

WOAH Current data analytics experience and future redirection to travel

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World
Organisation
for Animal
Health
Founded as OIE

Organisation
mondiale
de la santé
animale
Fondée en tant qu'OIE

Organización
Mundial
de Sanidad
Animal
Fundada como OIE





Introduction



World Organisation for Animal Health (WOAH)

1924

Creation:
**Office International
des Epizooties
(OIE)**

1945

Creation of the
United Nations

2003

New common name:
**World Organisation
for Animal Health
(OIE)**

2022

New common
acronym:
WOAH

Our Worldwide Network



182
Members



1
Headquarters
in Paris, France



75+
official
partners



13
Regional and
Sub-regional
Representations



300+
Reference Centres
of expertise

- Management of data provided by Members since its creation, mandate provided by Members and based on **Standards**
- Currently management of data collected through different ways :
 - Information systems with periodic reporting from Members (mostly)
 - Surveys
 - Non-official information managed through epidemic intelligence systems
 - Etc.
- Importance of **data confidentiality** management
- No management of big data, but management of databases with **global coverage**



Data Governance

Objective: implementing digital transformation through a WOAH Data Strategy.

How is it being achieved? By developing a Data Strategy and data governance framework to optimise data management, while improving accessibility and visibility of data for stakeholders.



Successful stories: WAHIS Digitalization

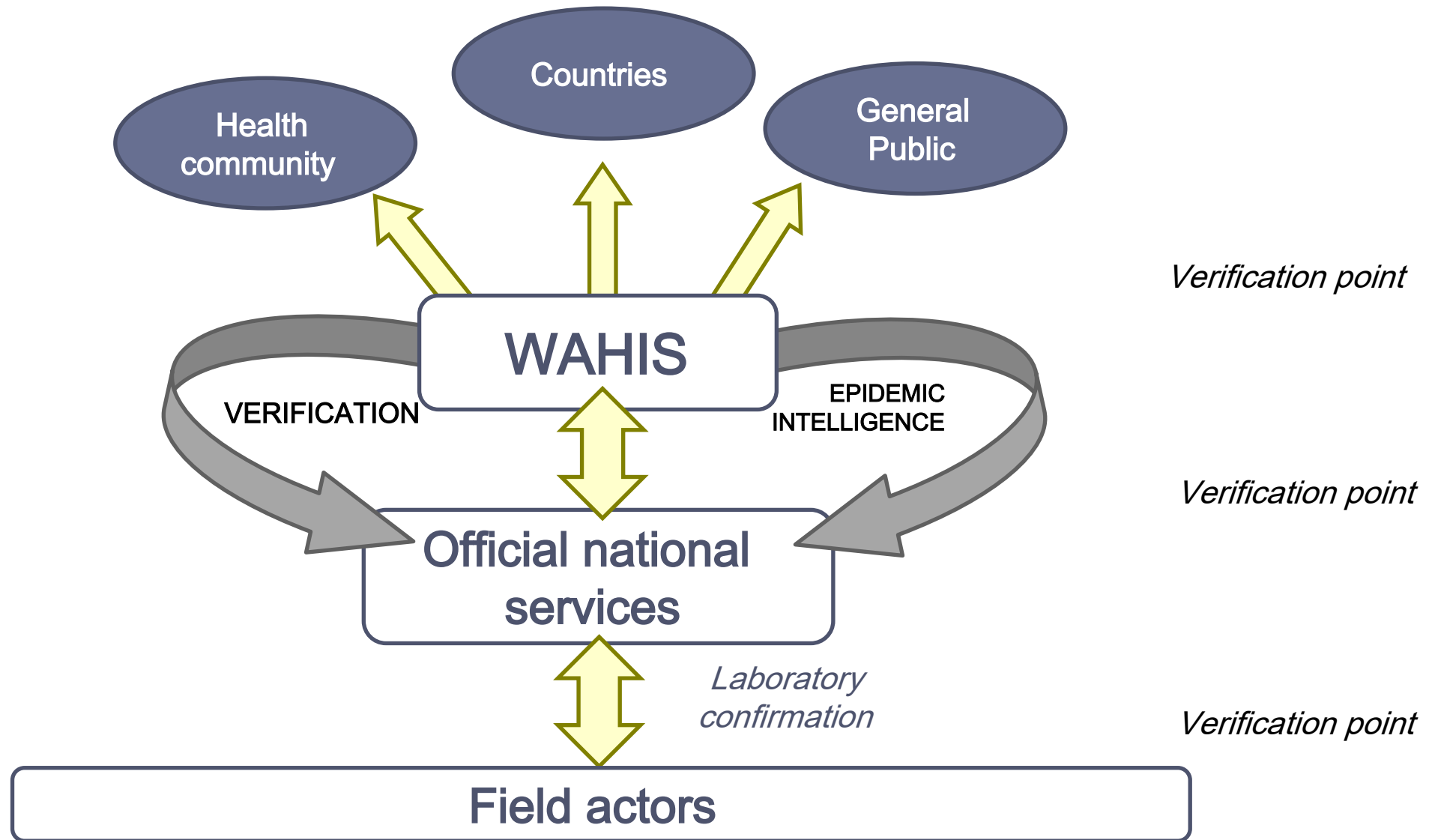
WAHIS

