

# OHSEA Capitalisation Colloquium

## Session 4.1 – One Health surveillance capacity

### World Animal Health Information System - WAHIS

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World  
Organisation  
for Animal  
Health

Organisation  
mondiale  
de la santé  
animale

Organización  
Mundial  
de Sanidad  
Animal



## WAHIS: Animal Health Data

- Transparency of the world animal health
- WOAHA Members have an obligation to submit information on their animal health situation (list of terrestrial and aquatic animal diseases notifiable to WOAHA)
- WOAHA regularly adapts the information technology tools of WAHIS which comprises three essential elements:
  1. Early warning system
  2. A monitoring system
  3. Further information provided by National Authorities through 6-Monthly Reports



**Diseases & case definitions based on WOAH Standards**

Criteria based on WOAH *Animal Health Codes* :

1

International spread of the pathogenic agent and at least one country has demonstrated freedom

**AND**

2

Transmission to humans with severe consequences

**AND**

**OR**

Significant impact on the health of domestic or wild animals

3

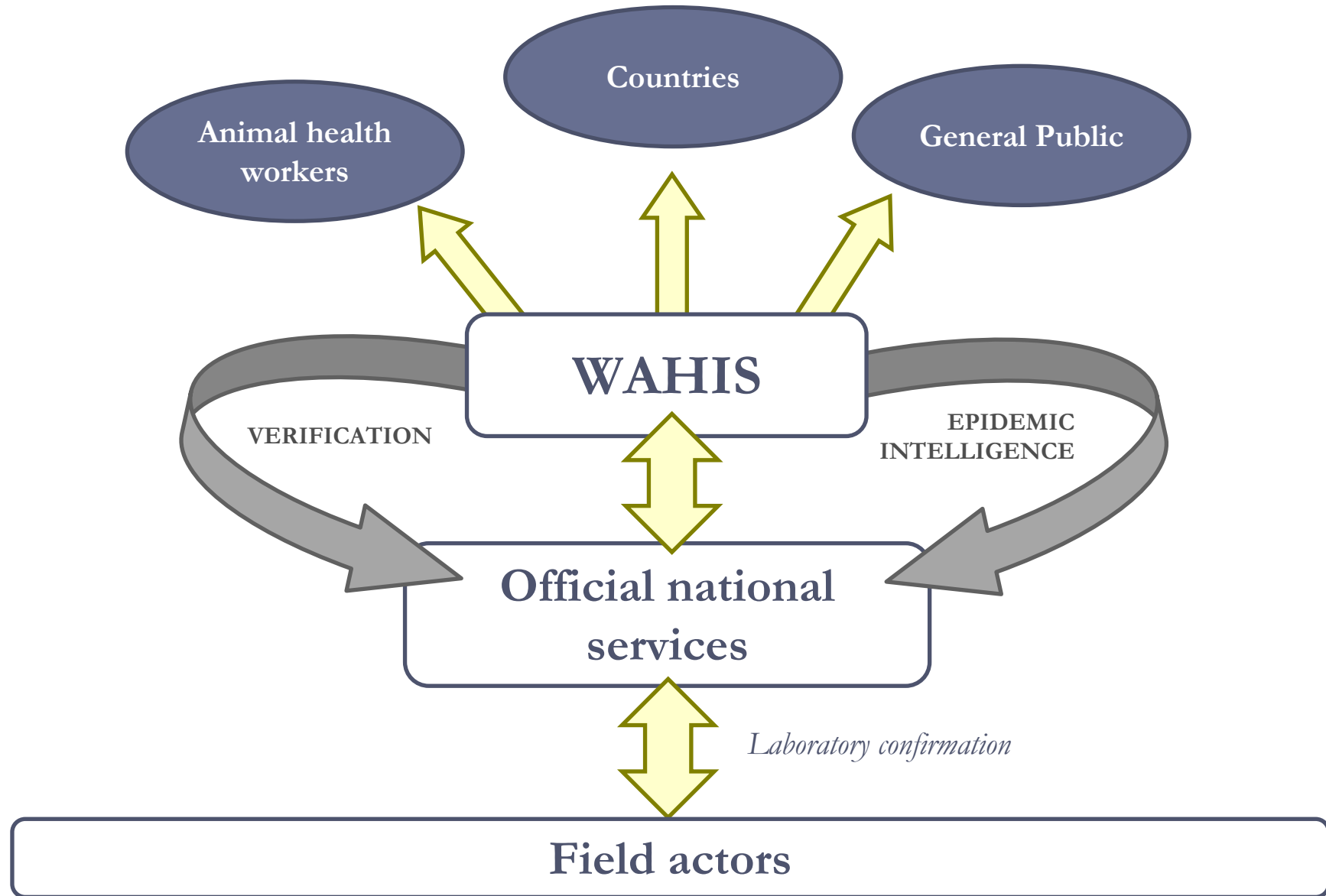
Reliable means of detection, diagnosis and precise case definition

