

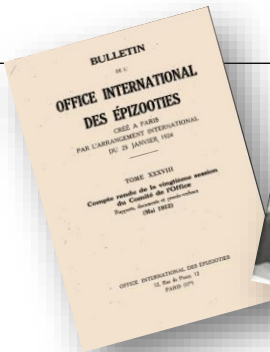


# Journey of the

# AMU Data Collection

Regional **ANIMUSE** Training for Europe  
7-9 November 2023, Belgrade, Serbia





— 776 —

2° Le praticien ne doit pas utiliser les antibiotiques au gré de sa fantaisie, mais en suivant les règles qui ont été fixées par l'expérience.

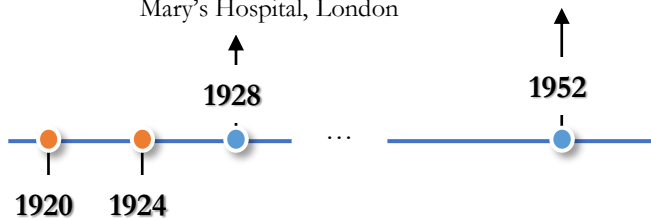
L'utilisation des antibiotiques contre des germes insensibles à leur action ou particulièrement résistants, l'emploi de doses trop faibles ou pendant un temps trop bref entraînent des dépenses inutiles, peuvent faire apparaître des germes résistants, retardent d'autant la mise en œuvre d'un traitement efficace et conduisent à des échecs qui nuisent à une méthode qui, lorsqu'elle a été judicieusement et correctement appliquée, a permis de sauver nombre de vies humaines et animales.

*“Practitioner must not use antibiotics at the discretion of his fantasy, but following rules that have been set by experience.*

*Use of antibiotics against insensitive germs or specifically resistant, utilization of too weak doses or through a too short time frame, can reveal resistant germs, delaying the set of an efficient therapy and lead to treatment failures, harming a method that, when judiciously and correctly applied, has saved numerous human and animal lives”*

First international resolution around **AMR**, based on scientific evidences reported back in 1948

Alexander Fleming discovers **penicillin** at St. Mary's Hospital, London



Rinderpest outbreak in Belgium as a result of zebus originating from India and destined to Brazil. Numerous ravages in livestock and livelihoods across the globe

## The World Organisation for Animal Health (WOAH)



2022

We are an intergovernmental organisation working across borders to improve the health of animals and therefore, our future .

**Office International des Epizooties (OIE)** is created by agreement of 28 States, to improve animal health, and to ensure coordinated prevention, preparedness & response, in case of outbreaks

### Transparency

Ensure transparency in the global animal disease situation

### Sanitary safety

Safeguard world trade by publishing health standards for international trade in animals and animal products

### Scientific information

Collect, analyse and disseminate veterinary scientific information

### Promotion of veterinary services

Improve the legal framework and resources of national Veterinary Services

### International solidarity

Encourage international solidarity in the control of animal diseases

### Food safety and animal welfare

To provide a better guarantee of food of animal origin and to promote animal welfare through a science-based approach

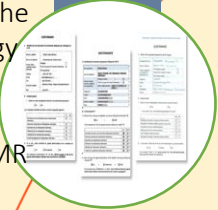
Our Worldwide Network

- 182 Members
- 1 Headquarters in Paris, France
- 75+ official partners
- 13 Regional and Sub-regional Representations
- 300+ Reference Centres of expertise

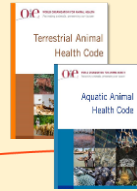
**85% Participation  
(152 Members)**

## 2012 - Survey on the implementation of Chapter 6.9 of the Terrestrial Animal Health Code

Some of the objectives were:  
To determine what actions are needed and to help the OIE to develop its strategy regarding AMU  
To prepare the 1st OIE Global Conference on AMR



## 2013 - 1st Global Conference on AMR



### 2014 – OIE AMU Template

Created by the experts of the OIE ad hoc Group on AMR – based on Chapters 6.9 and 6.3 of the Terrestrial and Aquatic Codes, respectively.

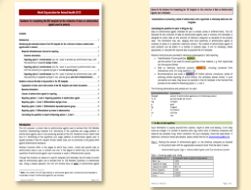


### 2014 – National Focal Points for Veterinary Products (FPVP)

Documents were discussed with the OIE National FPVP in the Americas; Europe; and Asia, Far East and Oceania regions; Africa was asked by email.



