32ND CONFERENCE OF THE REGIONAL COMMISSION FOR EUROPE

21 – 25 SEPTEMBER 2026

JURMALA, LATVIA

HOSPITAL DE LEÓN
Altos de Nava S/N
Microbiología

Pág

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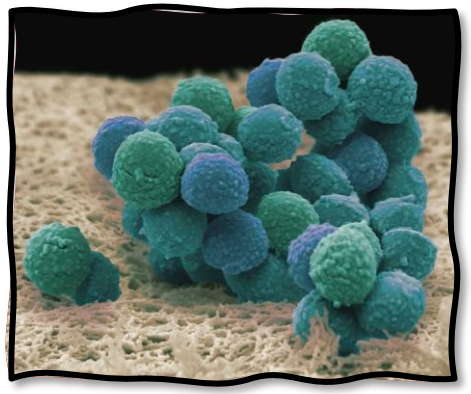
Tipo de Muestra **ORINA SONDA VESICAL**

UROCULTIVOS
UROCULTIVO

Valorar clinicamente
POSITIVO
Recuento aproximado 50.000 UFC/ml

Staphylococcus epidermidis

	S.epidermidis	
Penicilina	>0.25	R
Amoxi/Clav.	8/4	R
Oxacilina	>2	R
Gentamicina	>4	R
Nitrofurantoina	<=32	S
Levofloxacina	>4	R
Cotrimoxazol	<=1/19	S
Fosfomicina	<=32	S
Vancomicina	2	S
Teicoplanina	4	S



Staphylococcus epidermidis, also know as 'the white Staph', is part of the normal skin flora and can cause opportunistic infections

- Penicillins
- Aminoglycosides
- Fluoroquinolones
- 2nd generation cephalosporins

Multi-drug resistant

- Phosphonic acid derivatives
- Glycopeptides

https://antibiotic.ecdc.europa.eu/en/patient-stories

Patient stories



Michelle

Michelle, is 23 years old and in her spare time she enjoys gaming, reading, and writing poetry. Besides family, friends and loving partner, her two cats and a hamster fill her days with comfort and companionship.



Rosa

When Rosa was 6 weeks old, an apparently simple respiratory infection turned out to be a multidrug-resistant *Klebsiella pneumoniae* infection. This resulted into three long years of surgical interventions, rehabilitation and uncertainty about her future.



Gavin

Gavin, 26 years old, is a haemodialysis patient with chronic kidney disease. For him, the resistant infections became worse than the kidney disease itself.



Yira

A multidrug-resistant Klebsiella pneumoniae infection left Yira, a patient with Ehlers-Danlos syndrome, in



Areti

Areti was just 13 years old when she was diagnosed with acute lymphoblastic leukaemia, a cancer of the



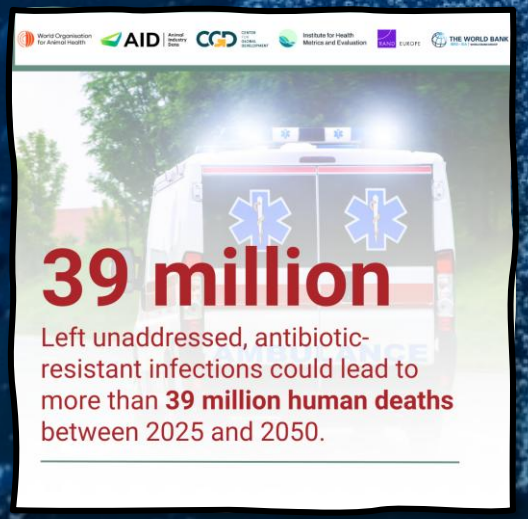
Mohammed

Cancer chemotherapy had weakened Mohammed's immune system, allowing an infection with a highly

Over 1 million lives are claimed each year because drug-resistant bacteria

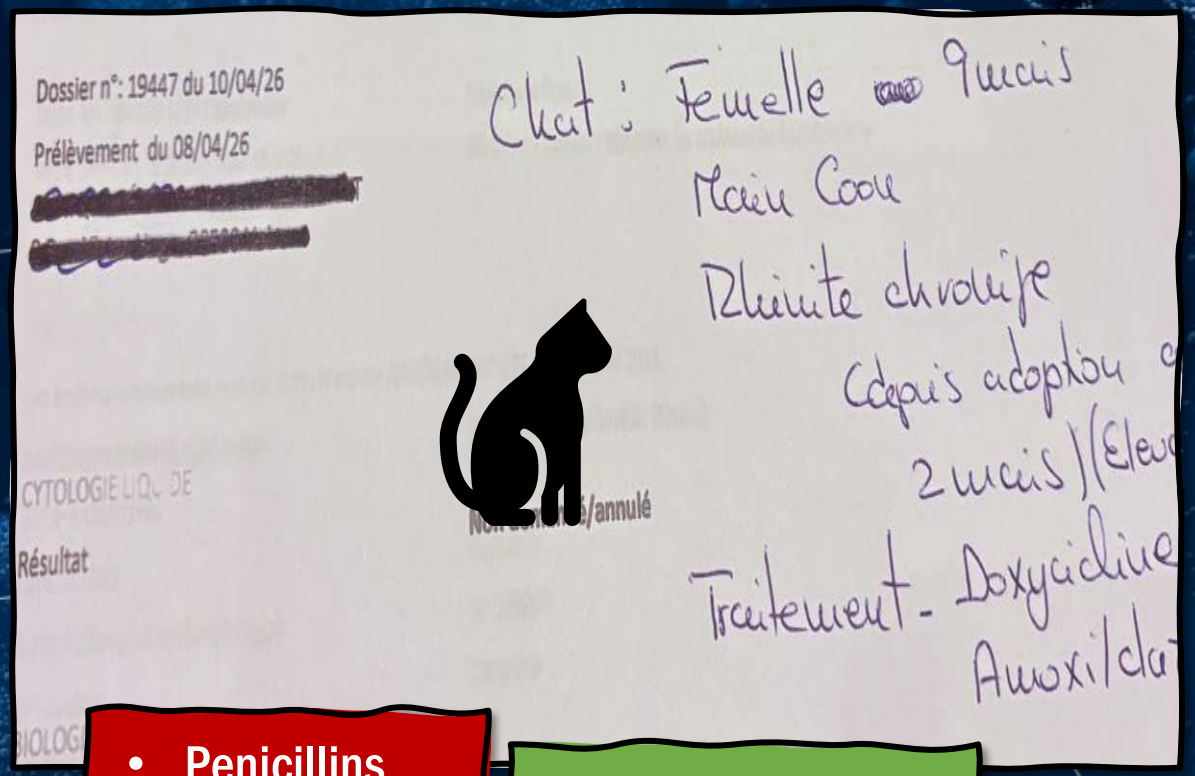
And what would happen if we do not change our current behaviour?

