

# 20 years of social veterinary epidemiology

Helena Ferreira <sup>1,2</sup>, Fanny Baudoin<sup>2</sup>, Cristina Rojo-Gimeno<sup>3</sup>,  
Erwin Wauters<sup>2</sup>

<sup>1</sup>University of Ghent, Belgium, <sup>2</sup>Flanders Research Institute for Agriculture, Fisheries and Food,  
<sup>3</sup>European Food Safety Authority

# SOCIAL VETERINARY EPIDEMIOLOGY?

WHAT?



# SOCIAL VETERINARY EPIDEMIOLOGY



## Social Epidemiology

Research on **human attitudes, perceptions and practices** influencing human health



## Social Veterinary Epidemiology

Study of **human behaviour that affects** the causes, spread, prevention and control of **animal/human diseases and health problems.**

UNDERSTANDING THE  
SOCIAL DIMENSION OF  
ANIMAL HEALTH MANAGEMENT



# SOCIAL VETERINARY EPIDEMIOLOGY



Jan 2019 – Jun 2022

- To **share best practices** to promote a responsible AMU
- Creation of a **multi-actor community**, a **knowledge database**, **Farm health teams** and a **farm health toolbox**.



Jun 2019 – May 2023

- Research on **human behaviour (lock-ins/incentives)** that **influences AMU** in livestock at system & individual level.
- **Co-creation** of solutions via Living Labs

# SOCIAL VETERINARY EPIDEMIOLOGY



Oct 2020 – Sep 2023

- **Multi-actor EU thematic network** that will compile, validate and share supporting measures for **biosecurity compliance** that have been implemented in poultry farming
- Measures will be collected from **both the practice and the literature** and analysed from a technical and socio-economic point of view
- ILVO will assess whether the supported measures are (cost-)effective.
- Measures will be either **validated on pilot farms** or disseminated directly to stakeholders.



# SOCIAL VETERINARY EPIDEMIOLOGY?

WHY?

