



# **TERMS OF REFERENCE**

## **SHORT-TERM CONSULTANCY**

**“In-depth assessment and analytics of Animal Health data within the Animal Resources Information System (ARIS) hosted in AU-IBAR”**

**AU-OHDAA Project**

## Introduction

The African Union One Health Data Alliance Africa project (AU-OHDAA) is a two year project that aims to improve digitalized One Health governance and management in sub-Saharan Africa. The African Union InterAfrican Bureau of Animal Resources (AU-IBAR) and *Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH* will be implementing the project funded by the German Federal Ministry for Economic Cooperation and Development (BMZ).

To date, OH-related data is mostly related to zoonosis, epi-/pandemics, foodborne diseases and Anti-Microbial Resistance (AMR). Such data has largely remained in sector silos and has resulted to a slowed pace in creating information and digital intelligence through data science-based algorithms or machine learning. The lack of harmonization and integration of data platforms especially in the one health sphere has resulted to loss of information, lack of information and ultimately to poor One Health governance and management. It is evident that for the One Health approach to be more effective, there should be a paradigm shift from a narrow focus on zoonotic diseases to a more system-based approach that will embrace innovative joint solutions as well as technological approaches. There is also a need to have a broad view of One Health. There is a clear need to ensure we have a strong unified drive towards sharing information, Knowledge and experiences on all the three One Health domains (Animal Health, Human Health and Environmental health).

Presently One Health data has largely remained underutilized, under-analysed and under disseminated in respective sector silos thereby affecting evidence-based decision making. The lack of harmonization and integration of data and data systems especially in the One Health sphere has resulted in loss of information, lack of information and ultimately in poor One Health governance and management.

Data harmonization, integration and access across sectors and disciplines at national, regional, continental and global level is the key missing integral piece. Data is increasingly recognised as a strategic asset, integral to decision-making, policy formulation, targeted investment and actions. Data integration allows for the aggregation of information from various sources, human health data, environmental data, animal health and veterinary data, socio-economic data, wildlife monitoring systems among others. By integrating and analysing this data collectively, it becomes possible to identify disease risk factors, trends, and patterns. Integration of data from diverse One Health sectors provides metadata necessary for advanced data analytics, prediction modelling and machine learning that will provide valuable insights, early warning and evidence-based recommendations to promote better animal, human, and environmental health.

Therefore, to further strengthen the One Health data domain and with special focus to the Animal Health component, it is necessary that the available Animal health data that is domiciled in AU-IBAR ARIS database is analysed and assessed to better inform continental areas that require data harmonization, integration and interoperability. ARIS currently

collects monthly disease and vaccination data inventories which are collected from the Chief veterinary officers across the 55-member states.

To enable this action, AU-IBAR intends to commission a short-term consultancy to undertake in-depth assessment and analytics of Animal Health data within the Animal Resources Information System (ARIS)

### **3.0 Objectives of the Consultancy**

Undertake in-depth data analytics on animal health data aimed at better informing intervention areas for improved data sharing, data integration, data harmonization and evidence-based policy formulation.

The specific objectives of the consultancy are:

1. Review existing ARIS animal health data records from 2015 - 2023 and undertake quality check and assurance
2. Undertake comprehensive data analytics and in-depth analysis interpretation to inform the overall disease and vaccination status in Africa based on ARIS animal health with the generation of various graphical outputs
3. Identify target areas to improve One Health data collection and analytics that will subsequently contribute towards improved One Health data management and governance at national, regional and continental levels
4. Draft recommendations and guidelines for improved data quality and management procedures, Real-time data access and analytics in ARIS.
5. Develop a One Health Feedback prototype to support dissemination of user-friendly data outputs and targeted information
6. Propose intervention strategies (short, medium and long term) for the sustainability and improvement of One Health governance and management (Key focus on Sharing, integration, standardization and harmonization of data)

### **Expected Outputs/deliverables of the consultancy**

It is expected that the following will be achieved under this assignment:

1. Complete quality assured Animal health data available for the above stipulated period
2. Comprehensive animal health data analytics including data visualization outputs available
3. Draft One Health Feedback tool prototype available
4. Technical report including all data analytics outputs and recommendations for improved data collection, compilation, analytics and feedback especially on One Health

### **Submission & Approval of Reports**

1. Copies of the approved technical report referred must be submitted to AU-IBAR. AU-IBAR is responsible for approving the progress reports

### **Methodology**

In summary, the consultant will utilize the existing ARIS Animal Health data which includes monthly disease and vaccination inventories from 55-member states collected from 2015 - 2023.

### **Time frame and location**

The assignment will be conducted for a period of 30 working days within a period of 2 months.

The assignment will start immediately after signature of the contract by both parties.

The Selected candidate will be based at the AU-IBAR offices as required and agreed with the supervisor.

### **Competences and experience**

#### **Qualifications**

A Bachelor's degree in data Science/analytics, computer science or any relevant fields will be required. An advanced degree in the relevant study areas will be an added advantage.

#### **General experience**

The consultant should have:

At least five years' experience in data science with working knowledge on One health domains, Animal Science, Veterinary Medicine or any related area. Experience with animal genetic resources or the livestock sector data will be an added advantage.

The consultant should have;

- Proficient in at least one data-focused programming language (preferably R)
- Proven ability in data analytics (visualization and interpretation)
- Experienced in data collection and management of National and/or Regional data systems
- Experience in large data repositories management
- Ability to interpret complex data and disseminate information for non-scientific audiences' consumption and use at national, regional and continental level to inform evidence-based decision making
- Proficiency in English and any other AU working languages
- Excellent writing and reporting skills
- Efficient communication skills and demonstrated experience in working with multi-disciplinary, multi-stakeholder and multi-sectoral actors across the African continent

### **Remuneration**

The consultant will be paid a lumpsum of 3000USD. The consultancy fees will be paid upon satisfactory completion and delivery of the expected outputs

### **Supervision**

The consultant will work under the overall technical guidance and supervision of Project lead for AU OHDAA and overall supervision of the Director – AU-IBAR.

### **Disclaimer**

All data, information and reports generated from the consultancy is intellectual property of AU-IBAR.

### **How to Apply**

Please submit your CV including three references and a cover letter, including the proposed methodology to the email [procurement@au-ibar.org](mailto:procurement@au-ibar.org) and a copy to [irene.ohaga@au-ibar.org](mailto:irene.ohaga@au-ibar.org), clearly indicating in the subject line “*In-depth assessment and analytics of Animal Health data within the Animal Resources Information System (ARIS)*” The deadline for applications will be 25<sup>th</sup> March 2024. Only short-listed candidates will be notified.