

Impact of animals in society

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The Position of Animals in Our Society has Changed.

New Challenges and Solutions for Veterinary Medicinal Products.





The FVE network



- >45 national associations
- >38 European countries

>4 FVE Sections

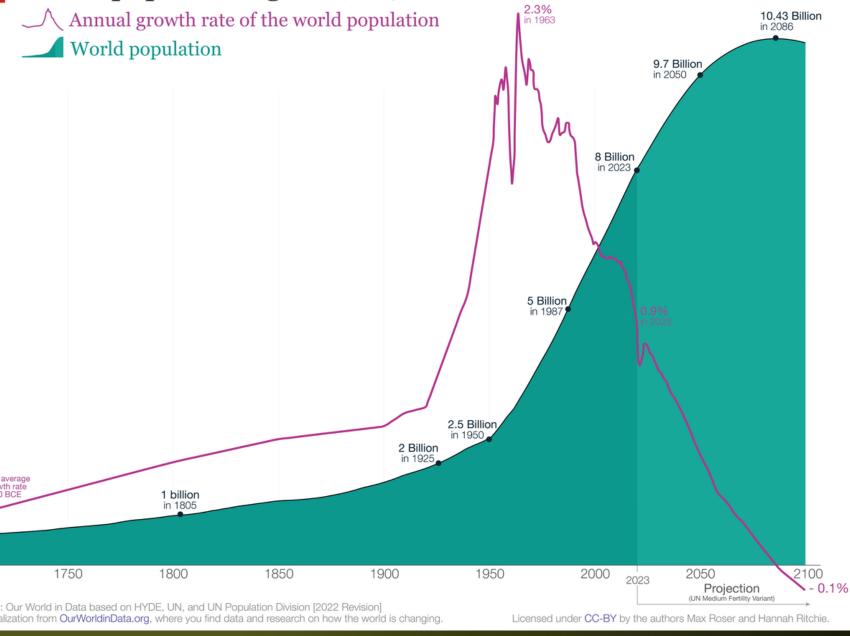
- UEVP (Practitioners)
- UEVH (Hygienists Public Health Officers)
- EASVO (Veterinary State Officers)
- EVERI (Education, Research, Industry)

Content:

- Changing Position of
 Animals in Society/on Earth
- Challenges Faced
- Proposed Solutions
- Conclusion



World population growth, 1700-2100



World population has grown 3x in last 70 years

(Europe: 650mj to 750mj)

Animal biomass distribution changed significantly leading to:

- > increasing humanwildlife conflicts
- → habitat encroachment
- → disease transmission

Distribution of mammals on Earth

in Data

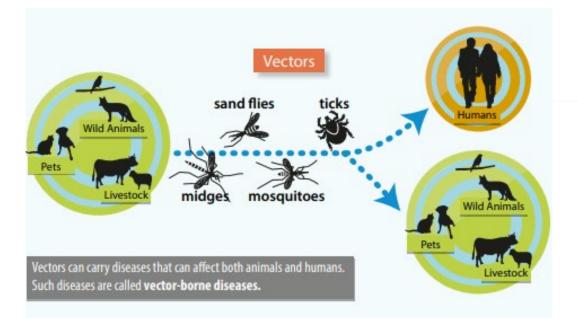
Mammal biomass is shown for the year 2015. or or or = 1 million tonnes carbon (C)



Livestock & pets Wild mammals 62% global mammal biomass 4% global mammal biomass Cattle Horses 2%

Humans 34% global mammal biomass

*Bar-On et al. (2018) provide estimates of livestock only, without estimates of mammalian pets (e.g. cats and dogs). Pets have been added as an additional category based on calculations from estimates of the number of pets globally and average biomass. Data source: Bar-On et al. (2018). The biomass distribution on Earth. Images sourced from the Noun Project. OurWorldinData.org - Research and data to make progress against the world's largest problems.







Climate changes increases risk for emerging diseases esp. vector-borne

e.g. West Nile Fever, Lyme disease, food-borne pathogens, etc.