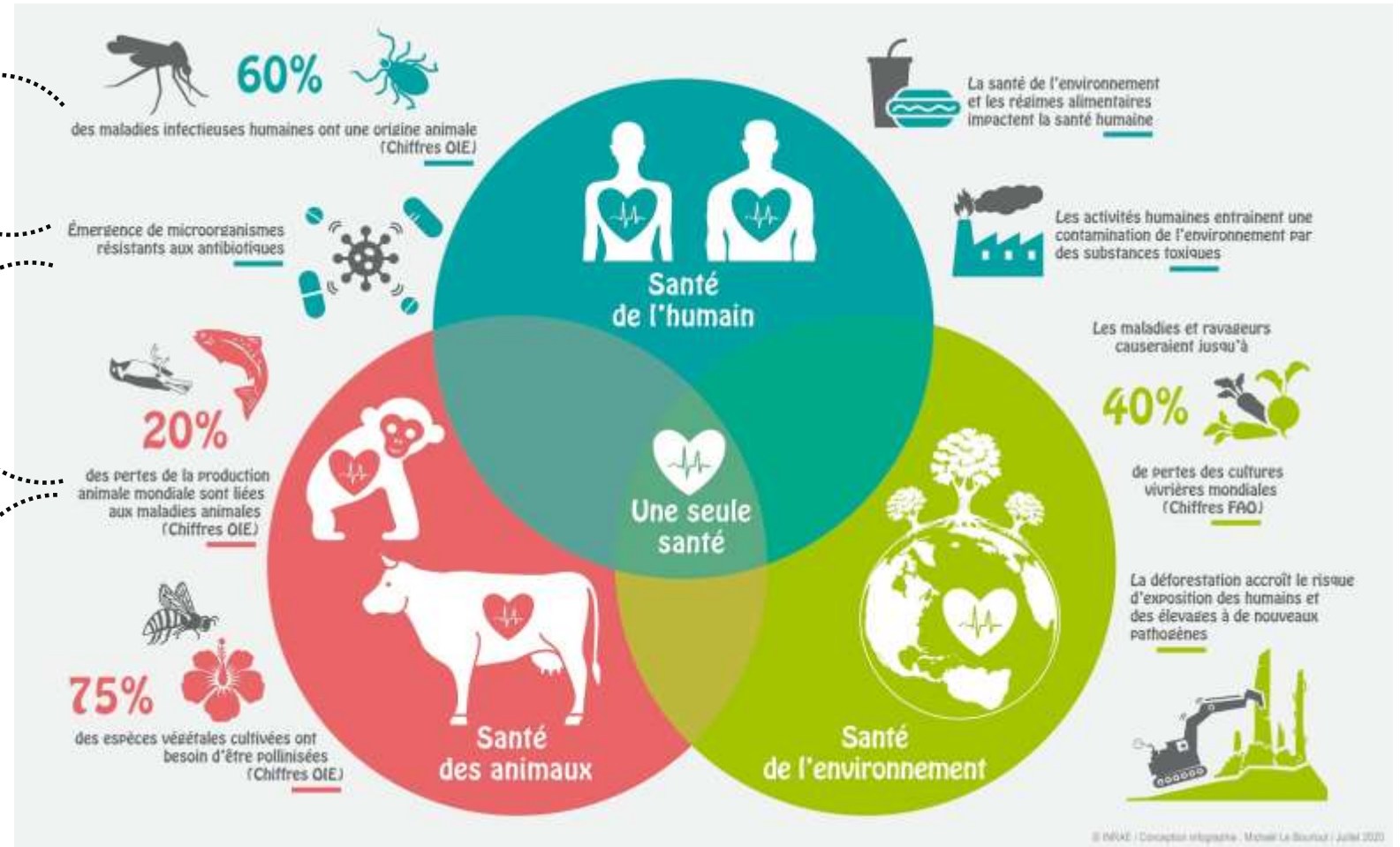


# SOCIETAL RELEVANCE – One Health

Public Health Matter

Animal welfare

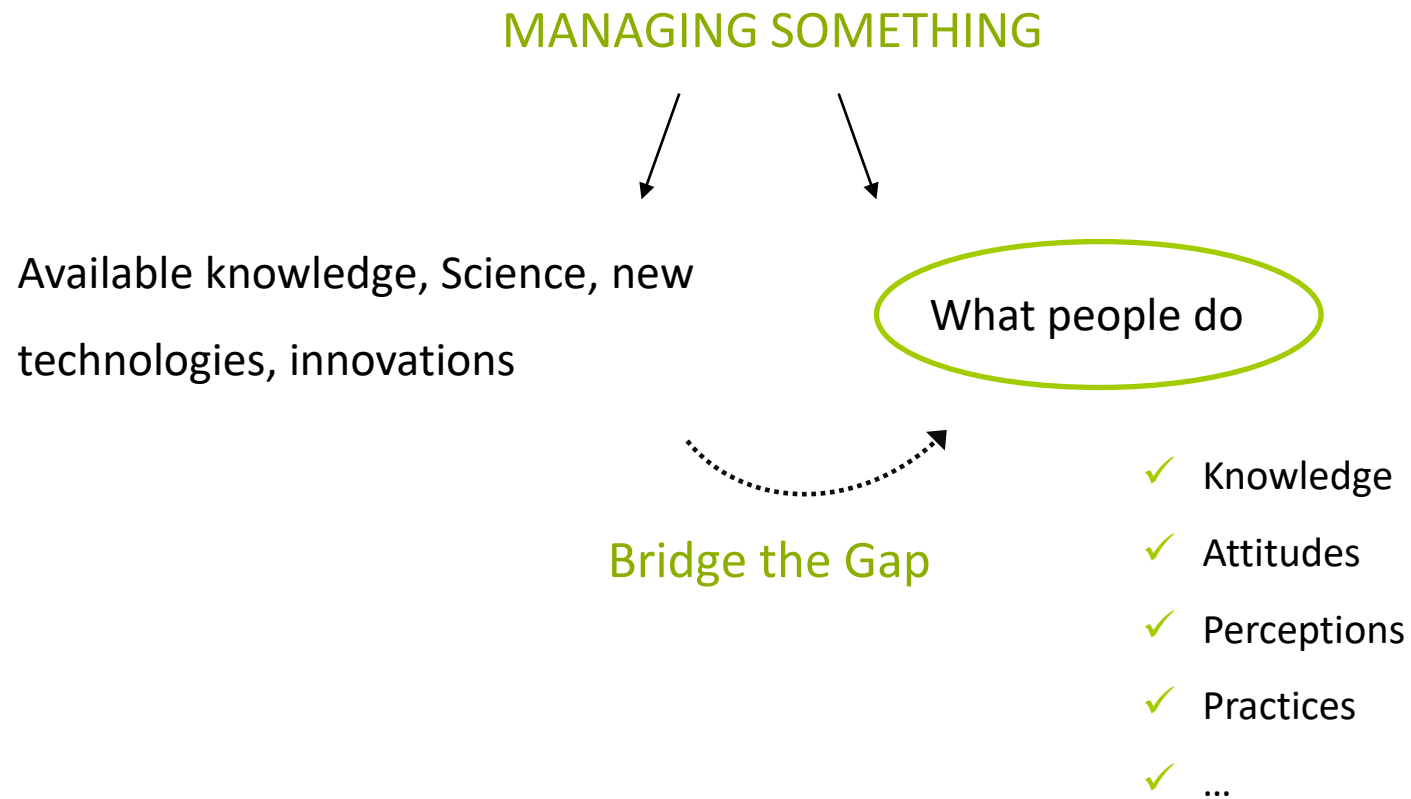
Economic Matter



<https://www.inrae.fr/alimentation-sante-globale/one-health-seule-sante>



# SOCIETAL RELEVANCE – Social dimension



# Why focus on social veterinary epidemiology?

- ✓ Research on **how human behaviour affects** the causes, spread, prevention and control of animal diseases
- ✓ SVE provides insights that can **ensure effective & efficient implementation of strategies and solutions** regarding Animal health management

# SVE REVIEW PAPER



# Materials and Methods

- 189 peer-reviewed papers published between 2001 and 2021 identified in common search databases.
- literature search is still ongoing
- most of the identified papers have already been analyzed by using a heuristic framework
- developed to characterize the “Social Veterinary Epidemiology” field





## 189 PEER-REVIEWED PAPERS

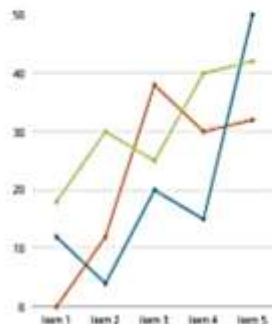
Identified in Scopus, Google Scholar and pubmed by using combinations of the following keywords: "behaviour", "farmer", "animal health", "perception", "management practices".



## HOLISTIC FRAMEWORK

For every paper, different elements were assessed.

- **Study design** ( e.g. qualitative, quantitative, ...),
- **Methodology** (e.g. survey, interviews, sample size, ...)
- **Species** (e.g. cattle, pigs, poultry, ...)
- **Disease** ((non)-zoonotic, endemic, ...)
- **Main subject of study** (farmer, veterinarian, ...)
- **Theory** (e.g. theory of planned behaviour)
- **Inspirations from other disciplines**