+ emerging diseases

120 listed diseases and 4 emerging diseases in 2022



## Principles of the WAHIS system



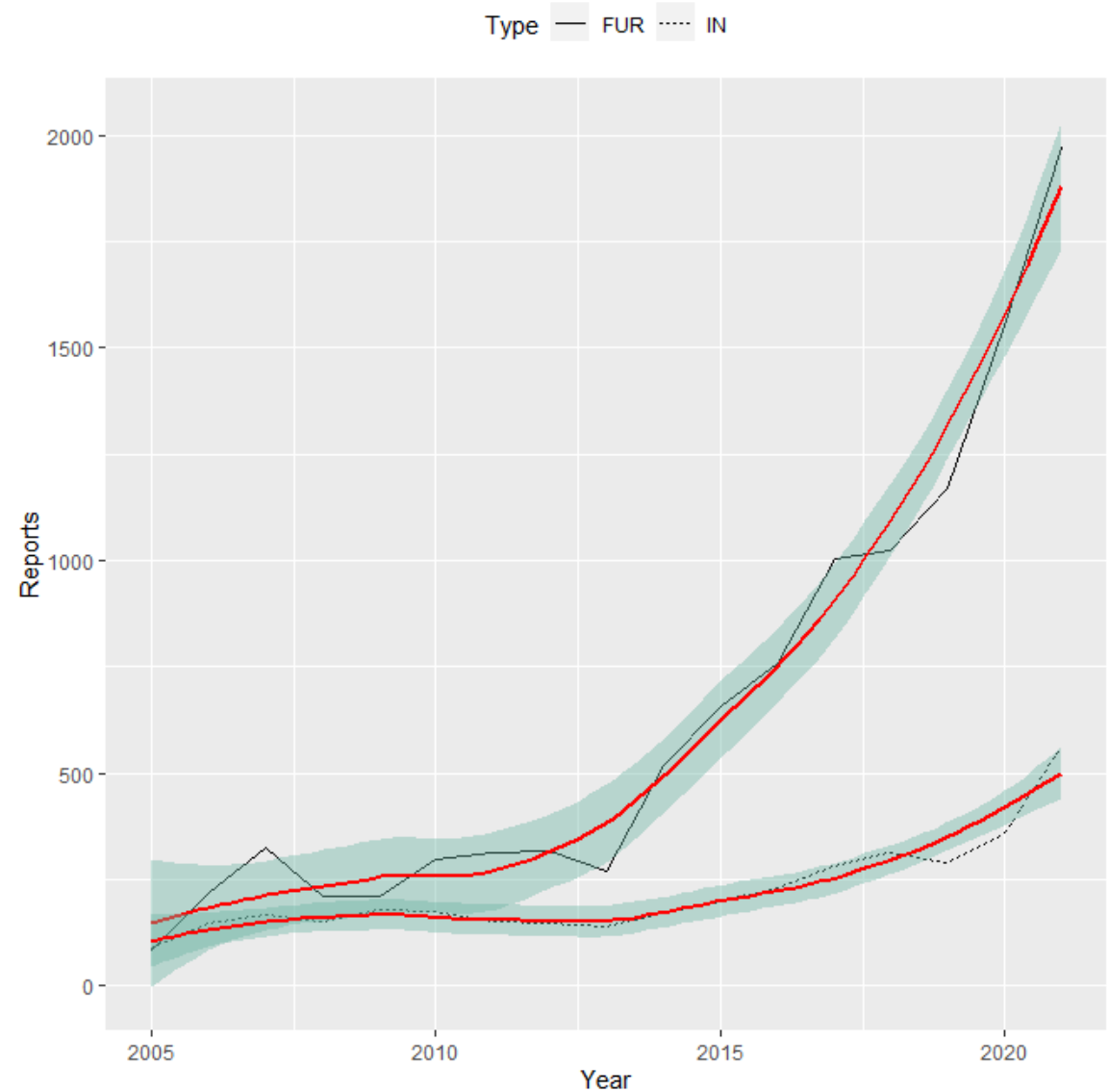


## Some key figures

- ✓ Time scope : 2005-present
- ✓ Geographical scope : global - 218 reporting countries and territories
- ✓ Information on 183 diseases of terrestrial and aquatic animals
- ✓ More than 3,8 million outbreaks and 7,8 billion cases recorded in the database, with geographical, temporal, quantitative details and epidemiological information



