

AESAN International conference

Risk Assessment Driving Food Safety: Europe & Latin America

21-22 May 2026



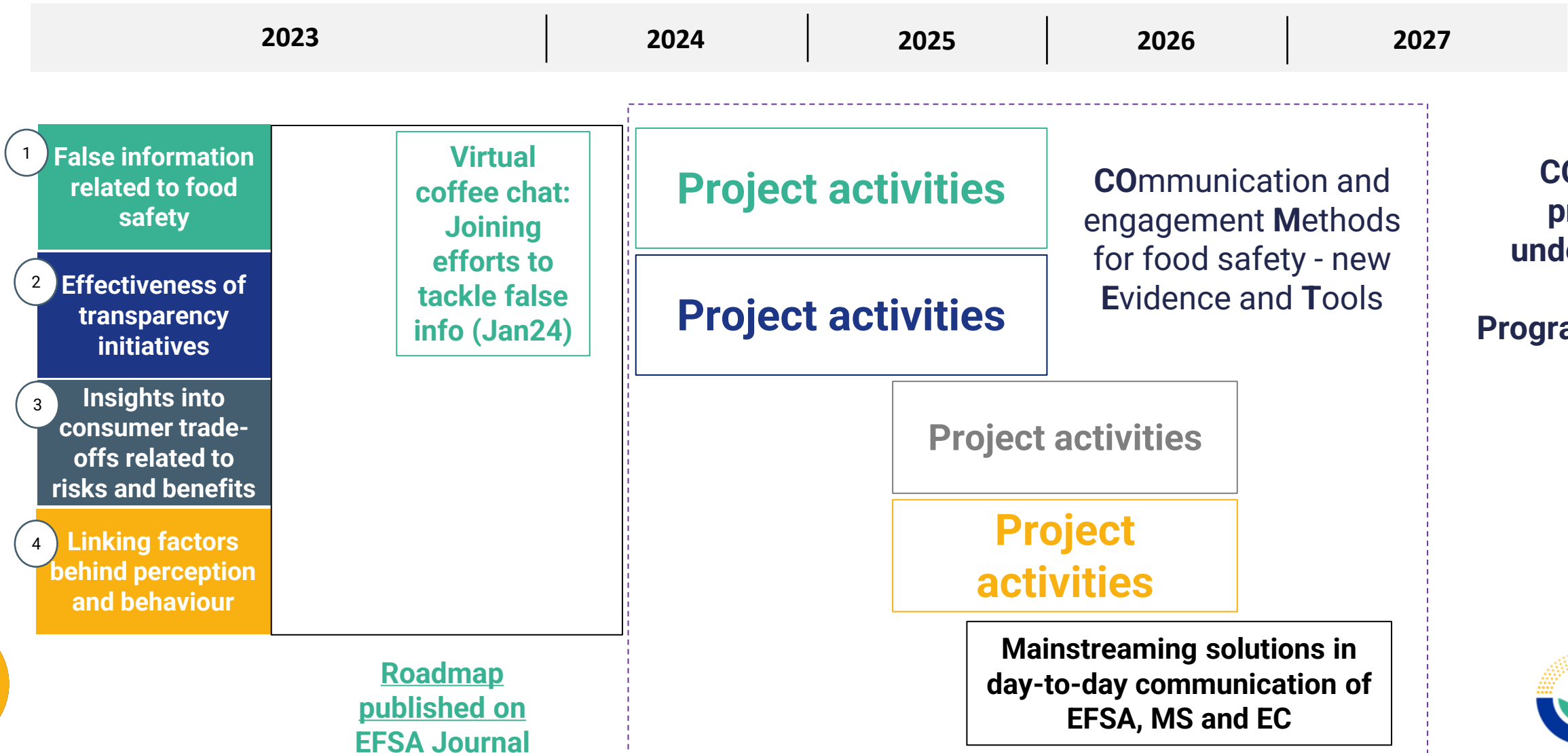
COMMUNICATION AND ENGAGEMENT METHODS FOR FOOD SAFETY: NEW EVIDENCE AND TOOLS

Giorgia Zamariola

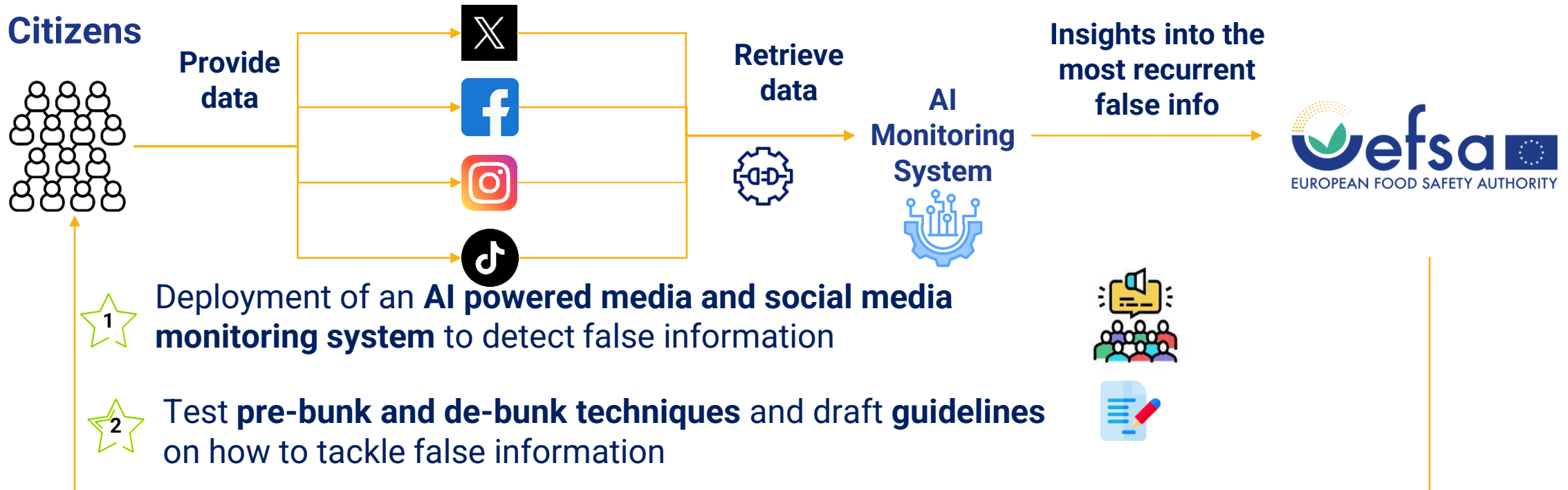
Social scientist

Strategic Communications Team - COM/ENGAGE

FOCUS AREAS COVERED



1) FALSE INFORMATION



External scientific report available on EFSA Journal:

[Benchmarking exercise and identification of AI tool to detect false information on food](#)



FALSE INFORMATION ONGOING WORK



www.nature.com/scientificreports

scientific reports

Check for updates

OPEN Investigating the role of source and source trust in prebunks and debunks of misinformation in online experiments across four EU countries

Hendrik Bruns¹, François J. Dessart², Michał Krawczyk¹, Stephan Lewandowsky^{3,4}, Myrto Pantazi⁵, Gordon Pennycook⁶, Philipp Schmid⁷ & Laura Smillie¹

Misinformation surrounding crises poses a significant challenge for public institutions. Understanding the relative effectiveness of different types of interventions to counter misinformation, and which segments of the population are most and least receptive to them, is crucial. We conducted a preregistered online experiment involving 5228 participants from Germany, Greece, Ireland, and Poland. Participants were exposed to misinformation on climate change or COVID-19. In addition, they were pre-emptively exposed to a prebunk, warning them of commonly used misleading strategies, before encountering the misinformation, or were exposed to a debunking intervention afterwards. The source of the intervention (i.e. the European Commission) was either revealed or not. The findings show that both interventions change four variables reflecting vulnerability to misinformation in the expected direction in almost all cases, with debunks being slightly more effective than prebunks. Revealing the source of the interventions did not significantly impact their overall effectiveness. One case of undesirable effect heterogeneity was observed: debunks with revealed sources were less effective in decreasing the credibility of misinformation for people with low levels of trust in the European Union (as elicited in a post-experimental questionnaire). While our results mostly suggest that the European Commission, and possibly other public institutions, can confidently debunk and prebunk misinformation regardless of the trust level of the recipients, further evidence on this is needed.

