# ANIMUSE: The Global AMU Database in Animals

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WOAH Headquarters

15 October 2025

RAGNA Webinar - Deep Dive: Surveillance and Data Collection

World Organisation for Animal Health
Founded as OIE

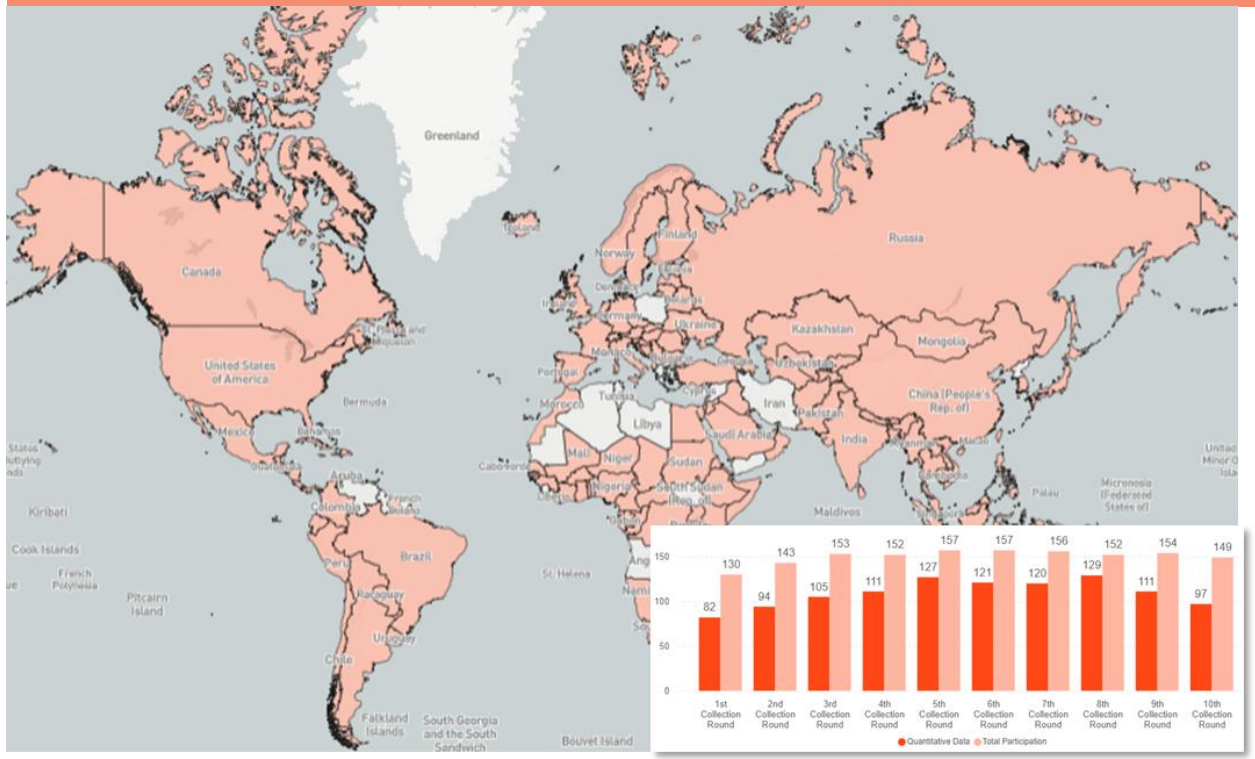
Organisation mondiale de la santé animale
Fondée en tant qu'OIE

Organización Mundial de Sanidad Animal
Fundada como OIE

# Context

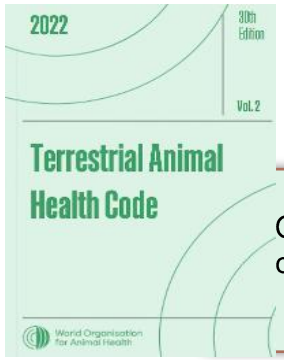
# What is ANIMUSE Global Database?

Stands for ANImal antiMicrobial USE (ANIMUSE) Global Databse.
In 2015 WOAH launched the data call to all its Members to provide AMU data in annual basis (every September with a deadline for December on the same year).
Based on WOAH Standards

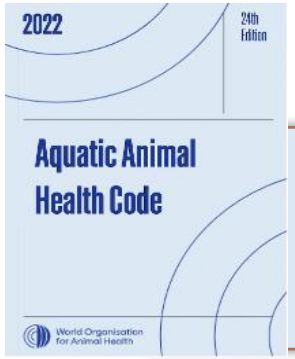



ANIMUSE Global Database

AMU Questionnaire based on WOAH International Standards for AMR



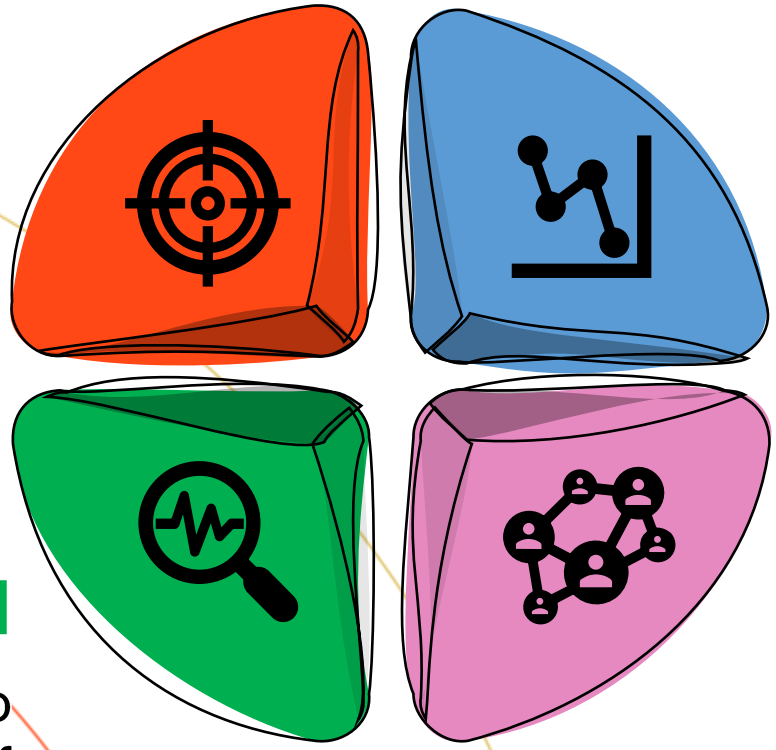

Ch.6.9. Monitoring of the quantities and usage patterns of antimicrobial agents used in food-producing animals




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

## INTERPRETATION

Helping in the interpretation of AMR surveillance data and assisting in responding to problems of antimicrobial resistance in a precise and targeted way



## EVOLUTION

Giving an indication of trends in the use of antimicrobial agents in animals over time and potential associations with AMR in animals

## EVALUATION

Assisting in risk management to evaluate the effectiveness of efforts and mitigation strategies.