- **4,054 IN** (alert messages - yearly average 226)
- **11,297 follow-up reports** (yearly average 628)





## Analytics

Disease situation >

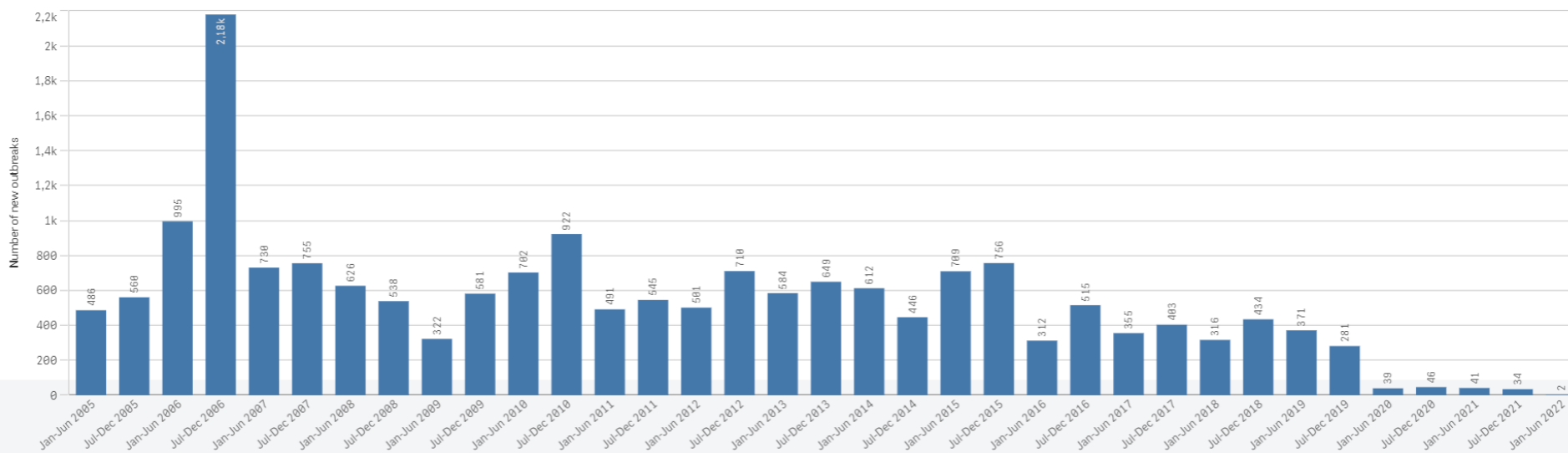
Animal health capacity -  
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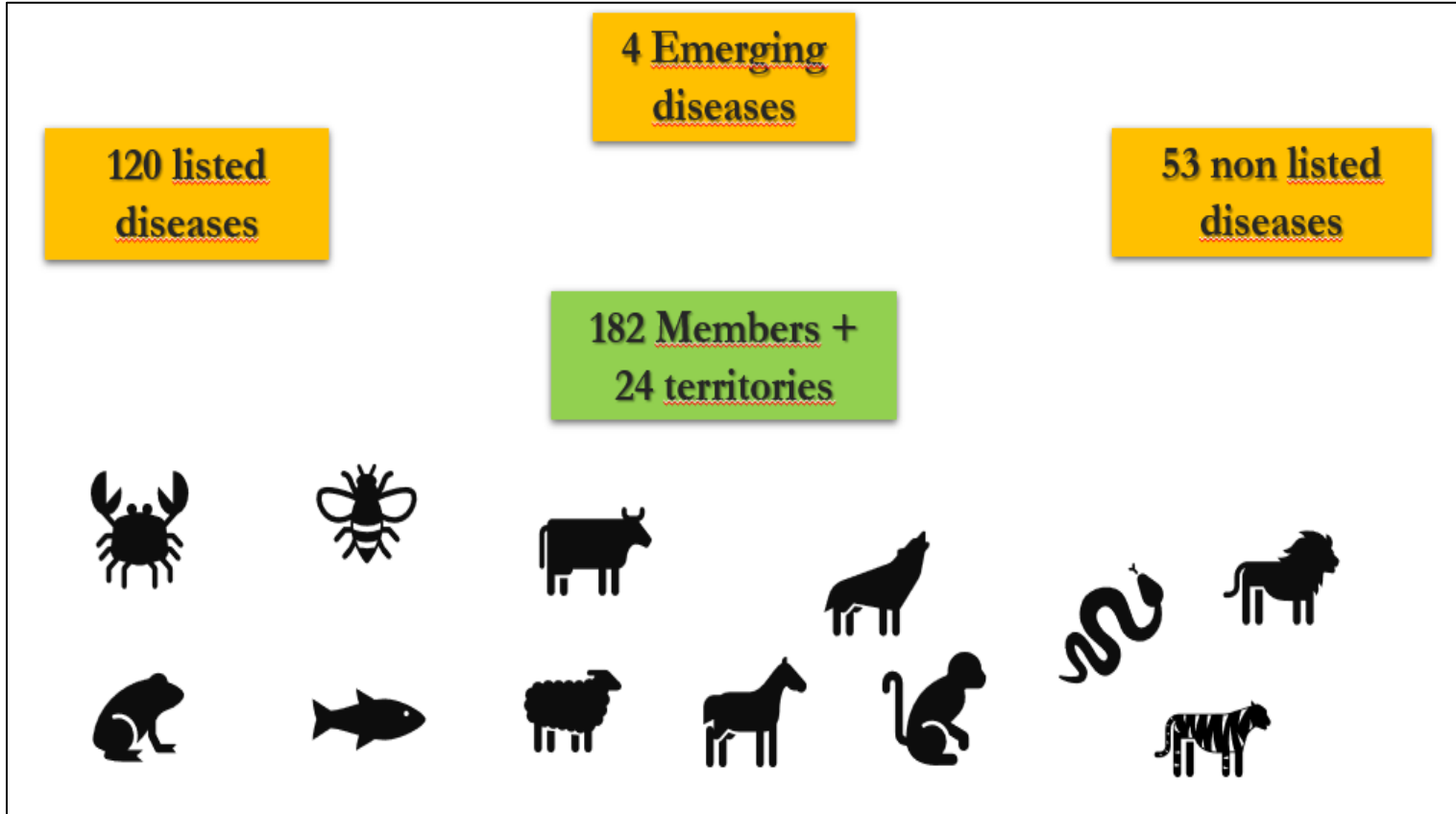
Quantitative data >

