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UNITED ARAB EMIRATES
MINISTRY OF CLIMATE CHANGE
& ENVIRONMENT

MIDDLE EAST
MEVMAS
VETERINARY MEDICINE & ANIMAL SCIENCE
CONFERENCE 2022

Javier Y. Marcos

Antimicrobial Resistance & Veterinary Products
Department Head

Responsible & prudent use of antimicrobials – OIE Strategy

Week of Innovation on
VETERINARY SERVICES
7-10 FEBRUARY 2022

OIE

Organisation Mondiale de la Santé Animale
World Organisation for Animal Health
Organización Mundial de Sanidad Animal

Antimicrobial Resistance - How did we manage to get there ?

1945

Fleming, Florey and Chain were jointly awarded the Nobel Prize in Physiology or Medicine.

Laboratory workers in the development of penicillin, England (1943). By Ministry of Information Photo Division Photographer, Stone Richard [Public domain], via Wikimedia Commons.

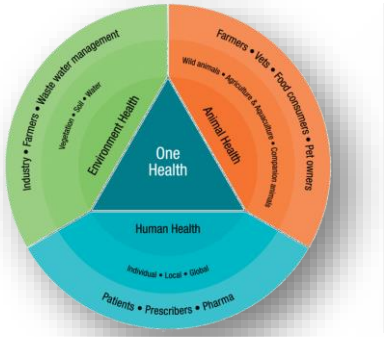
"It is not difficult to make microbes resistant to penicillin in the laboratory by exposing them to concentrations not sufficient to kill them, and the same thing has occasionally happened in the body. The time may come when penicillin can be bought by anyone in the shops. Then there is the ***danger that the ignorant man may easily underdose himself and by exposing his microbes to non-lethal quantities of the drug make them resistant****."*

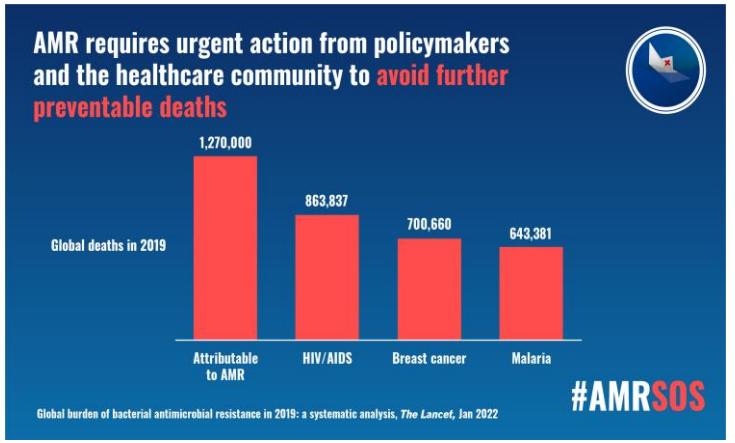
2022

Global burden of bacterial antimicrobial resistance in 2019: a systematic analysis

Published Online
January 20, 2022
https://doi.org/10.1016/
S0140-6736(21)02724-0

*Antimicrobial Resistance Collaborators**





The Washington Post

Opinion | The shadow pandemic: Antibiotic resistance is growing

Another global health crisis is unfolding in the shadow of the coronavirus pandemic. Antimicrobial resistance, the tendency of bacteria and...

Il y a 6 jours

Organisation Mondiale de la Santé Animale

World Organisation for Animal Health

Organización Mundial de Sanidad Animal

World Organisation for Animal Health (OIE)

- An Intergovernmental Organisation
- Mandate to Improve Animal Health, Welfare and Veterinary Public Health
- **Sets international standards recognised by the WTO**

- Formed in **1924** as the *Office International des Epizooties* (OIE)
- Named as World Organization for Animal Health (OIE) since **2003**

264 Reference Laboratories	**182** Members	**75** Partner organisations

For each Member:

- **1** National Delegate to the OIE
- **8** National Focal Points on specific subject matter, *including one on Veterinary Products including* ***AMR***

Headquarters in Paris
158 staff

13 Regional offices
74 staff

MIDDLE EAST

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…in 2022…

…stay tuned !