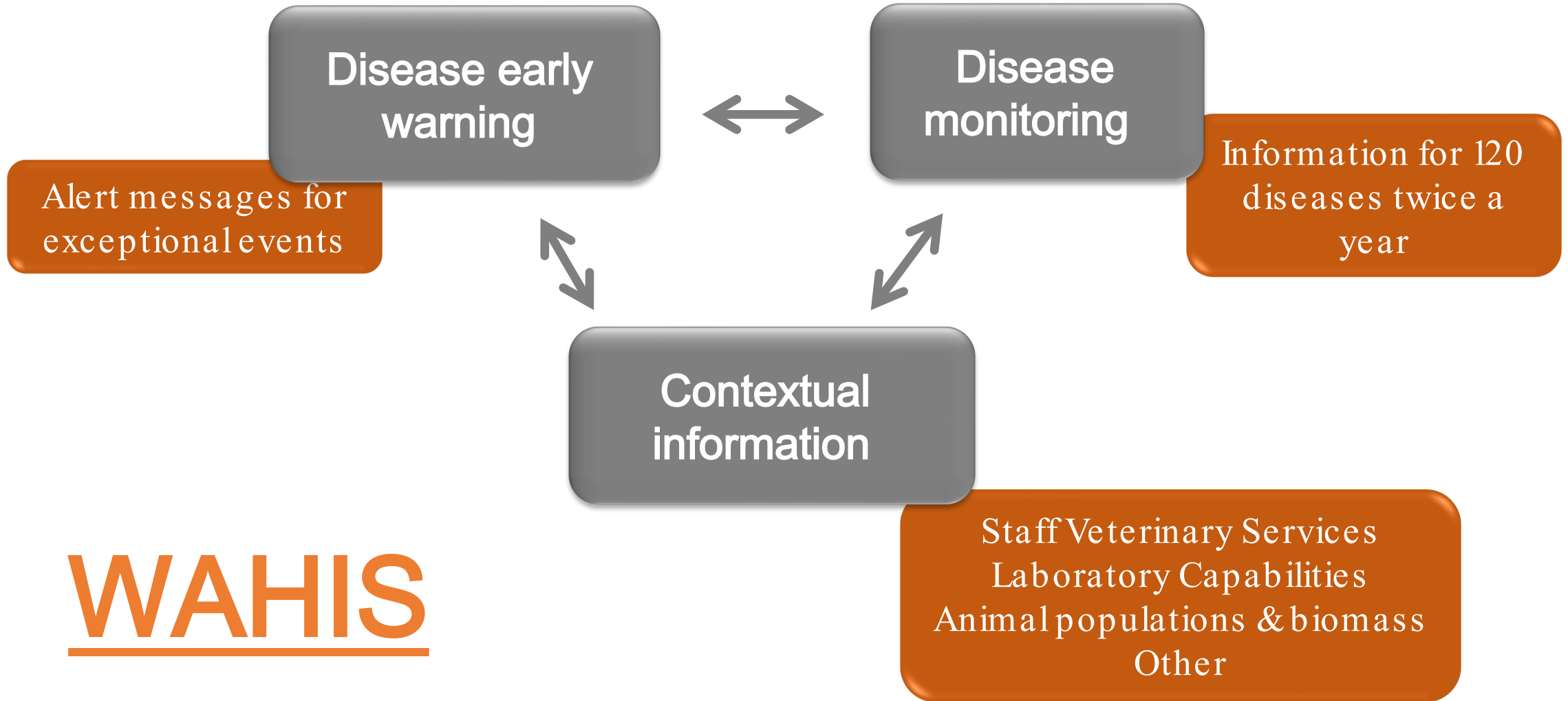


World Organisation
for Animal Health
Founded as OIE


WAHIS


World Animal Health Information System







Which type of report would you like to consult ?








Animal disease event  >

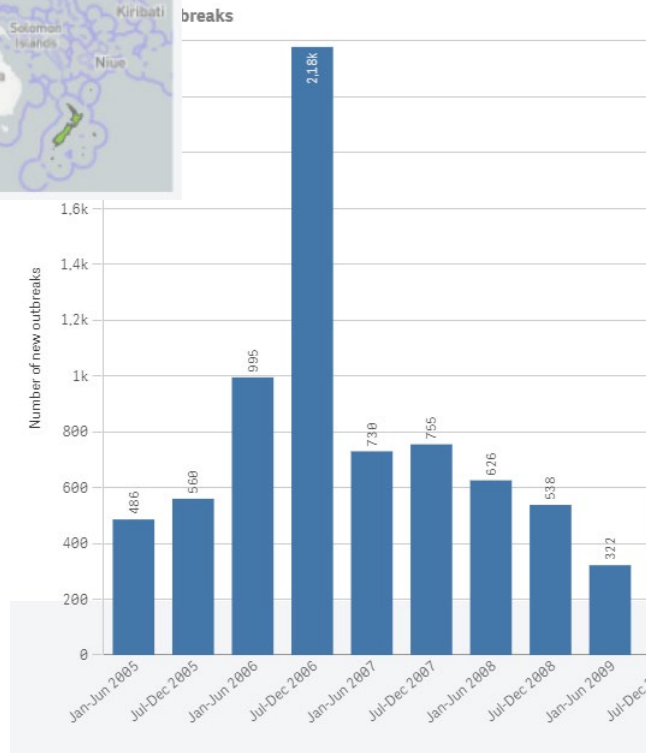
Six-monthly report  >

Annual report  >

Events management

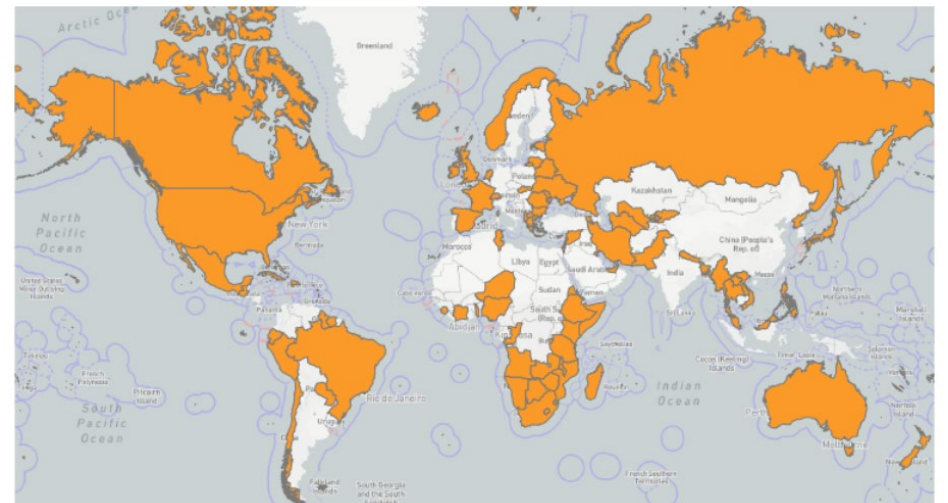
 See on the map

<input type="checkbox"/>	Country	Report number	Disease	Genotype/ Serotype/ Subtype	Reason	Start date	Report date	
<input type="checkbox"/>	 Austria	IN	Influenza A viruses of high pathogenicity (Inf. with) (non-poultry including wild birds) (2017-)	H5N1	Recurrence of an eradicated disease	2022/11/07	2022/11/10	 ...
<input type="checkbox"/>	 Italy	IN	Infectious haematopoietic necrosis virus (Inf. with)		Recurrence	2022/10/07	2022/11/10	 ...
<input type="checkbox"/>	 Hungary	FUR_57	African swine fever virus (Inf. with)		Recurrence of an eradicated disease	2021/08/29	2022/11/09	 ...



Analytics

- Disease situation >
- Animal health capacity - *This page is not available yet* >
- Quantitative data >
- Surveillance and control measures >



Export Data

Year	Semester	Region	Country	Disease	Animal category	Occurrence code	Disease status
2022	Jul-Dec-2022	Africa	Burkina Faso	Anthrax	Domestic	Disease limited to one or more zones	Present
2022	Jul-Dec-2022	Africa	Congo (Dem. Rep. of the)	Anthrax	Wild	Disease limited to one or more zones	Present
2022	Jul-Dec-2022	Africa	Liberia	Anthrax	Domestic	Disease limited to one or more zones	Present
2022	Jul-Dec-2022	Africa	Sierra Leone	Anthrax	Domestic	Disease limited to one or more zones	Present