From now to 2050…





https://www.woah.org/en/superbugs-could-jeopardise-food-security-for-over-two-billion-people-and-increase-annual-health-care-costs-by-us-159-billion-annually-by-2050-finds-most-extensive-modelling-to-date/



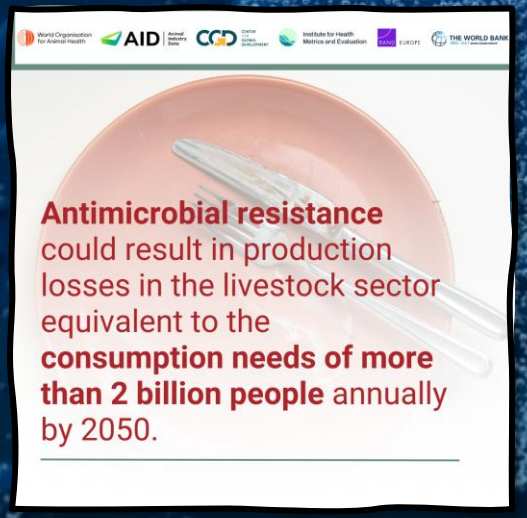
- Penicillins
- Tetracyclins
- Macrolides

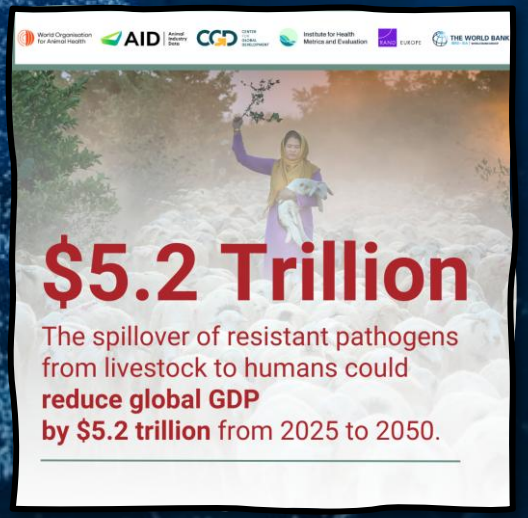
- Fluoroquinolones
- Aminosides

$17 billion are lost in livestock each year because drug-resistant bacteria

And what would happen if we do not change our current behaviour?

From now to 2050…



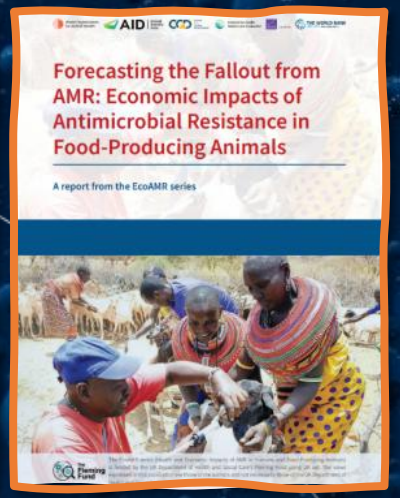


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- First authentic multisectoral economic analysis
- Released in Sep.2024, together with the World Bank and other outstanding partners
- Data from more than 200 countries forecasting full toll of AMR on people, livestock and the economy









CENTER FOR GLOBAL DEVELOPMENT

RAND EUROPE

WORLD BANK GROUP

Institute for Health Metrics and Evaluation

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

Javier Y. Marcos on behalf of Marco Hafner
September 2026 | Europe Regional Conference

EcoAMR

Forecasting the fallout from AMR - Economic impact of antimicrobial resistance in food-producing animals

RAND EUROPE

World Organisation for Animal Health

Focus of the research:

Understanding the burden of antimicrobial resistance in livestock production

Estimating the economic value of interventions to reduce antimicrobial use



Livestock production disease (LPD) model



Livestock sector and disease inputs:

- Animal stocks
- Production parameters
- Disease incidence

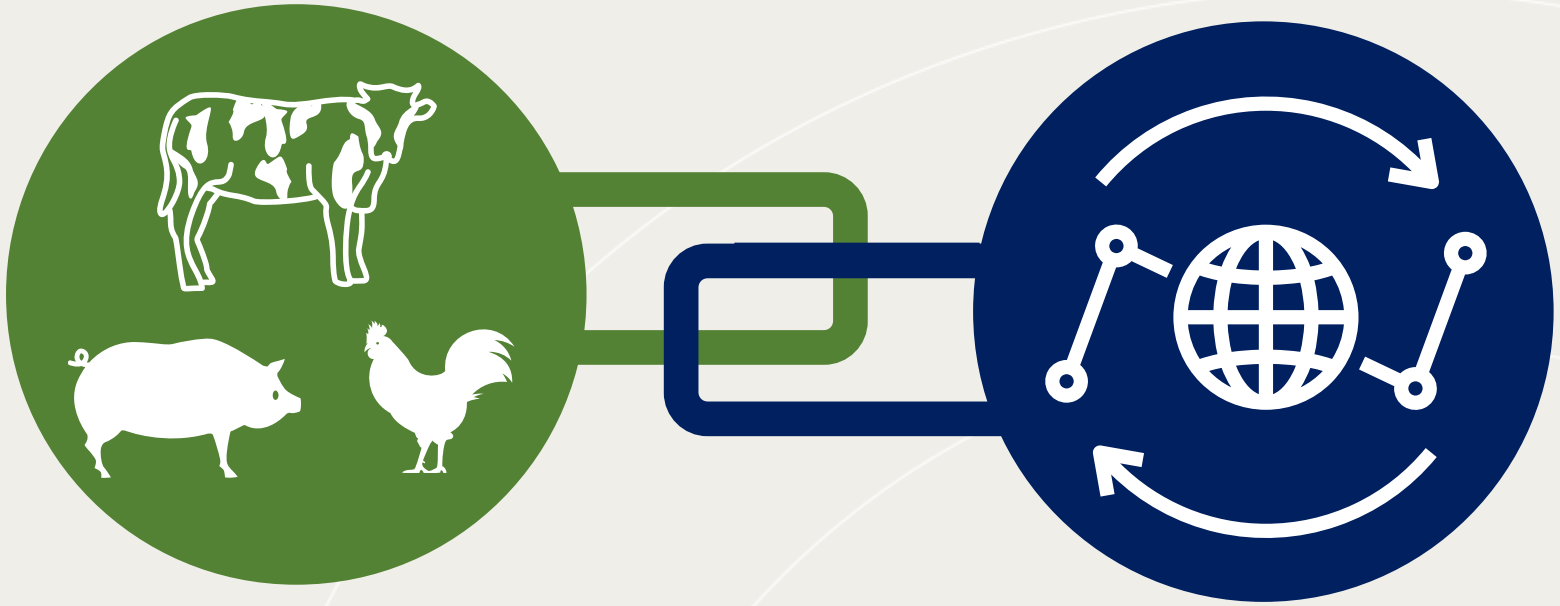
Link between antimicrobial use and resistance:

- **ANIMUSE**
- Resistancebank

Modelling the cost of resistance in livestock production

Livestock production disease (LPD) model

Dynamic computable general equilibrium (DCGE) macroeconomic model



Economic inputs:

- Consumption of intermediate and final goods and services
- Bilateral trade flows factor use tables
- Transport, taxes and subsidies

Business as usual and other “what-if” scenarios



Business as usual case:
Resistance projected based on historical rates; **business as usual antimicrobial use**



Pessimistic scenario:
Higher AMR-attributable disease burden

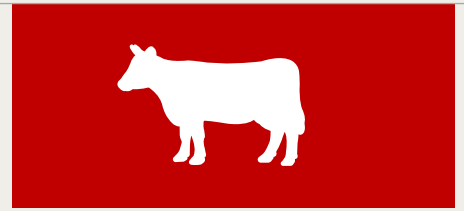


Human spillover scenarios:
Moderate spillover effects from animal antimicrobial use on humans

Estimated production losses in livestock sectors attributable to resistant infections in 2025 [12]

Europe & Central Asia

CATTLE: MEAT



-2.1%

(-16.6 million)

CATTLE: RAW MILK



-1.0%

(-13.1 million)

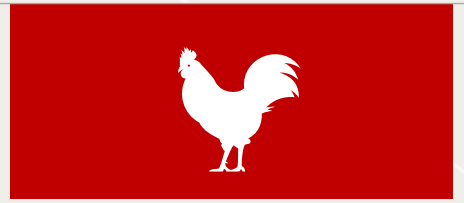
PIG: MEAT



-0.8%

(-6.4 million)

CHICKEN: MEAT



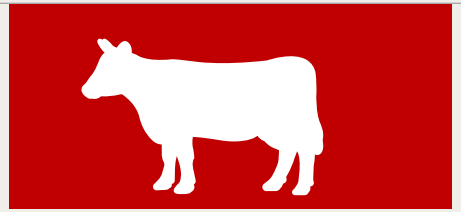
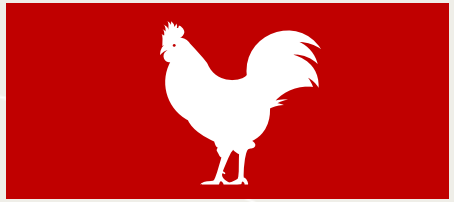
-1.9%

(-12.7 million)

Consumption equivalent based on per capita consumption

Estimated production losses in livestock sectors attributable to resistant infections in 2050

Europe & Central Asia,
if you keep reducing AMU

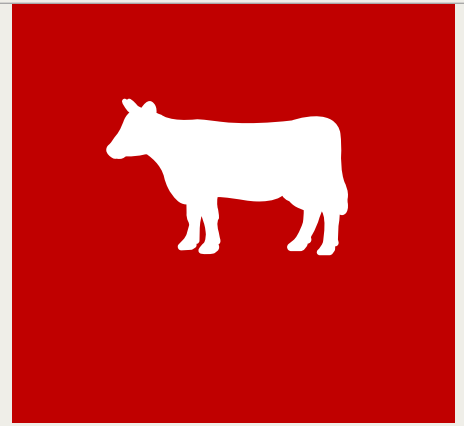
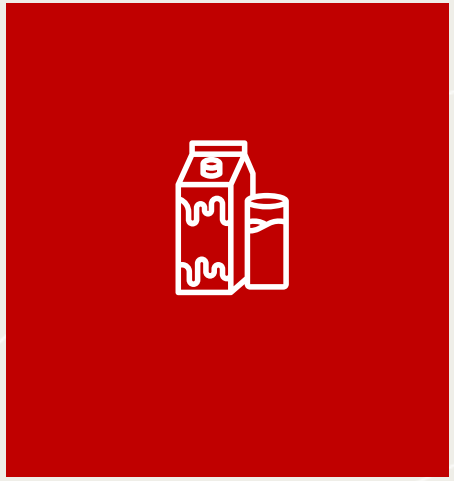
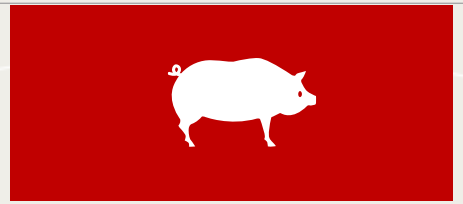
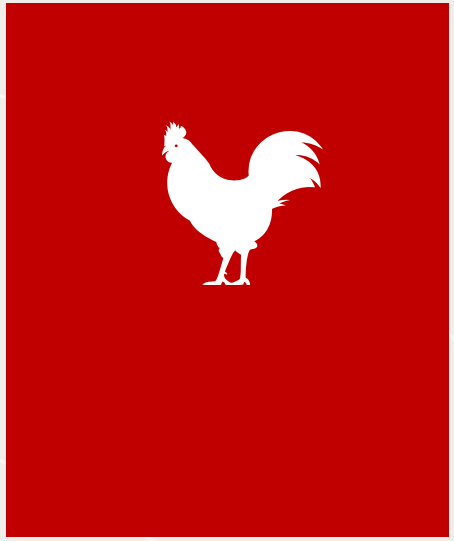
CATTLE: MEAT	CATTLE: RAW MILK	PIG: MEAT	CHICKEN: MEAT
			
-2.3%	**-1.1%**	**-0.8%**	**-2.0%**
(-24 million)	**(-16.5 million)**	**(-8 million)**	**(-15.9 million)**

Consumption equivalent based on per capita consumption

Estimated production losses in livestock sectors attributable to resistant infections in 2050

Europe & Central Asia,

but if you do not...