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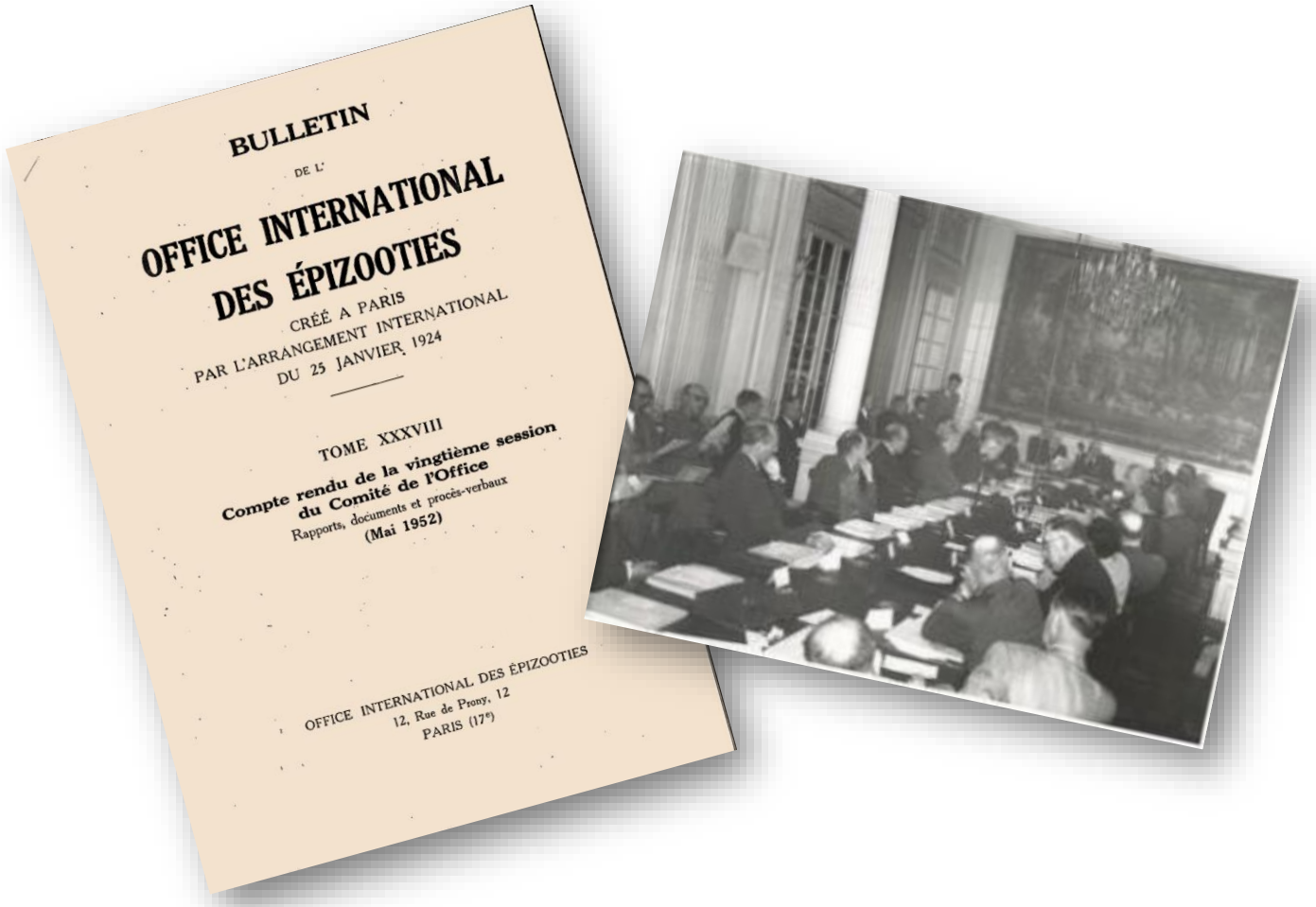
OIE work on antimicrobial resistance

Antimicrobial resistance was already discussed in the 20th OIE Session in 1952 and makes reference to an earlier report of 1948



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**"*

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Where are we today ?

The OIE Strategy on AMR and the Prudent Use of Antimicrobials

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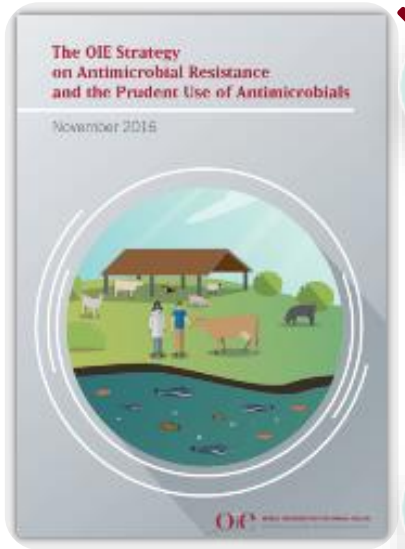
The OIE Strategy on AMR & Prudent Use of Antimicrobials

The OIE Strategy supports the objectives established in the Global Action Plan on antimicrobial resistance and reflects the mandate of the OIE, through four main objectives:



- Improve awareness and understanding
- Strengthen knowledge through surveillance and research
- Support good governance and capacity building
- Encourage implementation of international standards

http://www.oie.int/fileadmin/Home/eng/Media_Center/docs/pdf/PortailAMR/EN_OIE-AMRstrategy.pdf

The OIE Strategy on AMR & Prudent Use of Antimicrobials

1 Improve awareness and understanding

- Development of **targeted communications and advocacy materials**
- Awareness of AMR **to encourage a professional culture** that supports the responsible and ethical use
- Professional development goals by **conducting workshops, conferences and symposia**
- Expand the portfolio of **OIE guidance, education and scientific reference materials**
- **Collaborate with WHO and FAO**

2 Strengthen knowledge through surveillance & research

- Developing and implementing **monitoring and surveillance systems**
- Collecting **data on the use of antimicrobial agents** in food-producing and companion animals
- Developing **use and functionality of WAHIS**
- **Guide and support research into alternatives**
- Identify and pursue **public-private partnerships** in AMR research and risk management

3 Support good governance and capacity building

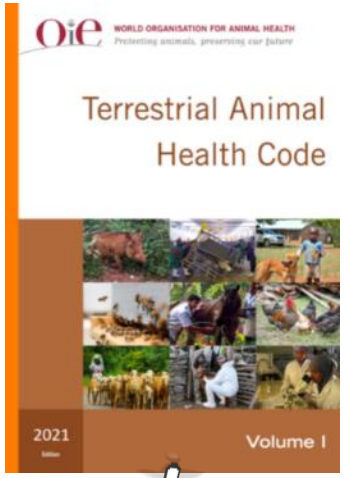
- Assist in implementing **National Action Plans**, promoting a "One Health" approach
- Provide **tools and guidance**
- Ensure **Veterinary Services capacity** through PVS Pathway
- Develop and modernise **legislation**
- Provide training of **Focal Points**
- Ensure that well-trained **veterinarians and veterinary para-professionals** are at the forefront

4 Encourage implementation of OIE standards

- Support Member Countries in their efforts to **implement OIE standards**
- Encourage adoption of recommendations in the **OIE List of Antimicrobials of Veterinary Importance**
- **Strengthen multilateral support** among policy makers
- Continue our **framework of quality, science-based standards**
- **Collaborate with WHO and FAO** to develop an aligned framework of standards and guidelines

