



# BETTER

COST Action CA20103: **B**iosecurity **E**nhanced **T**hrough  
**T**raining **E**valuation and **R**aising Awareness

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**WG1 - POULTRY SUB-GROUP, CURRENT STATUS OF BIOSECURITY  
LEGISLATION IN THE EUROPEAN POULTRY SECTOR**

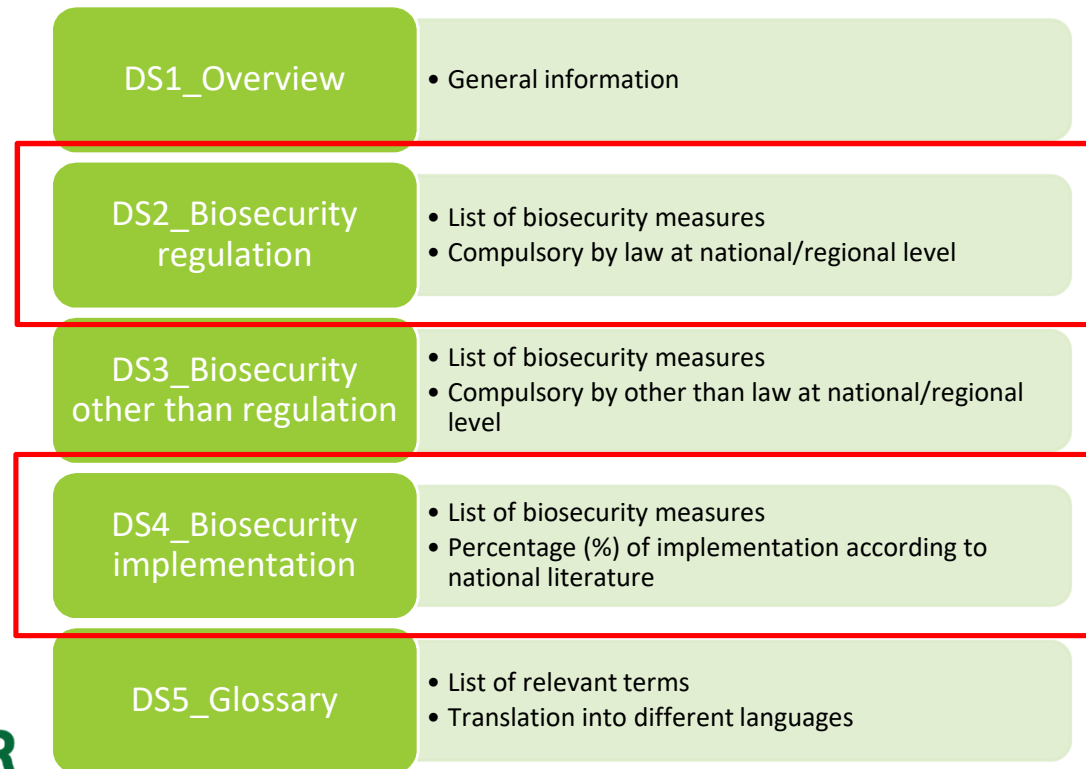
# Agenda

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1. Map biosecurity at EU level: state of the art
2. Analysis of the available data
3. Additional data collection
4. Updates on other datasheets
5. Next steps