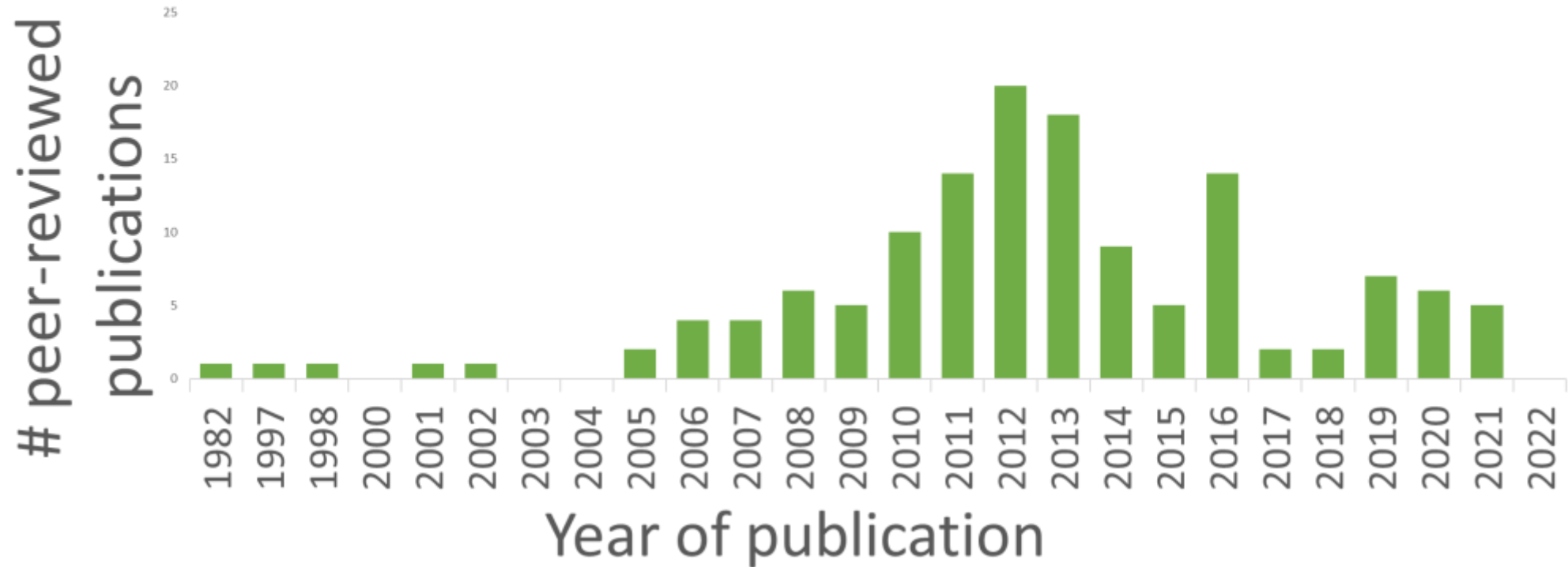
## TRENDS

Trends or patterns were assessed for the studied elements of the framework. However, these results are currently preliminary as the literature search is still ongoing.



# Evolution of the relevance of SVE over time

## SVE publications over time



# Results

## **Our preliminary results have shown that:**

- Most studies focus on zoonosis, antimicrobial resistance or diseases with economic impact in European pig and cattle production
- Farmers and veterinarians are the main subjects of the identified studies
- Individual behavior is often analyzed in relation to one specific disease or the implementation of biosecurity measures against a whole range of diseases
- Intervention studies were scarce
- The use of participatory approaches were underrepresented and more common in developing countries

# Discussion and preliminary conclusions

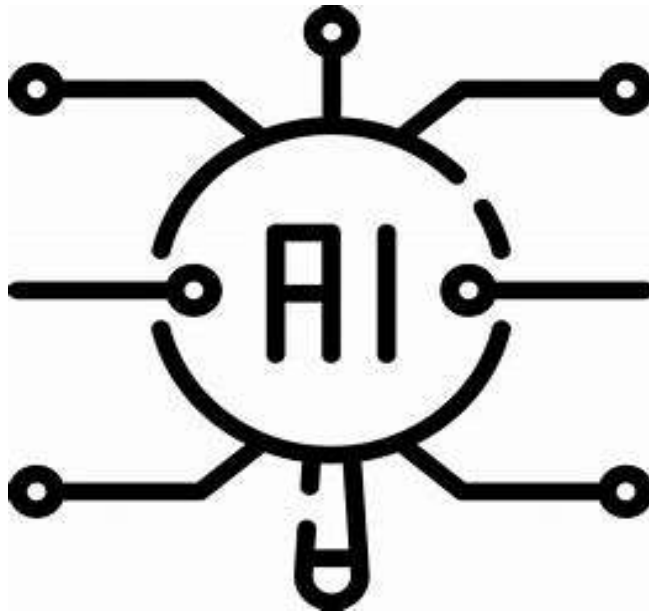
## Recommendations for further research:

- understanding the systems in which farmers and others are embedded by applying a system thinking approach
- Avoid conceptualization of behavior as being determined on an individual level and disconnected from the system;
- a more holistic conceptual view on behavioral change:
- beyond communication and education
- explore other avenues to behavioral change such as economic incentives, provisions, regulations and social norms;
- more focus behavioral and experimental intervention studies

# Recommendations



**More systems thinking**



**More integrated view on behavioural theory**



**Experimental intervention studies**

# Thank you for your attention!

## Questions or suggestions?



[Helena.ferreira@ilvo.vlaanderen.be](mailto:Helena.ferreira@ilvo.vlaanderen.be)



**ILVO**