## 1st Round Launched in 2015





# Global database on antimicrobial agents intended for use in 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

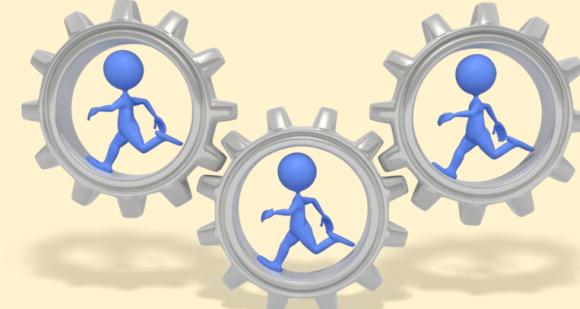
- Antimicrobial agents
- Type of use\*
- Group of animals\*\*

#### 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'



## Peer-reviewed methodologies for data collection and analysis

**Journal of Antimicrobial Chemotherapy**  
**Comparison of different biomass methodologies to adjust s on veterinary antimicrobials in the USA**  
 Eco Bulut <sup>1</sup> and Renata Ivankov <sup>1</sup>  
<sup>1</sup>Department of Population Medicine and Diagnostic Sciences, College of Veterinary Medicine, Cornell University  
 \*Corresponding author. E-mail: eib464@cornell.edu  
 Received 31 January 2021; accepted 4 November 2021

**Objectives:** The United States (US) FDA, European Surveillance of Veterinary Antimicrobial Consumption (ESVAC), Public Health Agency of Canada (PHAC) and World Organisation for Animal Health (WOAH) methodologies that characterize antimicrobial sales for use in food animals by adjusting mass. Our aim was to review and compare these methodologies on US-specific data.

**Methods:** Annual antimicrobial sales for cattle, swine, chickens and turkeys in the US were adjusted by the FDA, ESVAC, PHAC and OIE methodologies. To better understand advantages of the four methodologies, their biomass denominators were compared against the estimated US livestock biomass, their ability to observe term within a country and practicality in biomass estimation for comparing antimicrobial sales for use in US food animals. The 2015 estimates were the highest with 1.7% of active antimicrobial ingredient (a.i.) of animal biomass, followed by PHAC and OIE (11.5 mg/kg). The animal weight parameters used in each method biomass-adjusted sales estimates.

**Conclusions:** In regard to the estimation of the animal biomass, no method was best for biomass estimation for global monitoring of antimicrobial use.

**Introduction**  
 Antimicrobial resistance is a global health crisis. While emergence and spread of antimicrobial resistance is a complex, multi-causal evolutionary phenomenon, antimicrobial use in food animals is a contributor to this crisis and a potential source of antimicrobial-resistant infections in humans.<sup>1,2</sup> Current evidence shows that antimicrobial-resistant organisms can be transferred from food animals to humans through direct contact,<sup>3,4</sup> the food chain<sup>5,6</sup> and the environment,<sup>7,8</sup> and shared between food animals and humans.<sup>9-11</sup> The expanding human population is becoming more reliant on animals for food, which induces large-scale intensive farming operations and exerts antimicrobial use in food animals. This adds to the on-going problem of overuse and inappropriate use of antimicrobials in food animals and increases the health risks in human-resistant organisms.<sup>12-14</sup>

**1. Introduction**  
 In the framework of the global action plan on antimicrobial resistance (GAP) related to AMR, the WHO, FAO, and WOAH have agreed to reduce the use of antimicrobials in animals. The WHO Strategic Action Plan on Antimicrobial Resistance (2019-2023) includes a target to reduce the use of antimicrobials in animals. The WHO Strategic Action Plan on Antimicrobial Resistance (2019-2023) includes a target to reduce the use of antimicrobials in animals. The WHO Strategic Action Plan on Antimicrobial Resistance (2019-2023) includes a target to reduce the use of antimicrobials in animals.