# WG1 | Map biosecurity at EU level

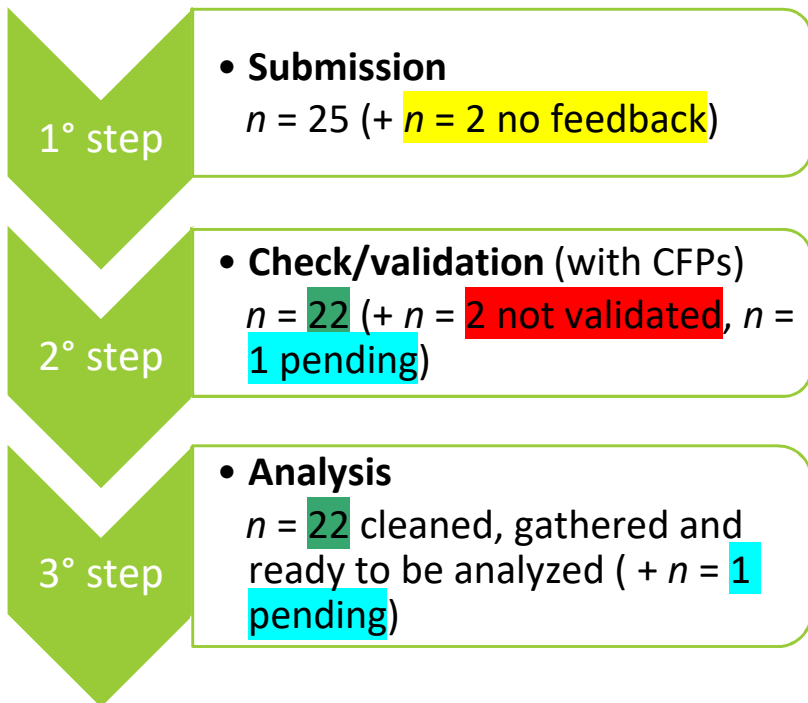


**Participatory research approach**

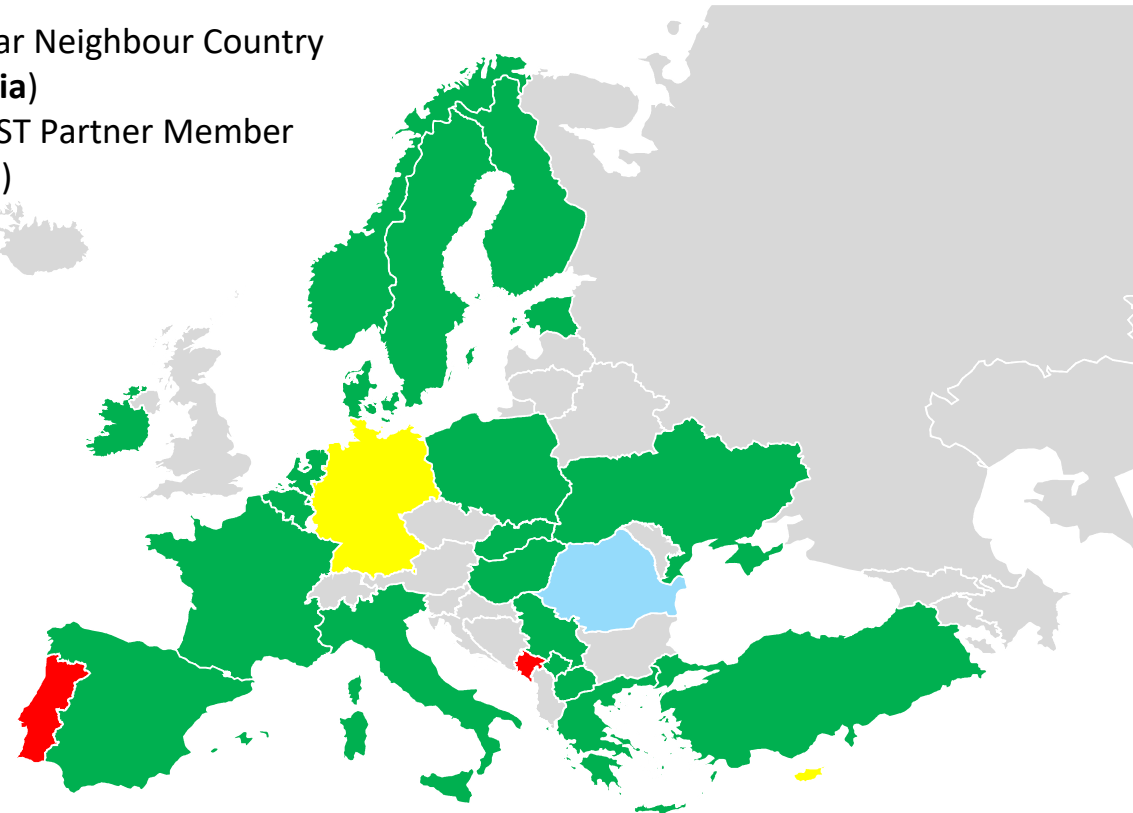


# WG1 | Map biosecurity at EU level

## Data processing flow



+1 Near Neighbour Country  
(Tunisia)  
+1 COST Partner Member  
(Israel)



# WG1 | Map biosecurity at EU level

## Database 2 (DS2): Biosecurity measures compulsory by law

- Recoding of answering options for analysis:

1 → Yes (mandatory)

2 → Yes (recommended)