Year	Semester	World region	Country	Administrative Div	Disease	Serotype/Subtype/	Animal Category	Species	Outbreak_id	New outbreaks	Susceptible	Cases	Killed and dispose	Slaughtered	Deaths	Vaccinated
2005	Jul-Dec 2005	Africa	Angola	Huila	Anthrax	-	Both animal categor	-	-	5	-	-	-	-	-	-
2005	Jul-Dec 2005	Africa	Angola	Huila	Anthrax	-	Domestic	Cattle	-	-	167 255	25	0	0	25	167 230
2005	Jul-Dec 2005	Africa	Botswana	Jwaneng (2005-20)	Anthrax	-	Both animal categor	-	-	1	-	-	-	-	-	-
2005	Jul-Dec 2005	Africa	Botswana	Jwaneng (2005-20)	Anthrax	-	Wild	Wildlife (species L	-	-	700	2	0	0	1	0
2005	Jul-Dec 2005	Africa	Botswana	Kasane (2005-201	Anthrax	-	Both animal categor	-	-	1	-	-	-	-	-	-
2005	Jul-Dec 2005	Africa	Botswana	Kasane (2005-201	Anthrax	-	Wild	Wildlife (species L	-	-	500	2	0	0	1	0
2005	Jul-Dec 2005	Africa	Burkina Faso	Burkina Faso	Anthrax	-	Both animal categor	-	-	6	-	-	-	-	-	-
2005	Jul-Dec 2005	Africa	Burkina Faso	Burkina Faso	Anthrax	-	Domestic	Cattle	-	-	289	13	0	0	13	0
2005	Jul-Dec 2005	Africa	Burkina Faso	Burkina Faso	Anthrax	-	Domestic	Sheep	-	-	2	2	0	0	2	0
2005	Jul-Dec 2005	Africa	Cameroon	Adamaoua	Anthrax	-	Both animal categor	-	-	1	-	-	-	-	-	-
2005	Jul-Dec 2005	Africa	Cameroon	Adamaoua	Anthrax	-	Domestic	Cattle	-	-	58	2	-	-	-	2
2005	Jul-Dec 2005	Africa	Cameroon	Littoral	Anthrax	-	Both animal categor	-	-	1	-	-	-	-	-	-
2005	Jul-Dec 2005	Africa	Cameroon	Littoral	Anthrax	-	Domestic	Cattle	-	-	29	1	-	-	-	1
2005	Jul-Dec 2005	Africa	Chad	Batha	Anthrax	-	Both animal categor	-	-	1	-	-	-	-	-	-
2005	Jul-Dec 2005	Africa	Chad	Batha	Anthrax	-	Domestic	Cattle	-	-	13	2	-	-	-	1
2005	Jul-Dec 2005	Africa	Chad	Chari-Baguirmi	Anthrax	-	Both animal categor	-	-	3	-	-	-	-	-	-

English :

The export file draws from two possible data sources. The source can be identified by looking at the "Outbreak_id" column: a blank field means it comes from Six-monthly reports (SMR) while a non-blank field indicates the record comes from an immediate notification or follow-up report (IN/FUR).

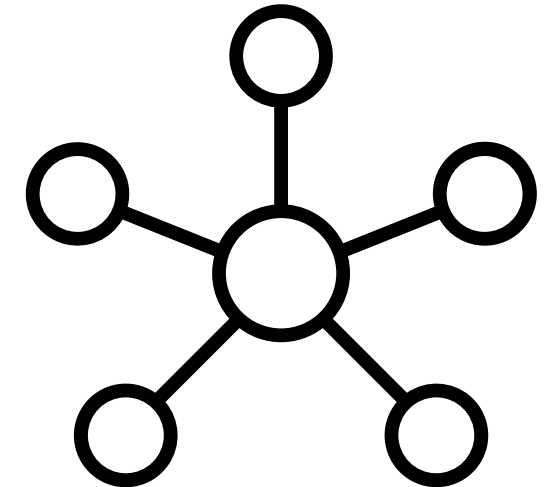
The display of information varies slightly according to the data source. To avoid duplication of outbreaks in IN/FUR, only one species in an outbreak contains the "new outbreak" count while the rest show "0". This does not affect the summation of outbreaks nor the other quantitative data (Susceptible, Cases, etc.)

See image below for examples.

IN/FUR example: For outbreak n° 85619 three species were affected. However, to prevent triplication, only sheep were counted for number of new outbreaks as « 1 » while goats and cattle display as « 0 ».

Disease	Species	Outbreak_id	New outbreaks	Susceptible	Cases
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- Systems have **different scopes, processes** - this results in specific limitations and added values
- Best picture of the reality obtained by **crossing databases**
- WAHIS is an essential source of information for other systems (the impact of our work **goes beyond direct users**)
- Other systems are of primary importance for **cross-checking information received through WAHIS**
- Data exchange also essential for analysis and informing **decision makers**

