

WOAH's epidemic intelligence for decision making

Lina AWADA, Paolo TIZZANI

Veterinary epidemiologists, Data Integration Department, WOAH

3-5 April 2023

Maison de la Chimie, Paris, France



1. Epidemic intelligence and WOAH's mission of transparency





HPAI events are kept secret fearing for consequences and no one knows Gaps in information

Media talking about HPAI spread between mammals based on a hypothesis before scientific confirmation **Misinformation**

Deliberate release of false information on fake HPAI events to create panic **Disinformation**

Imagine a world where... Countries do early detection but... Do not systematically share official information

How to do risk assessment on disease spread?

How to prepare and respond quickly?

How to avoid panic?

The founding Members entrusted WOAH with the mission of ensuring transparency of the global animal disease situation and committed themselves to the legal obligation to report

1924:

One source of information?

Possible gaps when relying on official notification only:

E.g.

Significant HPAI wild bird mortality event in a country

National Focal Point in charge of notification has been recently appointed and does not understand that wildlife is in the scope of mandatory reporting WOAH not aware, information not confirmed with official authorities and not communicated to the public



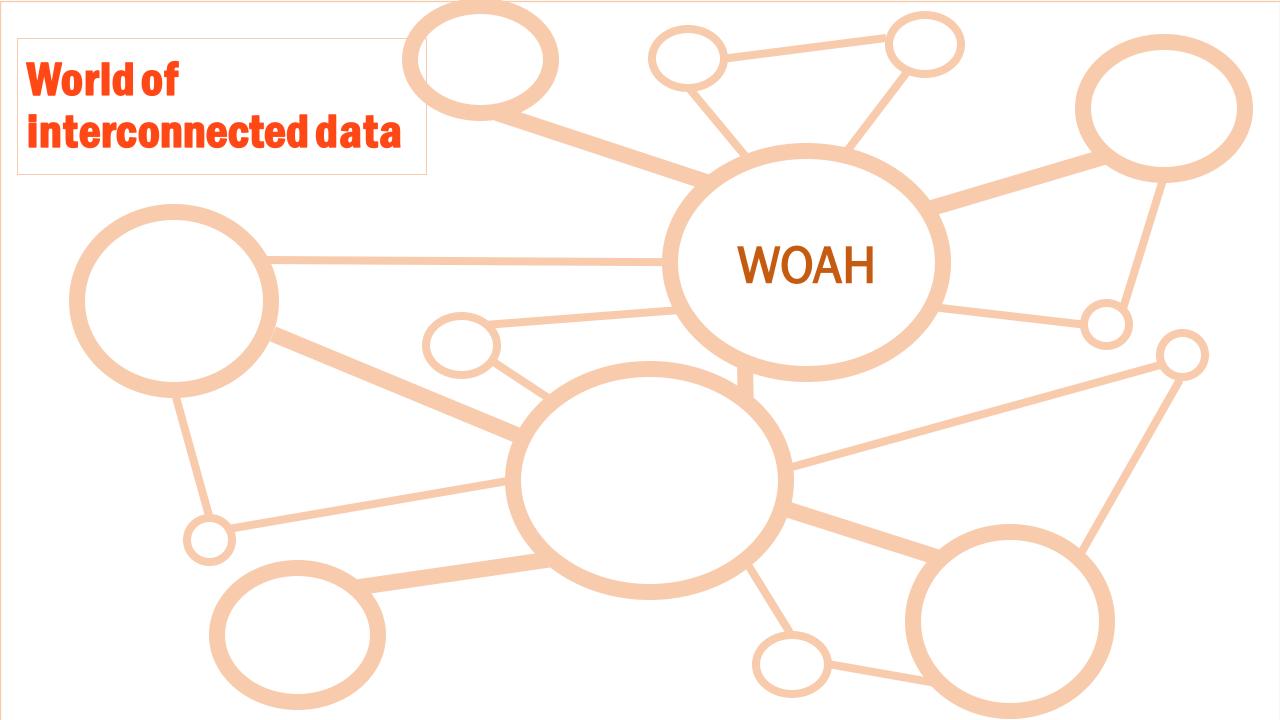
That is why, 20 years ago, WOAH Members gave the organisation the mandate of conducting epidemic intelligence

Epidemic intelligence

"Cycle of **organised and systematic collection**, analysis and interpretation of **information from all sources** to enhance early detection of health events and early warning for timely response, based on an adequate assessment of the associated risk"







World of interconnected data

- In today's world, information systems are highly interconnected and interdependent
- Systems have different scopes and processes, which leads to specific limitations and added values
- Crossing information provides a more accurate picture of reality
- WOAH and its Members are a key source of information for other systems & other systems are of primary importance for cross-checking the information received at WOAH
- Data exchange is also essential for analysis and information for decision makers

Fast evolution of epidemic intelligence in WOAH

20 years of

Information exchange

Signal detection technology

WOAH resources for this activity (human resources, networks, systems)

2. How WOAH is using epidemic intelligence for early detection and warning





Typology of sources considered within epidemic intelligence in WOAH

In 2022 – information collected on 120 listed diseases and 4 emerging diseases

182 120000 334

Members reportingSignals detected throughReferinformation throughweb scrapingsharingWAHISVAHISVAHISSharing

