

WOAH Data Integration Department (DID) initiatives and projects

Accelerating the Operationalisation of the One Health Joint Plan of Action (OHJPA) in Veterinary Services in the European Region

18-20 November 2025 - Athens, Greece

Paolo Tizzani

Data Integration Department - WOAH



World
Organisation
for Animal
Health

Organisation
mondiale
de la santé
animale

Organización
Mundial
de Sanidad
Animal

What is data integration?

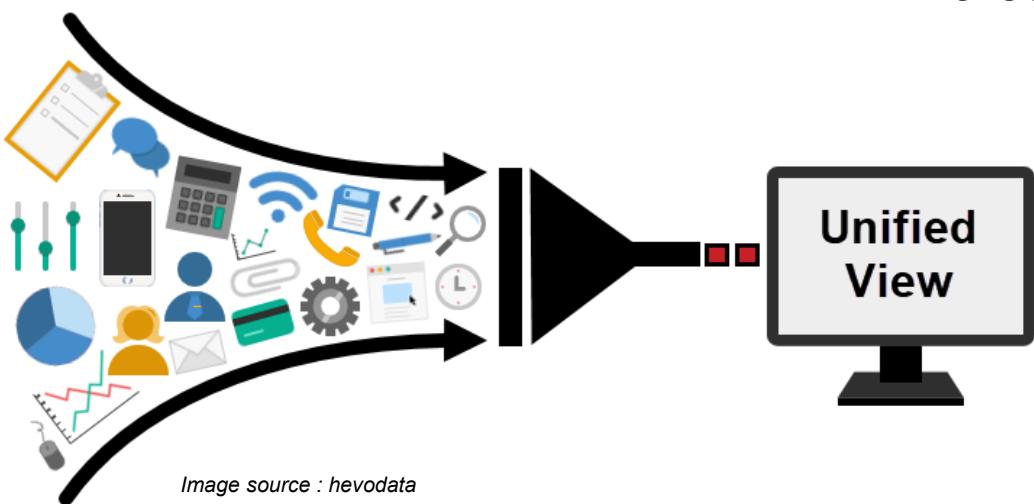


Image source : hevodata

Microsoft definition

The process for combining data from several **disparate sources** to provide users with a **single, unified view**

- **All types of data**, considering its growth, volume, and all its varying formats
- Allows us to **see eye-to-eye on situations, to support decisions**
- Part of data management