Surveillance and control measures >



Number of new outbreaks









	Promote	Collaborations
	Strengthen	Capacity
	<b>Improve</b>	Reporting and analysis
	Standardize	At international level
	Disseminate	Scientific knowledge
	Awareness and advocacy	To better integrate wildlife health into veterinary services



World  
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Founded as OIE

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### NFPW, NFPN

Increase engagement and data sharing



### Partner Organizations

Encourage multisectoral data sharing, streamlined communication and enhanced local collaboration



### Interoperability

With multisectoral databases (e.g. EIOS, WAHIS, CITES, FAO)



### User-friendliness of the reporting system

Ensure



### Decrease reporting fatigue and enhance data analysis

Simple interface, training, data analysis modules



### Improve overall data quality

Standardised protocols, training



### Avoid duplication

Multisectoral discussions with partners



### Increase access to quality data

Analysis and visualization modules that match the needs of users

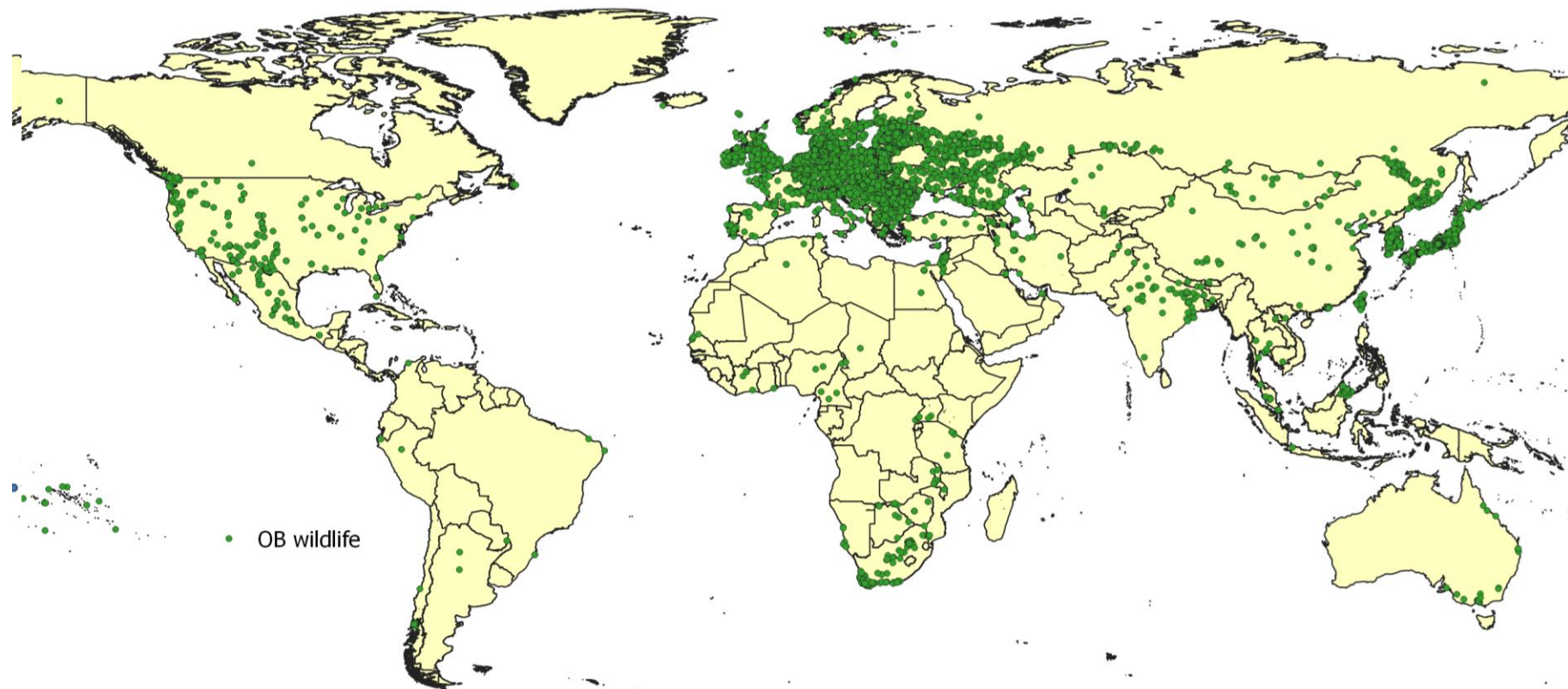


**32,716 outbreaks  
(early warning  
system)**

**31% of all the OB in  
the database**

**ASF and HPAI top  
reported**

**447 species**



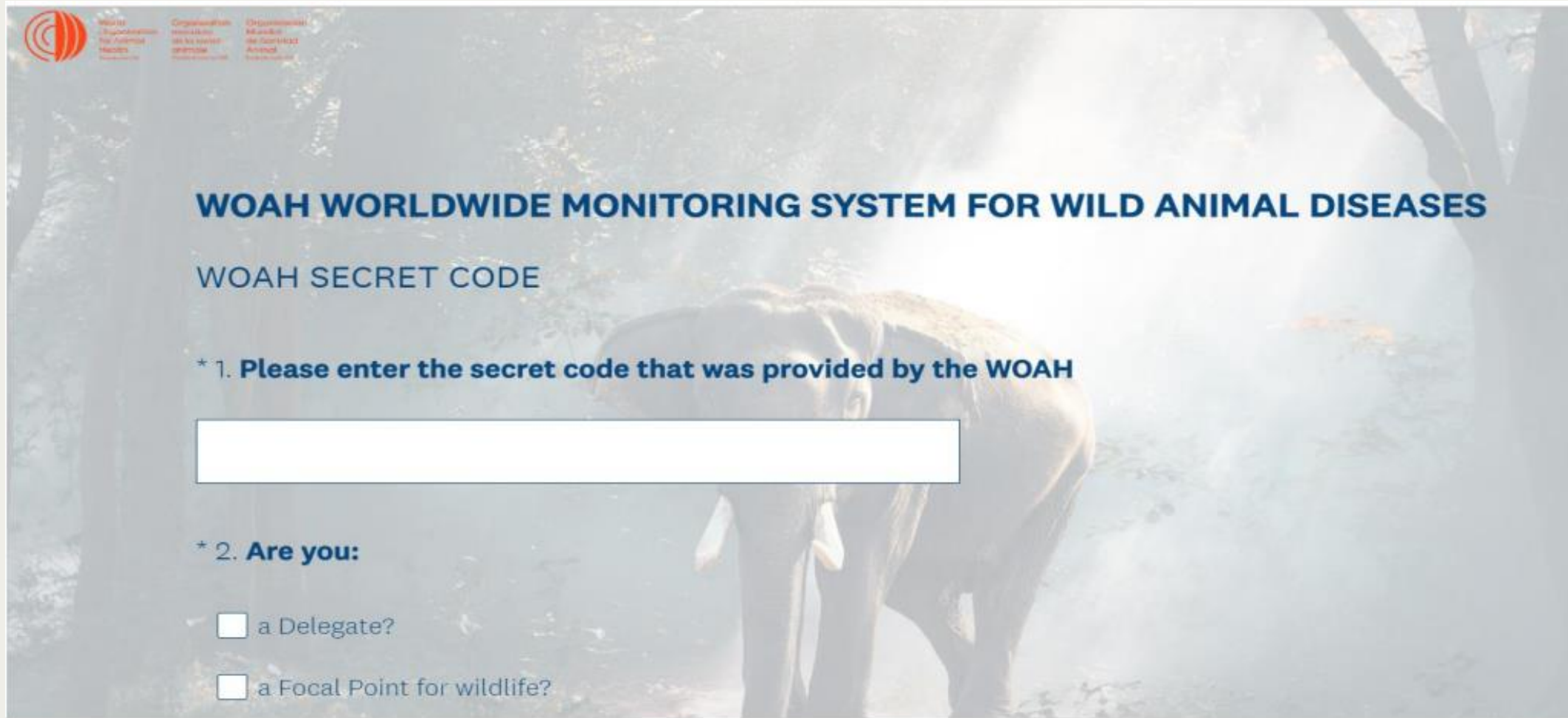


WOAH's new online reporting module WAHIS-WILD Beta




# WAHIS-WILD Beta

WORLDWIDE MONITORING SYSTEM FOR WILD ANIMAL DISEASES

3<sup>rd</sup> February 2023



The image shows a registration form for the WOAH Worldwide Monitoring System for Wild Animal Diseases. The form is overlaid on a background image of an elephant in a forest. In the top left corner, there are three logos: the WOAH logo, the logo for the Organisation for Animal Health, and the logo for the Organisation Mondiale de Santé Animale. The main title of the form is 'WOAH WORLDWIDE MONITORING SYSTEM FOR WILD ANIMAL DISEASES'. Below the title is the text 'WOAH SECRET CODE'. The first question is '\* 1. Please enter the secret code that was provided by the WOAH', followed by a white rectangular input field. The second question is '\* 2. Are you:', with two radio button options: 'a Delegate?' and 'a Focal Point for wildlife?'.