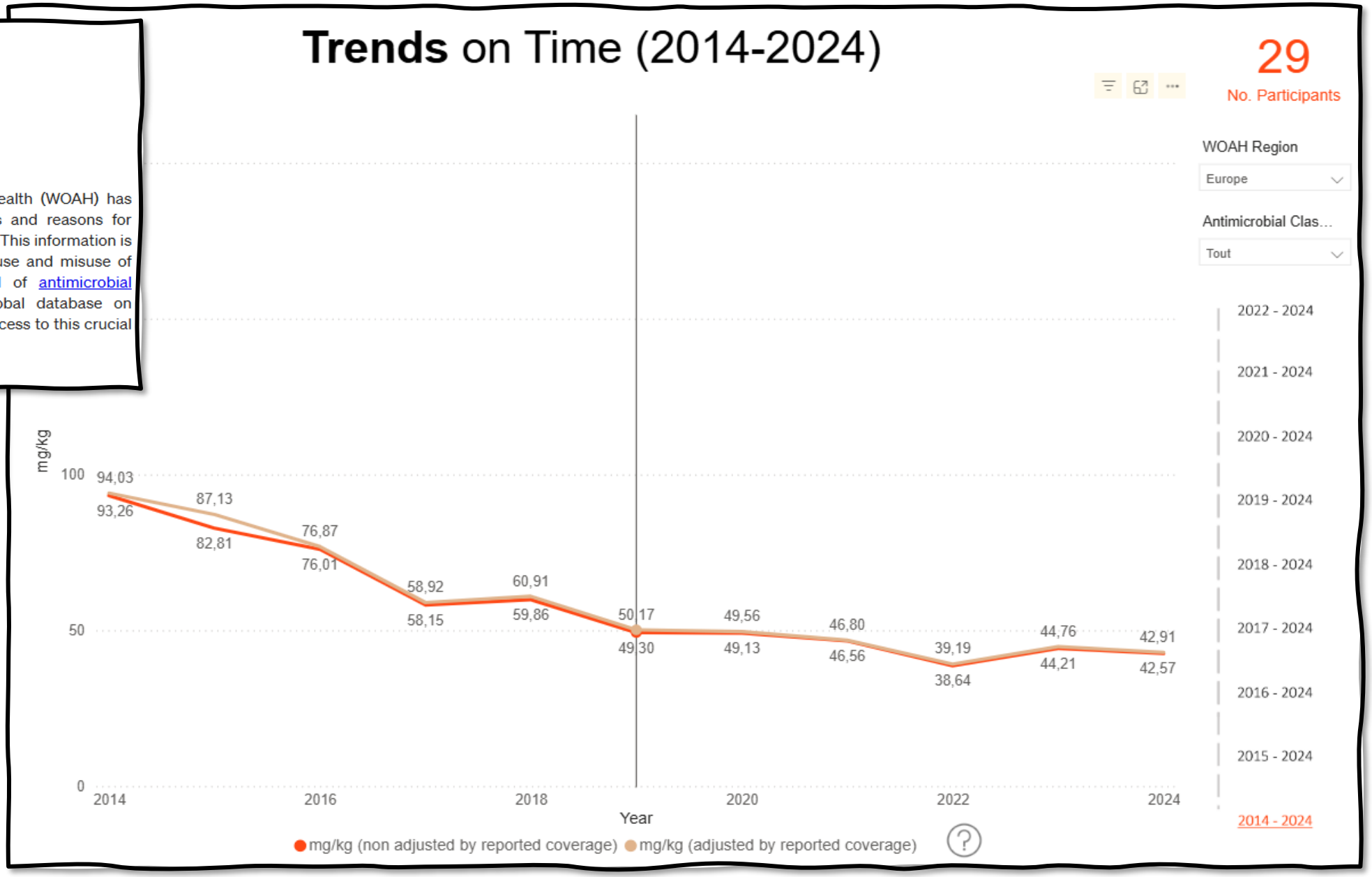
CATTLE: MEAT	CATTLE: RAW MILK	PIG: MEAT	CHICKEN: MEAT
			
-5.2%	**-5.5%**	**-2.1%**	**-5.9%**
(-54.1 million)	**(-87 million)**	**(-21.1 million)**	**(-48.8 million)**

Consumption equivalent based on per capita consumption

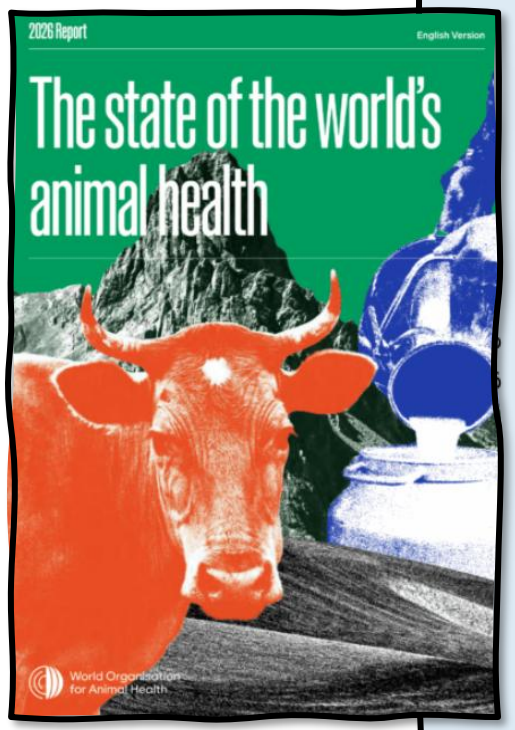
Exemplary work – Picture not fully complete though !!