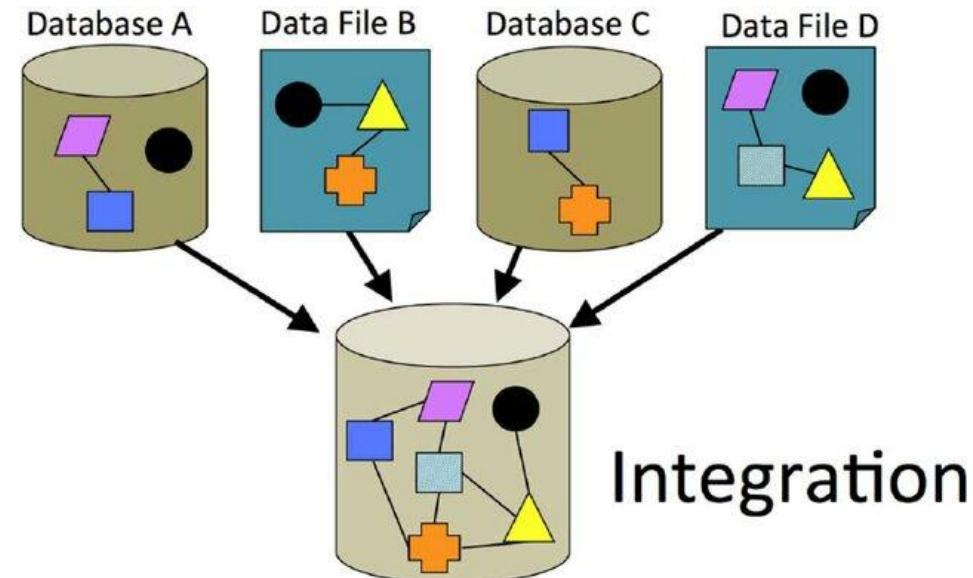
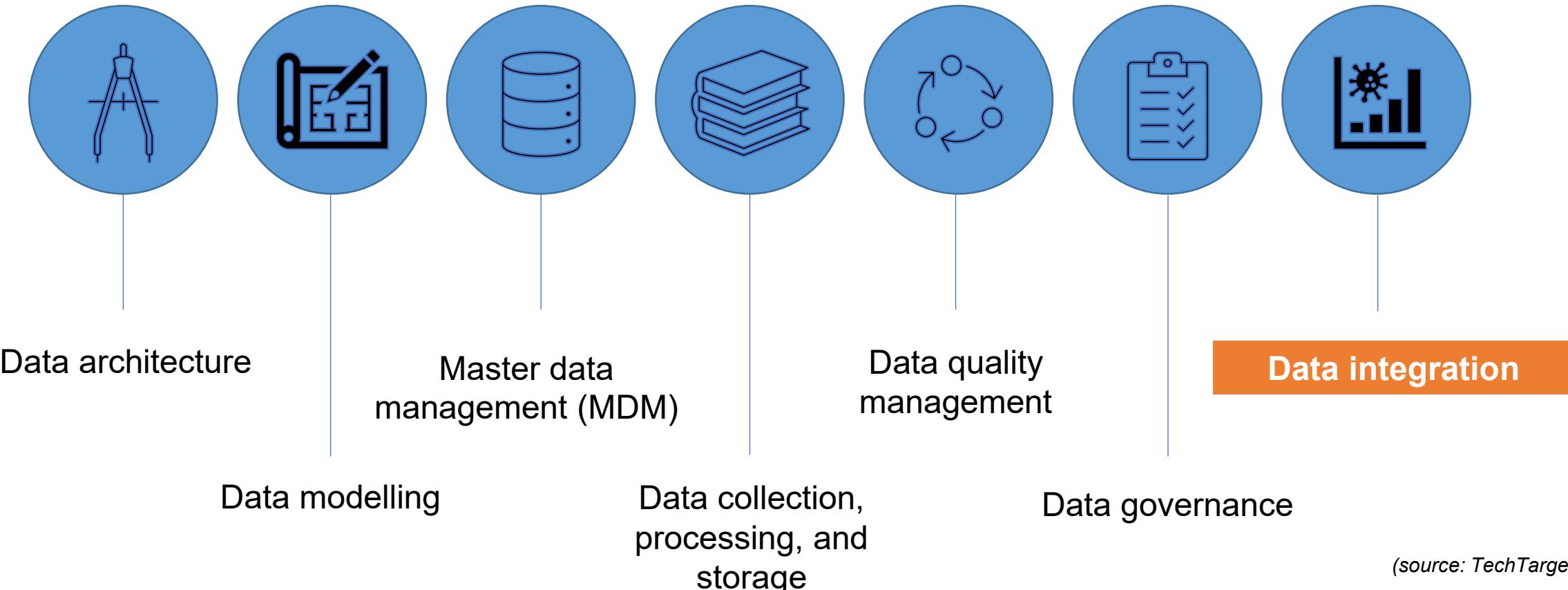