OIE Standards and Guidelines Related to Antimicrobial Resistance

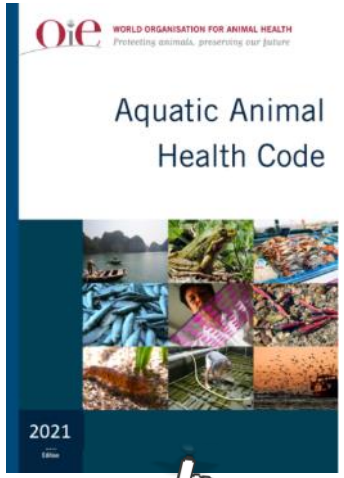
Terrestrial Animal Health Code



- Ch.6.7. **Introduction** to the recommendations for controlling antimicrobial resistance
- Ch.6.8. Harmonisation of national AMR **surveillance and monitoring** programmes (updated in May 2018)
- Ch.6.9. **Monitoring of the quantities and usage patterns** of antimicrobial agents used in food-producing animals (Agreement on definitions)
- Ch.6.10. **Responsible and prudent use** of antimicrobial agents in veterinary medicine
- Ch.6.11. **Risk analysis** for AMR arising from the use of antimicrobial agents in animals

Recommendations for:
- regulatory authorities
- veterinary pharmaceutical industries
- wholesale and retail distributors
- veterinarians
- food-animal producers
- animal feed manufacturers

Aquatic Animal Health Code



- Ch.6.2. Principles for **responsible and prudent use** of antimicrobial agents in aquatic animals
- Ch.6.3. **Monitoring of the quantities and usage patterns** of antimicrobial agents used in aquatic animals
- Ch.6.4. Development and harmonisation of national AMR **surveillance and monitoring** programmes for aquatic animals
- Ch.6.5. **Risk analysis** for AMR arising from the use of antimicrobial agents in aquatic animals

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OIE List of Antimicrobials of Veterinary Importance

WORLD ORGANISATION FOR ANIMAL HEALTH
Protecting animals, preserving our future

- Criteria used for categorisation
- List of antimicrobial agents

OIE LIST OF ANTIMICROBIAL AGENTS OF VETERINARY IMPORTANCE
(June 2021)

The OIE[1] International Committee unanimously adopted the List of Antimicrobial Agents of Veterinary Importance at its 75th General Session in May 2007 (Resolution No. XXVIII).

The FAO [2] /OIE/WHO [3] Expert Workshop on Non-Human Antimicrobial Usage and Antimicrobial Resistance held in Geneva, Switzerland, in December 2003 (Scientific Assessment) and in Oslo, Norway, in March 2004 (Management Options) recommended that the OIE should develop a list of critically important antimicrobial agents in veterinary medicine and that WHO should also develop such a list of critically important antimicrobial agents in human medicine.

Working Group on Antimicrobial Resistance

Terms of Reference

Members' detail

Meeting reports

Date	Report	Document
October 2021	Report of the Working Group on Antimicrobial Resistance	Report_Oct_2021
April 2021	Report of the Working Group on Antimicrobial Resistance	Report_Apr_2021
October 2020	Report of the Working Group on Antimicrobial Resistance	Report_Oct_2020
April 2020	Report of the Working Group on Antimicrobial Resistance	Report_Apr_2020
October 2019	Report of the Working Group on Antimicrobial Resistance	Report_Oct_2019

Technical Reference Document Listing Antimicrobial Agents of Veterinary Importance for Poultry

AMR Working Group (Since 2019)

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Relying on data

OIE Global Database on Antimicrobial Agents Intended for Use in Animals

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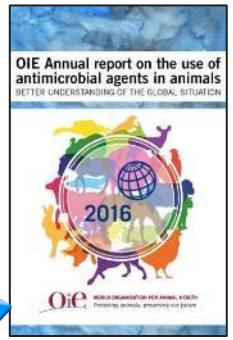
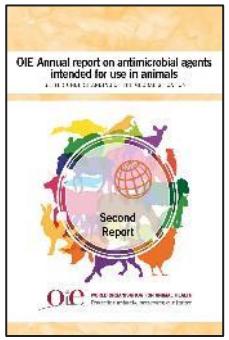
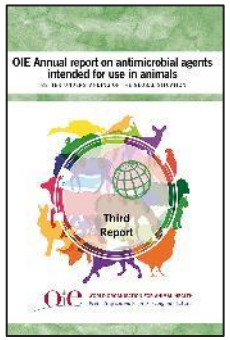
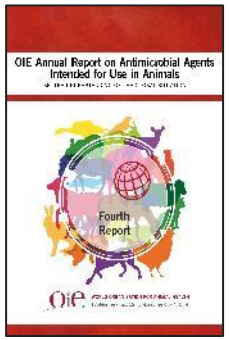
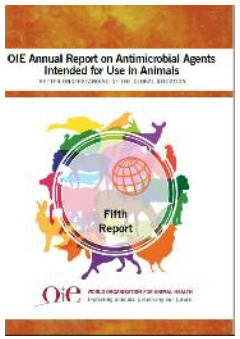
OIE Global database on antimicrobial agents intended for use in animals

