

# BIOSECURITY IN THE SWINE LIVESTOCK: A STATE OF ART IN THE ECONOMIC FIELD

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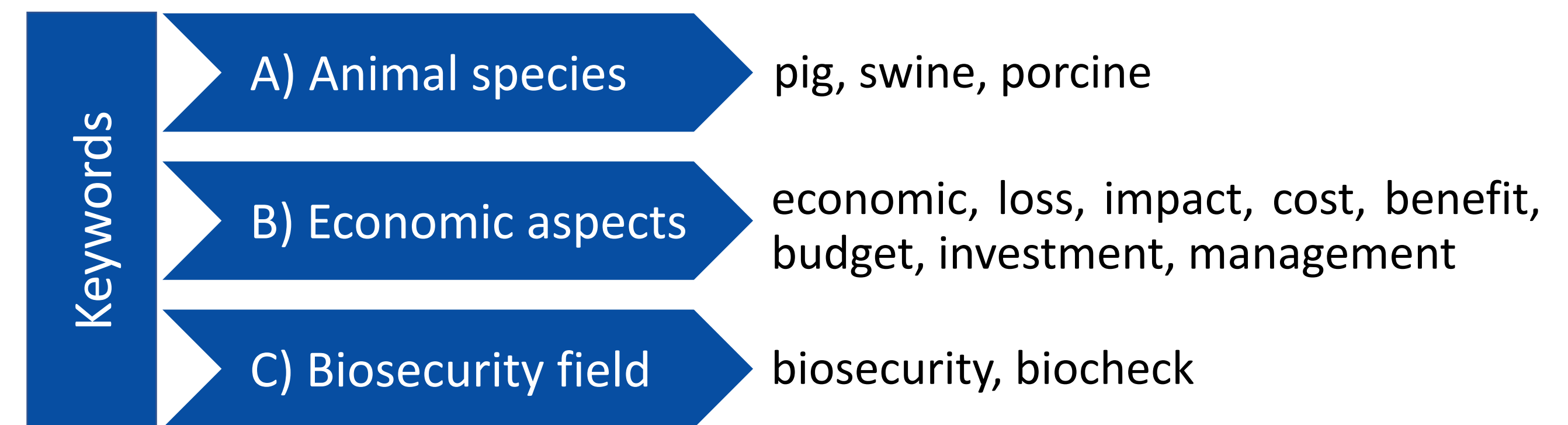
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## INTRODUCTION

Infectious animal and zoonotic diseases represent a threat for farm productivity, product quality, and human health. Biosecurity measures adoption helps to prevent introduction and spread of diseases in farms but increases management and investment costs, potentially reducing profits. This study is part of a PhD research project and is part of the ongoing European HE Project BIOSECURE. The aim of this poster is to show the results of a bibliometric and network analysis focusing on the economic aspects of biosecurity in swine farms.

## DATA COLLECTION

The extraction of published studies was run on 22 November 2023 from Scopus, PubMed and ISI-Web of Knowledge. Three groups of keywords were used. The duplicate documents, the documents with incomplete information and off-topic were discarded. **586** documents were finally selected for the analysis.



## RESULTS

The selected documents were imported, in .csv format, into the R software to obtain a **bibliographic data frame**.

### Main information data

Documents	586
Sources (Journals)	193
Keywords Plus (ID)	3548
Author's keywords (DE)	1511
Timespan	1995 - 2023
Average citations per document	20.75
Authors	2679
Author appearances	3609
Documents per author	0.223
International co-authorship	34.95%
Annual percentual growth rate	13.89%