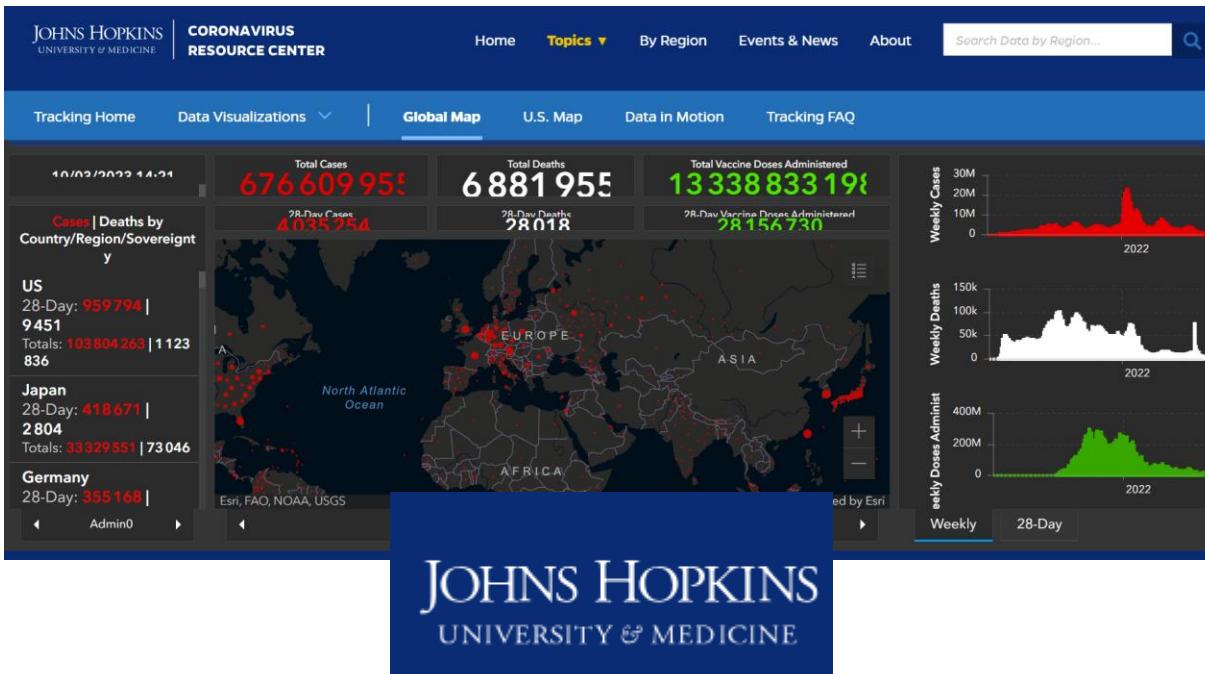
Image source : Eppig, Janan T., et al. "Mouse Genome Database: from sequence to phenotypes and disease models." *genesis* 53.8 (2015): 458-473.

- WOAH data integration will require an **effective and transparent implementation of all pillars of data management**, with adequate budget, tools, human resources, and skills
- A **progressive approach** and a **certain level of flexibility** will be required to adjust the work and priorities to future needs and to further develop cross-sectoral work, while including all relevant actors in the process



It has emerged as a **critical need to support decision making** in public health during the epidemics of the past decade and even more so during the recent pandemic (COVID-19)

WOAH also recognises the importance and need for data integration



Extensive data integration effort described in [International Journal for Equity in Health](#)

Vision & Highlights



Vision

- WOAH's Statistics Office & Transversal department
- Promoting state-of-the-art methods and tools
- Empowering colleagues

Workstreams

- Data Science Lab
- Epidemic Intelligence
- Observatory



Data Science Lab

Tools, methods, processes

- Identify opportunities and develop methods to modernize, streamline, accelerate and automate processes.
- Explore AI use cases relevant to WOAH and develop tools.

Data science training

- Class-format training sessions, July-October 2025
- Workshop series focused on business cases, Nov-Dec 2025



Epidemic Intelligence



Periodic situation report

- Regular situation reports on hot-topics
 - African Swine fever
 - Highly pathogenic avian influenza
 - Aquatic animal diseases
 - Wildlife
- Progressive automation
- Potential extension to One Health topics



Epidemic intelligence framework

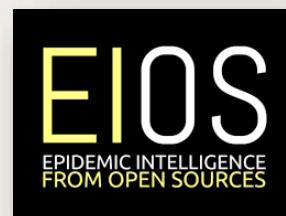
- WOAH Epidemic intelligence framework
- Exploring use of AI to improve the framework
- Assessment of sensitivity of surveillance systems

AFRICAN SWINE FEVER (ASF) Situation Report 69

Period covered: September 2025
This report provides an update of the ASF situation, according to the information shared with WOAH.

HIGH PATHOGENICITY AVIAN INFLUENZA (HPAI) Situation Report 75

Period covered: September 2025
This report provides an update of the high pathogenicity avian influenza (HPAI) situation, according to the information submitted to the World Organisation for Animal Health.