ANIMUSE

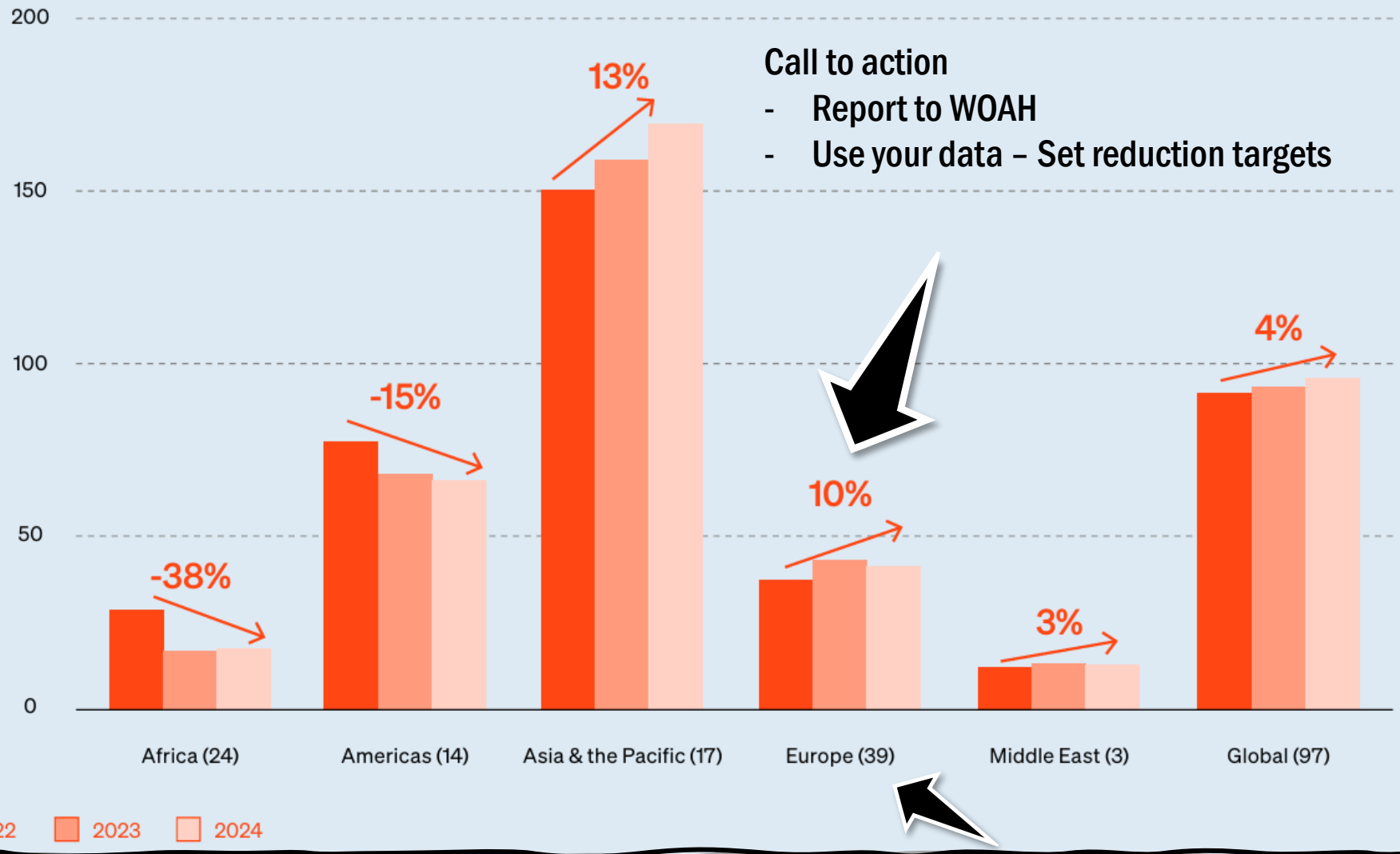
The World Organisation for Animal Health (WOAH) has been collecting data on the amounts and reasons for antimicrobial use in animals since 2015. This information is an essential asset to reduce the overuse and misuse of medication and to curb the spread of antimicrobial resistance (AMR). **ANIMUSE,** the global database on ANImal antiMicrobial USE, facilitates access to this crucial and growing set of information.



Beware of complacency !!