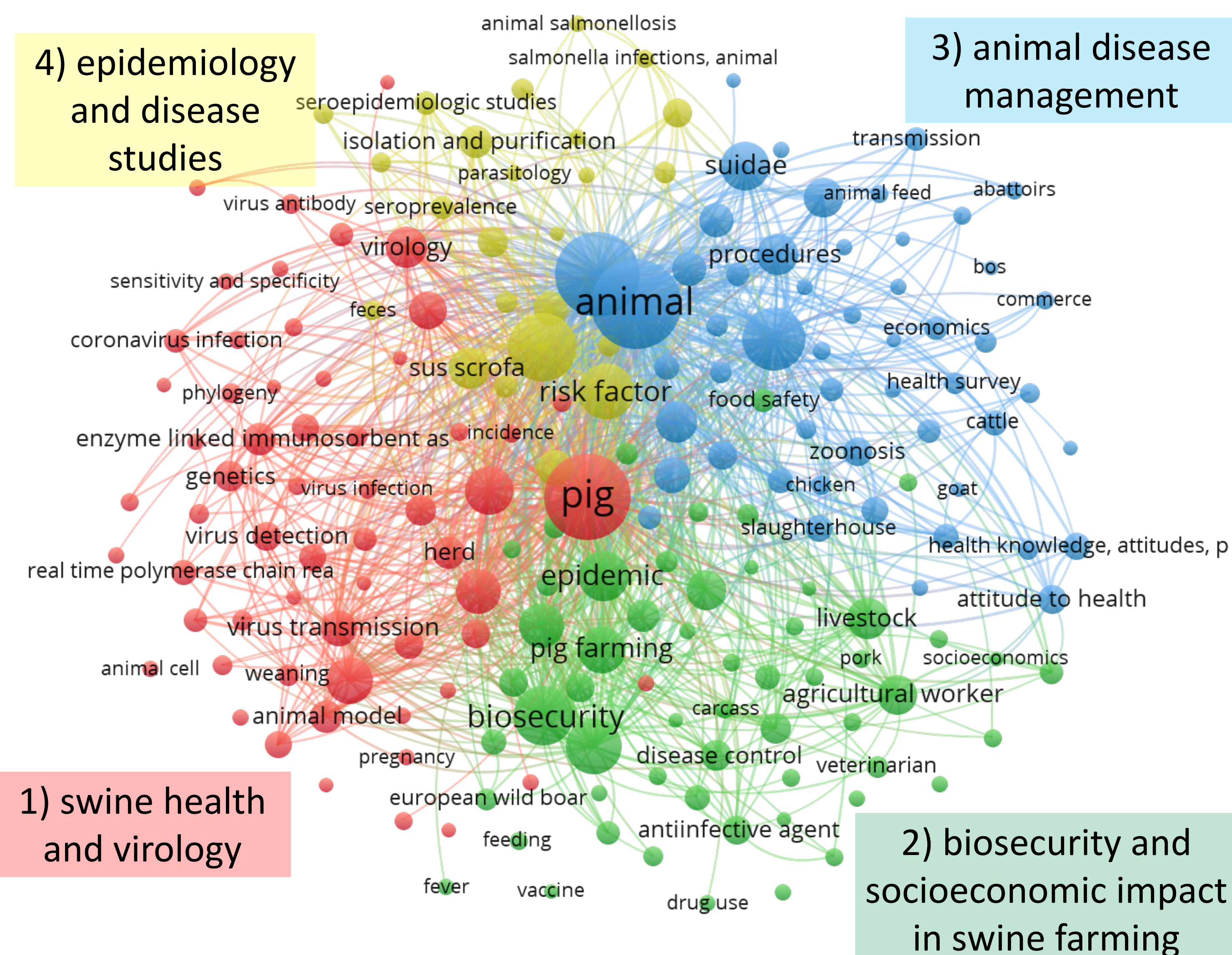
### Leading journal for number of published documents

	Publisher	No. documents	Impact Factor
Preventive Veterinary Medicine	Elsevier	83	2.6
Frontiers in Veterinary Science	Frontiers	43	3.2
Transboundary and Emerging Diseases	Wiley	36	4.5