Building the World Organisation for Animal Health (WOAH) framework for Epidemic Intelligence
Document for internal purposes (WOAH only)

This work was made possible thanks to the contribution of the following departments, technical units, Regional and Sub-Regional Representations

Coordination

Data Integration Department – Paolo Tizzani (lead), Lina Awada, Laure Weber-Vintzel

WOAH Epidemic Intelligence Core Group

Antimicrobial Resistance and Veterinary Products Department – Andrés García Campos and Delfy Gómez

Foresight Advisor – Tianna Brand

Preparedness and Resilience Department – Claire Cayol and Madison Wimmers

Science Department – Mariana Delgado

World Animal Health Information and Analysis Department – Itala Gizo and Colin Baster

WOAH Epidemic Intelligence Extended Group

GF-TADS Coordinator – Alexandre Fedaevsky

One Health Coordinator – Chadia Wannous

Regional Representation for the Americas – Luis Barcos and Martin Minassian

Regional Representation for Africa – Serge Eugene Mpouam

Regional Representation for Asia and the Pacific – Jacqueline Lusat and Shohei Urushizaki

Regional Representation in Moscow – Marina Sokolova

Sub-Regional Representation for Central America – Catya Itzel Martinez Rivas and Verónica Aguilar

Sub-Regional Representation for Central Asia – Dmitry Morozov

Sub-Regional Representation for Eastern Africa – Viola Chemis

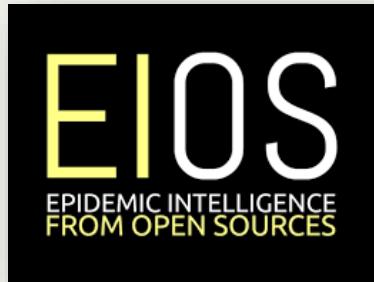
Sub-Regional Representation for North Africa – Francesco Valentini

Sub-Regional Representation for South-East Asia – Bolortuya Purevsuren

Sub-Regional Representation for Southern Africa – Tenzin

Sub-Regional Representation in Brussels – Denise Dubois

Improving tools for One Health intelligence



CATEGORIES

- Any of these selected categories
- All OIE Categories (473 of 473 categories selected)
- Animal Related (3 of 3 categories selected)
- Biological (144 of 144 categories selected)
- Chemical (76 of 76 categories selected)
- Disasters (11 of 11 categories selected)
- Diseases From J-Q (1 of 1 categories selected)
- Health Systems (6 of 6 categories selected)
- Immunity (4 of 4 categories selected)
- Measures (6 of 6 categories selected)
- Nuclear (4 of 4 categories selected)
- Outcomes (7 of 7 categories selected)
- Populations (12 of 12 categories selected)
- Product Safety (1 of 1 categories selected)
- Symptoms (16 of 16 categories selected)
- All Hazards Threats (optional) (182 of 182 categories selected)

Combine more selected categories in (AND)

EOS fosters a global public health intelligence collaboration, uniting stakeholders and leveraging open-source data for early detection and response to public health threats under a One Health, all-hazards approach. WHO leads this multi-stakeholder initiative under its Health Emergencies Programme. As a global collaboration, the EOS initiative is governed by a Coordination Group with representatives from various organisations; **WOAH** is one of the organisations.