## COMMUNICATION

Ensuring transparency and communicating on the risks (if data published)

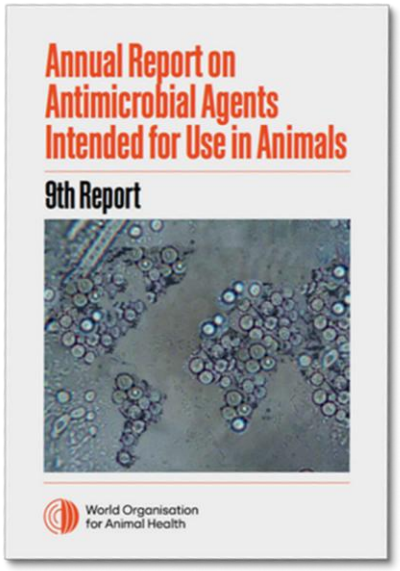
# WOAH AMU 9th AMU Annual Report: Two versions

https://amu.woah.org



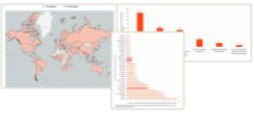
**Interactive Report:** Only selected charts – Based on most updated data in ANIMUSE (automatic refresh every hour).

**PDF Version:** All analysis based on a data extraction from November 2024




Published in May 2025

Results of the Ninth Rount (157 Participants)



2022 Analysis of Antimicrobial Quantities (107 Participants)

Trends from 2020 to 2022 (85 Participants)

# KEY FIGURES

## In short

Global antimicrobial use is decreasing

Non-responsible practices remain

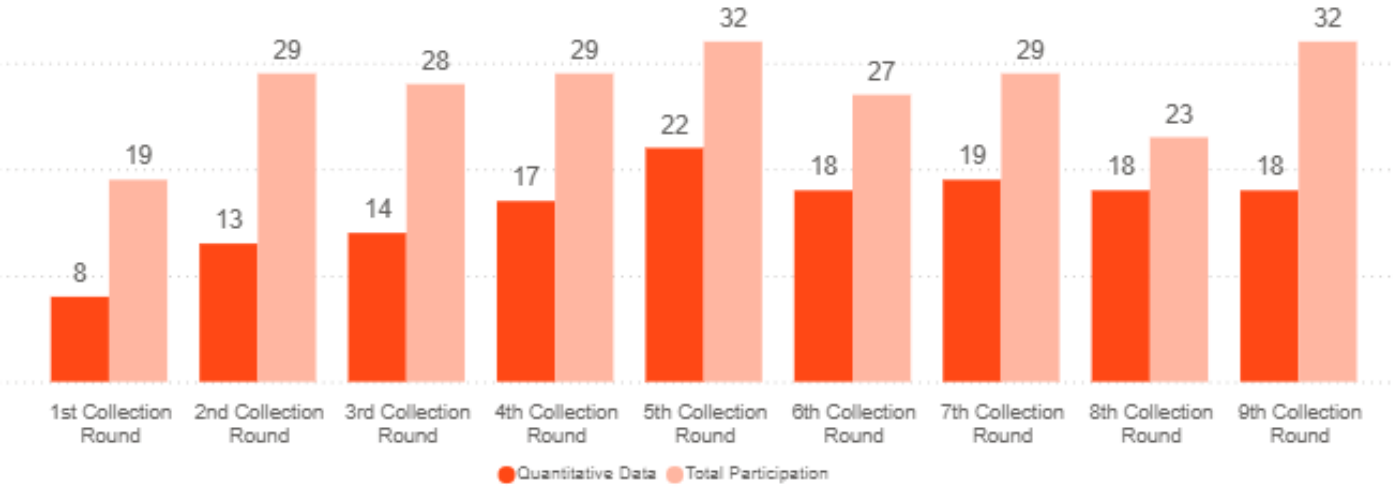
Transparency on AMU is improving

# Global Participation in ANIMUSE – 9th Round



The overall participation rate in the current ninth data collection round has slightly changed over time, despite all the resilience challenges and competing priorities WOAH Members have to face. **Three out of five submitted reports contain quantitative data**, representing a decrease in countries providing AMU reports, this could be explained due to alignment with countries to WOAH's target year.

**Participation** during the 9th round of ANIMUSE

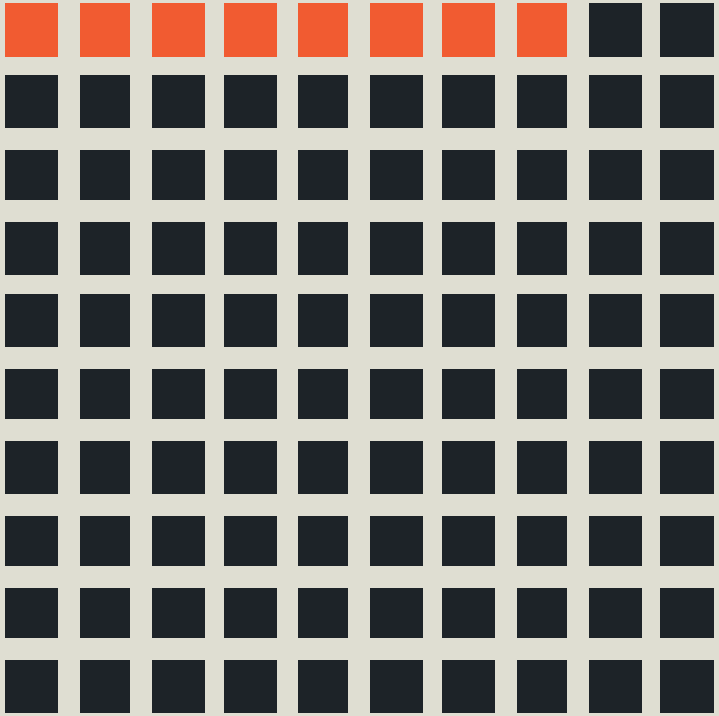


# There is room for improvement to optimise antimicrobial use



## Use of antimicrobials critical to human health

Only **8%** of antimicrobials used in animals in 2022 are considered as highest priority critically important (**HPCIA**) for human health. We must preserve their efficacy by using them in a responsible way.