3 → Partly

**4 → *Partially, answered for certain categories (specifications)***

**5 → *Partly/partially, mix of the previous two (partly present in the law, but valid for certain categories)***

6 → No

Biosecurity measures FULLY present in the law

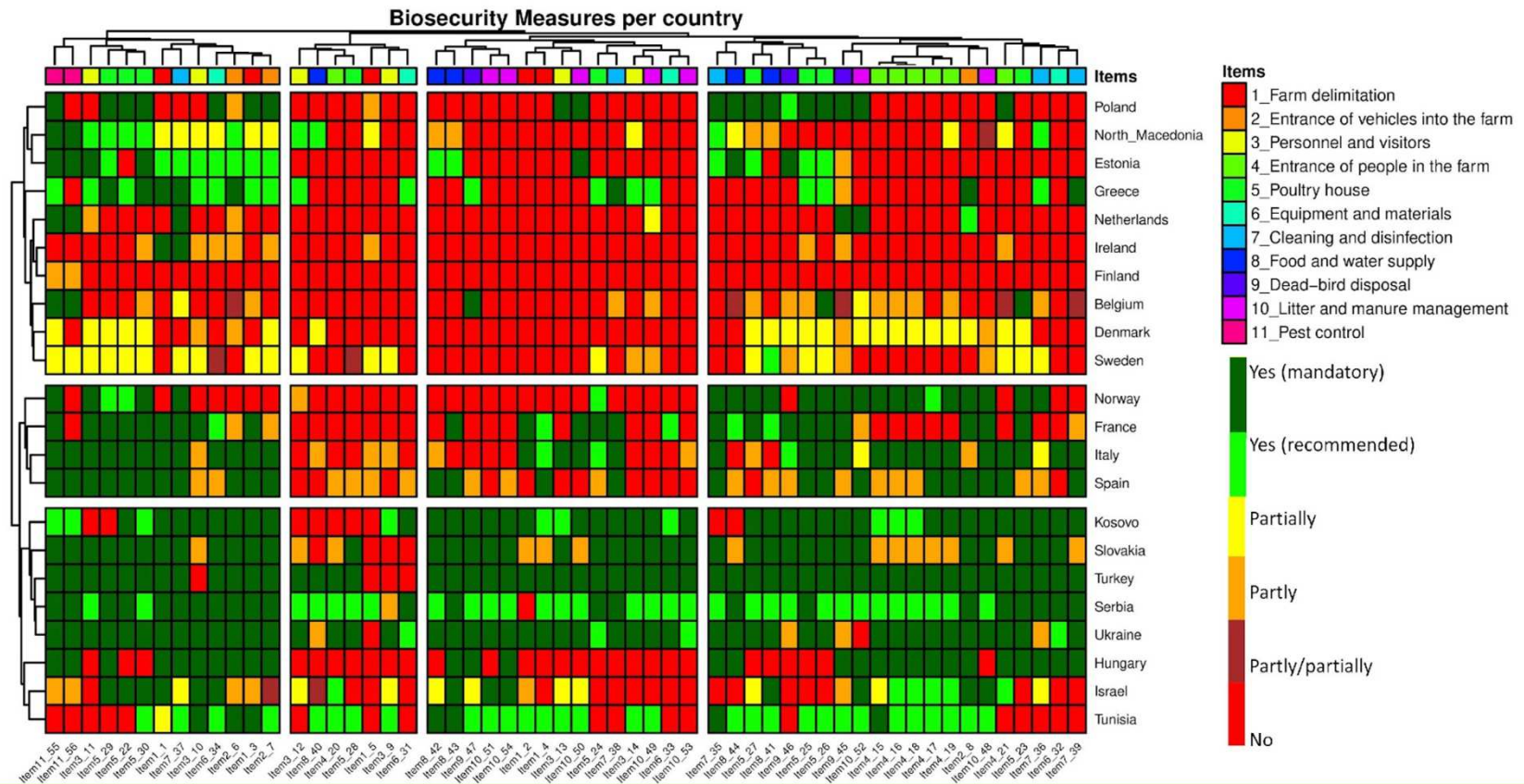
Biosecurity measures NOT present in the law