Countries coverage: Estonia, Germany, Greece, Ireland, Poland, **Spain**

Timeline: Nov 2025-Aug 2026



BACKGROUND

www.nature.com/scientificreports

scientific reports

Check for updates

OPEN

Investigating the role of source and source trust in prebunks and debunks of misinformation in online experiments across four EU countries

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- 5228 participants from **Germany, Greece, Ireland, and Poland**
- **Climate change or COVID-19**
- 2 (intervention: prebunk v debunk) × 2 (intervention source: no source v European Commission) + 1 (control) between-subjects design
- Both interventions change four variables reflecting vulnerability to misinformation in the expected direction in almost all cases, with **debunks being slightly more effective than prebunks**



THIS STUDY: RESEARCH QUESTIONS

- What is the **impact of prebunk and debunk** techniques in countering false information?
- What is the impact of **trust in the source of information** providing the countering intervention?
- Does **analytic thinking** moderate the effectiveness of prebunking and debunking?

- Avian influenza
- Antimicrobial resistance

(a) Misinformation example

The sun, not humans, causes climate change

It's obvious and the scientific evidence is clear: the sun, not humans, causes climate change, scientific study proves.

Written by [redacted]
February 10, 2022



A scientific paper that was recently published in a leading academic journal proves that the sun, not humans, causes climate change.

The article proves that recent warming is caused through changes in solar irradiance, meaning the amount of solar energy that reaches the Earth. This is a completely natural process.

This exposes previous "scientific" evidence claiming the

(b) Prebunk example (dashed line indicating EC source condition)

An official website of the European Union

MISINFORMATION #ThinkBeforeSharing
Is this misinformation? Check before sharing

Misinformation often uses several well-known techniques to mislead people:

- Claiming that one scientific article is proof. This alone should raise alarm because no single study ever offers proof – it offers evidence that needs to be interpreted in the light of previous research.
- Dismissing contrary evidence as untrustworthy or illogical. This is a hallmark of pseudoscientific argumentation.
- Claiming that there is a malevolent actor behind everything, is extremely unlikely.

It seeks to create negative emotions and an "us versus them" scenario. This distracts from the facts. No scientific article would do this.

(c) Debunk example (dashed line indicating EC source condition)

An official website of the European Union

Home > Energy, Climate change, Environment > Climate change > Fighting disinformation

Fighting disinformation

Global warming is unequivocally human driven. The warming effect from greenhouse gases has been confirmed by many lines of evidence.

A climate myth is that modern climate change is natural, and that the sun, not humans, has always been, and still is, responsible for it. This claim is wrong. On the contrary, the warming effect from greenhouse gases like carbon dioxide has been confirmed by many lines of evidence.

The article uses several well-known techniques to mislead people:

- It claims that one scientific article is proof. This alone should raise alarm because no single study ever offers proof—it offers evidence that needs to be interpreted in the light of previous research. Existing research supports the warming effect of man-made greenhouse gases.
- It dismisses contrary evidence as untrustworthy or illogical. This is a hallmark of pseudoscientific argumentation.
- It claims that there is a malevolent actor behind everything. This is extremely unlikely. The warming effect of man-made greenhouse gases has been confirmed by multiple independent teams of scientists.
- It seeks to create negative emotions and an "us versus them" scenario. This distracts from the facts. No scientific article would do this.

Global warming is unequivocally human driven. The warming effect from greenhouse gases like carbon dioxide has been confirmed by many lines of evidence.