**From OIE standards to responsible and prudent use of antimicrobials: supporting stewardship for the use of antimicrobials in animals**  
 Jorge Pinto Ferrero <sup>1</sup>, Dany Gocher <sup>2</sup>, Argen Jimenez <sup>3</sup>, Mehdi Welcomme Magno <sup>4</sup>, Camille Lal <sup>5</sup>, Karen Becker <sup>6</sup>, Gerard Nisbet <sup>7</sup>, Elisabeth Erbacher-Vincke <sup>8</sup>  
<sup>1</sup>World Organisation for Animal Health (WOAH), Paris, France; <sup>2</sup>French Agency for Veterinary Medicines, French Agency for Food, Environmental and Occupational Health Safety, Fougères, France  
 \*Corresponding author. E-mail: jpferrero@woah.org

**JAC-Antimicrobial Resistance**



## INTERACTIONS

*Each round,*

**+30** teleconferences &  
videoconferences

**650** emails exchanged

## PROGRESS

*Since 1st round,*

**+ 20%** Participation

**+120 %** Reporting Option 3

## UNDERSTANDING

*Each round,*

**80%** of Members amend their  
dossiers after interacting with WOH  
AMU Team

## TRAININGS

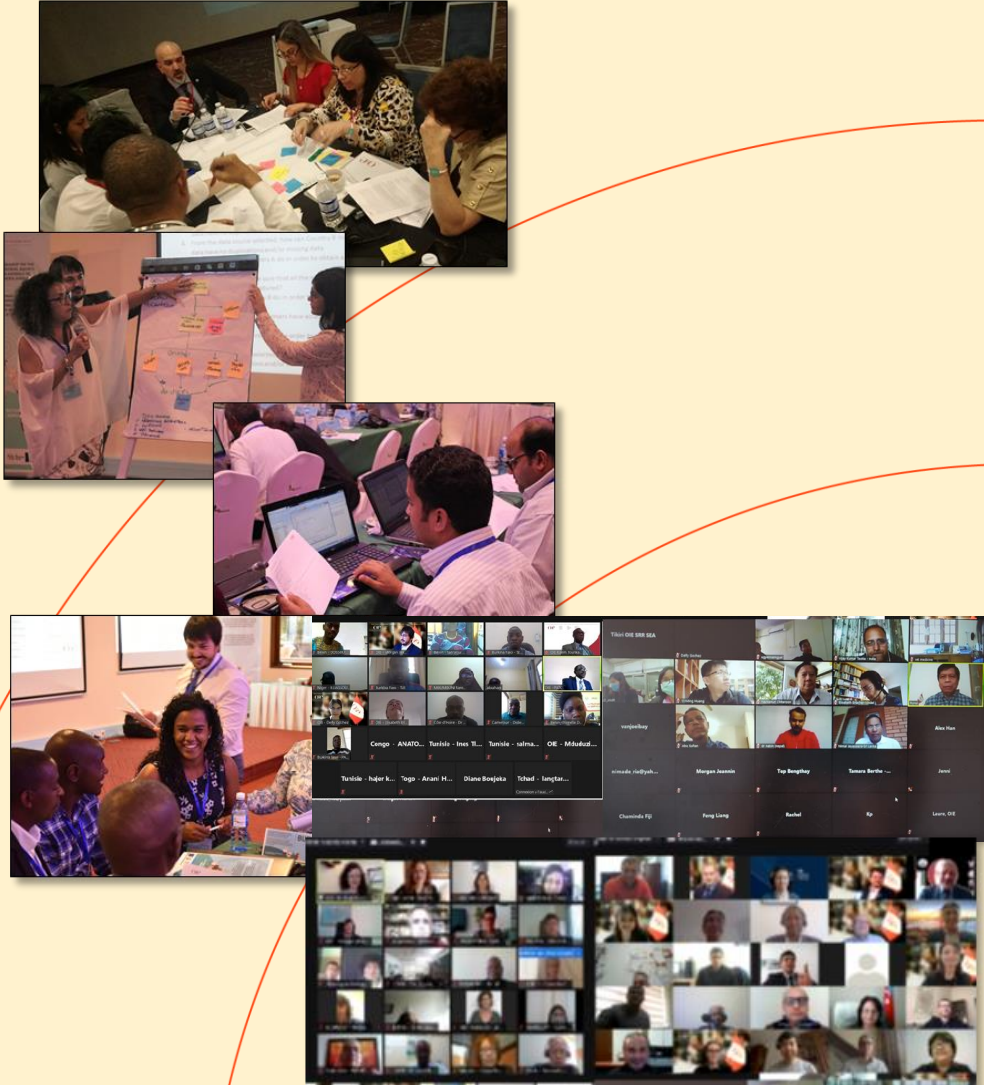
*Since 5th round,*

**615** participants were trained  
through in-person or virtual trainings



# What happened during the last seven years?

## Identified countries' needs



## Among all needs, these were present in many Members

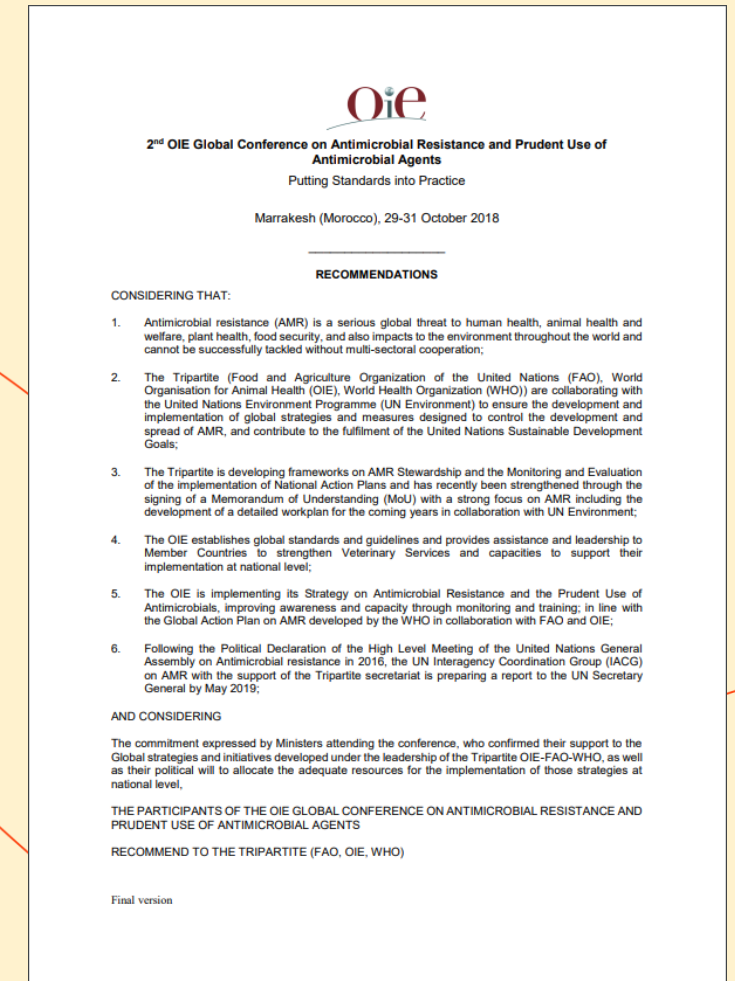
- ✓ IT Tools to collect and calculate AMU data
- ✓ Access to historical data
- ✓ Trends on time
- ✓ Analysis of AMU data