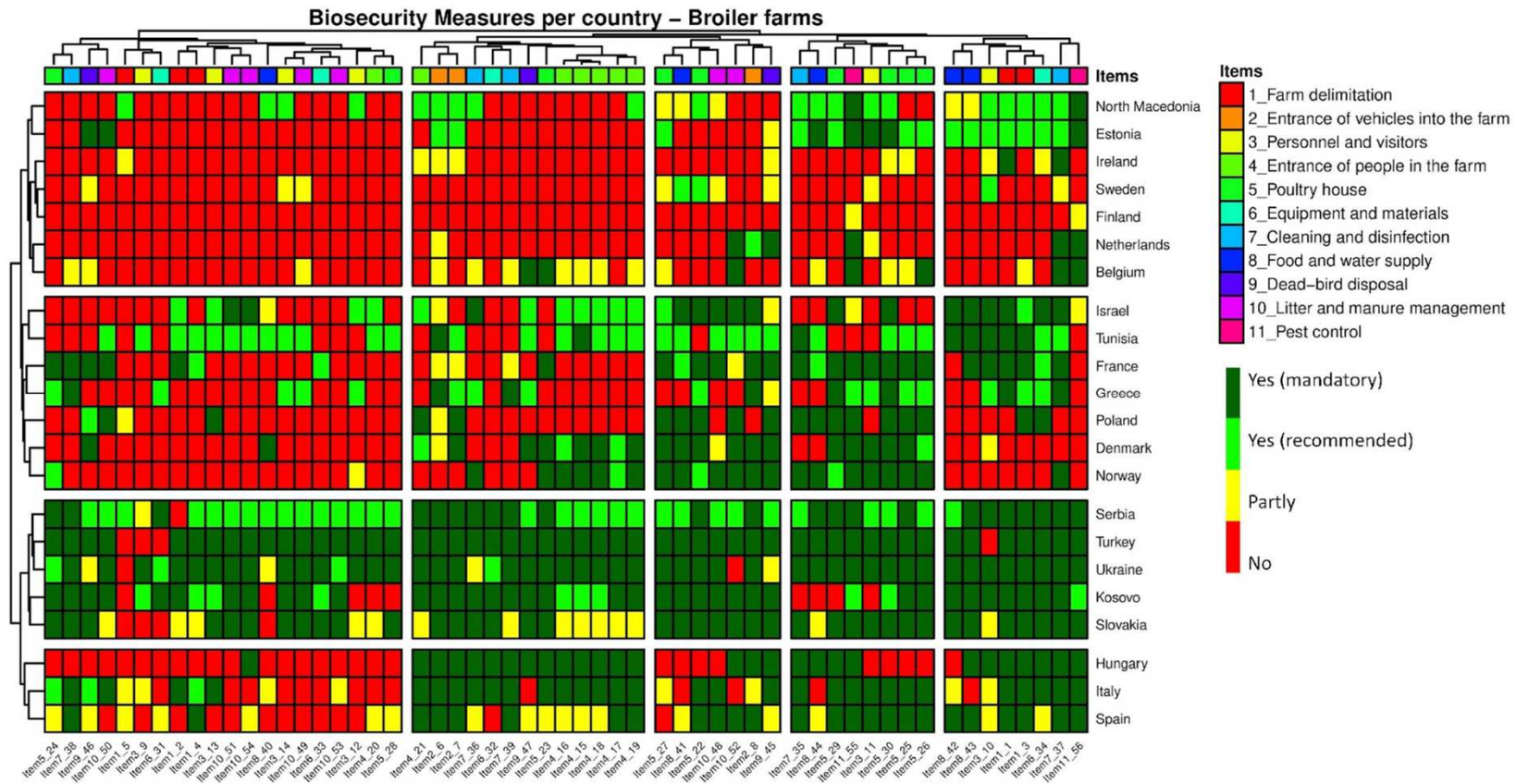
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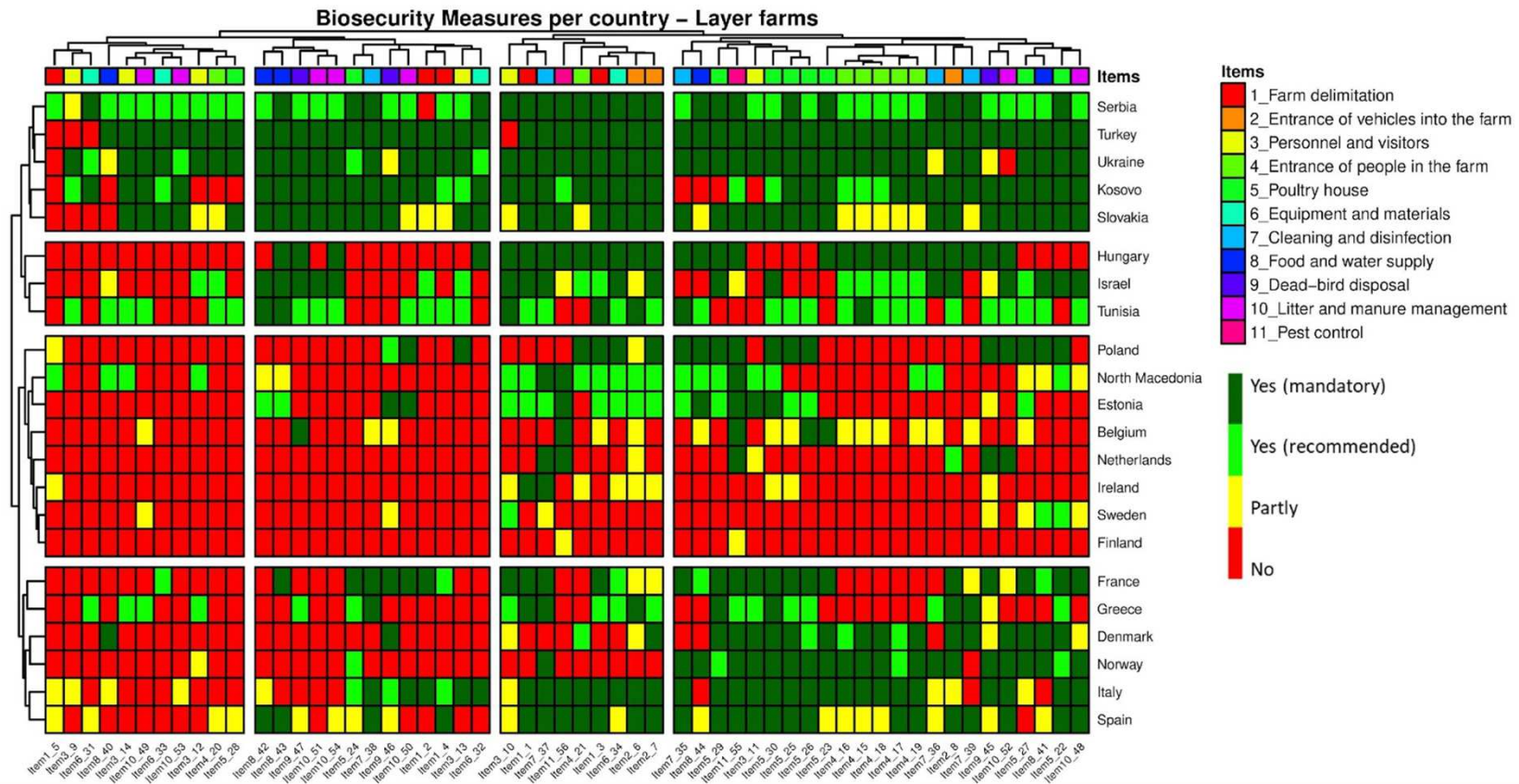
# WG1 | Analysis of the available data