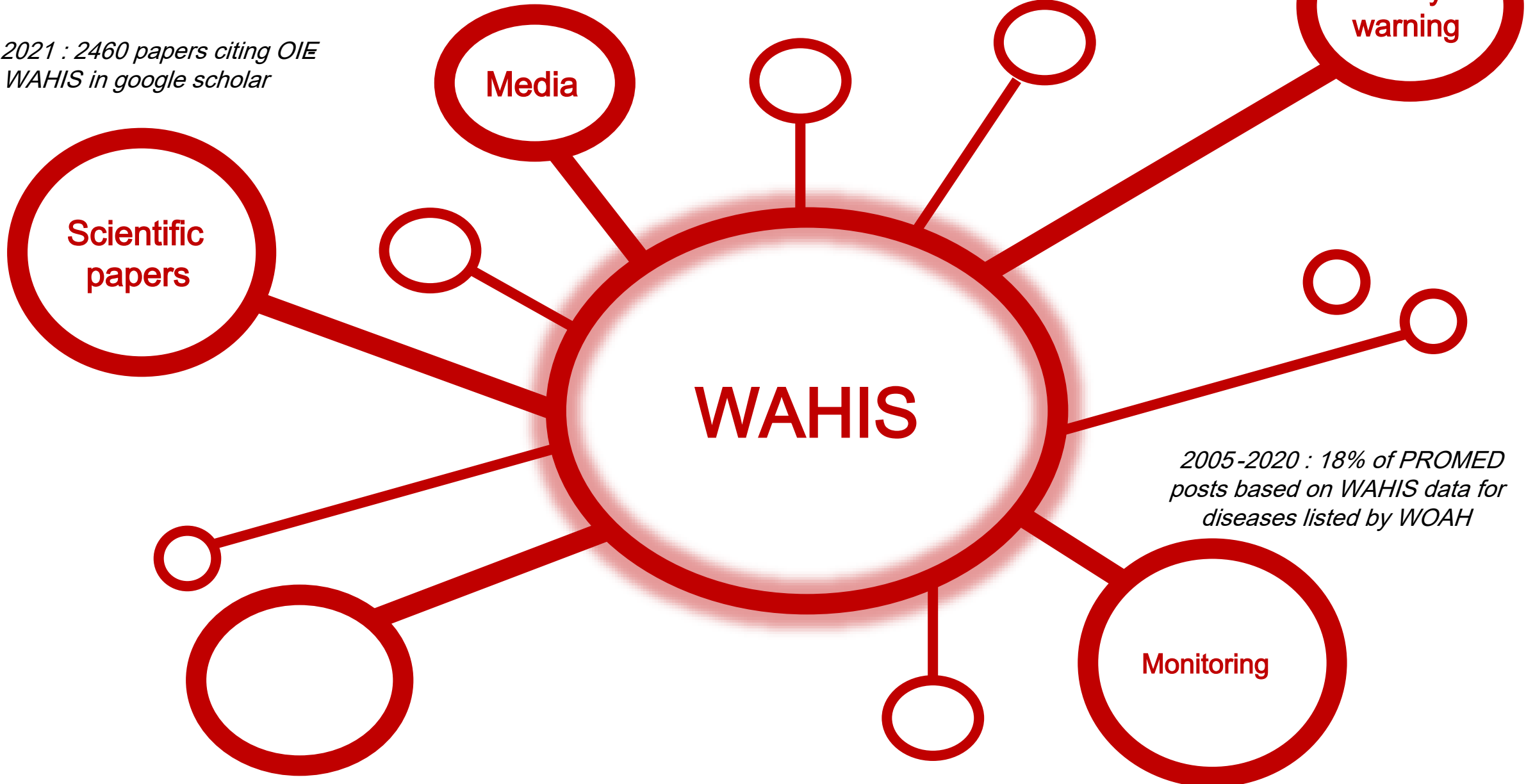


Nov 2021 : 2460 papers citing OIE WAHIS in google scholar

Nov 2021 : 46 100 google pages citing OIE-WAHIS in google

2005-2020 : 65% of outbreaks published in Empres-i + based on WAHIS data for diseases in the common scope

2005-2020 : 18% of PROMED posts based on WAHIS data for diseases listed by WOA



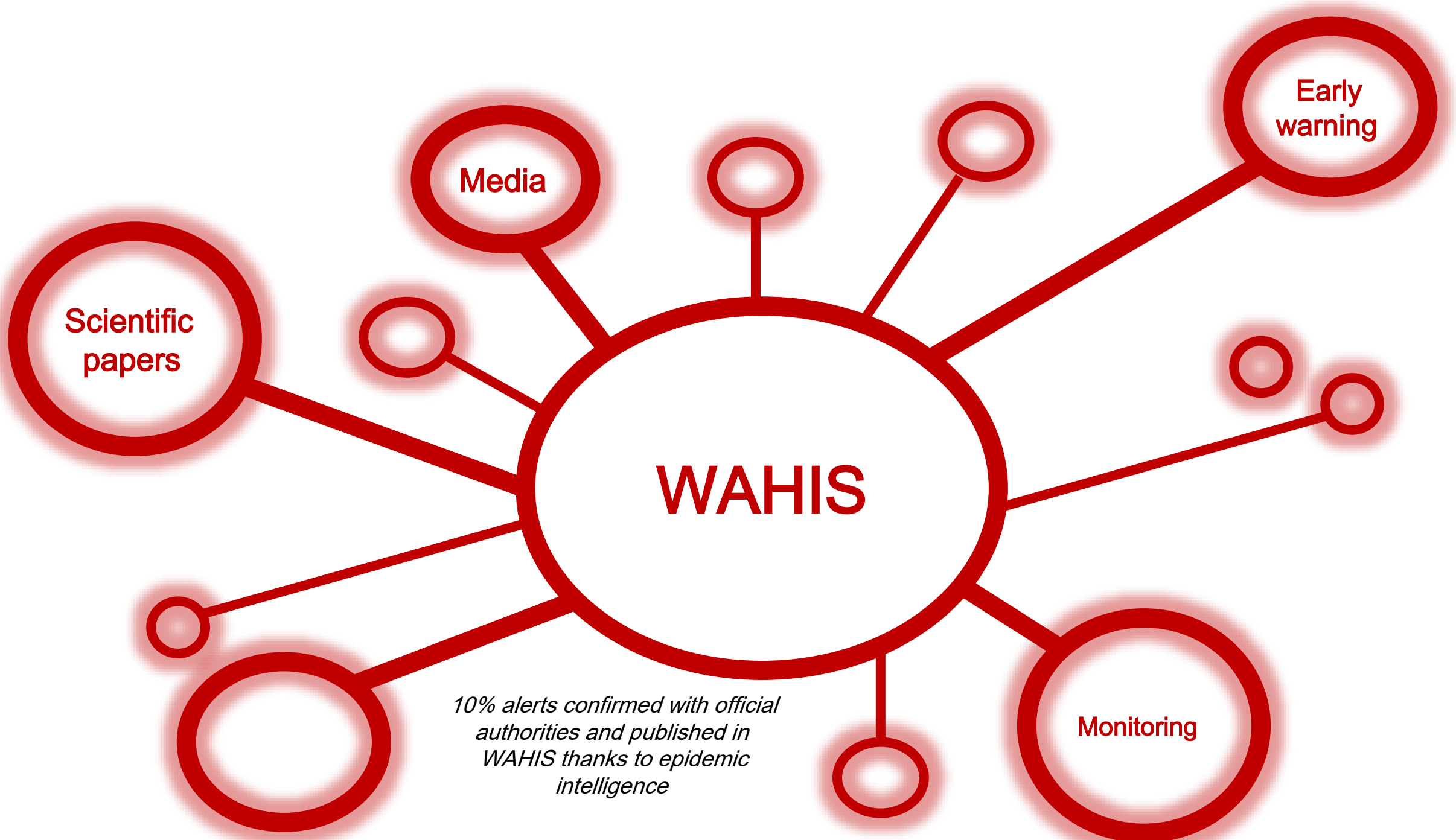
Scientific papers

Media

WAHIS

Monitoring

Early warning

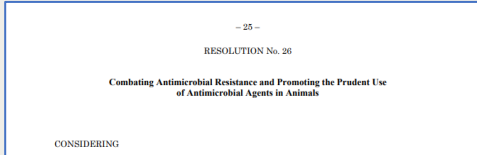




Successful stories: Vet Digitalization

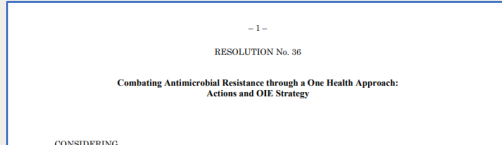
ANIMUSE





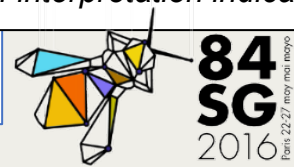
Resolution 26 “Combating AMR and Promoting the Prudent Use of Antimicrobial Agents in Animals”

- The OIE develops a procedure and standards for data quality for **collecting data annually from OIE Member Countries on the use of antimicrobial agents in food-producing animals with the aim of creating an OIE global database...**