Daily screening of the web for WOAH-listed and emerging diseases

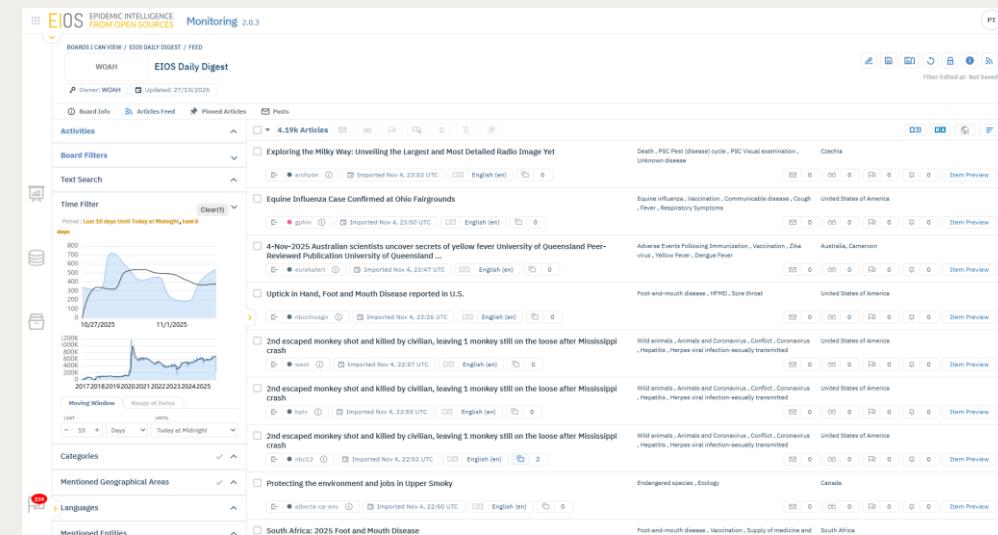
26,000 sources

723 disease categories

Just over 100 languages

150,000 – 200,000 news/year

Communication between WOAH and its Members

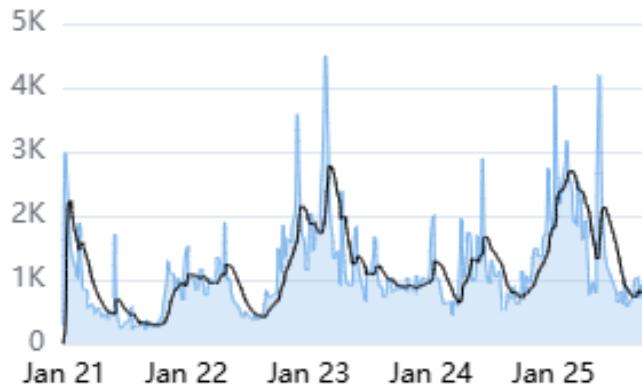




Example - Avian influenza monitoring systems in WOAH

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Global – last 3 years – 263k articles



The danger of bird flu is spreading: 14 localities in Olt under surveillance

Alina Mitran

Published: 13.11.2025 01:02

The sanitary and veterinary authorities are warning of the danger of avian influenza outbreaks, after confirmation of cases, including in farms in Europe. 14 localities in Olt County are under surveillance.

The Balearic Islands avoid a total lockdown of birds and adapt measures against avian flu

The Ministry of Agriculture has banned livestock markets in 14 at-risk municipalities, but allows open-air breeding under special conditions.

Avian influenza drives up egg prices and producers fear speculation: "There will be no supply problems".

The price of eggs and, to a lesser extent, chicken, is once again a cause for concern because of the effect they have on the cost of the shopping basket. This is nothing new; a few months ago, the increase in cases of avian flu, especially in other European countries and in the United States, had a knock-on effect on a foodstuff considered a staple. Even more so when its consumption has skyrocketed significantly in recent years. Radiography of egg consumption: 143 per person per year and a purchase that is growing despite soaring prices. Now the upsurge of this virus - which has forced the slaughter in Spain of nearly three million laying hens in a universe of almost 45 million animals - has generated a new earthquake among the different actors in the food chain, with calls to avoid price speculation and messages that seek to guarantee that there will be no problems of shortages. The key measure to try to curb the impact of avian flu has come this week because, since Monday, the Ministry of Agriculture, Fisheries and Food confined all poultry in areas considered special risk and surveillance, after detecting 14 outbreaks of this virus in Spain. In total, almost 2,000 municipalities in Andalusia, Aragon, Castilla y León, Catalonia, Navarra or the Balearic Islands, among others. A level of surveillance that will be maintained and that also includes other prohibitions, such as the breeding of ducks and geese with other poultry or that the latter cannot be given water from reservoirs to which wild birds may have had access. The objective is to stop the virus that not only affects Spain, but also other European countries. For example, in Germany almost 60 outbreaks have already been detected; in Poland, 17; and in France and Italy, 10 and 16, respectively, according to data published by the Ministry. The derivative is that the prices of eggs and, less so, those of chicken, are on the rise. The figures for the rise in the cost of these commodities may vary depending on the source, although the trend is the same. If you look at the data published by the Ministry of Agriculture - which is updated weekly - from the beginning of the year to the first days of November, the price of a dozen free-range eggs has risen by more than 28% so far this year. Meanwhile, the price of a dozen Class M eggs from caged hens has increased by 35%, and the same amount of organic eggs, by 24%. At the same time, chicken (in its different variants) is, on average, 6.7% more expensive.