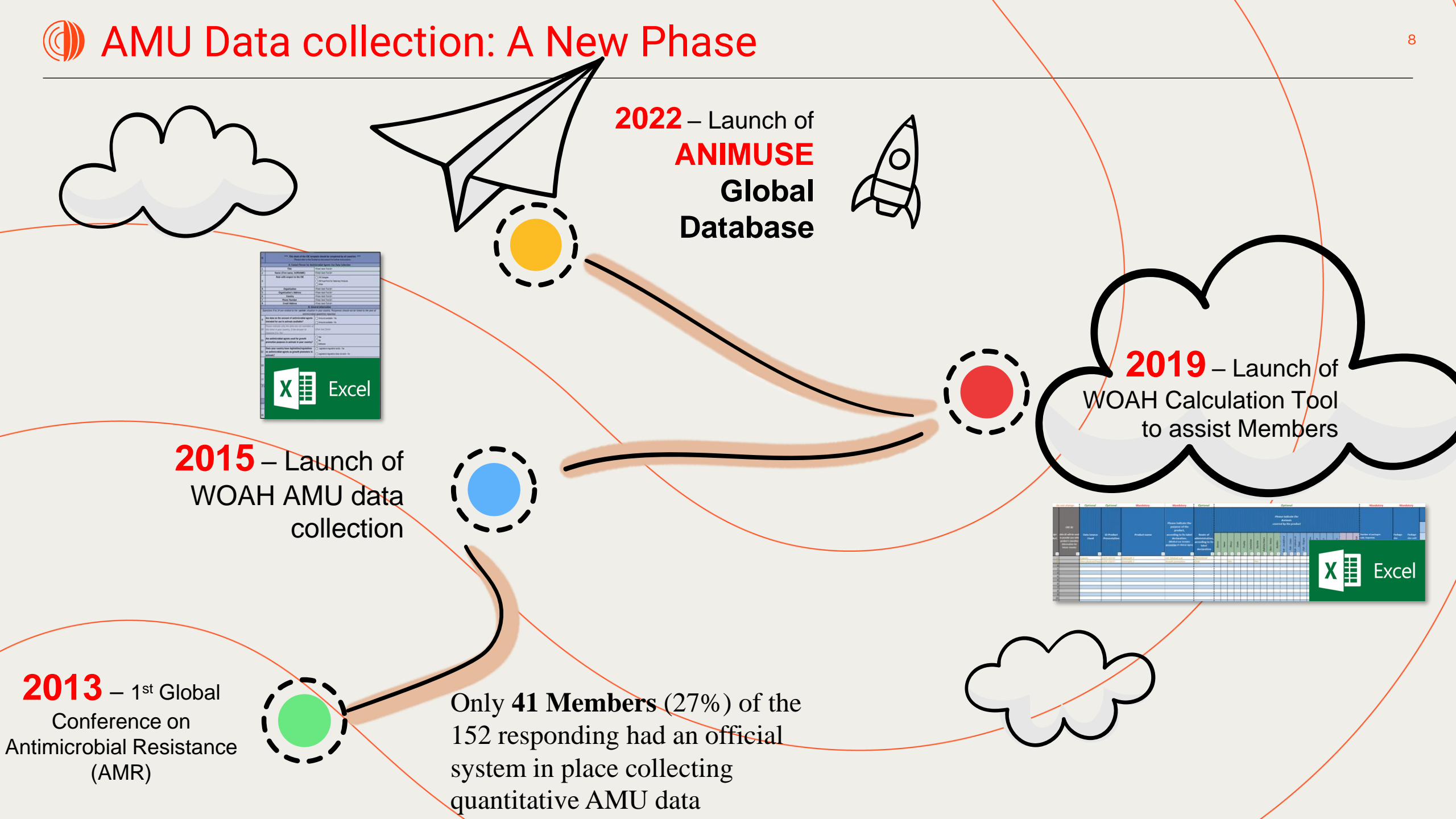
# Recommendation n°4 of the 2<sup>nd</sup> OIE Global Conference on Antimicrobial Resistance – October 2018



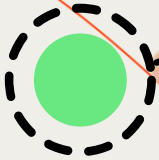
To further develop the OIE data collection on Antimicrobial Agents Intended for Use in Animals, **converting the current spreadsheet format to a database system**, able to accommodate data submissions by animal species, and its connection to the World Animal Health Information System (WAHIS) and also allowing addition of data from field studies



# AMU Data collection: A New Phase

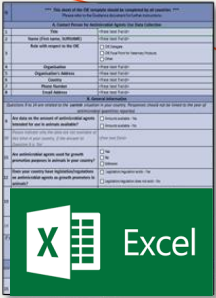


**2013** – 1<sup>st</sup> Global Conference on Antimicrobial Resistance (AMR)

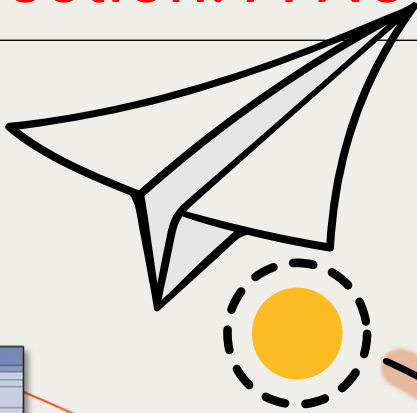


Only **41 Members** (27%) of the 152 responding had an official system in place collecting quantitative AMU data

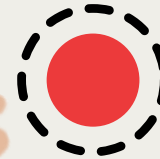
**2015** – Launch of WOAH AMU data collection



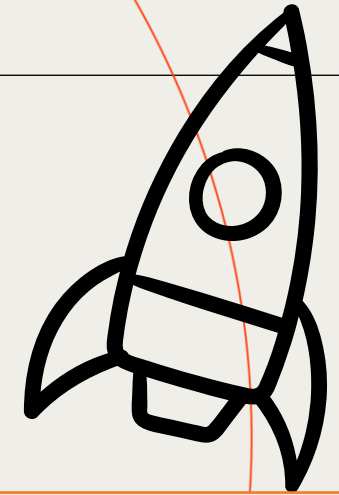
**2022** – Launch of **ANIMUSE** Global Database