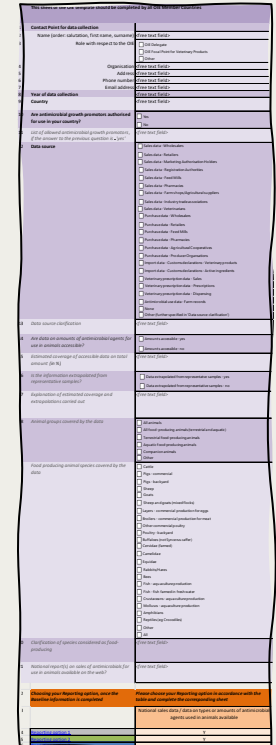


Resolution 36 “Combating AMR through a One Health Approach: Actions and OIE Strategy”

- The OIE actions to be compiled and consolidated within the OIE Strategy on antimicrobial resistance include:
 - **The establishment and the management of a database for the collection of data on the use of antimicrobial agents in animals as well as the development of interpretation indicators**



2015 First AMU Questionnaire (Excel)



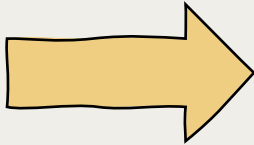
AMU Questionnaire Based on

Terrestrial Animal Health Code

- Chapter 6.9. Monitoring of the quantities and usage patterns of antimicrobial agents used in food-producing animals

Aquatic Animal Health Code

- Chapter 6.3. Monitoring of the quantities and usage patterns of antimicrobial agents used in aquatic animals





Type of Reporting

Qualitative Data

Baseline data designed to allow all countries to respond

Quantitative Data

Reporting Options represent increased level of data detail

Option 1

- Antimicrobial agents
- Type of use*

Option 2

- Antimicrobial agents
- Type of use*
- Group of animals**

Option 3

- Antimicrobial agents
- Type of use*
- Group of animals**
- Routes of administration

* Type of use: veterinary medical use or growth promotion

** Groups of animals: 'terrestrial food-producing animals', 'aquatic food-producing animals' or 'Companion animals'



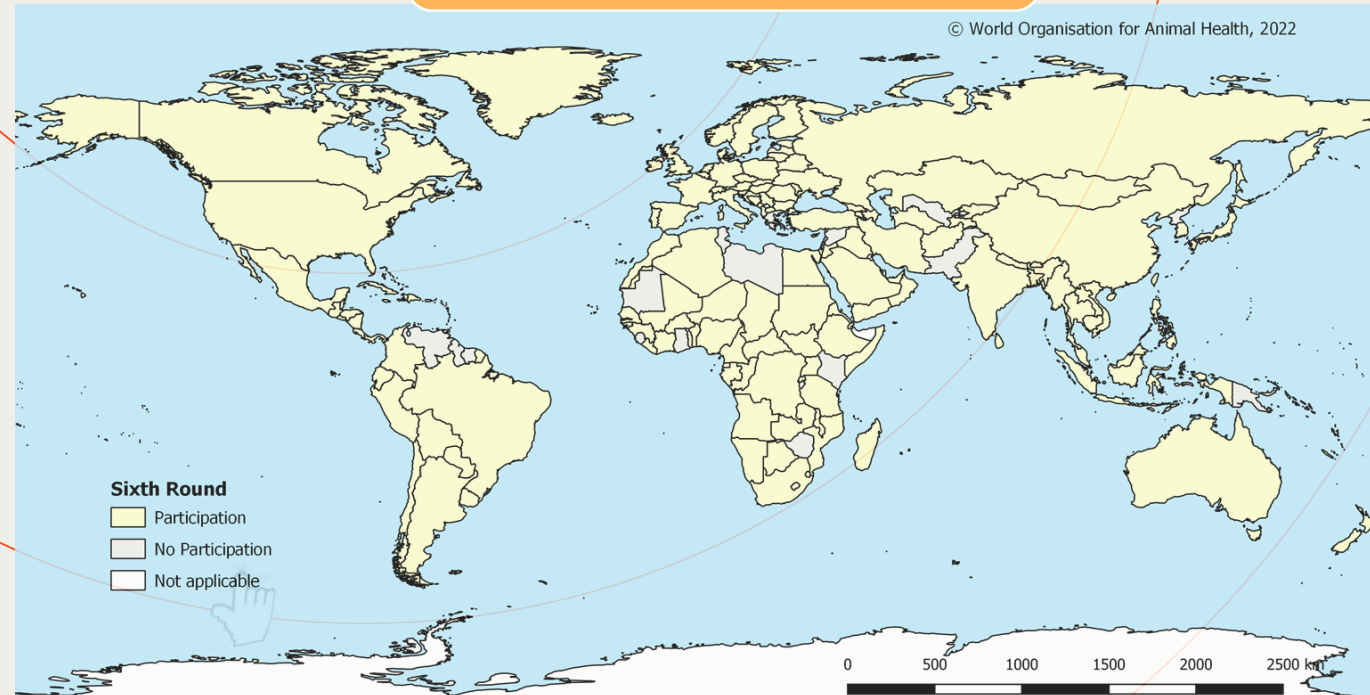
8 Rounds



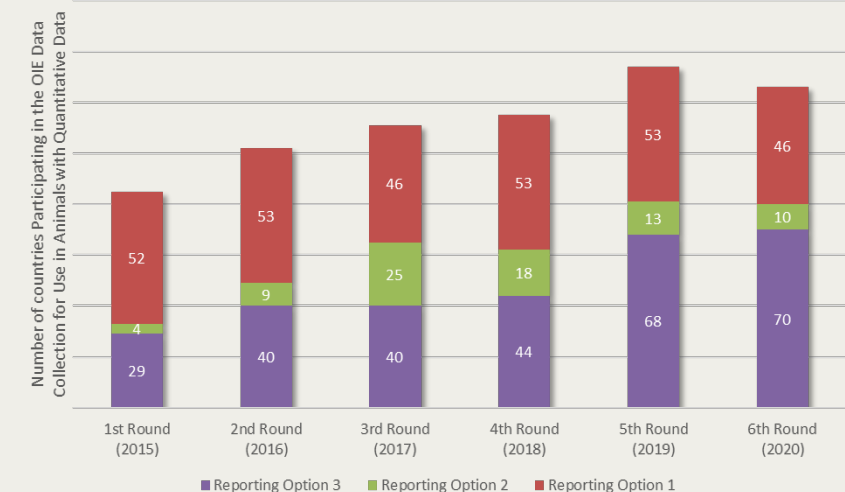
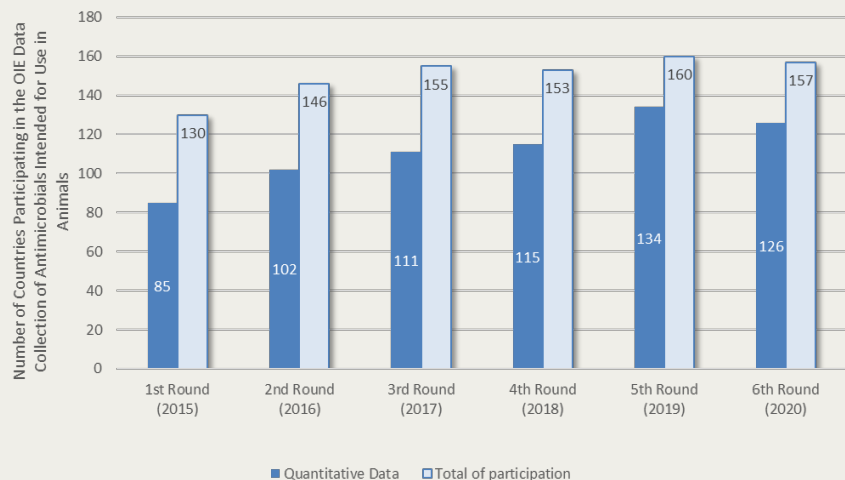
6 Reports