# WG1 | Analysis of the available data



# WG1 | Analysis of the available data





# WG1 | Additional data collection

## Data processing flow

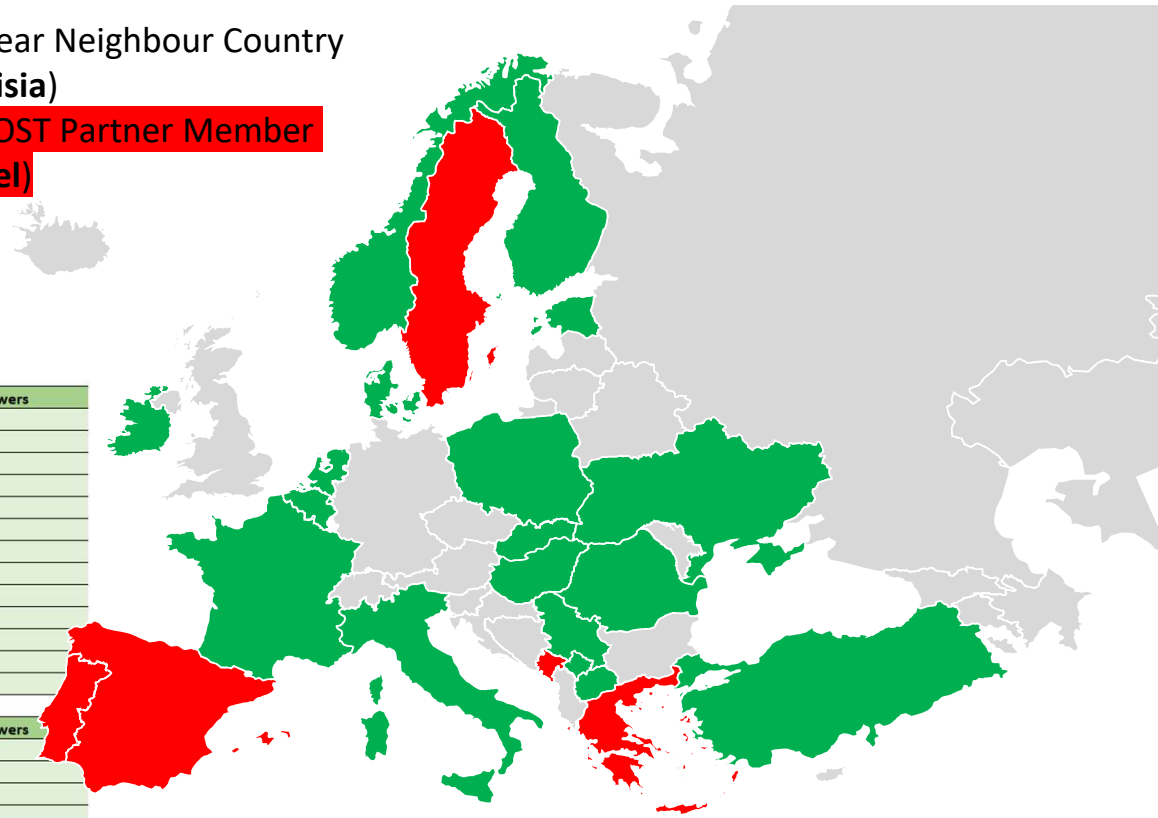
1 step

- **Submission**

$n = 25$  ( $n = 5$  no feedback)

+1 Near Neighbour Country  
(Tunisia)