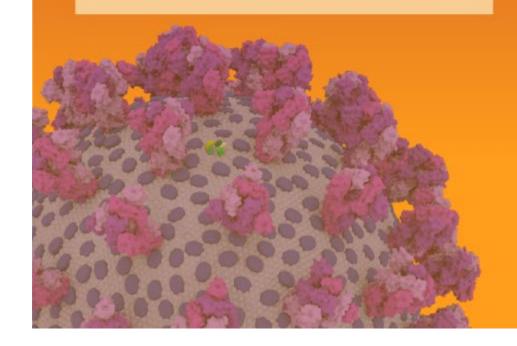






PREVENTING THE NEXT PANDEMIC

Zoonotic diseases and how to break the chain of transmission





Travel and

transport







Urbanization and industry



Demand for animal protein



Food supply chains



Climate change

The Lancet 2012 3801956-1965DOI: (10.1016/S0140-6736(12)61684-5) High risk Moderate risk Low risk

Global hotspots for emerging infectious diseases that originate in wildlife



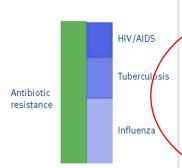




Antibiotic resistance: a growing threat to human health

Antibiotic resistance is the ability of bacteria to combat the action of one or more antibiotics. Bacteria, not humans or animals, become antibiotic-resistant.

In Europe, the health impact of antibiotic resistant infections is comparable to that of influenza, tuberculosis and HIV/AIDS combined.



More than 35000 deaths

Each year, more than 35 000 people die from antibiotic-resistant infections in the European Union, Iceland and Norway. This is equivalent to the number of passengers on 13 cruise ships.

Antibiotic resistance is a silent pandemic and a growing threat human health.

healthcare-associated

infections

Over 70% of the health impact of antibiotic-resistant infections is directly linked to healthcare-associated infections. This could be

minimized through adequate infection prevention and control measures, as well as antibiotic stewardship in healthcare settij



Increasing burden

Resistance to antibiotics that are used as last line for treatment of infections, such as the carbapenems, has the highest health impact.

letween 2016 and 2020, the overall number of deaths caused by antibiotic-resistant bacteria under study has increased.

or carbapenem-resistant Klebsiella pneumoniae and Acinetobacter spp, commonly causing healthcare-associated infections, the number of attributable deaths increased by approximately 50%.

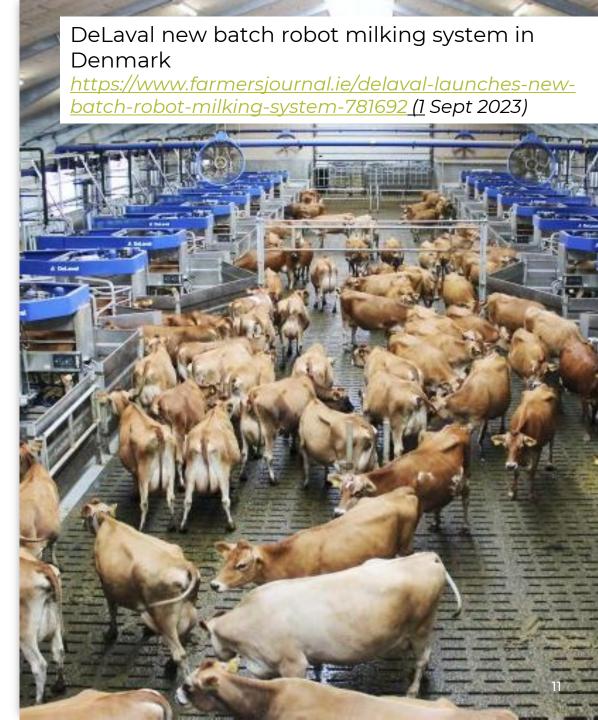
Acinetobacter spp. 53%

2011-2021 Sales of antibiotics for veterinary use are declining **↓47%** 160% overall sales in in some countries 25 of the 31 countries in the ESVAC network **↓38%** for 3rd- and 4th-generation cephalosporins for polymyxins

Need to further reduce antimicrobials

Farming of Livestock evolved

- Concentration & corporatisation
- GHG production → need to reduce
- Technological innovation
- Increased societal concern around animal welfare























Companion animals = part of the family

- Growing numbers, aging pets
- **Expectations for Best**in-Class Medical Care
- Demand for specialized veterinary services



patrikslezak/Adobe Stock



Jan Havicksz. Steen, 1655 - 1660





FVEs 3rd Vet Survey revealed change of working field veterinarians



Companion animal dominated: Most vets work in companion animal practice (71%), followed by cattle (23%), equine (21%) and pigs (13%).