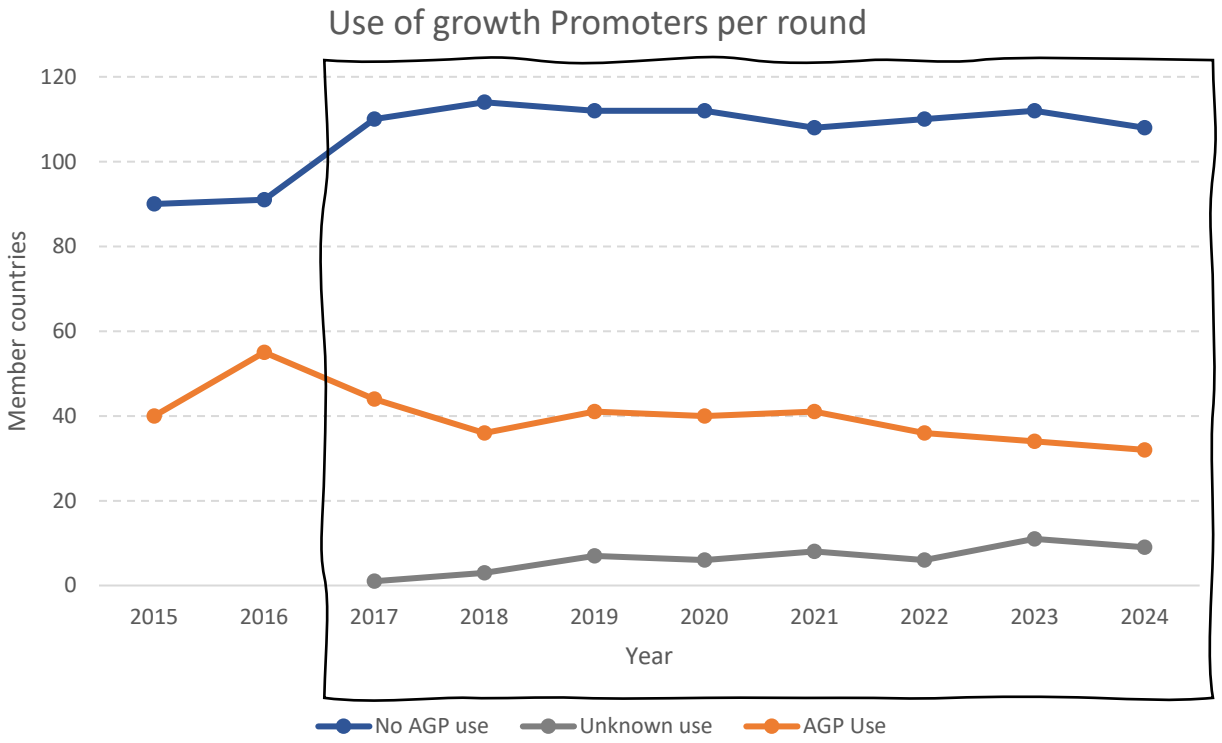
Importance of antimicrobials to human health

- HPCIA
- Others

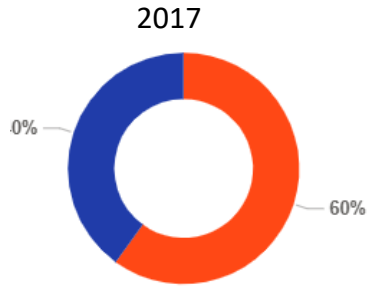
# Use of Growth Promoters (AGPs)

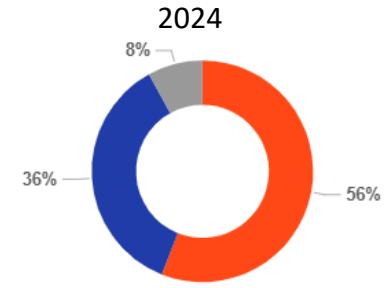
No changes observed in the risk analysis uptake by Members over the past decade to inform the use of growth promoters; at global level only three countries have a risk analysis for the use of growth promoters.

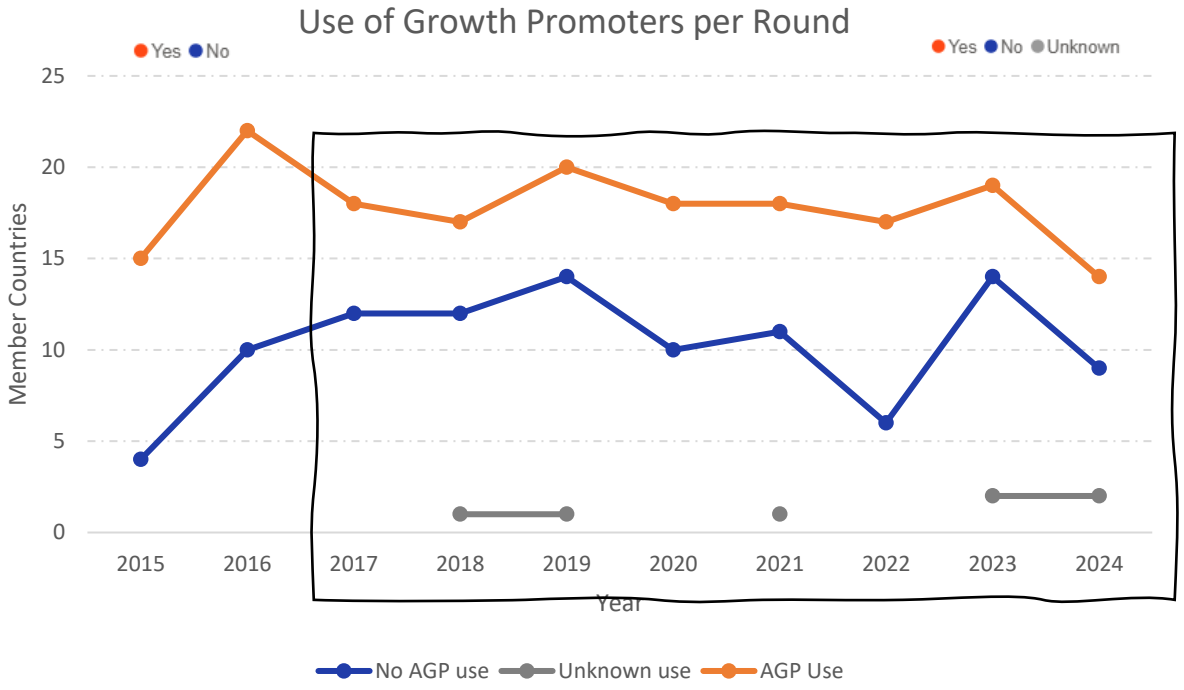
## Global




## Americas



# Terrestrial and aquatic food-producing animals



For the first time, antimicrobial quantities normalised by estimated animal biomass were compared between terrestrial and aquatic food-producing animals by antimicrobial classes.