**2019** – Launch of WOAH Calculation Tool to assist Members







World Organisation for Animal Health  
Founded as OIE

ANIMUSE

Search Country

EN FR ES

HOME DATA VISUALISATION FAQ ADMINISTRATION RESOURCES USER SUPPORT

## Welcome to your national portal

**Data Collection Round**

Follow the advancement of your AMU dossier here

Continue

- Round opened
- In progress**
- Submitted
- Pending clarification
- Validated

Need help to calculate the antimicrobial quantities?

Enter your information by

**Calculation**

## Data dashboard

EXPORT

Country Participation

If the data are **public**, the last two columns ANIMUSE public portal. They are shown here

A system designed for **YOU**

To calculate antimicrobial quantities with the **Calculation module**



Allows **online access** to complete the antimicrobial use (AMU) **questionnaire** and upload data collected offline.



Access **historical data** and generate professional outputs for **data visualisation**





From 2015...

**GLOBAL ACTION PLAN ON ANTIMICROBIAL RESISTANCE**

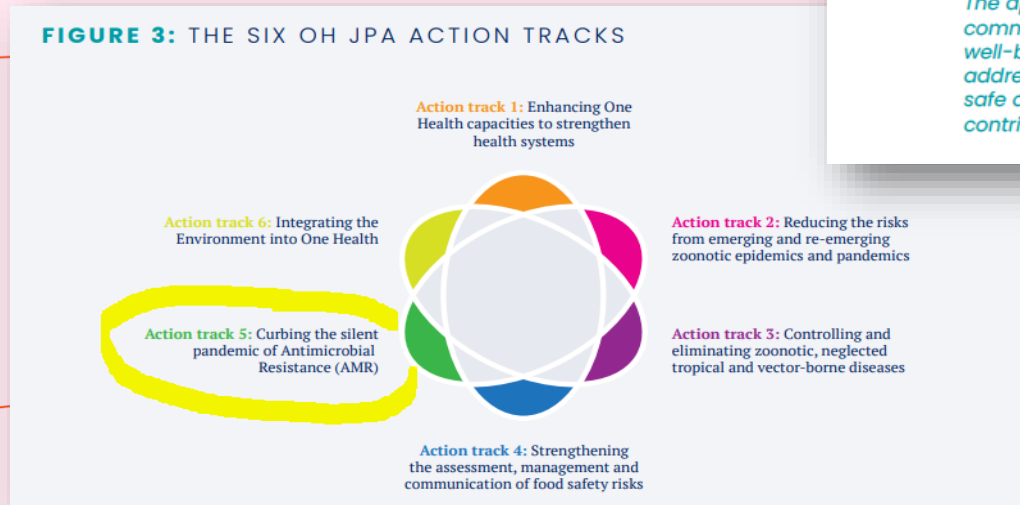
**Adopted in 2015** by all countries through decisions in the World Health Assembly, the Food and Agriculture Organization of the United Nations (FAO) Governing Conference and the World Assembly of World Organisation for Animal Health (OIE) Delegates. **Countries agreed to have a national action plan on AMR that is consistent with the Global Action Plan**, and to implement relevant policies and plans to prevent, control and monitor AMR. **This action plan underscores the need for an effective “one health” approach** involving coordination among numerous international sectors and actors, including human and veterinary medicine, agriculture, finance, environment, and well informed consumers.

...to 2022

**ONE HEALTH JOINT PLAN OF ACTION (2022-2026)**

**WORKING TOGETHER FOR THE HEALTH OF HUMANS, ANIMALS, PLANTS AND THE ENVIRONMENT**

**AMR is embedded as one action track**



**Memorandum of understanding signature**



OHHLEP, as an independent advisory group to the Quadripartite, has issued a comprehensive definition of One Health, which the Quadripartite embraces in this OHPA (Adisasmito et al., 2022):

*One Health is an integrated, unifying approach that aims to sustainably balance and optimize the health of humans, animals, plants and ecosystems. It recognizes the health of humans, domestic and wild animals, plants and the wider environment (including ecosystems) are closely linked and interdependent.*