Europe – last 3 years – 105k news



AI Use Cases – RVF example

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Data integration from multiple sources



WAHIS

EOS



API

AI use:
-Summary of news from different sources
-News title translation
-Assisting in coding



Rstudio
Integrate information and produce report



Epidemic intelligence Report

RIFT VALLEY FEVER (RVF) IN GABON, MALI, MAURITANIA, SENEGAL

Epidemic intelligence report 4

AUTHOR: World Organisation for Animal Health (WOAH) - Data Integration Department
PUBLISHED: November 3, 2025

Contents

- Period Covered
- Outbreak Summary
- Quarantine date
- Rift Valley Fever (RVF) Surveillance Report – data provided by Mauritania (as of 25 October 2025)
- Media attention: Number of news in blue and trend in red
- Summary of the epidemic intelligence update
- WHO links

Official data and other sources

30/10 - 09/11/2025

Outbreak Summary

The figure below illustrate the distribution of outbreaks reported for RVF: ongoing events in the area. Currently three events are ongoing in the concerned countries.

Senegal

- One event reported on 21 September 2025 (1 immediate notification and 2 follow-up reports - last update 17/10) for disease recurrence with 26 outbreaks reported

Mauritania

- One event reported on 3 October 2025 for unexpected change in disease epidemiology (1 immediate notification and 1 follow-up report - last update 24/10) with 25 outbreaks reported

Gabon

- One event reported on 29 October 2025 for the first occurrence in a zone (1 immediate notification) with 1 outbreak reported

The map shows outbreaks reported to WOAH (in red) and additional outbreaks appearing in FAO's Empreis database (in blue).



PROVNA data



National reports

Rift Valley Fever (RVF) Surveillance Report – data provided by Mauritania (as of 25 October 2025)

Animal Health Situation
Confirmed Outbreaks
91 suspected outbreaks reported via Kobo toolbox.
56 confirmed positive by ONARSOLP lab, including 8 asymptomatic viral circulation cases (from active surveillance).
35 outbreaks tested negative.
Sociological Observations
Geographic Concentration: Southern and southeastern Wilayas (Brakna, Tiznit, Hodh Gharbi, Assaba, Gorgor) are hotspots due to:

- High pastoral density. Cross-border Inwakid movement.
- Seasonal transhumance. Movement between wet and dry zones facilitates virus spread.
- Climate Conditions: Excess rainfall has created stagnant water bodies, favoring mosquito vector proliferation.

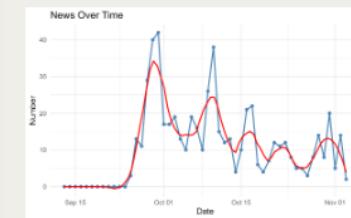
Actions taken

- Activation of One Health and surveillance committees.
- Daily SitReps and vigilance circulars to meet inspectors and private vets.
- Strict meat inspection protocols in slaughter areas.

Classification of outbreaks and vector control actions. Previous actions: Communication materials (posters, flyers).

Media scanning (EOS)

Media attention (number of news in blue and trend in red)



Summary of the epidemic intelligence update

Epidemiological Update

Senegal

Animals

- The World Organisation for Animal Health (WOAH) reports rising RVF cases in Senegal and Mauritania, linked to recent floods. It calls for international cooperation and One Health strategies to manage the transboundary zoonotic threat.

Humans

- Public awareness remains low despite 277 RVF cases and 22 deaths. The Ministry of Health emphasizes the need for improved communication and preventive measures, especially in urban areas.

Mauritania

Animals

- In Malian, members express concern over delayed vaccine delivery for RVF. The disease poses serious risks to livestock and humans, especially during the rainy season. Authorities have committed to supplying vaccines, but no timeline has been provided.