## WOAH WORLDWIDE MONITORING SYSTEM FOR WILD ANIMAL DISEASES

WOAH SECRET CODE

\* 1. Please enter the secret code that was provided by the WOAH

\* 2. Are you:

a Delegate?

a Focal Point for wildlife?

# Disease distribution

For a proper data display please select only one disease and period (year)

## Disease status

Disease presence: ● No ● Unclear / Unknown ● Yes



Region\_name: All

Disease category: All

Year: All

Non-listed pathogens and other ...: All

### Non-infectious Diseases

All

### Reptiles

All

### Diseases of Unknown Cause

All

## No diseases by category



# Surveillance

Disease category: All

Intervention / to be completed

Region\_name: All

Year: All

Non-listed pathogens and other disease-causing agents in wildlife 0 1 Total

Agent causing chronic wasting disease (CWD)	1	4	5
Inf. with low path. avian influ. viruses (all subtypes)	1	1	
Infection with Borrelia spp.	2	2	
Infection with circoviruses	1	1	
Infection with encephalomyocarditis virus	1	1	
Infection with flaviviruses	1	1	
Infection with hantaviruses	1	1	
Infection with Herpesviruses (Nipah viruses)	1	1	
<b>Total</b>	<b>1</b>	<b>19</b>	<b>20</b>

Reptiles 0 1 Total

Infection with Crocodylon virus (Papillomatosis in crocodiles)	1	17	18
Infection with Ophidiomyces ophiodiicola (causing snake fungal disease)	1	1	
<b>Total</b>	<b>1</b>	<b>19</b>	<b>20</b>

Non-infectious Diseases 0 1 Total

Mycotoxins	1	1	
Chemical poisons	1	1	
<b>Total</b>	<b>1</b>	<b>17</b>	<b>18</b>

Diseases of Unknown Cause 0 1 Total

Unusual morbidity or mortality event (cause undetermined)	1	1	
<b>Total</b>	<b>1</b>	<b>19</b>	<b>20</b>

Non-listed pathogens and other disease-causing agents in wildlife 0 1 Total

Agent causing chronic wasting disease (CWD)	4	1	5
Inf. with low path. avian influ. viruses (all subtypes)	1	1	
Infection with Borrelia spp.	1	1	2
Infection with circoviruses	1	1	
Infection with encephalomyocarditis virus	1	1	
Infection with flaviviruses	1	1	
Infection with hantaviruses	1	1	
Infection with Herpesviruses (Nipah viruses)	1	1	
<b>Total</b>	<b>9</b>	<b>11</b>	<b>20</b>