PRE-TEST RESULTS: AWARENESS

Country	Screenout AI	Screenout AMR
Ireland	1	22
Germany	7	8
Estonia	5	31
Spain	5	18
Greece	14	29
Poland	2	41

Topic	Response	n	%
Avian Influenza	2. Heard of it, but I do not know much about it	260	43.4%
	3. Heard of it, and feel I am reasonably well informed	286	47.7%
	4. Heard of it, and feel I am very well informed	53	8.8%
Antimicrobial Resistance	2. Heard of it, but I do not know much about it	305	50.7%
	3. Heard of it, and feel I am reasonably well informed	247	41.1%
	4. Heard of it, and feel I am very well informed	49	8.1%

Country	EFSA AWARENESS	n	%
Estonia	Yes	161	80.5
	No	39	19.5
Germany	Yes	147	73.9
	No	52	26.1
Greece	Yes	186	93.9
	No	12	6.1
Ireland	Yes	182	91.5
	No	17	8.5
Poland	Yes	156	78
	No	44	22
Spain	Yes	182	89.2
	No	22	10.8



TOP CLAIMS

1. Avian influenza is a threat that was fabricated by governments
2. Avian influenza is not contagious neither for birds nor for humans
3. **Forced slaughter of birds affected by avian influenza is unnecessary**
4. **Vaccines against avian influenza are poisonous and ineffective**
5. Avian influenza is a man-made bioweapon designed to harm populations
6. Avian influenza is a pretext to destroy the economy of the agricultural sector
7. **Cooking poultry does not eliminate the virus of avian influenza**
8. Avian influenza is caused by environmental factors such as 5G radiations
9. Avian influenza tests are designed to produce false positives to justify forced slaughter of birds

1. Antimicrobial resistance is not real and does not represent a serious threat
2. Antibiotic misuse is not a driver of antimicrobial resistance
3. Antimicrobial resistance does not have an impact on public health
4. Antibiotics work against all illnesses, including viral infections
5. **Humans, rather than bacteria, develop resistance to antibiotics**
6. Misuse of antibiotics in livestock does not contribute to antimicrobial resistance
7. **Pharmaceutical waste is not a driver of antimicrobial resistance**
8. **Antimicrobial resistance is not driven by overuse or misuse, but it is a natural evolutionary process**
9. Antimicrobial resistance is a local problem affecting only countries with poor hygiene

Claims selected based on their frequency of appearance among the top 3 ranked claims across the questions



NEXT STEPS

- **Pilot**
 - Cognitive interviews
 - Quantitative pilot
- (If applicable) Q're revision following pilot testing
- Fieldwork (Q3 2026)
- Data Analysis and Results (Q4 2026)

Humans, rather than bacteria, develop resistance to antibiotics

It's obvious and the scientific evidence is clear: humans, rather than bacteria, develop resistance to antibiotics, scientific study proves.

Written by [REDACTED]

February 10, 2026

[Image]

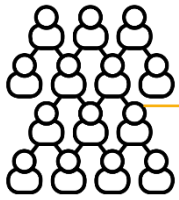


A scientific paper that was recently published in a leading academic journal proves that humans, rather than bacteria, develop resistance to antibiotics. The article proves that antimicrobial resistance is developed by humans, not bacteria. This exposes previous "scientific" evidence claiming the contrary. It also proves that so-called experts lied, probably because they were paid by government authorities. The claim that bacteria, rather than humans, develop resistance to antibiotics is not just illogical, but also an immoral lie to the face of people. The evidence clearly proves what many of us have been guessing for a long time: humans, rather than bacteria, develop resistance to antibiotics.



2) TRANSPARENCY INITIATIVES

Stakeholders,
citizens and
partners



Gathered both EFSA
and stakeholder
insights on public
consultations



The way we seek
inputs should be
more tailored

Development of a
communication
toolkit



1

Provide clear indications on the **type of comments expected** and in which form

2

Pilot of **alternative formats** to complement Public Consultations (PCs)



Toolkit published on EFSA website: [Public consultations toolkit](#)
External scientific report available on EFSA Journal: [Stakeholder Focus Groups: Co-creation of a toolkit for public consultations](#)



TRANSPARENCY INITIATIVES: RECENTLY FINALISED WORK

Public hearing on plant lectins in food

9 September 2025, 11:30 - 13:00 (CEST)

Online

Background

EFSA organised a public hearing on the draft scientific opinion on risks for human health related to the presence of plant lectins in food, which is open for [public consultation](#) until 18 September 2025.