Humans

- As of October 26, Senegal has recorded 328 confirmed cases of Rift Valley Fever (RVF), including 28

AI Use Cases – RVF example

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Data integration from multiple sources



WAHIS

EIOS

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TERAMO

API

AI use:
-Summary of news from different sources
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-Assisting in coding

AI allows to:

- *Save human resources*
- *Increase accuracy and efficiency*
- *Improve data analysis and facilitate data interpretation*

Gemini

Rstudio

Integrate information and produce report

Epidemic intelligence

Report

RIFT VALLEY FEVER (RVF) IN GABON, MALI, MAURITANIA, SENEGAL

Epidemic intelligence report 4

World Organisation for Animal Health (WOAH) - Data Integration Department

EWI-040

November 3, 2025

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- Period covered
- Outbreak Summary
- Geographic Summary
- Rift Valley Fever (RVF) Surveillance Report – data reported by Mauritania (as of 25 October 2025)
- Summary of the epidemic intelligence update
- Geographic Observations
- Environmental Observations
- Actions taken

Report generated on 3 October 2025 for the following changes in disease epidemiology:

Outbreak Summary

The figure below illustrates the distribution of outbreaks reported for RVF ongoing events in the concerned countries.

Currently 20 outbreaks are ongoing in the concerned countries.

Outbreaks are reported by country and a follow-up report is issued every 15 days.

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MEDIA ATTENTION (NUMBER OF NEWS IN BLUE AND TREND IN RED)



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PROVNA data



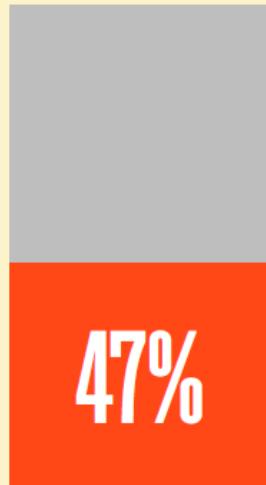
Observatory and One Health approach

Implementation of WOAH standards: the
Second Observatory Monitoring Report



Immediate notifications for zoonotic diseases

Between 2005 and 2023,



of immediate notifications
about WOAH-listed diseases
(2,172 out of 4,629)

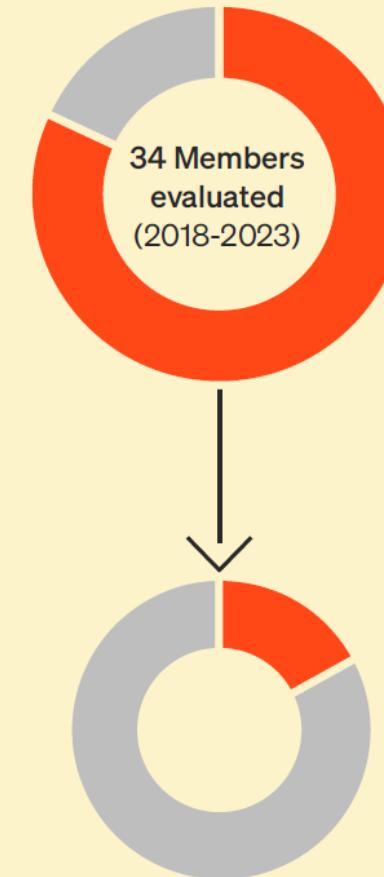


of immediate notifications
about emerging diseases
(124 out of 182)

were considered to have **zoonotic potential** according to
the scientific information reviewed in 2024.

Source: WAHIS

Members capacity for One Health



82%

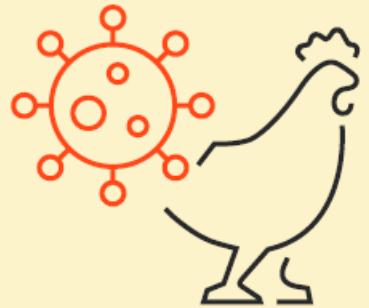
maintained **formal external coordination mechanisms** with clearly described procedures or agreements for national level activities such as One Health.

17%

had agreements in place for most activities, uniformly implemented throughout the country or territory, **including at sub-national or provincial level**.

Source: PVSIS

Between 24 September 2021 and 25 September 2023:



94

Members notified WOAH through the World Animal Health Information System (WAHIS) about the presence of HPAI in domestic or wild birds.