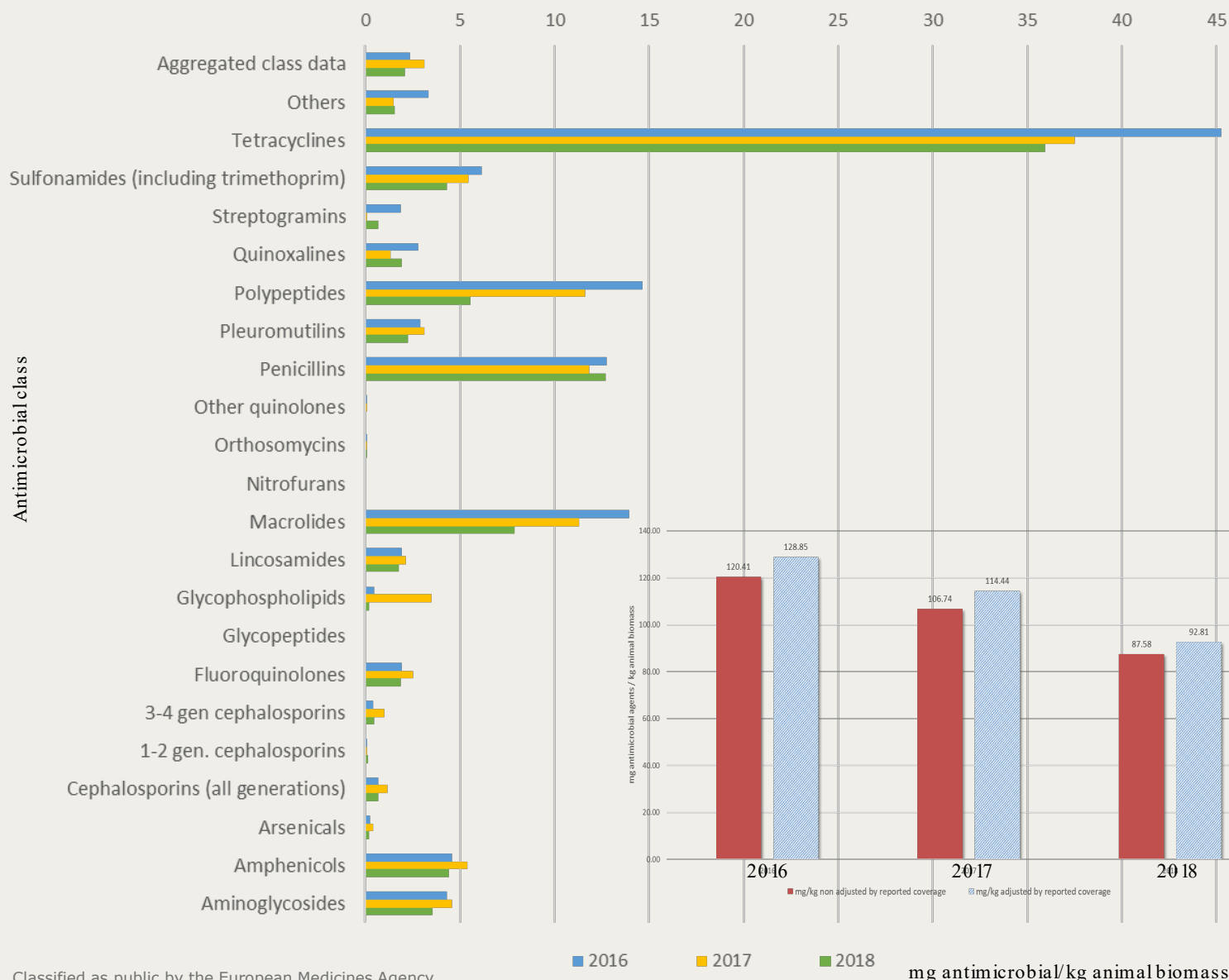
157 Members



Participation & type of reporting



Trends on Time for the Global Quantities of Antimicrobial Agents Intended for Use in Animals Based on Data Reported by 72 Countries from 2016 to 2018, Adjusted by Animal Biomass (mg/kg)



Historical Participation

Every year, since 2015, WOAH opens a round for the collection of data from september of year Y to may of year Y+1.



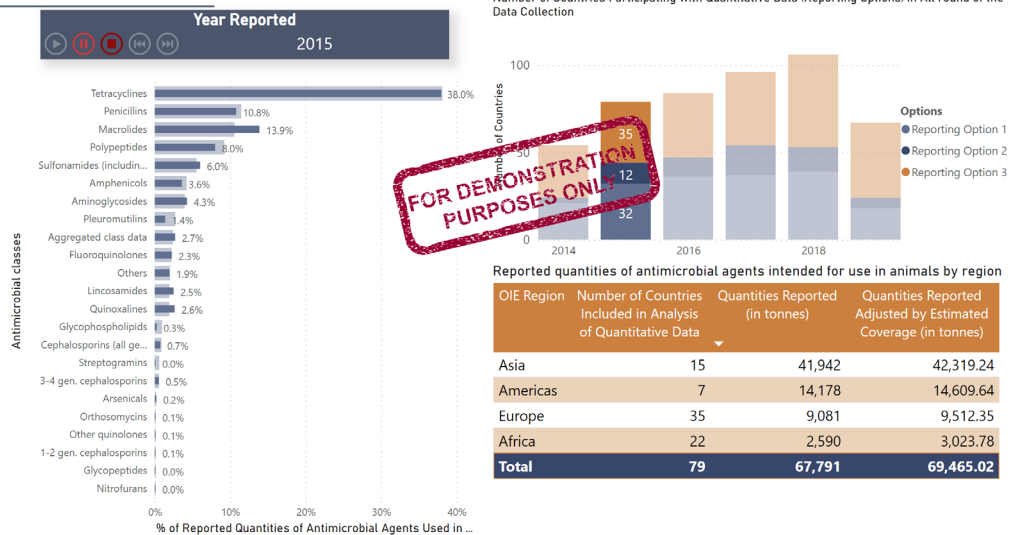
Barriers to collect AMU quantities

Barriers: WOAH questionnaire template was designed to allow all Countries to participate in the annual data collection even if the quantitative data on antimicrobial agents intended for use in animals were not nationally available. This general information is useful for guiding discussion on overcoming barriers during training seminars of National Focal Points for Veterinary Products (those who most frequently complete the questionnaire template) and increasing availability of quantitative data in the future. This information reflects challenges in National Action Plan (NAP) implementation that can also be assessed using the WOAH Performance of Veterinary Services (PVS) Pathway evaluation.