## Terrestrial food-producing animals

47% covered by AMU data

**98 milligrams** of antimicrobials adjusted by kilograms of animal biomass

## Aquatic food-producing animals

64% covered by AMU data

**21 milligrams** of antimicrobials adjusted by kilograms of animal biomass

# Trends on time (2020 2022)

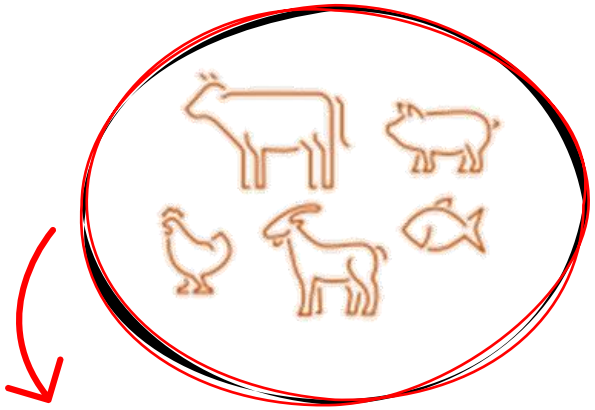
# Antimicrobial Quantities (numerator) and WOAH Animal Biomass (denominator)



Antimicrobial use is expressed in mg/kg of animal biomass. It is determined by adjusting the quantity of antimicrobial agents reported (mg) by the live domestic animal biomass (kg) each year. This indicator can be compared between regions and over time.

$$\frac{\text{Antimicrobial agents } \textbf{(mg)}}{\text{Animal biomass } \textbf{(kg)}} = \frac{}{}$$

As **reported** by the country to the OIE data collection for the target year



Total weight of food-producing animals in the target year

**Calculated** Animal Biomass of a country for the target year

# Less antimicrobials are used in animals

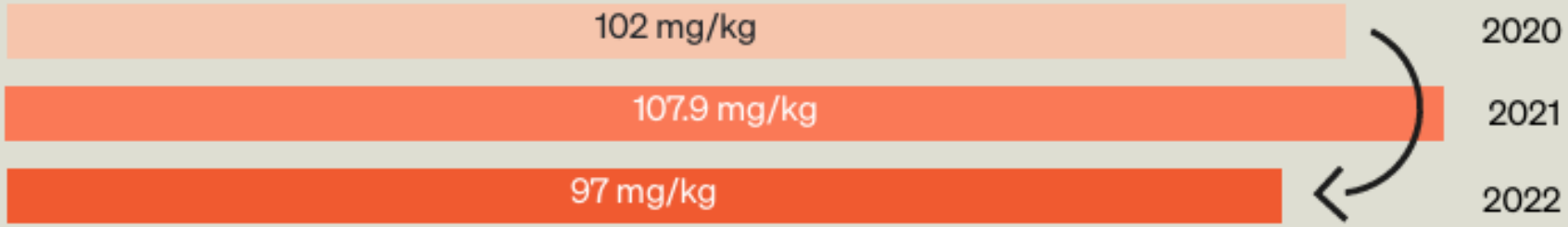


## An overview of antimicrobial use in animals

**-5%**

**Antimicrobial use in three years**

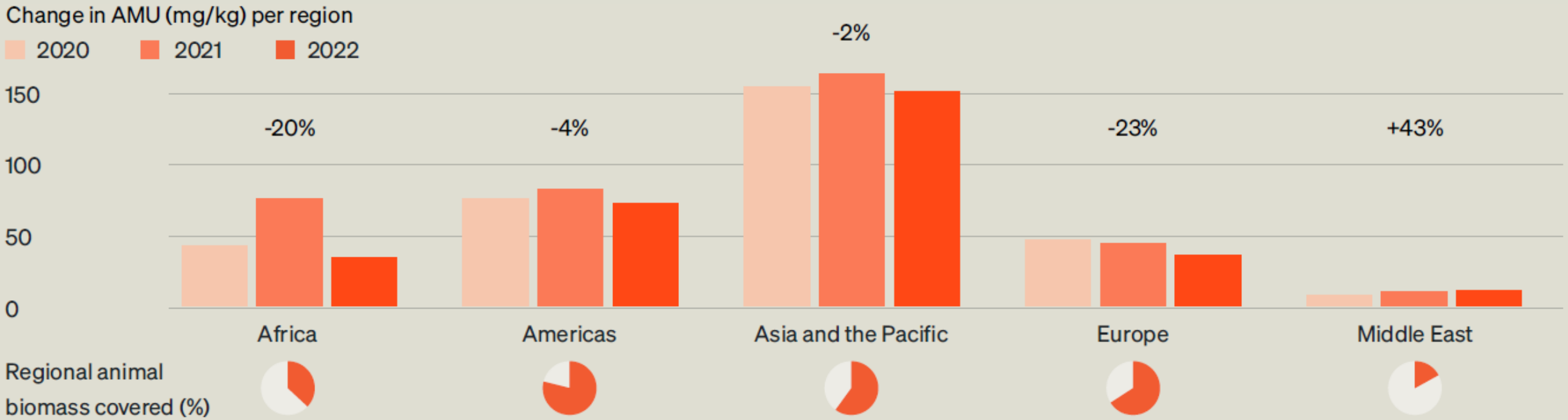
Global antimicrobial use (mg/kg) between 2020 and 2022




Data from 85 participating countries (62% of global biomass) that consistently provided quantitative data on AMU in animals from 2020 to 2022