Reptiles 0 1 Total

Infection with Ophidiomyces ophiodiicola (causing snake fungal disease)	1	1	
Infection with Crocodylon virus (Papillomatosis in crocodiles)	1	1	
<b>Total</b>	<b>2</b>	<b>10</b>	<b>18</b>

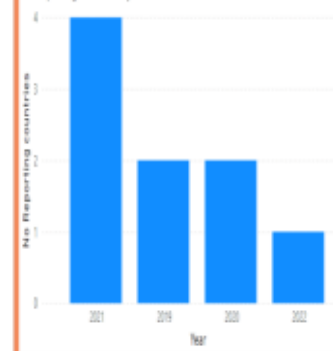
Non-infectious Diseases 0 1 Total

Mycotoxins	1	1	
Chemical poisons	1	1	
<b>Total</b>	<b>2</b>	<b>11</b>	<b>18</b>

Diseases of Unknown Cause 0 1 Total

Unusual morbidity or mortality event (cause undetermined)	1	1	
<b>Total</b>	<b>2</b>	<b>11</b>	<b>19</b>

## No Reporting countries by Year



## Reporting countries

Record submitted: ● completed



# Reporting status

Mapion	Diseases of reptiles	Diseases of Unknown Cause	Non-infectious Diseases	Non-listed pathogens and other disease-causing agents in wildlife	Total
Albania			1	3	4
Algeria	1			4	5
Argentina			1	2	3
Australia		1			1
Benin	1			3	4
China				3	3
<b>Total</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>15</b>	<b>20</b>