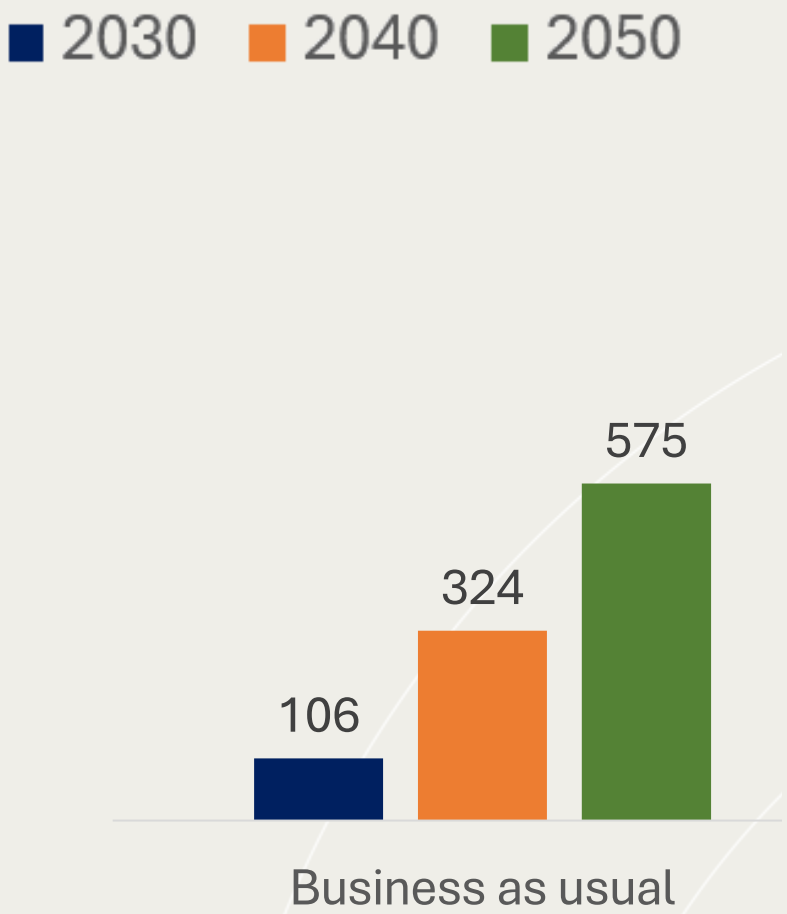
Antimicrobial use trends, 2022–2024

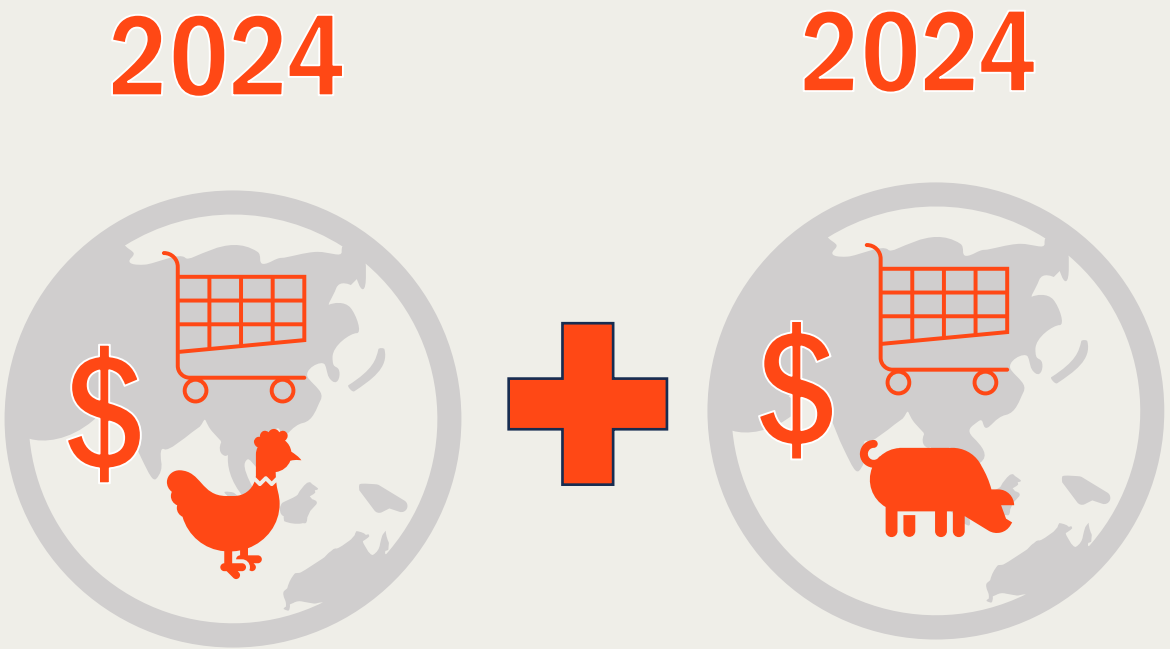


Call to action

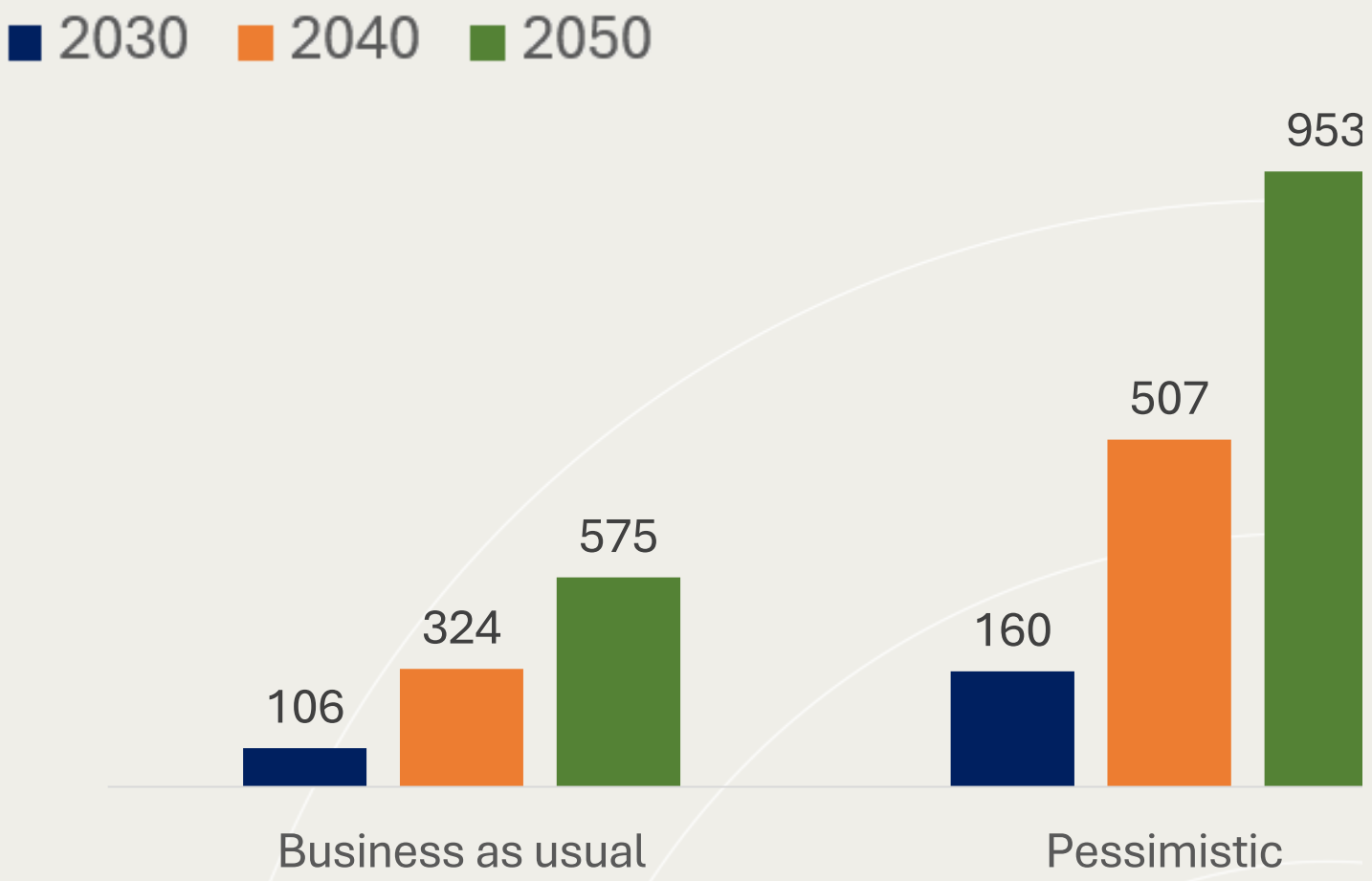
- Report to WOAH
- Use your data – Set reduction targets

Global cumulative GDP loss attributable to AMR in livestock sectors ($ billion)