# Global coverage by the 9th annual antimicrobial use report

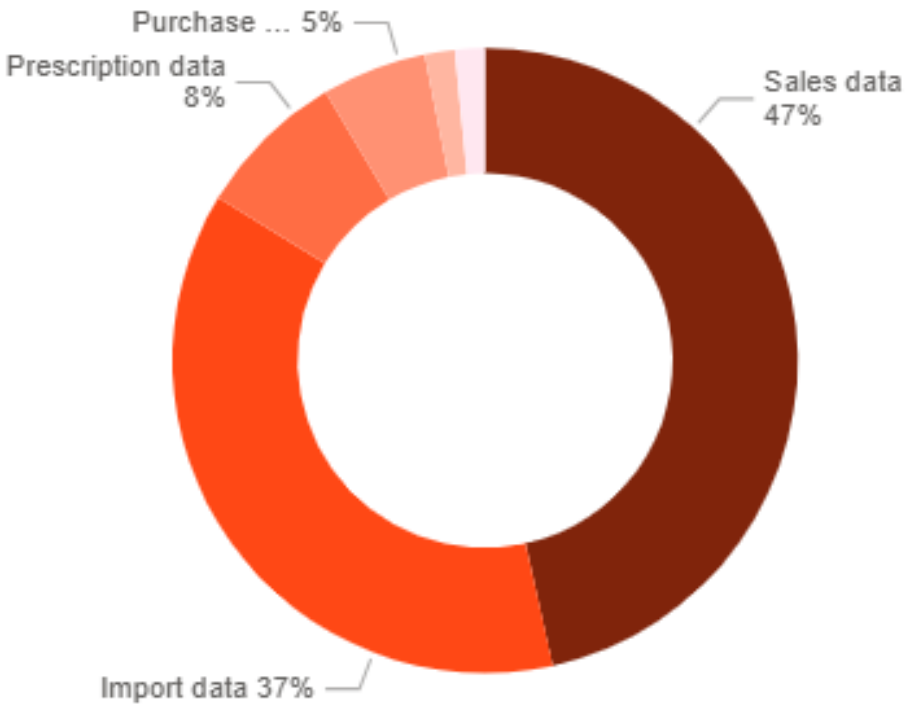




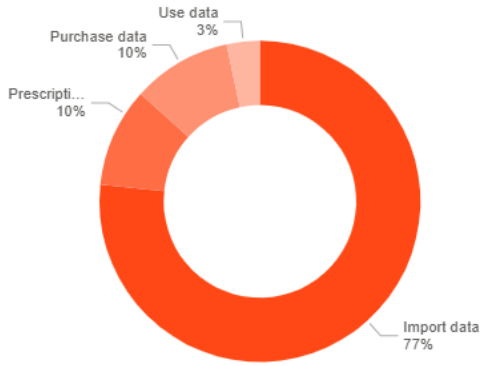
# ANIMUSE
# Reporting Option 4

# Validated Data Sources Selected by 111 Participants Reporting Quantitative Data in 2022

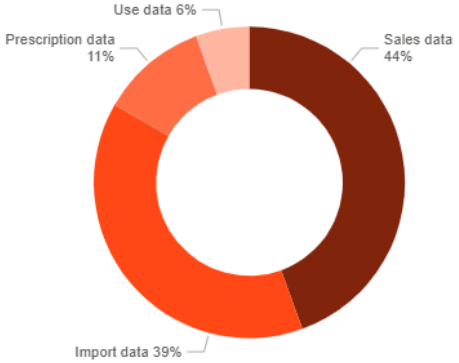




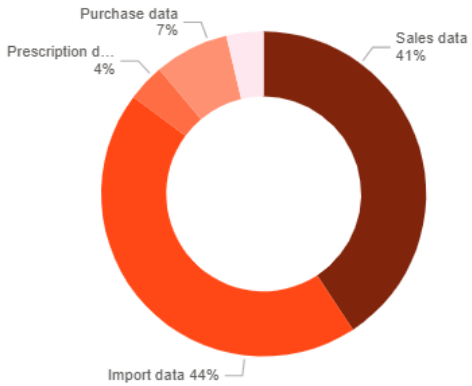

Africa (n= 28)



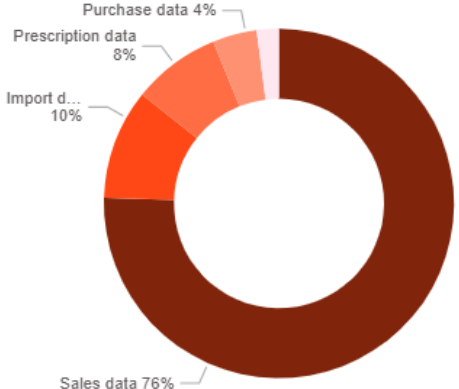

Americas (n= 16)



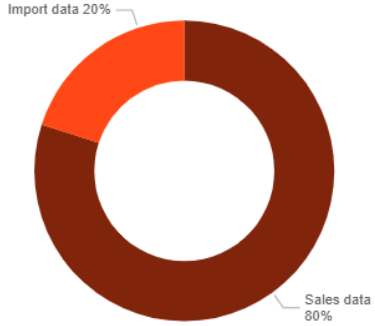

Asia (n= 22)




Europe (n= 41)

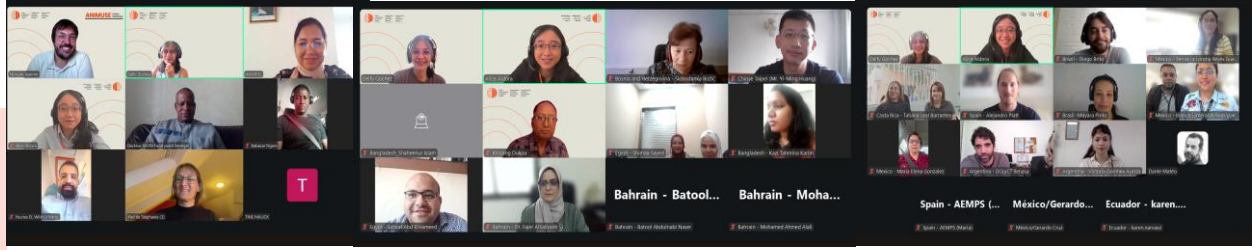



Middle East (n= 4)



# Reporting Option 4

Reporting Option will stratify data by animal species (launch by Sept. 2026). During the first weeks of Sept. 2025, 18 Members were invited to provide written feedback to WOAH. Of them, only **9** came back with their feedback as follows:




- **Five** only expressed that it will not be possible to provide such data by September 2026. Two of them will approach to the private sector to strengthen the collaboration.
- **One** understood WOAH is requesting all Members to collect farm level data.
- **Three** provided written feedback on how to improve the documents.

| Animal Species | Guidance |
|---|---|
| **Non-food-producing animals** | |
| **Canines and felines** | Includes cats and dogs. |
| **Other non-food-producing animals** | Includes all other non-food-producing animals not previously listed, including ornamental fish, horses, etc. |
| **Terrestrial food-producing animals** | |
| **Bovines** | Includes calves, dairy cattle, beef cattle and buffaloes (excluding Syncerus caffer). |
| **Pigs** | Includes piglets, fattening pigs, breeding pigs and backyard pigs. |
| **Sheep and goats** | Includes lambs, kids, adult sheep and adult goats. |
| **Poultry** | Includes broiler chickens, layer chickens, turkey, backyard poultry and other commercial poultry. |
| **Equidae** | Includes horses, donkeys and their crosses. |
| **Other terrestrial food-producing animals** | Includes all other terrestrial food-producing animals not previously listed, including rabbits, reptiles, bees (e.g. honey), Camelidae, Cervidae, etc. |
| **Aquatic food-producing animals** | |
| **Fish – Undefined** | Include amount of antimicrobials that could not be stratified by types of fish – (i.e., cannot distinguish between fish – Freshwater, fish – Salmonidae or Fish – Marine). |
| **Fish – Freshwater** | Includes Cyprinidae (carps, etc.), Cichlidae (tilapia, etc.) and Siluriformes (catfish, etc.). |
| **Fish – Salmonidae** | Includes Salmonidae (salmon, trout, etc.). |
| **Fish – Marine** | Includes marine fish. |
| **Crustaceans – Penaeidae** | Includes marine shrimp/prawn. |
| **Other aquatic-food-producing animals** | Includes all other aquatic food-producing animals not previously listed, including molluscs and amphibians. |
| **Unknown animals** | |
| **Unknown animals** | Use this category if specific animal species cannot be determined for a proportion of antimicrobial quantities. |