Objectives of the meeting

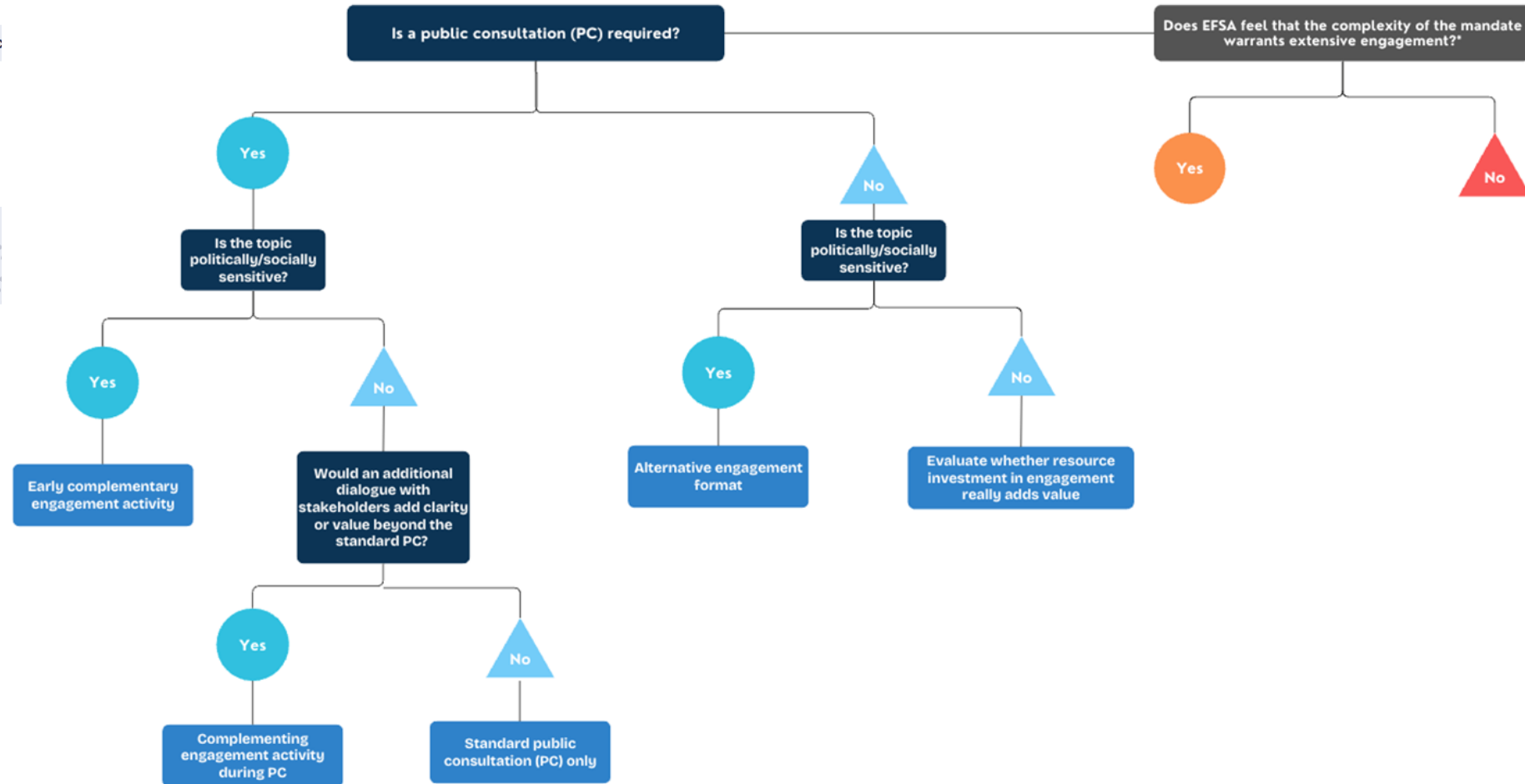
In line with EFSA's commitment to transparency and engagement with its stakeholders, the event aimed to provide a clear understanding of EFSA's approach to the risk assessment and main conclusions of the draft scientific opinion. It was also an opportunity for stakeholders to clarify any doubts regarding the public consultation phase.