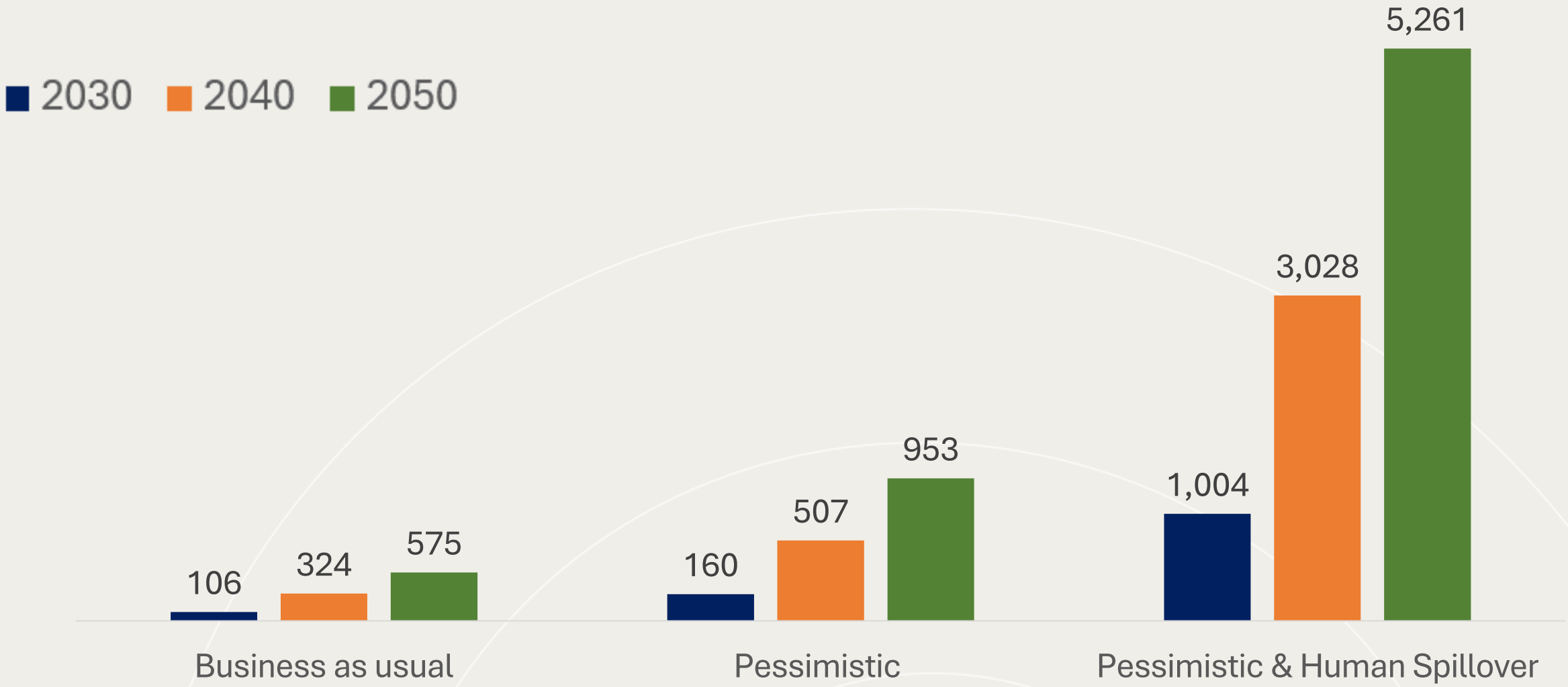




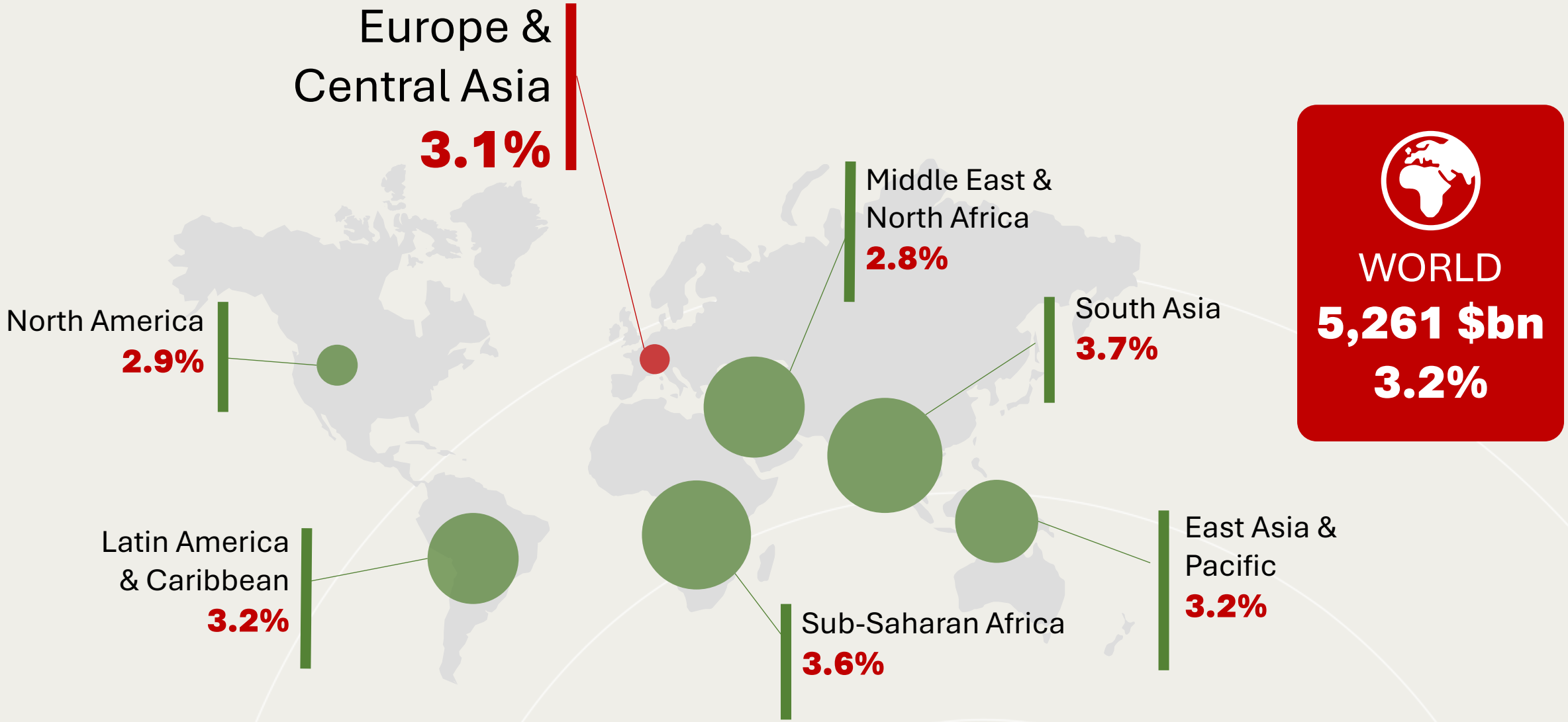
Global cumulative GDP loss attributable to AMR in livestock sectors ($ billion)



Global cumulative GDP loss attributable to AMR in livestock sectors ($ billion)



Cumulative GDP loss attributable to AMR in livestock sectors by 2050



AMR is already causing productivity losses...



and current course of action will lead to serious food security concerns

So...Is this the end ? Do we just give up and resign ? Are we out of options ?