80%

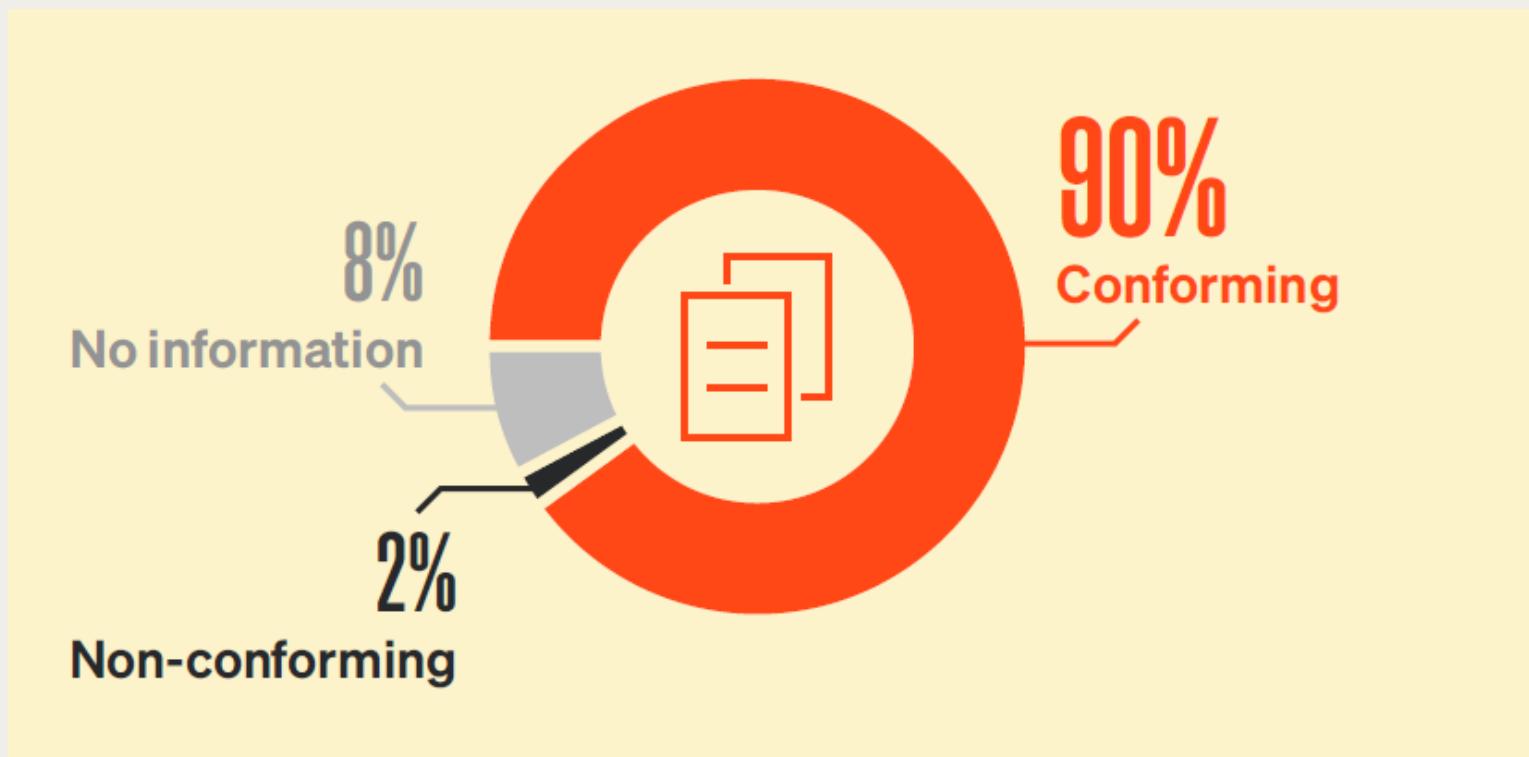
of them were able to share the virus sequence data through public health sector or to open database.



The action encouraged by OFFLU (FAO-WOAH) network to enhance vaccine production.

Between 2007 and 2023, there were **1,035** SPS notifications to WTO about new or modified regulations referring to WOAH standards, aiming to **protect humans from animal diseases**.

Out of these notifications...



Thank you

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