Contact

For more information, write to [Ask a Question](#).

Documents

- [Programme](#)
- [Slides](#)
- [Q&A document](#)



Published on [EFSA Journal](#)



3) RISK-BENEFIT TRADE-OFFS

Need for enhancing risk-benefit communication



Understand influential factors and impact of source credibility on the message

Test risk-benefit messages and communication



1

Set-up of an experiment to **test messages on risks and benefits**



2

Test the impact of risk-benefit communication on **public's perceptions**



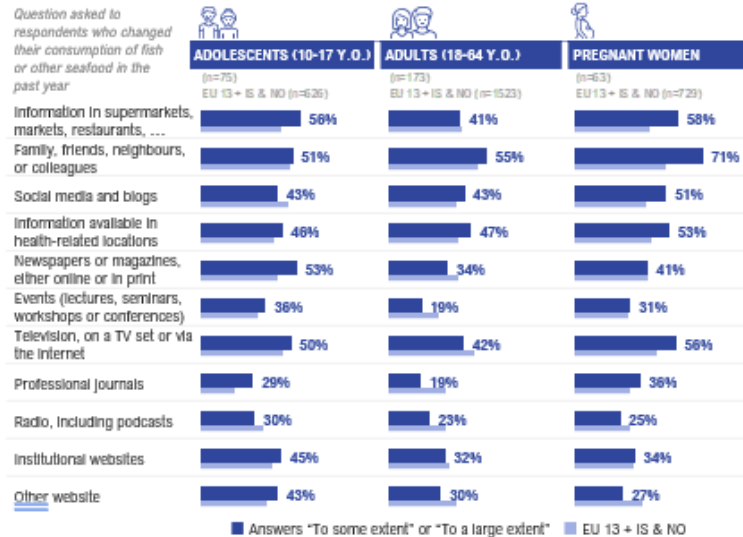
RISK-BENEFIT UPCOMING WORK

FISH AND OTHER SEAFOOD CONSUMPTION AND AWARENESS

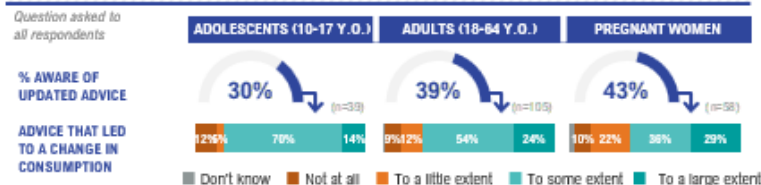


AWARENESS OF RISKS AND BENEFITS

SOURCES OF INFORMATION THAT LED TO CHANGE IN CONSUMPTION

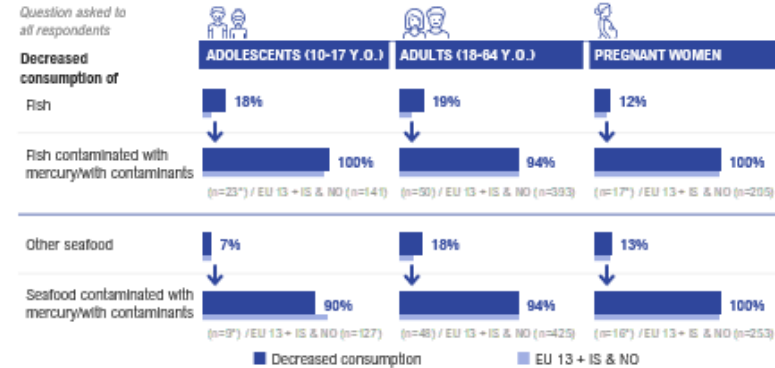


ADVICE RECENTLY UPDATED

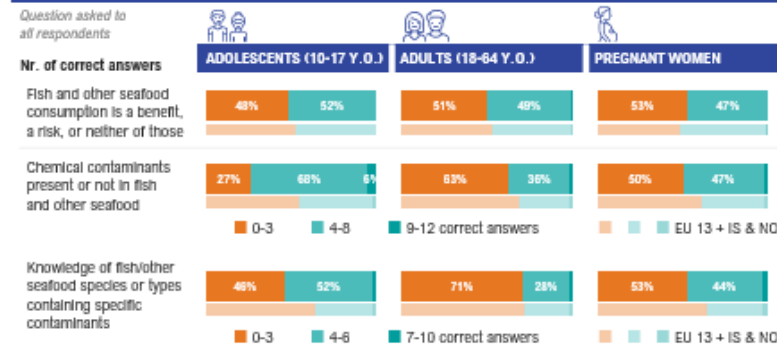


Updated advice available since Apr-24
Spanish Agency for Food Safety and Nutrition (AESAN)

DECREASE IN CONSUMPTION OF FISH OR OTHER SEAFOOD



RISK BENEFIT STATEMENTS & AWARENESS OF CONTAMINANTS



Data labels are not shown for 5% or under


*Low base size!

Sample size:
ADOLESCENTS (10-17 y.o.): 100
ADULTS (18-64 y.o.): 265
PREGNANT WOMEN: 132




COMMUNICATION ADVICE FOR MEMBER STATES

Promote benefits of fish/other seafood consumption **for low consumers with low awareness**, especially pregnant women

- Continue or **reinforce health promotion**
 - Focus on trade-offs leading to non-beneficial or suboptimal choices, highlight **healthier options**
 - Informative about health benefits and safety, be prescriptive on choices: **what to eat and how often** (but localised)
- 

