The consulting firm will engage technical, non-technical and administrative staff to ensure that the assignment is completed on time and that the required standards are met.

At a minimum, the team of consulting firm should include the following key employees with the listed qualifications and experience:

##### **a) Team Leader / Data Systems Expert:**

- University degree in information systems, computer science, public health informatics, or related fields;
- At least ten (10) years of progressively responsible professional experience in data management, design and implementation of data exchange systems, and health information systems;
- Experience working with MOHSPP and other public sector institutions in Tajikistan is considered an asset;
- Demonstrated experience in designing and implementing cross-sectoral data sharing frameworks and interoperability solutions among governmental institutions and agencies;
- Familiarity with health and animal health information systems and platforms such as DHIS2, EMPRESi, Laboratory Information Management Systems (LIMS), or similar systems will be considered a strong asset;
- Fluency in Tajik, Russian and English languages is required.

##### **b) Veterinary / Food Safety Data Expert:**

- University degree in Veterinary Medicine, Veterinary Science, Food Safety, Epidemiology, Veterinary Public Health, or a related field;
- At least five (5) years of experience in zoonotic disease surveillance, epidemiological data management, and information systems within the veterinary and/or food safety sectors;
- Demonstrated experience in the collection, analysis, management, and reporting of animal health and food safety data;
- Familiarity with WOAHS standards and FAO surveillance tools;
- Experience working with veterinary authorities in Tajikistan is considered an asset;
- Fluency in Tajik and Russian is required; knowledge of English is highly desirable.

**c) Environmental Expert:**

- University degree in Environmental Health, Ecology, Environmental Science, Ecology, Natural Resource Management, or a related field;
- At least five (5) years of experience in environmental health risk assessment, environmental surveillance, and environmental data management;
- Demonstrated experience in environmental health risk assessment, including climate-related and ecological factors affecting zoonotic disease emergence and transmission, as well as environmental surveillance, monitoring systems, and data management;
- Experience working with environmental authorities in Tajikistan is considered an asset;
- Fluency in Tajik and Russian is required; knowledge of English is highly desirable.

**d) IT Specialist:**

- University degree in Computer Science, Information Systems, Software Engineering, Information Technology, or a related field;
- At least five (5) years of professional experience in information systems development, database architecture, systems integration, and API development;
- Demonstrated experience in preparing functional requirements, technical architecture design documents for data exchange systems;
- Demonstrated experience in designing and implementing interoperable information systems, with knowledge of data exchange and interoperability standards applicable to the human health, veterinary, and environmental sectors (e.g., HL7/FHIR, WAHIS, and OGC);
- Fluency in Tajik and Russian is required; knowledge of English is highly desirable.

**e) Legal and Regulatory Specialist:**

- University degree in Law;
- At least five (5) years of professional experience in legal practice, legislative drafting, regulatory reform, or public sector legal advisory services;
- Minimum two (2) years of experience working with legal and regulatory frameworks in the healthcare, veterinary, public health, or related sectors;
- Demonstrated experience in drafting laws, regulations, policies, memoranda of understanding, or inter-agency agreements.
- Fluency in Tajik and Russian is required; knowledge of English is highly desirable.

**f) Health Information Systems (HIS) Specialist:**

- University degree in Health Informatics, Public Health, Information Systems, Computer Science, Health Information Management, or a related field;
- At least five (5) years of professional experience in the design, implementation, management, and interoperability of health information systems;
- Demonstrated experience in data governance, data exchange frameworks, interoperability architecture, and data privacy within government health systems;
- Proven experience working across multiple sectors, including human health, veterinary health, environmental health, or other surveillance systems.
- Experience with health information platforms and surveillance systems such as DHIS2, EMPRES-i, or similar systems;
- Experience working with medical authorities in Tajikistan is considered an asset;

- Fluency in Tajik and Russian is required; knowledge of English is highly desirable.