OF COURSE NOT !!
We need to use evidence & guidance on cost-effective interventions

SIX MAJOR RECOMMENDATIONS

- ❑ **Make the case** – use economic data to inform policy
- ❑ **Mobilise investments** – public, private, multilateral, equitable...
- ❑ **Look to LMICs** – as they bear the biggest burden of AMR
- ❑ **Let data flow** – gather data, share data, use data !!
- ❑ **Pursue R&D across One Health spectrum** – OHPRA, STAR-IDAZ, WHO, etc.
- ❑ **Aim policies at prevention** – cost-effectiveness shown


Forecasting the Fallout from AMR: Averting the Health and Economic Impacts through One Health Policy and Investment

A policy brief from the EcoAMR series

Investing in AMU reduction: a driver of growth



=



30% global reduction in AMU by 2030

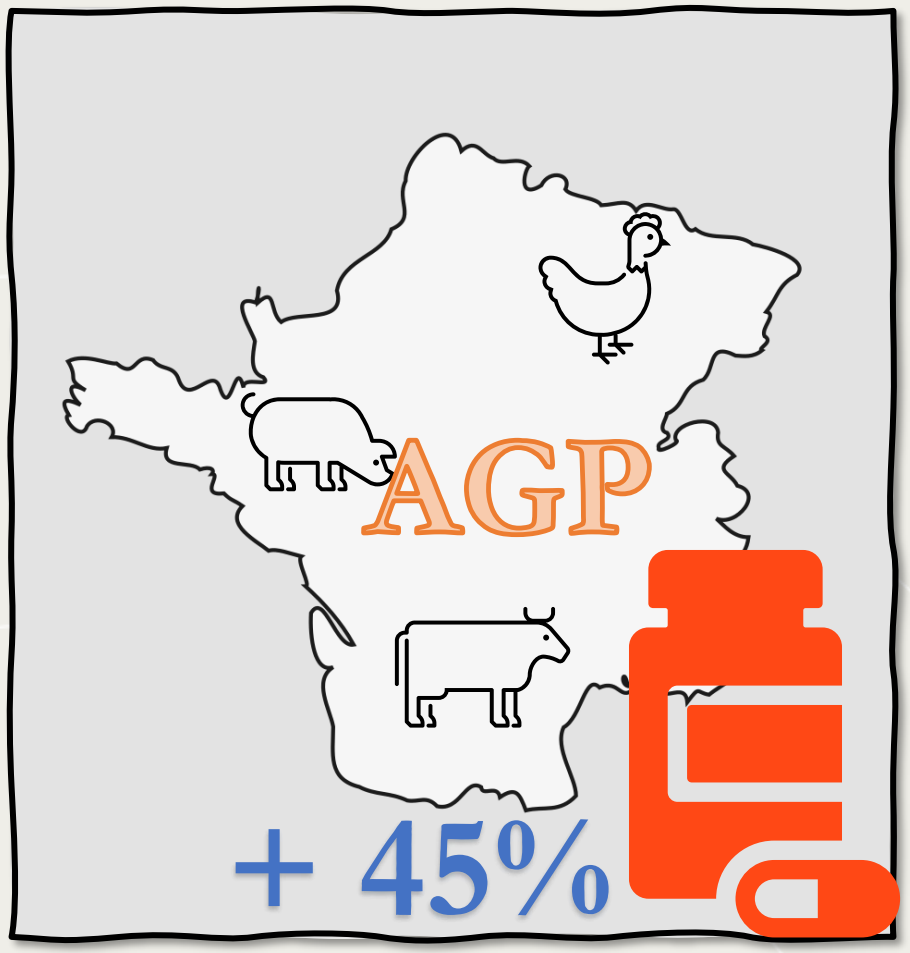
A cumulative increase in global GDP by US $ 120 billion

Is this achievable? Would this jeopardise medical veterinary use & animal health ?

Modelling the impact around antimicrobials used for growth promotion

20% of WOAH Members still allow growth promotion (75% are in the Americas & Asia-Pacific)





higher AMU per kg biomass (excl. ionophores)

Investing in AMU reduction: a driver of growth



=



30% global reduction in AMU by 2030 → **A cumulative increase in global GDP by US $ 120 billion**

Is this achievable? YES !!!

The power of proper animal husbandry, early diagnosis & access to veterinary care

CASE STUDY

AI-based intervention for real-time disease diagnostics

- CCTV monitoring, supporting farmers in monitoring animals, providing real-time surveillance of weight, behavior and early signs of disease
- Facilitates early disease detection, reduces the need for antimicrobials and better animal welfare



Estimated ROI of 4:1

From 255% in Year 1 to 537% in Year 3

Medical costs per pig dropped by up to 53%

Adaptable to lower- and middle-income countries



Artwork by Eiko Ojala (Estonia), part of the campaign Sketching Antimicrobial Resistance led by EU-JAMRAI 2.
Learn more at https://eu-jamrai.eu/raise-awareness/campaigns/sketching-antimicrobial-resistance/

- ❑ Annually, drug-resistant bacteria kill as many people as road accidents
- ❑ AMR is already causing animal productivity losses
- ❑ No behavioural change will unequivocally lead to medical and food insecurity
- ❑ The choice & the responsibility are ours !

We suggest you choose to



Artwork by Gosia Herba (Poland), part of the campaign Sketching Antimicrobial Resistance led by EU-JAMRAI 2.
Learn more at https://eu-jamrai.eu/raise-awareness/campaigns/sketching-antimicrobial-resistance/

1. Prioritise prevention
2. Collect, report and use your data
3. Speak up and lead the change in your cross-sectoral coordination mechanisms
4. Advocate to strengthen animal health systems

Thank You!
Merci!
Gracias!



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World Organisation for Animal Health
Organisation mondiale de la santé animale
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