Disease category: All

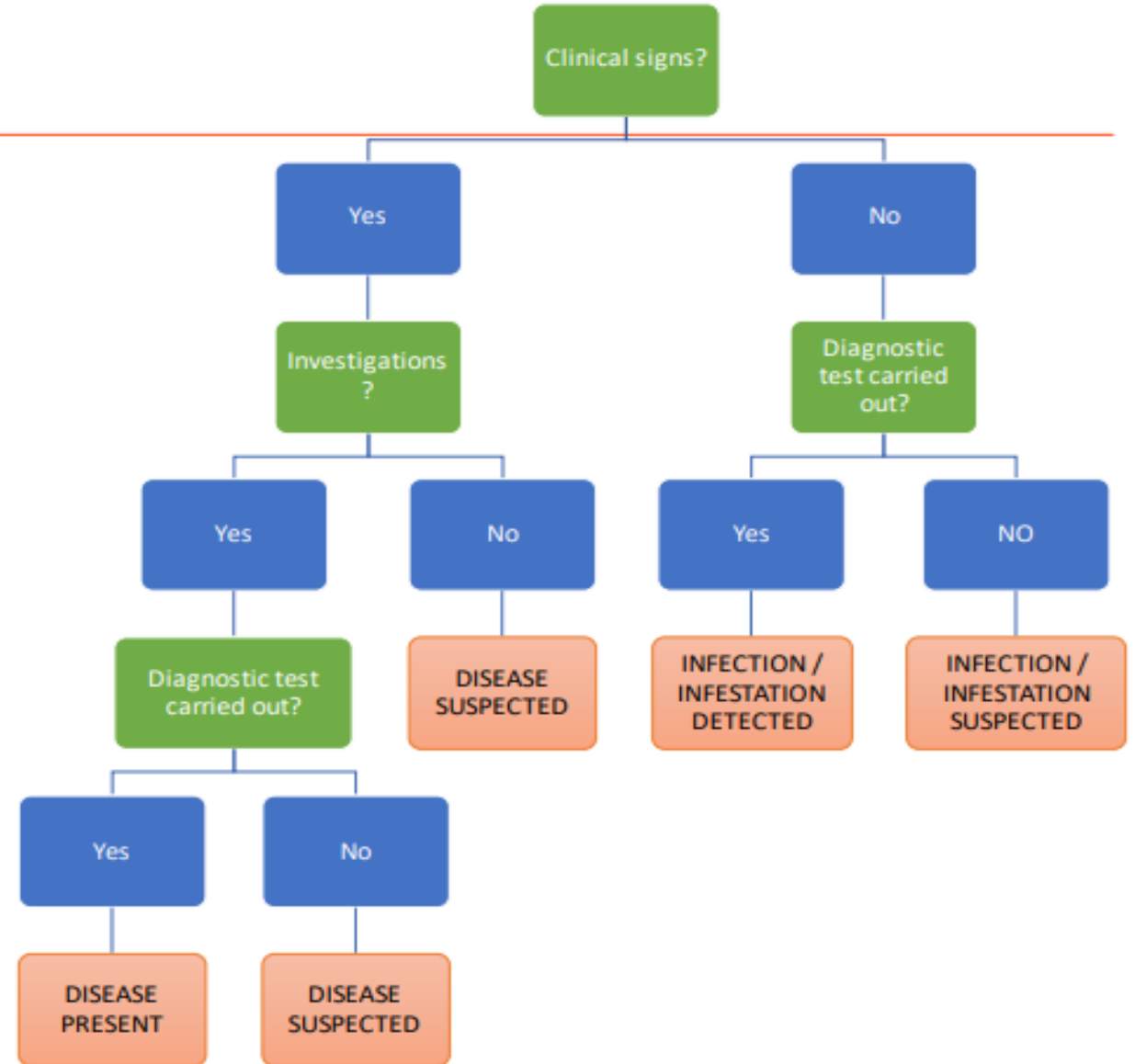
Region\_name: All

Year: All



## Four types of diseases

- Non-listed pathogens and other disease-causing agents in wildlife
- Diseases of reptiles
- Non-infectious diseases
- Diseases of unknown causes





World Organisation for Animal Health  
Founded in 1967

Animal Diseases | Monkeypox | Avian Influenza | COVID-19 | SEARCH

WHO WE ARE | WHAT WE DO | WHAT WE OFFER | MEDIA | WHO WE ARE

# Agent causing chronic wasting disease (CWD)

Agent causing chronic wasting disease (CWD) is a non WOAH-listed disease in wildlife reported by Members to the WOAH, through the voluntary annual report. The purpose of this report is to share information about possible threats to animal and public health, as well as to protect biodiversity, and therefore, this report should not imply any trade consequences.

Technical disease card

[https://www.woah.org/en/what-we-do/animal-health-and-welfare/animal-diseases/?\\_tax\\_diseases=non-listed-affecting-wildlife](https://www.woah.org/en/what-we-do/animal-health-and-welfare/animal-diseases/?_tax_diseases=non-listed-affecting-wildlife)

## CHRONIC WASTING DISEASE

[Aetiology](#) [Epidemiology](#) [Diagnosis](#) [Prevention and Control](#)  
[Potential Impacts of Disease Agent Beyond Clinical Illness](#) [References](#)

### AETIOLOGY

#### Classification of the causative agent

Chronic wasting disease (CWD) is a contagious prion disease of free-ranging and captive deer, elk, and moose. The cellular prion protein (PrP<sup>C</sup>) serves as the normal host-encoded cellular prion protein. It is when PrP<sup>C</sup> directly binds to the misfolded isoform PrP<sup>Sc</sup> that PrP<sup>C</sup> adopts the disease-associated conformation. Normal prion proteins can be found most abundantly in the brain and spinal cord.