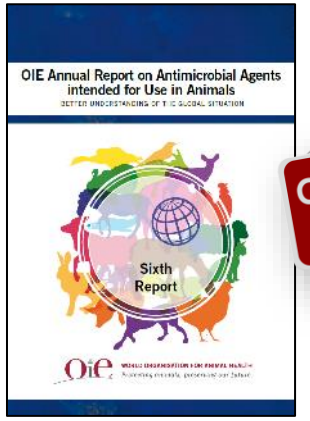




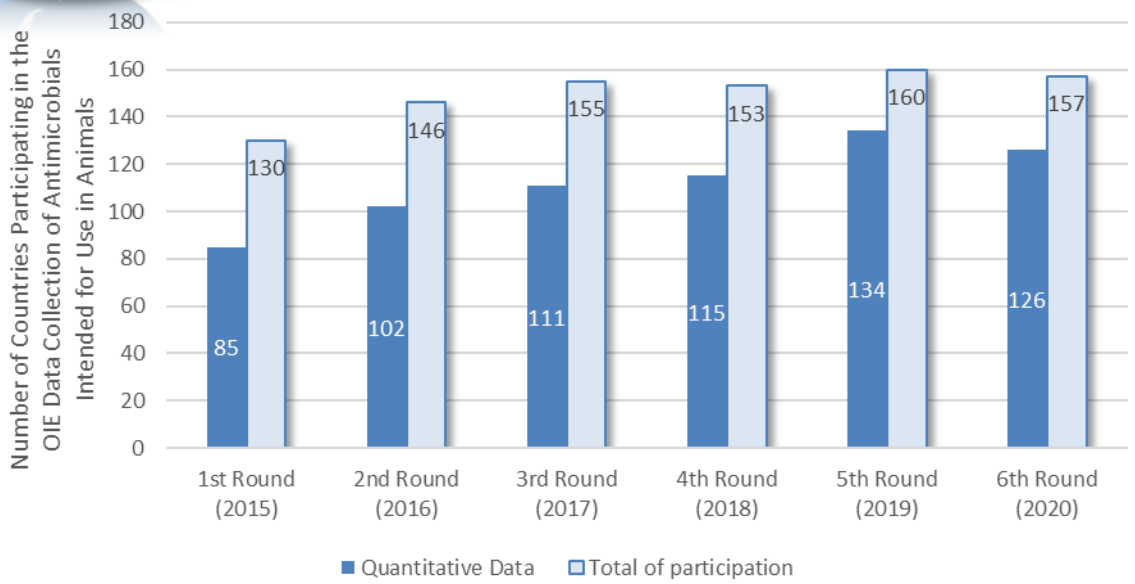


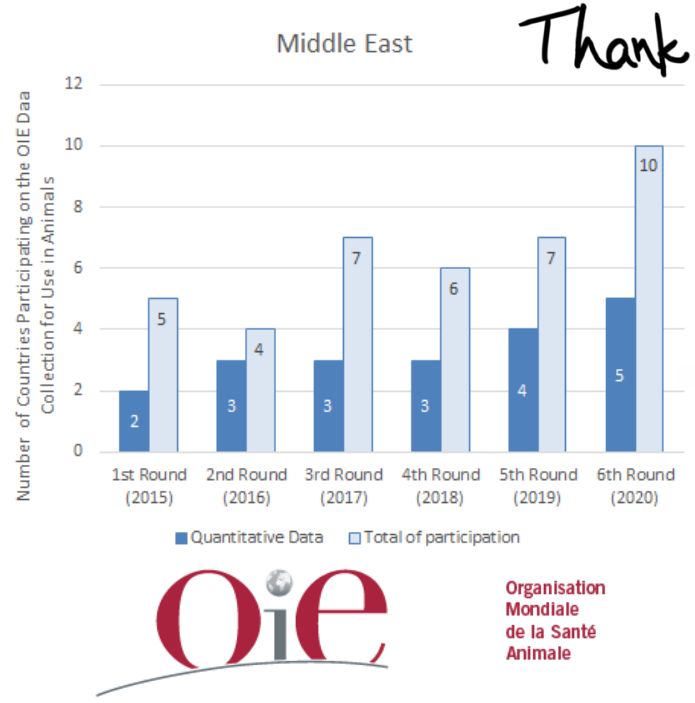






https://www.oie.int/en/scientific-expertise/veterinary-products/antimicrobials/





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OIE Global database on antimicrobial agents intended for use in animals

Type of Reporting

Qualitative Data
Baseline data designed to allow all countries to respond

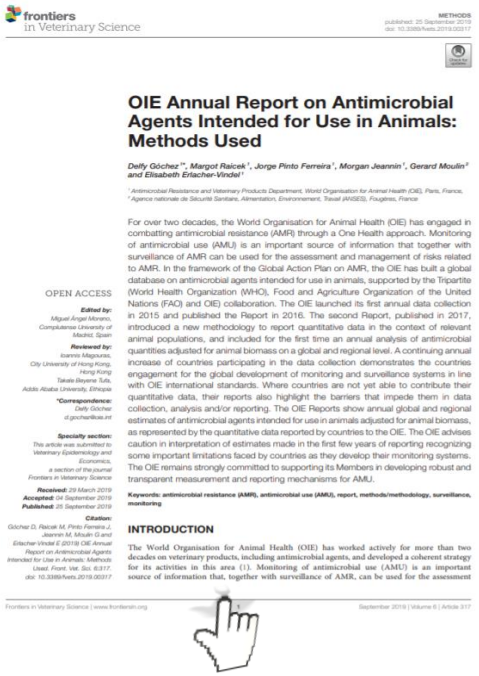
Quantitative Data
Reporting Options represent increased level of data detail

Option 1	Option 2	Option 3
• Antimicrobial agents • Type of use*	• Antimicrobial agents • Type of use* • Group of animals**	• 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 analysis


frontiers in Veterinary Science

METHODS

OIE Annual Report on Antimicrobial Agents Intended for Use in Animals: Methods Used


J Antimicrob Chemother
https://doi.org/10.1093/jac/dkab441

Journal of Antimicrobial Chemotherapy

Comparison of different biomass methodologies to adjust sales data on veterinary antimicrobials in the USA

"*From OIE standards to responsible and prudent use of antimicrobials: supporting stewardship for the use of antimicrobial agents in animals*"

Journal of Antimicrobial Chemotherapy

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https://www.oie.int/en/what-we-do/global-initiatives/antimicrobial-resistance/