More employed versus self-employed vets. Most employed full-time veterinarians work within the corporate sector (65%), compared to 34% working in the independent sector.



Veterinary workforce shortage: High workloads and staff shortages are the top challenges facing the veterinary profession.





FVEs 3rd Vet Survey revealed shared commitments



One Health: As a profession we need to stand out globally to demonstrate our One Health commitment



Animal Health & sustainability: As a profession we need to engage politically in future global challenges such as sustainability and resource management



Animal Welfare: Societal pressure will mean that animal welfare becomes an essential driver of sustainability and development in the food animal sector



Need to remove current roadblocks

- Availability Disparity between countries
- Lack of Incentive for Pharmaceutical Investment
- Regulating innovative/novel products
- Balancing benefit/risk







We are similar, but we are not the same: veterinary medicines versus human medicine

Number of species:

Human Sector: one species
Veterinary Sector: 7 major species and many minor

Market size and who pays:

Human Sector: ~97%, social security/insurance Veterinary Sector: ~3 %, owner pays

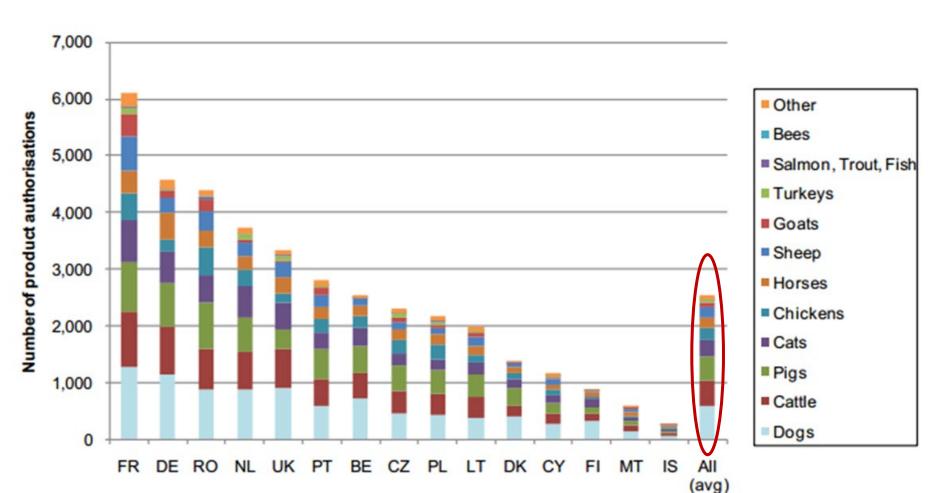
Ensuring food and environmental safety:

Extra tests are done to ensure food, consumer and environmental safety.