### Top 3 most productive countries (documents and citations)

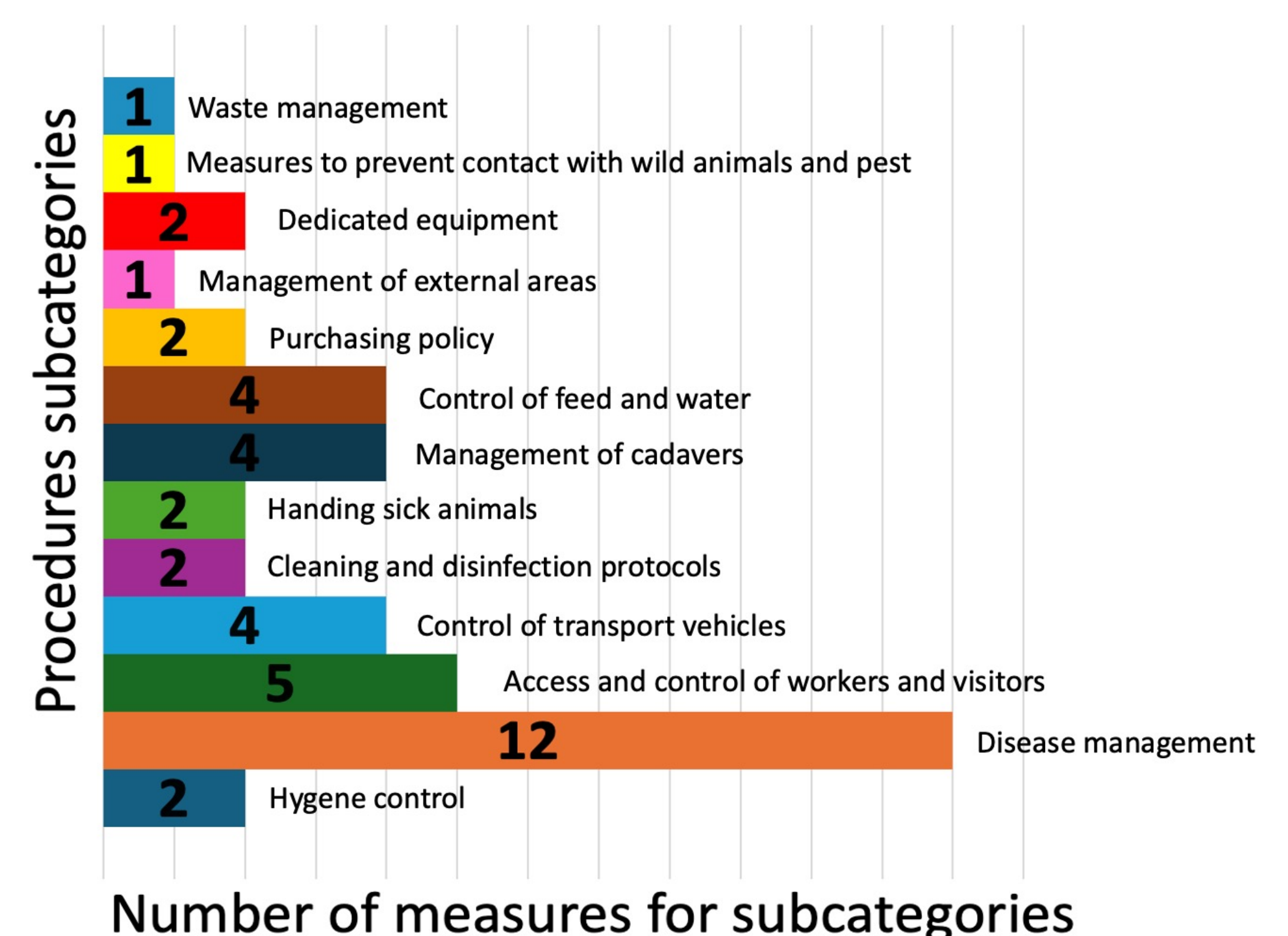
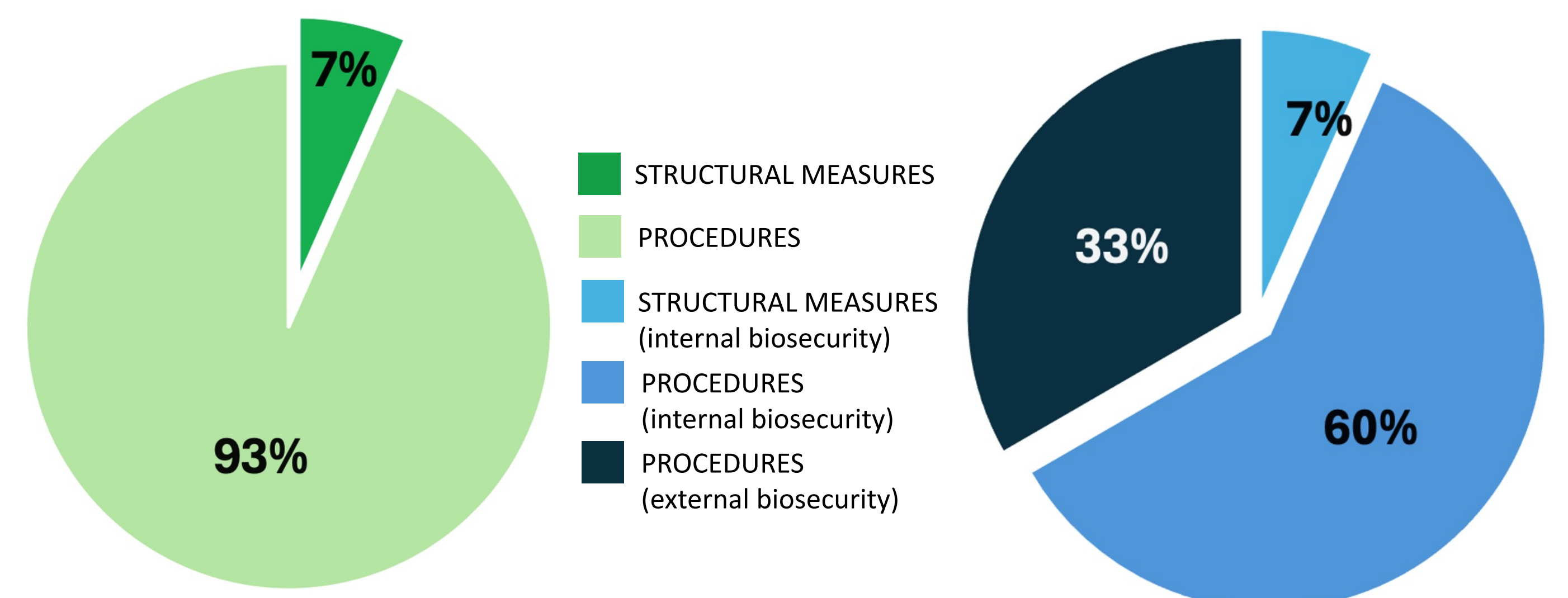
	No. documents	MCP ratio
United States	106	33.1%
Australia	31	32.3%
United Kingdom	31	38.7%

**Network analysis** has performed by using VOSviewer 1.6.14 software, 3548 total index keywords were chosen. The keywords with at least 10 occurrences were included. NA points out four clusters:



Network visualization of keyword co-occurrence analysis

**Content analysis** has performed:



## CONCLUSIONS

Studies investigating the economic aspect of improving animal biosecurity are still quite rare. But the sustainability of these measures must be guaranteed also on the economic and social point of view. There is not a specific journal specialized on the economics aspects of animal biosecurity underlining that the topic is not yet fully explored and investigated, but it emerges an increasing interest for the topic. The research focusses mainly on epidemiology, virology, diseases and swine health. A holistic approach in swine farms is required to consider also the biosecurity economic aspects.

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Funded by  
the European Union