OIE Global database on antimicrobial agents intended for use in animals

NEW

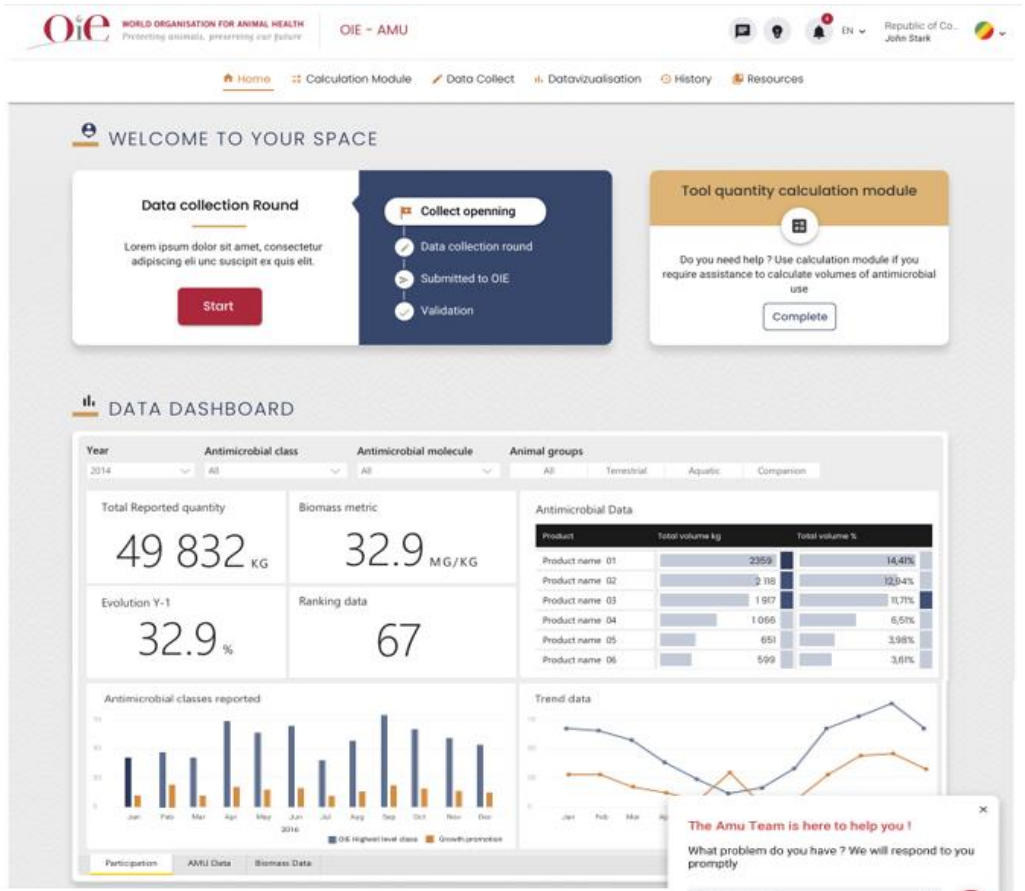
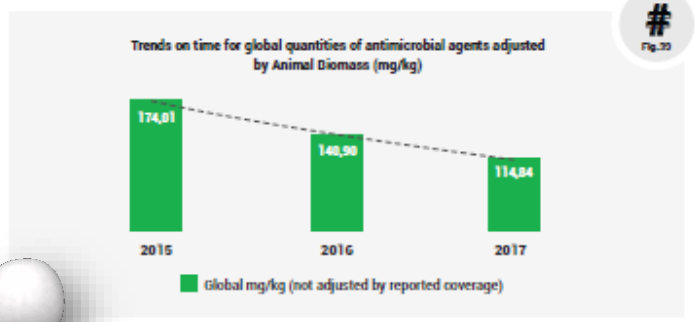


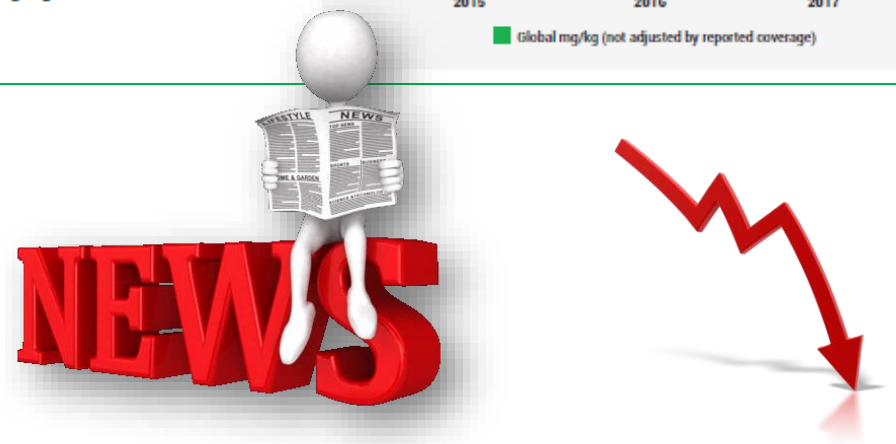
Image might not exactly reflect final OIE AMU Global Database Interface

TRENDS FROM 2015 TO 2017

Changes of the antimicrobial quantities adjusted by animal biomass in reporting countries

Countries are committed to reporting the **antimicrobial quantities to the OIE**. The data reported by 69 countries to the OIE for all years between 2015 to 2017, indicates an overall **decrease of 34%** in the global mg/kg indicator.