Reference Centers

sharing information with WOAH

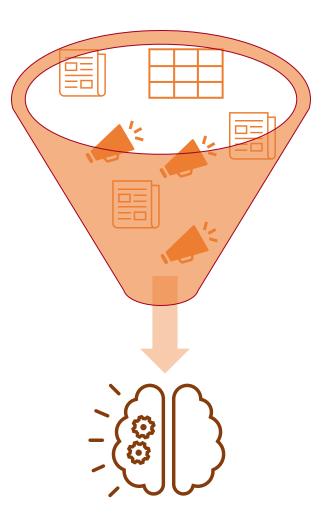
& WOAH network of partners with regular or ad hoc

information exchange

((World Organisation for Animal Health Founded as OIE	Analytics ~	Reports ~
← <u>R</u>	eturn to d	bird flu is now spreading	
REF	Lima, 07 cle Febrero de 2023	Fitter of infected , , who died ALSO has	
Col	CARTA-0048-2023-MIDAGRI-SENASA-DSA		ification
G	Señora Dra. MONIQUE ELOIT Directora General Organización Mundial de Sanidad Francia	D I no led from bir flu has also tested positive	
COL ZON	Asunto : Mortalidad de fauna silvestre por virus de Influenza Aviar	 International Health Regulations (IHR) National Focal Point (NFP) reported with avian influenza A (H5N1) virus to WHO. A second case, a family on 24 February 2023. An outbreak investigation is ongoing including reported cases to the virus. 	EVENT ID 4668
	Tengo el agrado de dirigirme a usted para comunicarle los resultados positivos al virus de influenza aviar H5N1 en una muestra de lobo marino (<i>Otaria flavescens</i>) procedente del departamento de Lima y otra de un delfín (<i>Tursiops truncatus</i>) procedente de Piura, reportados por el Servicio Nacional Forestal y de Fauna Silvestre	> > > > > > > > > > > > > > > > > > > > > > > > > > > > > > > >	

How do we get the useful information from all the signals?

- WOAH standards defines information related to stable situations vs exceptional events
- Internal process to treat signals of unofficial information
- Systematic validation of information with Members
- WOAH gets support from its network of experts to understand and communicate on disease situations
- Consider contextual data, drivers' data & indirect signals to assess risks



Value of the types of sources considered within epidemic intelligence in WOAH

Examples for HPAI in 2022

183







Alerts **spontaneously submitted** by National Authorities Alerts submitted by National Authorities after WOAH request based on **web scraping**

Meetings between WOAH and OFFLU **expert network** to discuss One Health epidemiological information including molecular and vaccination issues Meetings of **FAO-WOAH-WHO** Global Early Warning System for health threats and emerging risks at the humananimal-ecosystems interface

3. What decisions can be taken based on this information?







 National authorities can take decisions and implement actions to assess risk, get prepared to avoid spread of pathogens or mitigate event introduction

• **Private sector,** for example designing Poultry Insurance Scheme





For WOAH

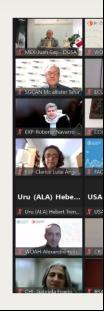
- Preparedness: identification of threats and needs for urgent regional & global coordination, guidance to Members
- Periodical re-assessment of the priorities and **needs for updates** of Standards, guidance, activities, and processes



Home > Projects > GF-TADs > GFTADs News > First meeting of the Standing Group

AVIAN INFLUENZA





For WOAH partners



- Early warning & response, WOAH linking with INTERPOL
- Intersectoral collaboration (One Health)

For the general public

- WOAH provides reference information
- Fights against misinformation / disinformation

Filters

World Organisation

for Animal Health

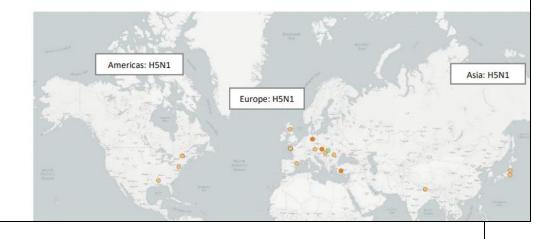
ounded as OIE

HOME >> ANIMAL DISEASE EVENTS

WAHIS

New outbreaks and associated subtypes

During the period covered by this report, a total of 37 new outbreaks in poultry were reported by 14 cd Bolivia, Canada, France, Germany, Hungary, Japan, Nepal, Romania, Slovakia, Spain, Türkiye, United I States of America). Details are presented in Figures 2 and 3.



Events management



3. Conclusions





Conclusions

- WOAH maintains its role and responsibility in publishing only the reference information validated by official authorities
- Comparison with other sources allows to identify data limitations and WOAH & Members can act
- WOAH provides **context to the information** presented (stable situations vs exceptional events)
- 20 years of epidemic intelligence evolution in WOAH, going towards **One Health Epidemic Intelligence?**
- Essential for early detection, warning and allowing all actors to implement timely decisions to reduce disease impacts







Lina AWADA & Paolo TIZZANI

Veterinary epidemiologists, Data Integration Department, WOAH

I.awada@woah.org

This event is supported by funding from:





Counter Proliferation & Arms Control Centre



Co-funded by the European Union



Tackling shared threats for a safer world

#WOAHGlobalConference

3-5 April 2023

Maison de la Chimie, Paris, France