+1 COST Partner Member  
(Israel)



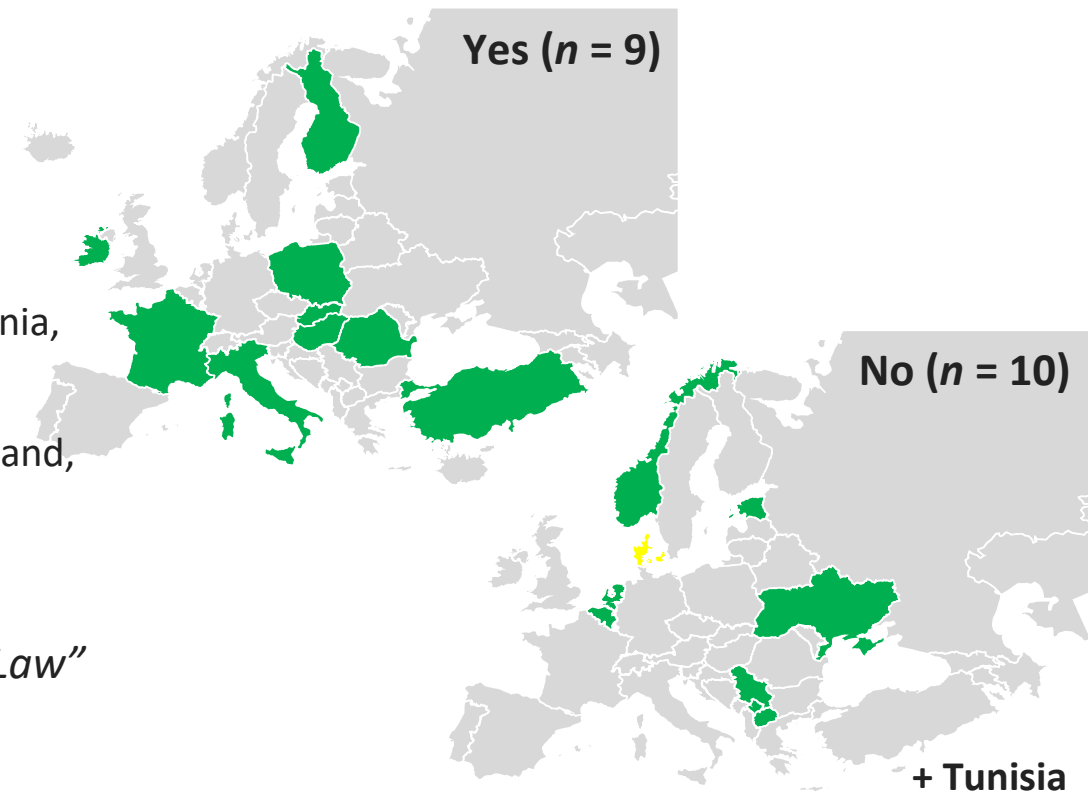
### Extra questions to DS2 Biosecurity regulation

Please, reply to the following questions by flagging the dropdown menu	Answers
In your country, is there a specific biosecurity legislation?	
If yes: does it apply to ALL poultry categories?	
In your country, are there other legislations dealing with biosecurity?	
In your country, how many legislations do you have to consult in order to retrieve information on biosecurity (i.e., salmonella, AI, welfare, etc)?	
Could you provide data on poultry population/no. of poultry farms in your country?	
If yes, please provide the source of this data (= data on population)	
If yes, please fill in the following list:	
No. of broilers (please report either the number or <b>not available</b> if such production is not present in your country)	
No. of layers (please report either the number or <b>not available</b> if such production is not present in your country)	
No. of ducks (please report either the number or <b>not available</b> if such production is not present in your country)	
No. of turkeys (please report either the number or <b>not available</b> if such production is not present in your country)	
No. of breeders (please report either the number or <b>not available</b> if such production is not present in your country)	
No. of minor species (please report either the number or <b>not available</b> if such production is not present in your country)	
<b>The table shown below refers to the references that you have provided according to biosecurity legislation in your country. We kindly ask you</b>	<b>Answers</b>
Is all the legislation reported correctly? Please, check if the governmental body, the title of the law, and the official bulletin are corrected	
Is the English translation for all the legislations correct?	
Is the link of each legislation correct and working? Please, provide the direct link to the law	
Are there any other biosecurity legislation not reported in the table below related to biosecurity? Please, provide all the correct references and link	

# WG1 | Additional data collection

## Database 2 (DS2): National legislation

- Responding countries:  $n = 19$  (out of 25)
- Specific biosecurity legislation in Countries applicable to all poultry species
  - Biosecurity ( $n = 4$  - France, Italy, Romania, Turkey)
  - Avian Influenza ( $n = 5$  - Denmark?, Finland, Ireland, Poland, Slovakia?)
  - Animal Health ( $n = 1$  - Hungary?)