Diversifying fish/other seafood species for **high consumers**, especially among pregnant women

- Challenging with low risk awareness (e.g. high perceived health benefits, highly embedded in **culture**)
 - Repeat messages that focus on **diversifying consumption habits** more relevant strategy
 - Encourage use of **tools** such as FishChoice
- 

Strategies for accessing **trusted sources** of information (e.g. work with amplifiers, explore TV)

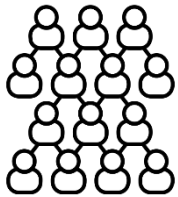
- Regular and news media (**TV, social networks**) and social contact (**family, friends**) are the most frequently used
 - Collaborations with **amplifiers** (journalists, science communicators, influential communicators) should be evaluated
- 

Upcoming work: development of **communication strategies and materials** in collaboration with Member States



4) RISK PERCEPTION-BEHAVIOUR

Citizens



Link between perception and behaviour varies among individuals and the features of the message



Need to convert data into actionable insights to enhance effectiveness of risk communication

Research to investigate link risk perception-behaviour



1

Development of a research project using **network analysis**



2

Improve risk communication **integrating insights** on the link between risk perception and behaviour



External scientific report available on EFSA Journal: [Risk Perception and Behaviour on Social Media Platforms: Natural Language Processing and Complex Network Analysis](#)

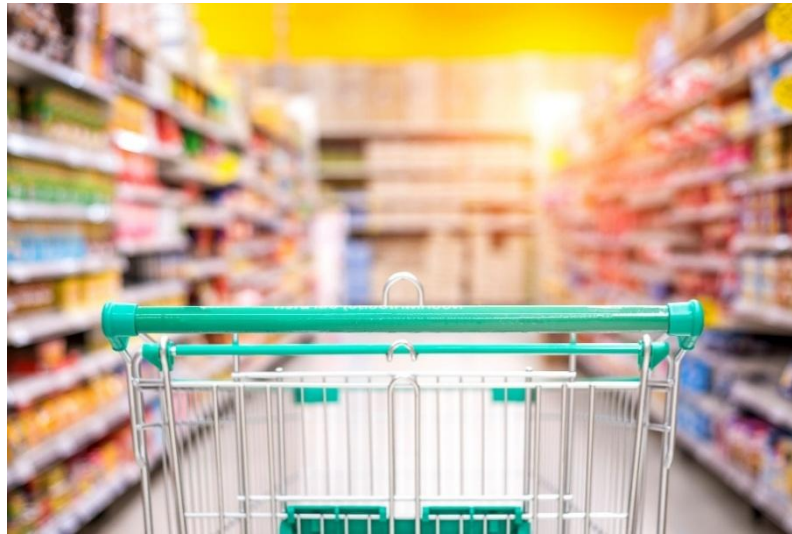


RISK PERCEPTION-BEHAVIOUR FINALISED AND ONGOING WORK



Social media network analysis

Topics: Avian influenza and PFAS



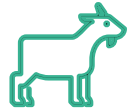
Countries coverage: Italy
Timeline: Nov 2025-Oct 2026