Antimicrobial Quantities

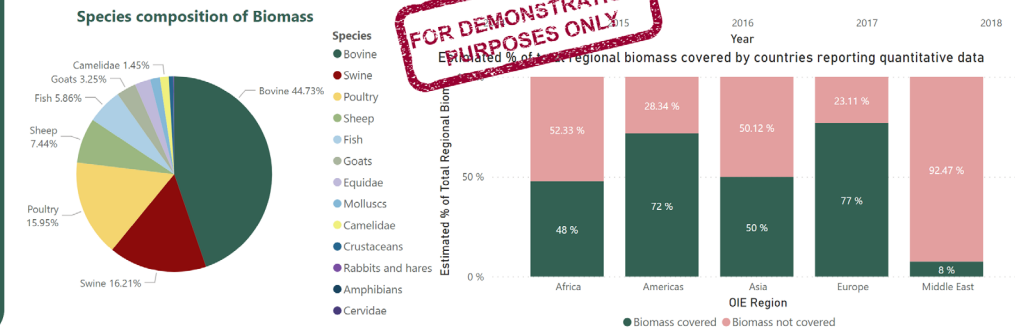
Number of Countries Participating with Quantitative Data (Reporting Options) in All round of the Data Collection



Animal Biomass



Animal biomass is used to represent animals that are likely to be exposed to the quantities of antimicrobial agents reported. Since antibiotics are used differently depending on animal species and farming systems, variation in the species composition of regional biomass may explain some of the differences in antimicrobial consumption.



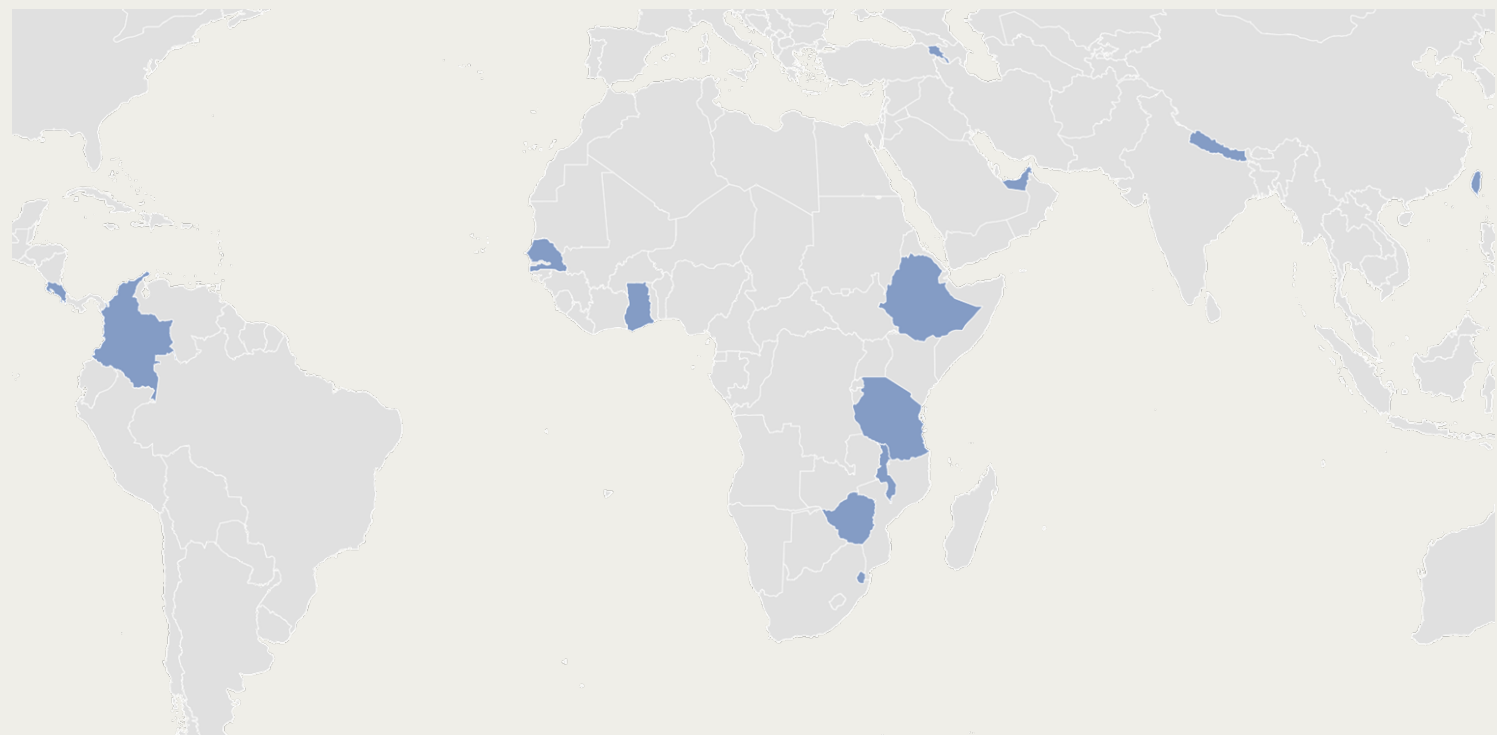
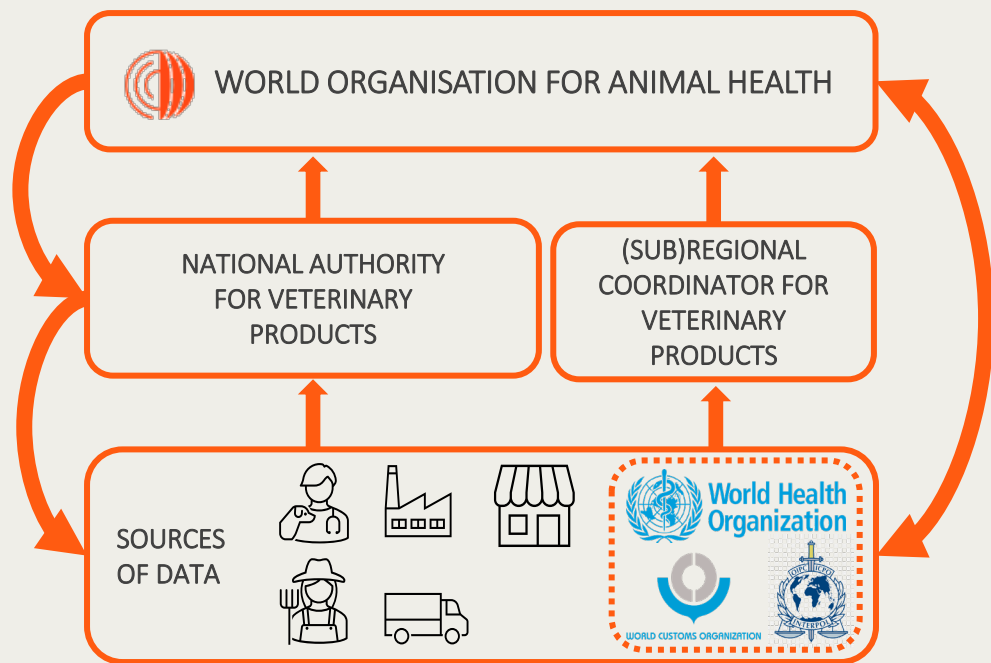