*The approach mobilizes multiple sectors, disciplines and communities at varying levels of society to work together to foster well-being and tackle threats to health and ecosystems, while addressing the collective need for clean water, energy and air, safe and nutritious food, taking action on climate change, and contributing to sustainable development.*

**One Health's definition**

**2014 - Netherlands** (Ministries of Health and Agriculture) - 17 countries → **accelerated political commitment and action to the realization of the WHO Global Action Plan on AMR as well as the UN General Assembly High level Meeting on AMR in September 2016.**

**2019 – Netherlands** (Ministries of Health and Agriculture) - 40 countries → **twining initiative among countries from the North and South in the implementation of National Action Plans and the establishment of the AMR Multiparter Trust Fund with 5M USD initial financial commitment from the Government of Netherlands.** By June 2022, the AMR Trust Fund mobilized 26M USD with additional donors including the Governments of UK, Germany and Sweden and supports 11 countries in the implementation of One Health NAPs on AMR.

**2022 – Muscat, Oman** (Ministries of Health and Agriculture) – Endorsed by 47 countries (attended by 28 Ministers of Health and 14 Ministers of Agriculture)

## Muscat Manifesto



Reviewing, updating or revising our **National Action Plans for AMR** with all relevant stakeholders for implementation with financial resources, milestones and national targets, including the Sustainable Development Goal indicators on AMR in the human health sector, taking into consideration the One Health approach;

Strengthening national, regional, and global **surveillance** systems through improved data management, private sector engagement, implementation of data-driven practices, and the reporting of data to the WHO Global Antimicrobial Resistance Use Surveillance System (GLASS), the WOAHA Animal Antimicrobial Use system (ANIMUSE), and the Quadripartite Tracking AMR Country Self-Assessment Survey (TrACSS);

**Reducing the total amount of antimicrobials used in the agri-food system by at least 30-50% from the current level by 2030;**

**Zero use of medically important antimicrobials for human medicine in animals for non-veterinary medical purposes or in crop production and agri-food systems for non-phytosanitary purposes;**

**Ensuring that ACCESS group antibiotics comprise at least 60% of overall antibiotic consumption in humans by 2030.**

**Coming soon (2024) – United Nations General Assembly (UNGA 2024)– AMR Side Event &**

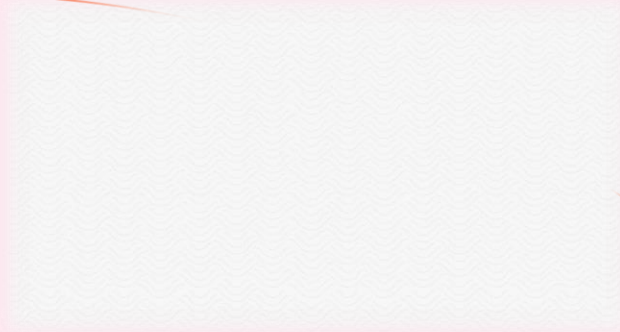
**Fourth High-Level Inter-Ministerial Conference on AMR (Saudi Arabia)**



# Muscat Manifesto: Recommendations for countries

Reviewing, updating or revising our NAPs for AMR with all relevant stakeholders for implementation with financial resources, milestones and national targets, (...) taking into consideration the **One Health** approach;

**Strengthening national**, regional, and global **surveillance systems** through **improved data management**, private sector engagement, implementation of **data-driven practices**, and the reporting of data to WHO (GLASS), **WOAH Animal Antimicrobial Use system (ANIMUSE)**, and the Quadripartite Tracking AMR Country Self-Assessment Survey (TrACSS);



**Target 1:** Reducing the **total amount of antimicrobials** used in the agri-food system by at least **30-50%\*** from the current level **by 2030**;

**Target 2:** **Zero use of medically important antimicrobials (MIAs)** for human medicine in animals for **nonveterinary medical purposes** – CIA are of utmost priority to preserve.

**Target 3:** Ensure that **ACCESS group antibiotics** are at least **≥ 60% of overall antibiotic consumption in humans by 2023**.



\*Note: This **30-50%** measurement refers to a **population-weighted amount of antimicrobials reduction**



## Scientific and Technical Review vol. 41

# Antimicrobial use in animals: a journey towards integrated surveillance



*M. Jeannin, M. Magongo, D. Gochez, O. Valsson, E. Erlacher-Vindel, M. Arroyo Kuribreña & J. Yugueros-Marcos*



# Thank you