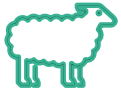
Countries coverage: Ireland, Romania, **Spain**, Greece
Timeline: Dec 2025-Oct 2026



PHASE I: QUALITATIVE



Aim: **Identify barriers and solutions for the implementation of biosecurity**



Focus: **Small ruminants, particularly goat and sheep.**



PHASE I: Qualitative research w/ farmers & vets in three EU countries



3 Countries: **ES, RO, IE**



- **2 Focus Groups (FG)/country** (48 goat and/or sheep farmers total)



- **5 semi-structured interviews/country** (15 vets w/ experience w/ goat and/or sheep total)



PHASE I: A FEW KEY FINDINGS

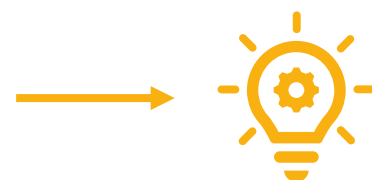
- Farmers tended to feel that their farms were **well-protected from diseases**
- Variations on the **degree animals are monitored** for signs of diseases
- Farmers faced **common obstacles** to implementing biosecurity measures
- Variations on the understanding of the **term biosecurity**, but links with a sense of increased workload, administrative burdens, and unrealistic or impractical demands.



Barriers to implementation:

- Lack of **resources/time** constrains
- Lack of **awareness**
- Practical **limitations**
- **Cultural** factors

Insights into:



Measures **commonly implemented**

Measures perceived as needed but **difficult to implement**

Measures perceived as **unnecessary/impractical**



AN EXAMPLE: COMMON ERRORS AND MISSES IN THE IMPLEMENTATION OF BIOSECURITY MEASURES ACCORDING TO VETS

- **Common errors in the implementation of biosecurity measures mentioned by vets** included:

- incorrect navel hygiene practices (IE)
- Inadequate cleaning of feeding utensils and bucket feeders during lambing (IE), and of farrowing crates (ES)
- various dosing issues (IE)
- errors relating to deworming (RO).



- **Vets consistently identified biosecurity measures that some farmers never or rarely implemented across the three countries** (these echoed those that farmers themselves commonly mentioned struggling with, or not implementing):

- Appropriate **entry control for new animals** (e.g. farmers purchasing animals from unknown sources, failing to quarantine, etc.)
- **Disinfection** and having **dedicated clothing** and footwear for different farm locations/events
- Proper disposal of **animal carcasses and other biological material**, with these often being fed to sheep dogs, or left for wild animals to consume.



You test [the sheep/goats] and you might find nothing. And everything's thriving and there's no issues. You'll talk to the farmers a week later [and they say] "I still dosed them, I felt like I should, and I still gave them the white drench".



Private sector vet, 5+ years' experience, Ireland

There are errors, especially when it comes to deworming. Either the products are of poor quality, or there are mistakes in their dosing.



Private sector vet, 5+ years' experience, Romania

They [don't] want to get too involved or spend a lot of money on disinfection and pest control products. The companies that deal with disinfections might be too expensive for them, so it's easier for them to buy and do this themselves.

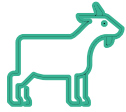
Private sector vet, 5+ years' experience, Romania



PHASE II: QUANTITATIVE



Aim: **Identify barriers and solutions for the implementation of biosecurity**



Focus: **Small ruminants, particularly goat and sheep.**



PHASE II: Quantitative research w/ farmers in four EU countries



4 Countries: **ES, RO, IE, EL**

Survey

+



Experiment to measure perceived effectiveness vs. practicality of different measures



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