Future direction of travel

Global Information & Alert System for

Substandard & Falsified Veterinary Products (SFP)

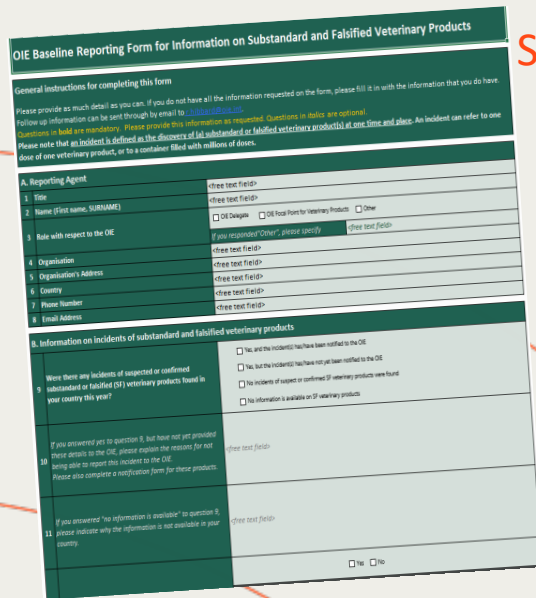
i Information & alert system for SFVPs



Pilot Phase – Goals:

- Information on the in-country situation related to VP quality
- WOHM Members' feedback on the data collection tools for their refinement towards an on-line tool

i Baseline Questionnaire & Immediate Notification Form



OIE Baseline Reporting Form for Information on Substandard and Falsified Veterinary Products

General Instructions for completing this form

Please provide as much detail as you can. If you do not have all the information requested on the form, please fill it in with the information that you do have. Follow up information can be sent through by email to ia@woah.org.

1. Reporting Agent

1. Name (First name, SURNAME)

2. Role with respect to the OIE OIE Delegate OIE Focal Point for Veterinary Products Other

3. Organization

4. Organization's Address

5. Country

6. Phone Number

7. Email Address

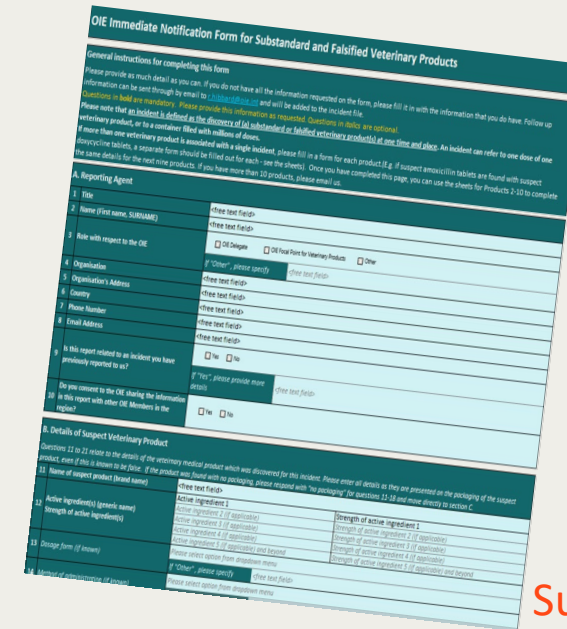
2. Information on incidents of substandard and falsified veterinary products

8. Were there any incidents of suspected or confirmed substandard or falsified (SF) veterinary products based in your country this year? No, the incidents have not been notified to the OIE No, but the incidents have not yet been notified to the OIE Yes, the incidents of suspect or confirmed SF veterinary products were found No information is available on SF veterinary products

9. If you answered 'yes' to question 8, but have not yet provided these details to the OIE, please explain the reasons for not being able to report this incident to the OIE. Please also complete a notification form for these products.

10. If you answered 'no information is available' to question 8, please indicate why the information is not available in your country.

Submitted once/year



OIE Immediate Notification Form for Substandard and Falsified Veterinary Products

General Instructions for completing this form

Please provide as much detail as you can. If you do not have all the information requested on the form, please fill it in with the information that you do have. Follow up information can be sent through by email to ia@woah.org and will be added to the incident file.

1. Reporting Agent

1. Name (First name, SURNAME)

2. Role with respect to the OIE OIE Delegate OIE Focal Point for Veterinary Products Other

3. Organization

4. Organization's Address

5. Country

6. Phone Number

7. Email Address

8. Is this report related to an incident you have previously reported to us? Yes No

9. Do you concur to the OIE sharing the information in this report with other OIE Members in the region? Yes No

2. Details of Suspect Veterinary Product

10. Name of suspect product (brand name)

11. Active ingredients (generic name)

12. Strength of active ingredients

13. Dosage form (if known)

Submitted at any time

Information on the current status and management of veterinary product quality in the country

- Authority for registration, authorization, surveillance of VPs
- Database of registered VPs in the country
- Legislation for sampling market, recalls for VPs
- Surveillance system
- Access to a laboratory
- Cooperation/coordination with other countries
- Traceability system for VPs

Notify any suspect SFVP to WOAHA
Basis of regional alerts

- General information as stated in the packaging / label
- Quantities
- Date and place of discovery
- Reasons of suspicious
- Photograph available
- Laboratory testing conducted
- Any Regulatory action put in place

Pilot Phase


Goal

1st Phase



2nd Phase

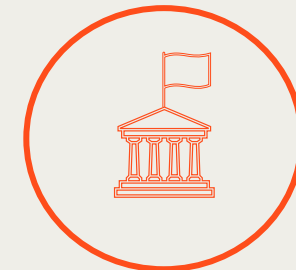
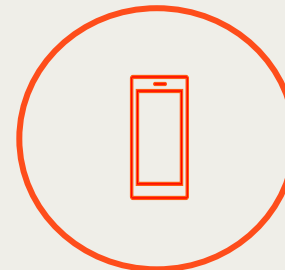



Participants

14




Tools for
Data Collection





- WOA digital transformation as part of **WOAH Data Strategy**
- With official validated information provided by WOA Members, WAHIS re-enforces its role as the **reference database for animal diseases** (including and zoonotic diseases)
- WAHIS data gains value through **interconnection and combination** with other external data
- **Public interconnectivity** to be developed in the coming months
- ANIMUSE is the **most comprehensive global database on animal antimicrobial use up -to-date**, providing real and comparable data over time and across regions
- Successful WAHIS & ANIMUSE digitalization leads the **development of a digital global information & alert system for substandard & falsified veterinary products** to cover WOA Member's needs

Thankyou

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