Availability of products in the EU in 2008

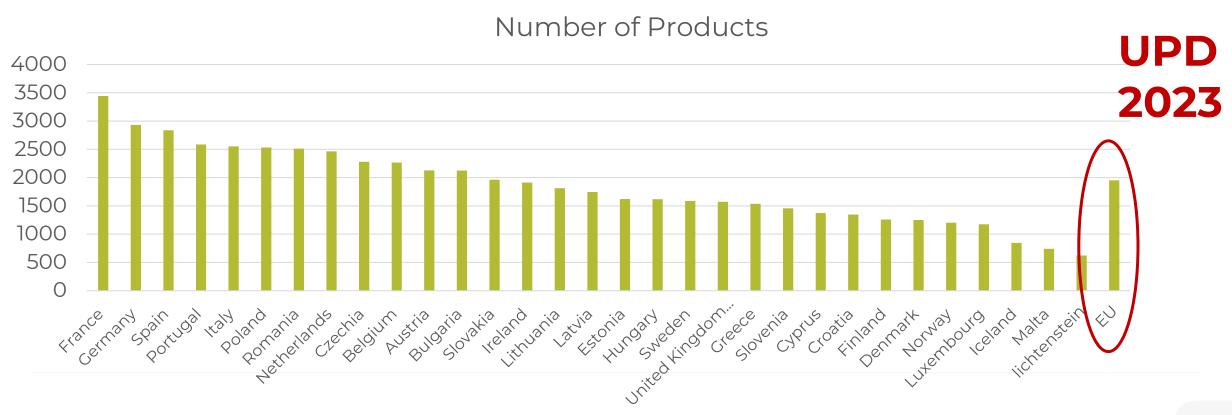


2008



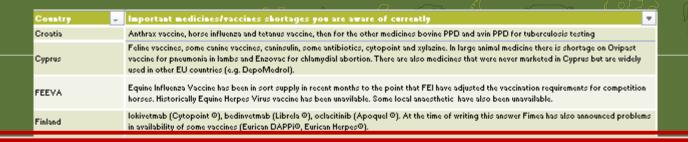


Availability seems to have decreased between 2008 and 2023



Monitoring availability

FVE survey on lack of medicine/vaccines in Europe



Critical shortages

- Vaccines, observed for several species
- Antibiotics, especially narrow spectrum or lower classes antibiotics— i.e. penicillin, amoxycillin, tetracyclines, etc.
- Need tools especially for essential indications

| Sweden | Equine influenza vaccine, atropine eyedrops, meloxicam, and (for laboratory animals): Hypnorm (needed for diabetes research) and Buprenorphine. |
|----------------|---|
| Switzerland | Almost permanent with intramammary Penicilline-Products, other first-line Antibiotics. This spring we hadn't any vaccine against Enterotoxemia/pulpy kidney disease in lambs, a lot died. |
| United Kingdom | Cat vaccines (which is now improving), equine influenza vaccines, intravenous fluids, particularly large 5 litre bags for equine practice |



Solutions on the horizon

- Increase availability
- Boost disease preparedness
- Incentive investments
- Ensure benefit-risk
- Think One Health







We need to ensure that we use the potential of the new Veterinary Medicines regulation to increase availability



Extending the centralized procedure



Increased flexibility of prescription cascade



Union Product
Database & easier
import of medicines
from other EU MSs;
prescriptions valid
throughout the EU



Harmonisation of
Summary of
Product
Characteristics
(SPCs)



Stimulate innovation and regulatory framework for new medicines





Outstanding Acts:

- Veterinary medicines: Oral medication
- Medicated Feed: cross-contamination rules
- List of substances which are essential for the treatment of equine species (Art 105(5))
- List of substances which may be used in food-producing aquatic species (Art 114(3))

Important to ensure availability of adequate treatment options in practice



Preventing zoonotic diseases

International Collaboration/Fund to pool resources

- For robust surveillance
- R&D and emergency response

Cost-Benefit Analysis Models

- Need to break the prevention paradox
- Get data on economic viability of preventive measures

Multi-sector Collaboration

- Government, industry, and public health agencies
- Integrated response strategies for containment and treatment









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A Scientific Assessment with Key Messages for Policy-Makers A Special Volume of UNEP's Frontiers Report Series





Showcases of collaborative solutions





#PetPower

COCKTAIL @ TOWNHALL EUROPE SQUARE DE MEEÛS 5-6

SHARE YOUR PET PHOTOS FOR

THE SECOND EDITION OF OUR

Conclusions

Our world changed, it is necessary for the regulatory framework to follow

- Key Challenges for One Health, Animal Health and Welfare:
 - Availability shortages and disparities among EU countries
 - Rising threats of zoonotic diseases and pandemics
 - Need more preventive tools and alternatives to antimicrobials
 - Need to incentivize investments
- Solutions on the Horizon
 - New EU Regulatory framework provides possibilities if rightly used
 - EU & Global initiatives to boost pandemic preparedness
 - Work collaboratively with regulatory flexibility to guard an effective benefit/risk balance and ensure veterinarians have the tools to treat their patients!



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