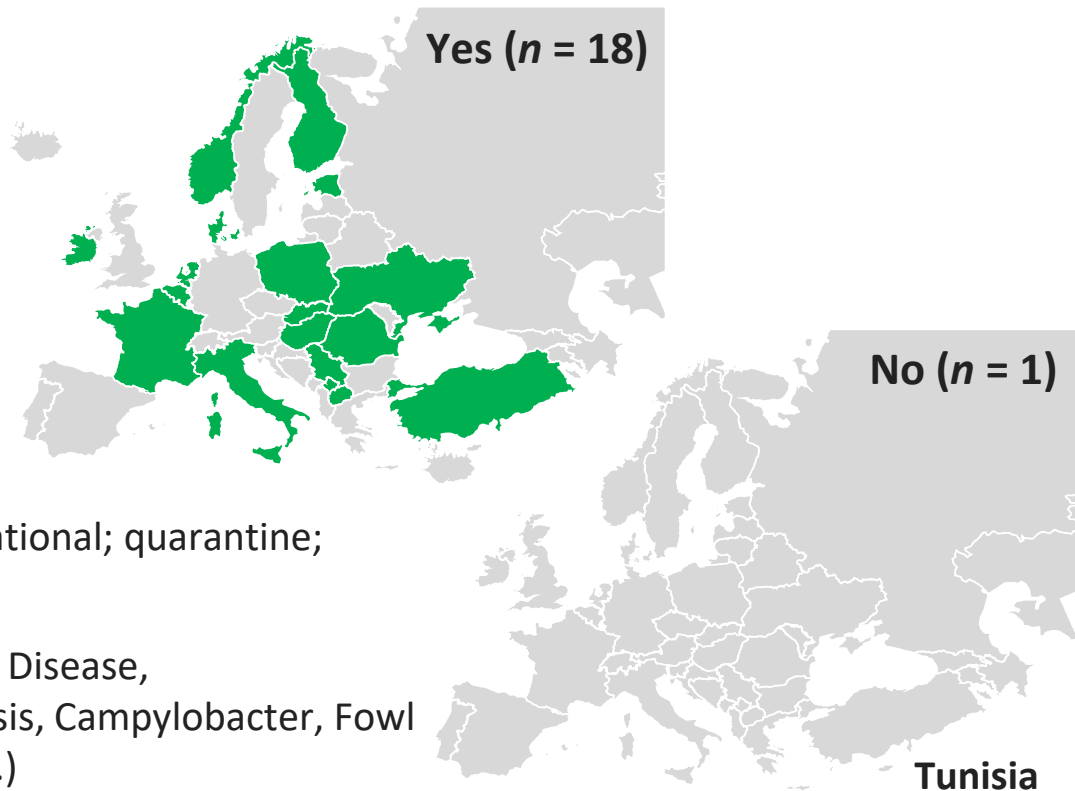
**BETTER**

Regulation (EU) 2016/429 “Animal Health Law”

# WG1 | Additional data collection

## Database 2 (DS2): National legislation

- Other legislations dealing with biosecurity:  
1 to 16 (or more...)
  - Salmonella
  - Welfare (broilers, layers)
  - Environment (e.g., emissions, building)
  - Feed and food hygiene
  - Animal movements (national or international; quarantine; transport)
  - Other poultry diseases (e.g., Newcastle Disease, Laryngotracheitis, Fowl Cholera, Ornithosis, Campylobacter, Fowl Typhus, Mycoplasmosis, Colibacillosis, etc.)



# WG1 | Updates on other datasheets

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## Database 4 (DS4): Implementation (%) of biosecurity measures

- Responding countries:  $n = 12$  (out of 25 responding countries)
- Characteristics of the data:
  - Few studies available on implementation (%) at national level
  - Data from national dataset (original language, no peer reviewed)
  - Feedback from poultry experts on field
- An **extra search (O2)** on studies currently available is being conducted



# WG1 | Systematic review

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**RESEARCH QUESTION: What is the percentage of implementation level of biosecurity measures in poultry production in Europe?**

The specific PICO elements are:

- 1.Population:** Broilers, Layers, Turkeys, Breeders, Ducks, minor species
- 2.Intervention:** Biosecurity measures
- 3.Comparator:** Countries
- 4.Outcomes:** Implementation level (%)

**Protocol for the systematic search**



# WG1 | Systematic review

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## Eligibility criteria

1. Language: Publications in English
2. Publication types: Journal articles and any other form of research publication that provides results of original research, fulfills the study design eligibility criteria
3. Geographical location of studies: Europe