One comment mentioned that we should align animal species internally at WOAH (we already follow WAHIS). Additionally, if possible, to align with InFARM animal species for future data integration.

| Variable SPECIES *(data model options A and B)* | Animal species or food products where samples/isolates were collected |
|---|---|
| Code | Description |
| AMP | Amphibians§# |
| BEE | Bees¶ |
| BRO | Broilers – commercial production for meat*¶§ |
| BUF | Buffaloes (not *Syncerus caffer*)*¶§ |
| CAM | Camelidae§ |
| CAN | Dog¶ |
| CAT | Cattle*¶§ |
| CER | Cervidae (farmed)*¶§ |
| CRU | Crustaceans-Penaeids (e.g. shrimp)§†# |
| DUC | Duck*¶§ |
| EQU | Equidae (Horse, Donkey, Mule)*¶*¶§ |
| FCI | Fish-Cichlids (e.g. tilapia)§†# |
| FCY | Fish-Cyprinids (e.g. carp)§†# |
| FEL | Cat¶ |
| FMA | Fish-Marine§†# |
| FSA | Fish-Salmonids (e.g. salmon, trout)§†# |
| FSI | Fish-Siluriformes (e.g. catfish)§†# |
| GOA | Goats*¶§ |
| INS | Insect*¶§ |
| LAY | Layers – commercial production for eggs*¶§ |
| MOL | Molluscs (e.g. shellfish)§†# |
| OAA | Other aquatic food-producing animals§†# |
| OANF | Other aquatic non-food-producing animals# |
| OPO | Other commercial poultry*¶§ |
| OTA | Other terrestrial food-producing animals*¶§ |
| OTNF | Other terrestrial non-food-producing animals¶ |

| Variable SPECIES *(data model options A and B)* | Animal species or food products where samples/isolates were collected |
|---|---|
| Code | Description |
| PIB | Pigs-backyard*¶§ |
| PIC | Pigs-commercial*¶§ |
| POB | Poultry – backyard*¶§ |
| PROA | Animal processed food products§ |
| PROP | Plant food products§ |
| RAB | Rabbits*¶§ |
| REP | Reptiles (e.g. crocodiles)§# |
| SHE | Sheep*¶§ |
| SHG | Sheep and goats (mixed flocks)*¶§ |
| TUR | Turkey*¶§ |
| O | Others |
| UNK | Unknown |

# ANIMUSE

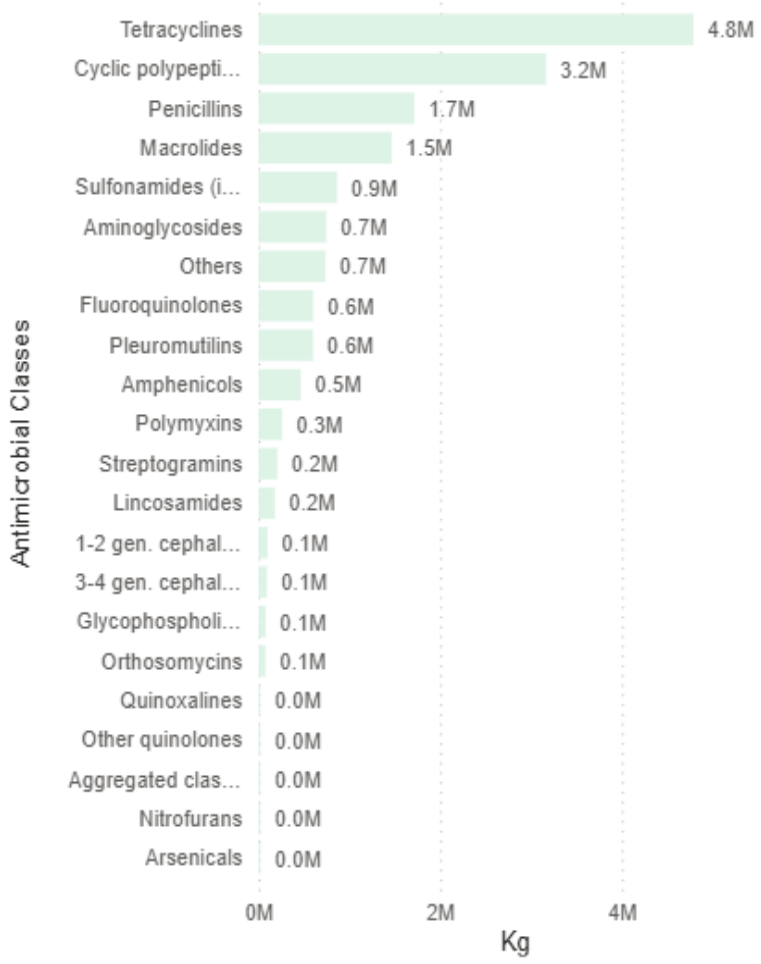
## Other Antimicrobials

# Addition of other antimicrobials

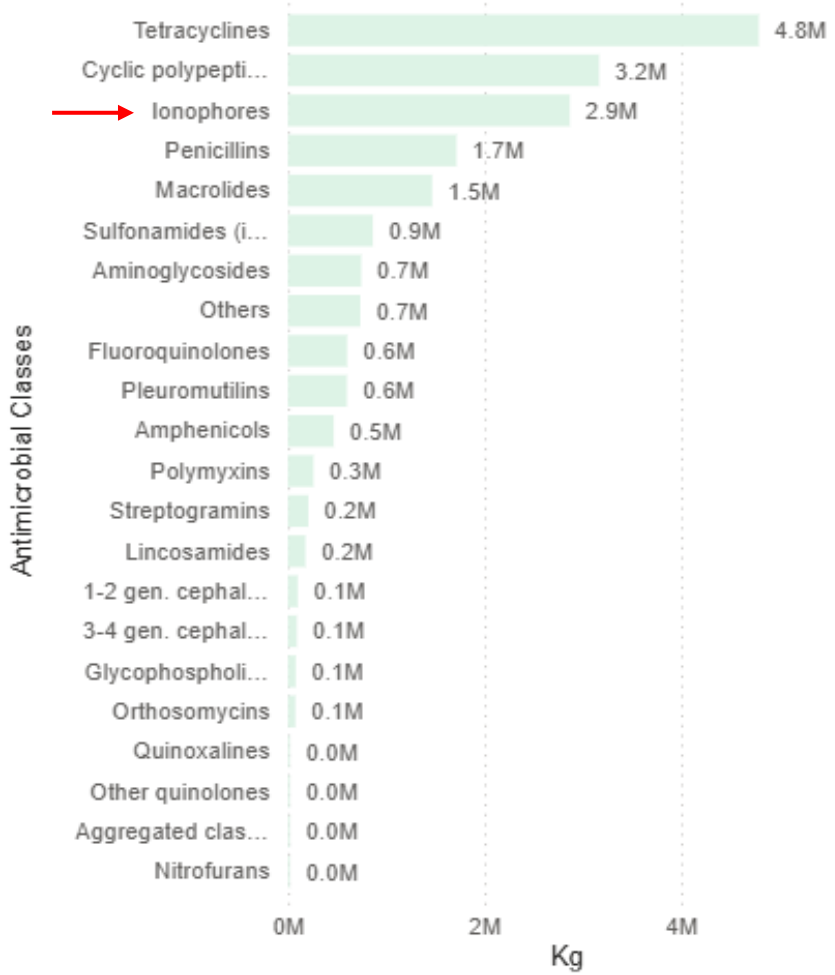
Draft zero of the Global Action Plan on AMR (2026 – 2035) indicates the following:

***AMR surveillance*** *should systematically include bacterial,* ***fungal***, ***parasitic*** *and* ***viral resistance****, supported by reliable microbiology, epidemiology, and economic data analysis capacity consistent with national context.* ***These systems should monitor*** *both AMR and* ***AMU****, and integrate data on behavioral, socioeconomic, and environmental determinants of AMR to deepen current understanding of AMR drivers and population-level trends...*

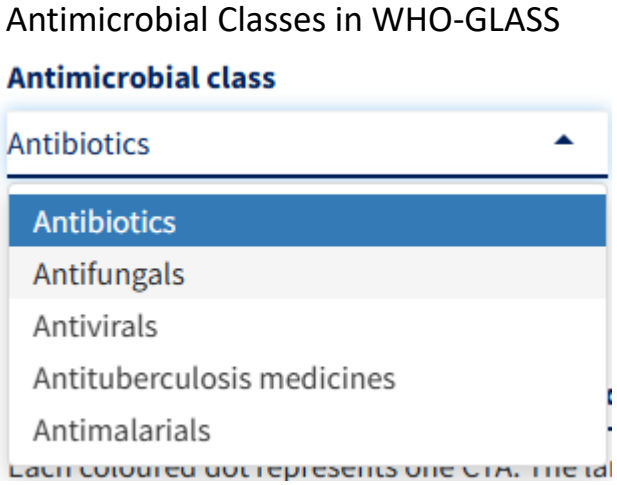
75 WOAH Members in 2023 – Calculation Module




75 WOAH Members in 2023 – Calculation Module.
Ionophores provided only by 14 Members




Antimicrobial Classes in WHO-GLASS



# 2024 UN Political Declaration on AMR: Key takeaways for Veterinary Services

**For the second time in history, UN Member States have adopted a Political Declaration on antimicrobial resistance (AMR). During the 79th United Nations General Assembly in September 2024, they reached consensus on 44 commitments. Almost half of them consider animal health matters, including four setting specific goals for our sector. Such recognition marks a significant milestone of our efforts to contain AMR.**

**This memo summarises the key outcomes that Veterinary Services need to consider and implement as their essential contributions to ensure that this global effort translates into successful achievements.**

1. PREVENTION
2. RESOURCED SURVEILLANCE
3. CROSS SECTORAL COORDINATION
4. SUSTAINABLE FUNDING

## Four commitments for the animal health sector by 2030

As a member of the national Veterinary Services, your work plays a central role in ensuring their achievement.

### Reduced quantities of antimicrobials used in animals

69. ***'Strive to meaningfully reduce [...] the quantity of antimicrobials used globally in the agri-food system*** *[...] taking into account the [...] standards, guidance and recommendations of the World Organisation for Animal Health.'*

### Prudent and responsible use of antimicrobials in animals

70. ***'Commit to ensure that the use of antimicrobials in animals and agriculture is done in a prudent and responsible manner*** *in line with [...] the standards, guidance and recommendations of the World Organisation for Animal Health.'*

### Prioritisation of prevention with a focus on animal vaccination strategies

72. ***'Ensure [...] that animal vaccination strategies are defined with an implementation plan*** *[...] taking into account WOAH's list of priority diseases for which vaccines could reduce antimicrobial use [...].'*

### Investment to ensure access to essential veterinary services

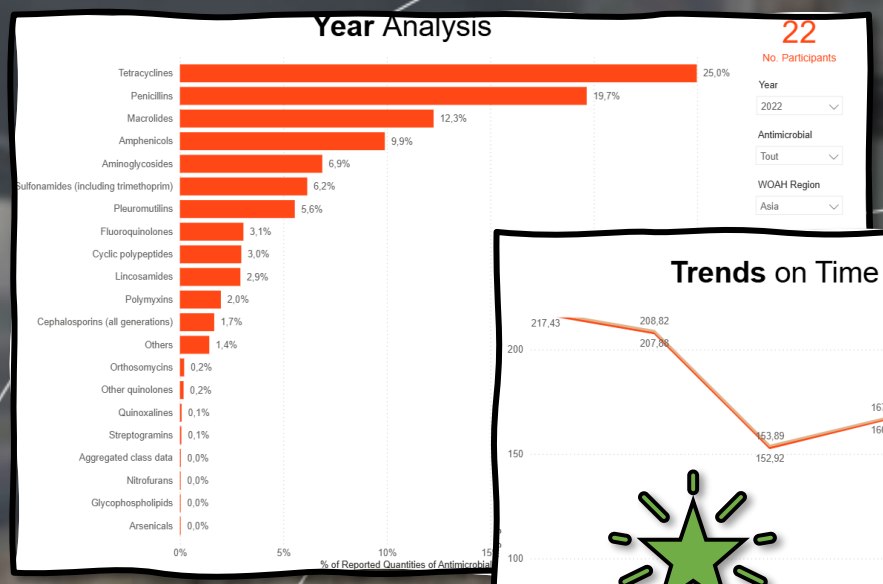
73. ***'Invest in animal health systems*** *to support equitable access to essential veterinary services, improve animal health and appropriate management practices to prevent infections [...].'*

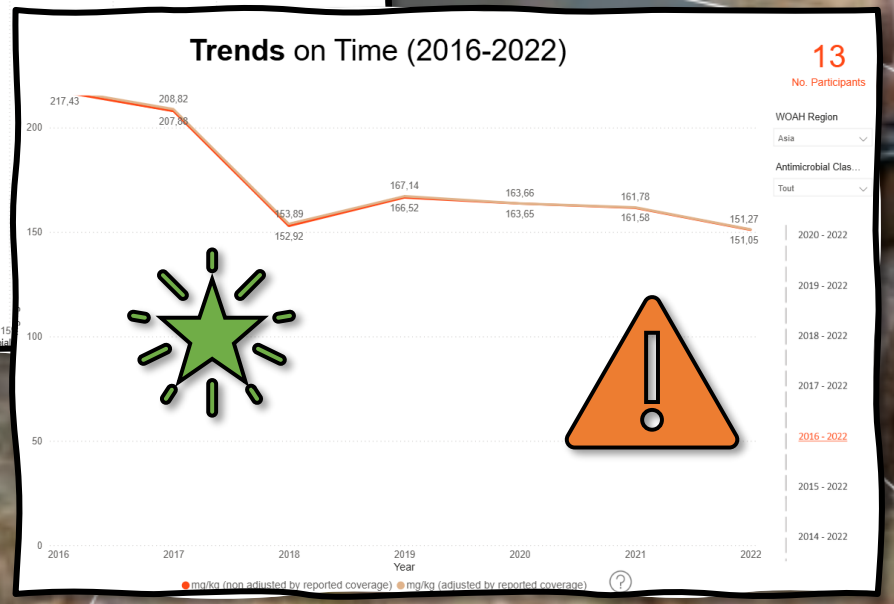
(X): number of the commitment in the AMR Political Declaration.