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Collective Intelligence

The AMR - Tripartite

NEW

Food and Agriculture Organization of the United Nations

WORLD ORGANISATION FOR ANIMAL HEALTH

UN environment programme

World Health Organization

*The Global Action Plan proposes interventions to control AMR, including **optimizing the use of antimicrobials in humans and in animals** and taking a One Health approach.*

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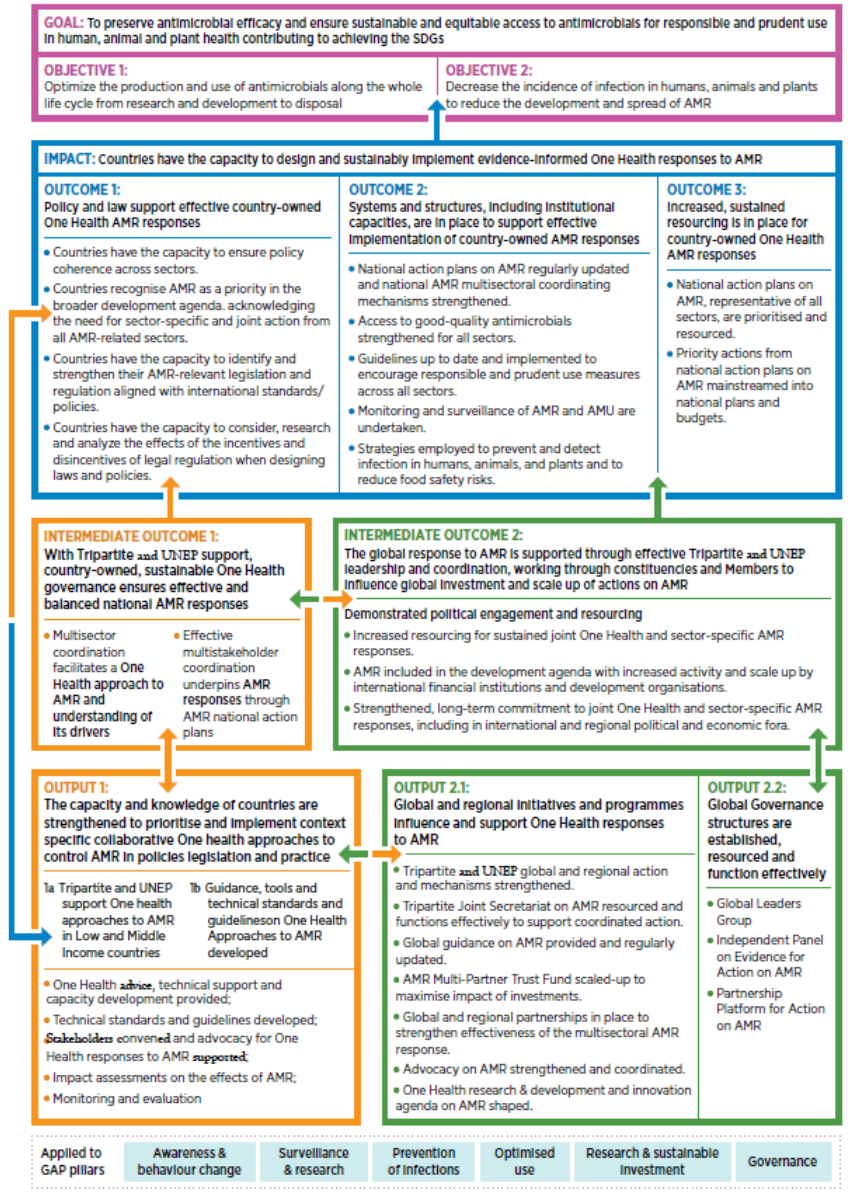


ToC FAO-OIE-WHO-UNEP collaboration on AMR

GOAL:
to **preserve antimicrobial efficacy** and ensure **sustainable and equitable access** to antimicrobials for **responsible and prudent use** in human, animal and plant health, **contributing to achieving** the Sustainable Development Goals **(SDGs).**

Applies to GAP Pillars + Governance

IMPACT:
Countries have the capacity to design and sustainably implement evidence-informed One Health responses to AMR

Food and Agriculture Organization of the United Nations
WORLD ORGANISATION FOR ANIMAL HEALTH
World Health Organization
UN environment programme

AMR Multi-Partner Trust Fund (AMR MPTF)

Scale up efforts of One Health approaches to AMR

4 global projects

TISSA proposal	Global web-based repository on AMR & AMU data across humans, animals, food and agriculture sectors
Monitoring & Evaluation	Global-level monitoring and aggregation of indicator data at sectoral level *Tripartite AMR Country Self-Assessment Survey (TrACSS)*
Legal frameworks	Development of a Tripartite One Health assessment tool for AMR-relevant legislation
Environment	Strategic global-level governance advocacy initiatives on AMR