Database	Interface	URL
MEDLINE	PubMed	<a href="https://pubmed.ncbi.nlm.nih.gov/">https://pubmed.ncbi.nlm.nih.gov/</a>
CAB Abstracts	EBSCOhost	<a href="https://connect.ebsco.com">https://connect.ebsco.com</a>
Web of Science	Web of Science	<a href="http://webofknowledge.com/">http://webofknowledge.com/</a>
AGRICOLA (AGRICultural OnLine Access)	USDA	<a href="https://www.nal.usda.gov/agricola">https://www.nal.usda.gov/agricola</a>



# WG1 | Updates: Systematic Review

Concept:

**[Poultry] AND [Biosecurity] AND [Implementation] AND [Geographic area]**

The general search strategy to identify studies relevant to the PICO of this review will be the following:

#1 ("chicken\*" OR "poultry\*" OR "gallus" OR "broiler\*" OR "lay\*" OR "hen\*" OR "turkey" OR "meleagri\*" OR "duck\*" OR "anas" OR "breeders\*" OR "intensive\*" OR "commercial\*")

#2 ("biosecurity" OR "farm biosecurity" OR "animal biosecurity" OR "preventive veterinary medicine" OR "flock health management")

#3 ("assess\*" OR "level\*" OR "implement\*" OR "measure\*" OR "scor\*" OR "questionnaire\*" OR "checklist\*" OR "Practice" OR "Evaluation")

#4 ("europe\*" OR "Austria\*" OR "Belgium" OR "Bulgaria\*" OR "Croatia\*" OR "Cypr\*" OR "Czech\*" OR "Denmark" OR "Estonia" OR "Finland" OR "France" OR "German\*" OR "Gree\*" OR "Hungar\*" OR "Ireland" OR "Israel" OR "Ital\*" OR "Kosovo" OR "Latvia" OR "Lithuania\*" OR "Luxembourg" OR "Malt\*" OR "Montenegro" OR "Netherlands" OR "Macedonia\*" OR "Norway" OR "Poland" OR "Portug\*" OR "Romania\*" OR "Serbia\*" OR "Slovakia" OR "Slovenia\*" OR "Spain" OR "Sweden" OR "Tunisia" OR "Turkey" OR "Türkiye" OR "Ukraine")

Database	Number of articles retrieved	After deduplication
Pubmed	238	25
WOS	589	218
CAB	526	395
Agricola	162	161
<b>TOTAL</b>	<b>1515</b>	<b>799</b>



# WG1 | Updates: Systematic Review

Eligibility of studies will be assessed with the following questions:

Screening of title  
and abstract

1. Is the publication language in English? YES [PASS], NO [EXCLUDE], UNCLEAR [PASS]
2. Is the publication an original research article? YES [PASS], NO [EXCLUDE], UNCLEAR [PASS]
3. Is the abstract of the study available? YES [PASS], NO [PASS]
4. Is the study concerning the biosecurity implementation in poultry farms? YES [PASS], NO [EXCLUDE], UNCLEAR [PASS]
5. Is the study performed in Europe, Israel, Tunisia, or Turkey? YES [PASS], NO [EXCLUDE], UNCLEAR [PASS]

Stage	Process	Number of articles screened	Nr. of articles retrieved	Nr. of articles removed
1st SC	1st calibration	25	8	17
	2nd calibration	25	5	20
	1st screening	749	119	630

Reports sought for retrieval: 132





# WG1 | Updates: Systematic Review

Eligibility of studies will be assessed with the following questions:

Screening of full-text

1. Is the full text available? YES [PASS], NO [EXCLUDE]
2. Is the full text in English? YES [PASS], NO [EXCLUDE]
3. Is the study performed in Europe, Israel, Tunisia, or Turkey? YES [PASS], NO [EXCLUDE]
4. Is the study concerning broilers, layers, turkeys, breeders, ducks, or minor species? YES [PASS], NO [EXCLUDE]
5. Is the study assessing the application of biosecurity measure(s) at the farm? YES [PASS], NO [EXCLUDE]
6. Is the study providing data (frequency or rate) concerning the implementation level of biosecurity measure(s) in poultry production? YES [PASS], NO [EXCLUDE]
7. Does the study concern intensive poultry farms? YES [INCLUDE], NO [EXCLUDE]

Stage	Process	Number of articles screened	Nr. of articles retrieved	Nr. of articles removed
2nd SC	1st calibration	20	13	7
	1st screening	112	53	59

Studies included in review: 67



# WG1 | Next steps

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1. Map biosecurity at EU level: state of the art
  - a) DS2 data: finalise the analysis of the available data
  - b) DS2 data: finalise the additional data collection
2. Updates on other datasheets
  - a) DS3 data: finalise the descriptive analysis
  - b) DS4 data: finalise the systematic review
  - c) DS5 glossary: decide what to do
3. Small scale farms
  - a) Start the data collection (deadline: April 2024?)



# WG1 | Questions/feedback

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THANK YOU FOR THE ATTENTION!