## **V. REPORTING REQUIREMENTS AND TIME SCHEDULE FOR DELIVERABLES**

The consulting firm will prepare and submit reports as follows:

- a) All assignment reports shall be submitted to the client in form of one (1) electronic copy (on CD) accompanied by PowerPoint presentations where appropriate and three (3) original hard copies. All documents to be submitted by the Consultant shall be in English and Russian.
- b) The reports will be submitted to the SI AED.
- c) The electronic data formats shall be compatible with the latest versions of Microsoft Office Suite and any other data formats subject to prior approval by the client.

Client Review Period: 10 working days for comments on interim reports and 15 working days for the final report.

As part of the assignment, the consulting firm must provide the following results:

| No | Activity/Stage                                  | Name of the Deliverable                                | Contents of the Deliverable                                                                                                                                                                        | Time for Submission from contract effectiveness |
|----|-------------------------------------------------|--------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| 1  | Preparation and Planning                        | Inception Report                                       | Detailed workplan, management structure, and TWG establishment plan.                                                                                                                               | 1 month                                         |
| 2  | Establishment of Technical Working Group        | Order of the MOHSPP on the Establishment of the TWG    | Official Order of the MOHSPP approving the TWG mandate and composition.                                                                                                                            | 1-2 month                                       |
| 3  | Situational Analysis                            | Situational Analysis Report                            | Assessment of existing surveillance and data systems and technical capacities at MOHSPP, CFS, and CEP.                                                                                             | 2-3 months                                      |
| 4  | Conceptual Design of the Data Sharing Mechanism | Cross-Sectoral Data Sharing Mechanism Concept Document | Conceptual design of data flows, agreed data categories and formats, roles and responsibilities, governance arrangements, focal points, and recommendations for development of the NOHCS platform. | 4-5 months                                      |
| 5  | Draft Legal and Governance Package              | Draft MoU, SOPs for data exchange                      | Institutionalization recommendations including staffing recommendations, and data security protocols                                                                                               | 5-6months                                       |
| 6  | Final Report                                    | Final Comprehensive Report and Dissemination Materials | Consolidation of all project results; finalized framework, technical design and recommendations.                                                                                                   | 7 months                                        |

## **VI. CLIENT'S INPUT AND COUNTERPART PERSONNEL**

- a) The consulting firm is responsible for all logistics, accommodation and travel costs necessary for the execution of the assignment, as well as the costs of translation and interpretation associated with the

execution of the assignment. All these costs, including all applicable taxes and fiscal obligations under the legislation of the Republic of Tajikistan (including but not limited to Value Added Tax (VAT), income tax, and any other mandatory levies), shall be reflected in and covered by the financial proposal submitted by the consulting firm.

b) The MOHSPP, CFS, and CEP of the Republic of Tajikistan will provide the consulting firm with the necessary administrative support, including introductory letters to other departments and local authorities, meeting rooms, and access to relevant materials, documents, and regulations necessary for the provision of services under the assignment.

c) The following project specialists will provide day-to-day support in the execution of this assignment: PMU Project Coordinator, PMU Public Health Coordinator, PMU Veterinary and Food Safety Coordinator, Environmental protection Coordinator, PMU Environmental Specialist, PMU M&E Specialist.

## **VII. DURATION OF THE ASSIGNMENT**

The period of service provision is **seven (7) months** from the moment of signing the contract.

## **VIII. STAKEHOLDERS TO BE MET**

- Ministry of Health and Social Protection of the Population (MOHSPP) of the Republic of Tajikistan:
  - Department of Sanitary and Epidemiological Safety, Emergency Situations and Emergency Medical Care
  - State Sanitary and Epidemiological Surveillance Service (SSESS)
  - Center for Quarantine and Especially Dangerous Diseases
- Committee for Food Security (CFS) of the Republic of Tajikistan:
  - Anti-Epizootic Center of the CFS
- Committee for Environmental Protection (CEP) under the Government of the Republic of Tajikistan:
  - Department of state control of the use and protection of the plant and animal world and fish stocks
  - Department of Digitalization and Innovation
  - State Institution "Specially Protected Natural Areas"
- National Agency for Innovation and Digital Technologies
- Development partners: WHO, FAO, OIE/WOAH, World Bank, CDC, and other relevant partners.