Food and Agriculture Organization of the United Nations

WORLD ORGANISATION FOR ANIMAL HEALTH

World Health Organization

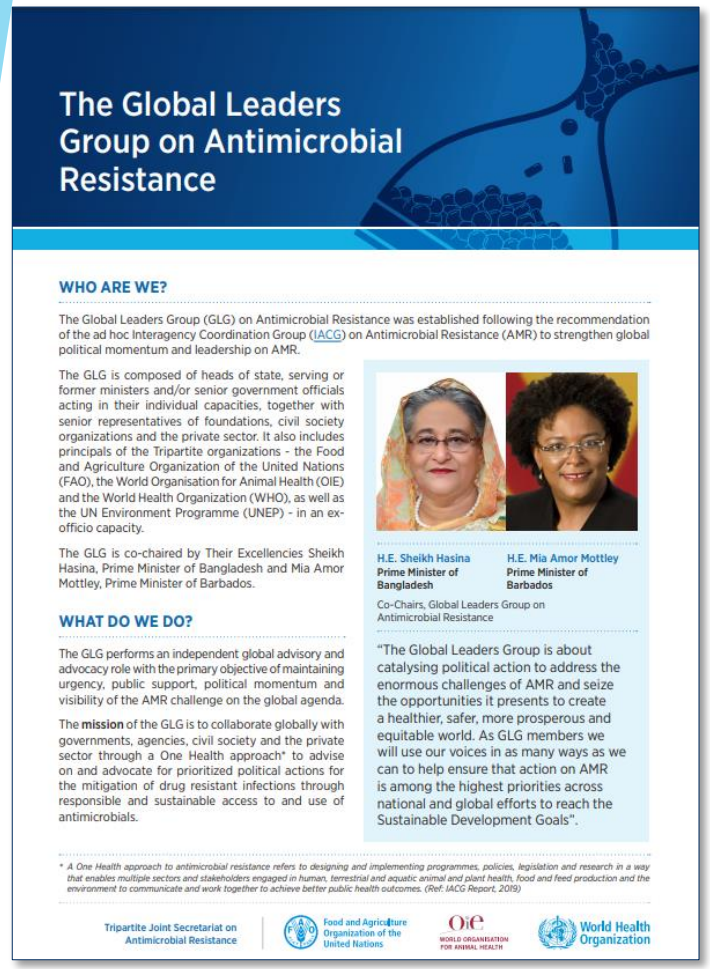
UN environment programme

Country projects

10 countries - **Morocco, Kenya, Zimbabwe, Senegal, Ghana, Cambodia, Indonesia, Ethiopia, Peru and Tajikistan -** had their proposals approved in 2020/21 and have started implementing activities.

6 countries – **Bangladesh, Cameroon, Mongolia, Tunisia, Madagascar, and Kyrgyzstan -** were invited to submit concept notes in January 2022 for a second round of country projects.

Global Leaders Group on Antimicrobial Resistance



The Global Leaders Group on Antimicrobial Resistance

WHO ARE WE?

The Global Leaders Group (GLG) on Antimicrobial Resistance was established following the recommendation of the ad hoc Interagency Coordination Group (IACG) on Antimicrobial Resistance (AMR) to strengthen global political momentum and leadership on AMR.

The GLG is composed of heads of state, serving or former ministers and/or senior government officials acting in their individual capacities, together with senior representatives of foundations, civil society organizations and the private sector. It also includes principals of the Tripartite organizations - the Food and Agriculture Organization of the United Nations (FAO), the World Organisation for Animal Health (OIE) and the World Health Organization (WHO), as well as the UN Environment Programme (UNEP) - in an ex-officio capacity.

The GLG is co-chaired by Their Excellencies Sheikh Hasina, Prime Minister of Bangladesh and Mia Amor Mottley, Prime Minister of Barbados.

WHAT DO WE DO?

The GLG performs an independent global advisory and advocacy role with the primary objective of maintaining urgency, public support, political momentum and visibility of the AMR challenge on the global agenda.

The **mission** of the GLG is to collaborate globally with governments, agencies, civil society and the private sector through a One Health approach* to advise on and advocate for prioritized political actions for the mitigation of drug resistant infections through responsible and sustainable access to and use of antimicrobials.

H.E. Sheikh Hasina, Prime Minister of Bangladesh — H.E. Mia Amor Mottley, Prime Minister of Barbados

Co-Chairs, Global Leaders Group on Antimicrobial Resistance

"The Global Leaders Group is about catalysing political action to address the enormous challenges of AMR and seize the opportunities it presents to create a healthier, safer, more prosperous and equitable world. As GLG members we will use our voices in as many ways as we can to help ensure that action on AMR is among the highest priorities across national and global efforts to reach the Sustainable Development Goals".

* A One Health approach to antimicrobial resistance refers to designing and implementing programmes, policies, legislation and research in a way that enables multiple sectors and stakeholders engaged in human, terrestrial and aquatic animal and plant health, food and feed production and the environment to communicate and work together to achieve better public health outcomes. (Ref: IACG Report, 2019)

Tripartite Joint Secretariat on Antimicrobial Resistance | Food and Agriculture Organization of the United Nations | OIE World Organisation for Animal Health | World Health Organization

- **Background**: established following IACG recommendations to strengthen global political action and leadership on AMR
- **Members**: Heads of State, serving or former ministers/ senior government officials, representatives of foundations, civil society and the private sector
- **Co-chairs**: Prime Ministers H.E. Sheikh Hasina of Bangladesh and H.E. Mia Amor Mottley of Barbados
- **Meetings**: Quarterly - next meeting 16 March 2022

Global Leaders Group website

@glgamr

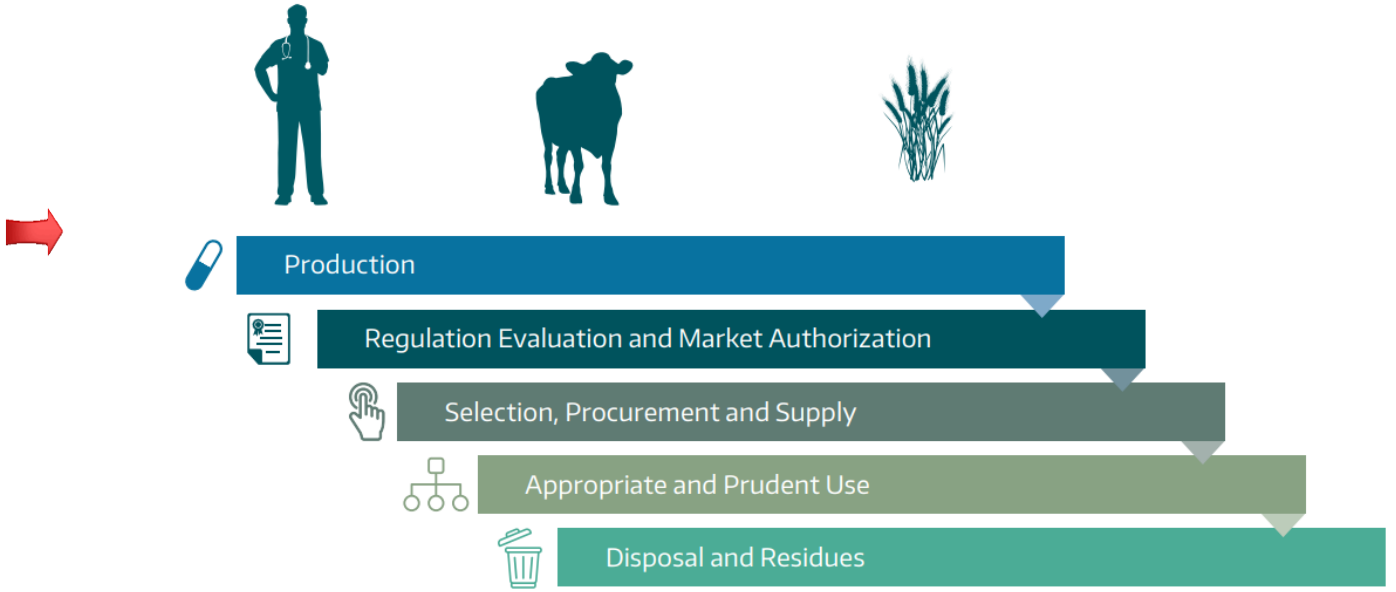
Food and Agriculture Organization of the United Nations