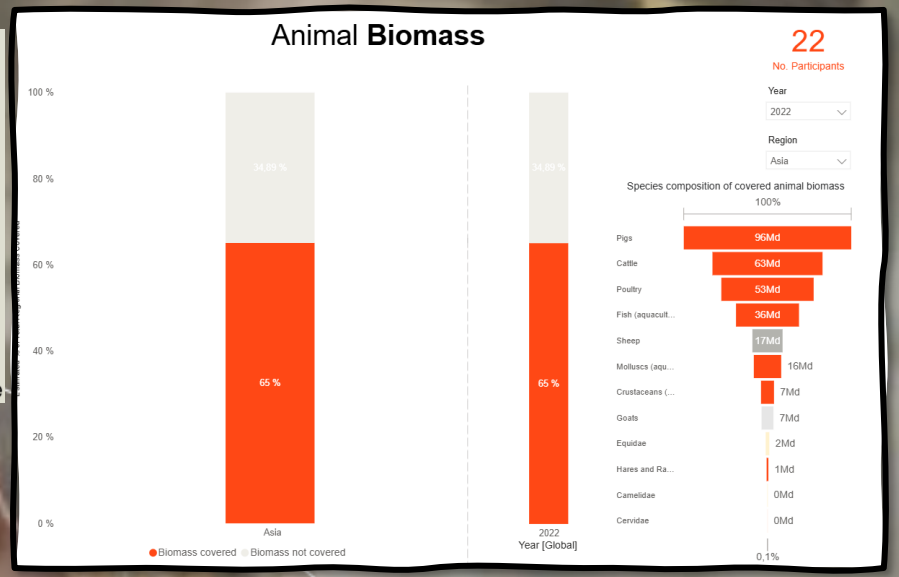
## Reduced quantities of antimicrobials used in animals

*69. 'Strive to meaningfully reduce [...] the quantity of antimicrobials used globally in the agri-food system [...] taking into account the [...] standards, guidance and recommendations of the World Organisation for Animal Health.'*

ANIMUSE Global Database



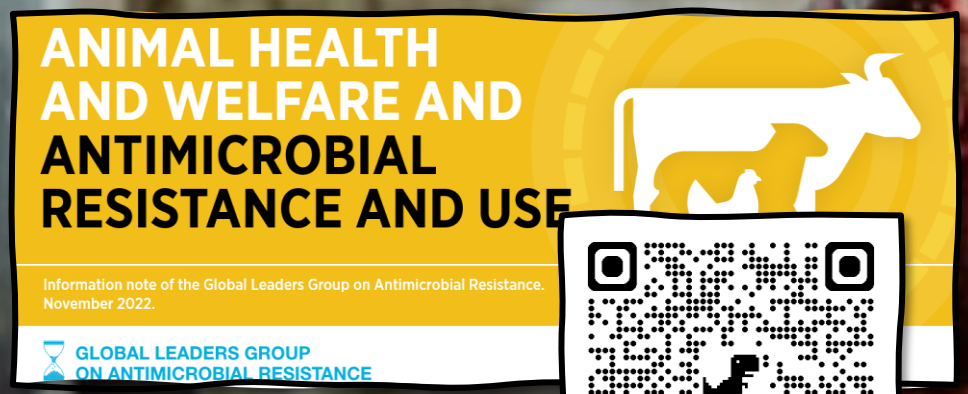




- 41% of global animal biomass
- You can make a difference !!

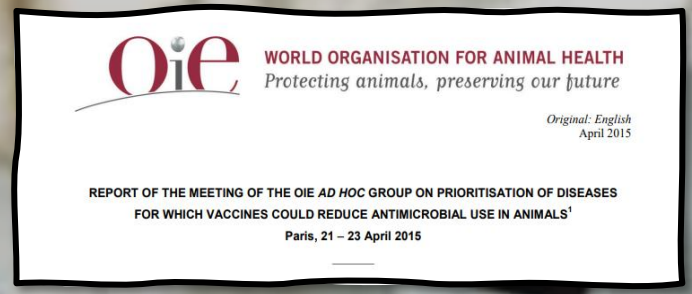
## Prioritisation of prevention with a focus on animal vaccination strategies

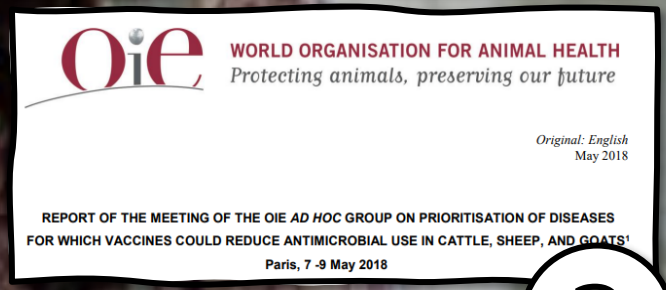
72. *'Ensure [...] that animal vaccination strategies are defined with an implementation plan [...] taking into account WOAH's list of priority diseases for which vaccines could reduce antimicrobial use [...].'*



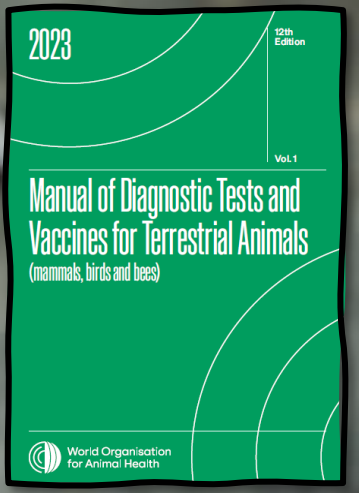

**1 PROPER ANIMAL HUSBANDRY**

**2 BIOSECURITY STANDARDS**




**3 VACCINATION**



# Thank you

**ANIMUSE** Global Database

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Organización Mundial de Sanidad Animal
Fundada como OIE