CWD is a member of the transmissible spongiform encephalopathy (TSE) family of prion diseases, and it is believed there are multiple strains within the United States as well as a strain unique to Norway.

#### Resistance to physical and chemical action

Temperature:	Highly resistant to heat and radiation (UV, microwave, ionising); inactivation by autoclaving at 134°C (273°F) for 18 minutes at 30 lb/in <sup>2</sup> is suitable, but parameters may vary pending type of sample contaminated.
pH:	Bioavailability of the CWD prion in soil is greater when pH=6.6.
Chemicals/Disinfectants:	Highly resistant to chemical inactivation and few disinfectants effectively inactivate them; primarily, 50% concentrated household bleach with a contact time of 30-60 minutes or sodium hydroxide for 60 minutes are recommended, but concentrations and contact times may vary pending the type of sample contaminated.
Survival:	Remains viable for long periods in fluids, faeces and tissues; persists in soil; partially resistant to protease digestion and can accumulate within neurones, eventually causing neuronal death.

### EPIDEMIOLOGY

#### Hosts

- It is known to affect multiple cervid species including but not limited to: elk (*Cervus canadensis*), moose (*Alces alces*), mule deer (*Odocoileus hemionus*), white-tailed deer (*Odocoileus virginianus*), and reindeer (*Rangifer tarandus*).

#### Transmission



## Messages to take home

- There is an existing animal health information system at global level with mandatory notification of animal diseases for domestic animals
- Available in the public domain
- Relies on data quality at national level
- Collaboration, coordination, communication and capacity building is required to obtain reliable data and to use them adequately
- A dedicated HIS for Wildlife exists also but not yet available in the



# Thank you!

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[World Animal Health Information System - WAHIS](#)

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