OIE World Organisation for Animal Health

World Health Organization

UN environment programme

Recent Tripartite Resources & Publications



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Recent Tripartite Resources & Publications

TECHNICAL BRIEF ON WATER, SANITATION, HYGIENE AND WASTEWATER MANAGEMENT TO PREVENT INFECTIONS AND REDUCE THE SPREAD OF ANTIMICROBIAL RESISTANCE

Food and Agriculture Organization of the United Nations

World Health Organization

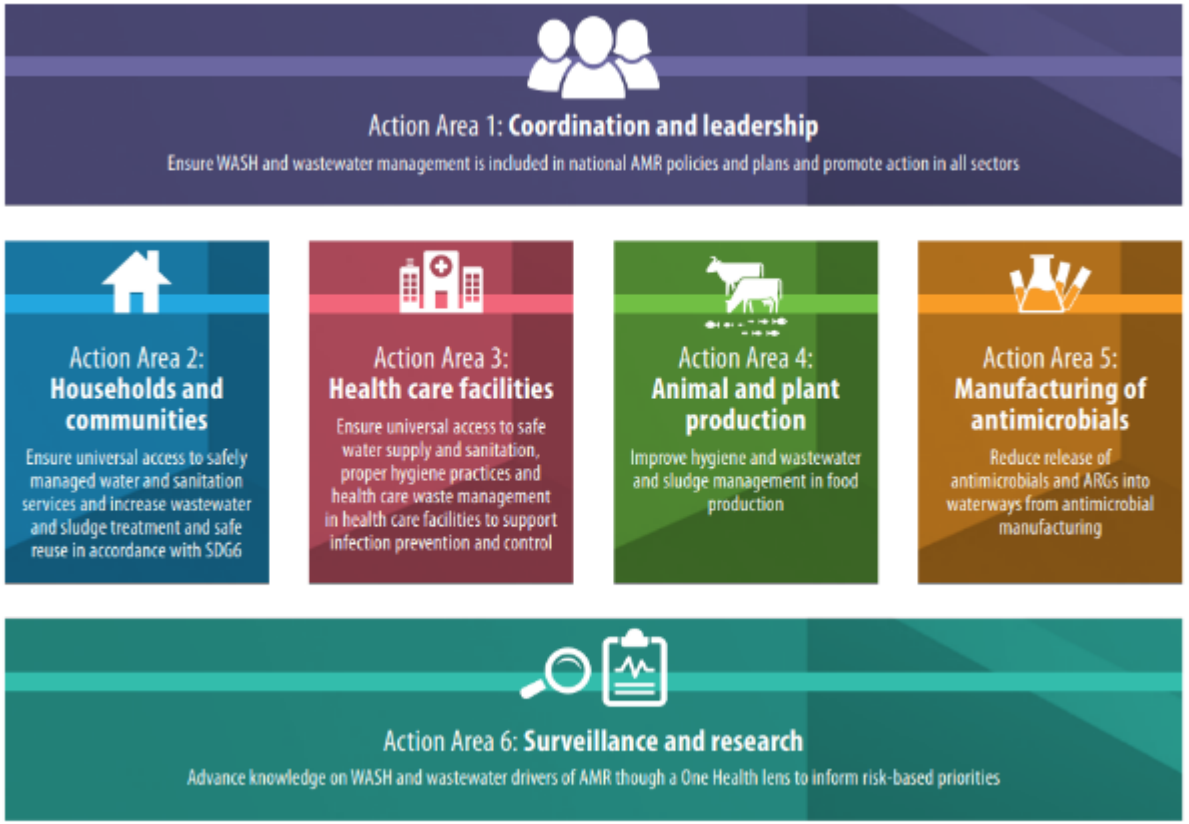

Figure 1: Actions areas for coordinated multi-sectoral action on WASH and AMR

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Antimicrobial Resistance – we need each of you, now !

1945

Fleming, Florey and Chain were jointly awarded the Nobel Prize in Physiology or Medicine.

Laboratory workers in the development of penicillin, England (1943). By Ministry of Information Photo Division Photographer, Stone Richard [Public domain], via Wikimedia Commons.

"It is not difficult to make microbes resistant to penicillin in the laboratory by exposing them to concentrations not sufficient to kill them, and the same thing has occasionally happened in the body. The time may come when penicillin can be bought by anyone in the shops. Then there is the ***danger that the ignorant man may easily underdose himself and by exposing his microbes to non-lethal quantities of the drug make them resistant****."*

2022 & beyond

Only use antimicrobials **when prescribed by a veterinarian**

Only obtain antimicrobials **from authorised sources**

Only use the **dosage and follow length of treatment** and withdrawal period as prescribed

Only use when associated with **good animal husbandry, vaccination and hygiene practices**

Only use when needed, **antimicrobials do not cure every infection**

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Thank you for your attention!

My most sincere acknowledgements to all the AMR-VP Team at the OIE HQ office in Paris, as well as to Dr. Tariq Hassan Taha

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