33rd meeting of the Stakeholder Discussion Group on Emerging Agenda
4th & 5th June 2025

Web minutes

These web minutes summarise the topics presented and discussed at the 33rd meeting of the Stakeholder Discussion Group on Emerging Risks.

1. Welcome
The Chair welcomed the participants and the observers.

2. Adoption of the agenda
The agenda was adopted with no changes.

3. Introduction to the event
An update on the status of the action points from the previous meeting was provided to the group.

4. StaDG-ER members - Presentation and discussion of new emerging issues

4.1 Edible electronics - by Nicola King (ESR New Zealand)

The presentation by Nicola King explored the field of edible electronics, initially developed for medical purposes to detect and signal physiological data like pH and pressure from inside the body. It highlighted the evolution towards using safer materials, enabling devices to be ingested without medical supervision, thus opening opportunities for applications in food technology. Edible electronics can function both before and after consumption, with applications including real-time food status sensors and ingestible devices that communicate internal body conditions. Components are made from edible materials, with developments in edible transistors, sensors, and even power sources like edible batteries. The presentation also discussed the potential of edible robotics. It concluded by addressing future challenges, emphasizing biocompatibility, toxicity, and bioaccumulation concerns, as well as regulatory issues regarding classification and safety responsibilities. The discussion highlighted the regulatory ambiguity surrounding edible electronics, questioning whether they are considered as food or active and intelligent packaging. Furthermore, FCM colleagues clarified that the assessment of active and intelligent materials is on hold pending the Commission's clarification. It was also suggested informing relevant panels, like the NDA and FEED, while indicating that this topic pertains more to long-term horizon scanning of potential changes in the food landscape, rather than being an immediate emerging risk.

4.2 Carbon dots by Nicola King (ESR New Zealand)

Carbon dots, categorised under quantum dots or nanodots, are carbon-based nanoparticles typically less than 10 nanometers in diameter, known for their unique optical properties called tunable fluorescence, which allows them to emit specific wavelengths of light. They can be synthesised via two primary methods: a top-down approach, breaking down carbon sources like coal or graphite, and a bottom-up approach utilising organic molecules such as citric acid or sucrose. Their potential applications in the food industry are extensive, particularly in sensory devices for packaging, due to their stability, antioxidant, and antimicrobial properties. However, concerns persist about their safety, with conflicting data suggesting potential cytotoxic and genotoxic effects. During the presentation it was highlighted the need for further research to establish safety guidelines and frameworks, particularly for their use in food packaging, to ensure they do not migrate to food or the environment. To date, EFSA has not received any applications for the use carbon dots in food or food contact material. The need for assessments on the environmental impact of carbon dots, including their potential to persist and re-enter the food chain, was emphasised. Additionally, it was highlighted that this topic is related to the horizon scanning workflow; it will be presented to the nanomaterials working group for further information.

4.3 The potential for global spread of *Shewanella spp.* - by Nicola King (ESR New Zealand)

Shewanella spp. is a group of marine bacteria causing food spoilage and infections in marine animals and humans. This bacteria also aids in bioremediation and energy production. *Shewanella spp.* succeed

in a variety of environments including extreme conditions, with some species being utilised in bioremediation and energy production. They may also proliferate with rising temperatures and exhibits antibiotic resistance. Understanding *Shewanella*'s transmission pathways, environmental drivers, and virulence factors is critical for mitigating its growing health risks, particularly as climate change and aquaculture expansion may increase human exposure and infection rates. In addition, reported outbreaks in freshwater pond systems recommends expanding research beyond the sea to include climate-related impacts on freshwater aquaculture. The group also agreed to report the topic to future Panel meetings, stressing the need for regional data (e.g., Europe), collaboration with veterinary experts, and monitoring antimicrobial resistance.

4.4 Correlation between food additive mixtures and type 2 diabetes - by Luigi Tozzi (SAFE Europe)

A recent French cohort study examined the relationship between mixtures of food additives and the incidence of type 2 diabetes. Conducted by the CRESS-EREN team, this research used the NutriNet-Santé cohort to investigate the effects of combined exposure to food additives, often found in ultra-processed foods (UPFs). The study revealed significant associations between certain additive mixtures and an increased risk of type 2 diabetes, suggesting that these mixtures may interact synergistically, and influencing metabolic health. The findings underscore the limitations of current safety assessments, which evaluate additives individually, and highlight the need for a more comprehensive approach that considers potential combined effects. This study suggests that public health recommendations should focus on limiting nonessential additives while encouraging further research to understand the mechanisms underlying these associations. During the discussion, it was highlighted that the reevaluation of food additives is conducted substance by substance due to existing mandates, and it was acknowledged the importance of considering mixtures, when data are available. The inherent limitations of observational studies, with the presence of confounding factors and the challenge of establishing causality, was underlined.

4.5 FMD: Two introductions into Europe in 3 months - Emerging risk? - by Jan Dahl (Copa Cogeca)

The transmission routes for the recent foot-and-mouth disease (FMD) outbreaks in Germany, Slovakia, and Hungary are still unknown. The 2024–2025 German outbreak in water buffaloes and the 2025 cattle infections in Central Europe raise concerns over possible under reporting by some countries and potential pathways such as contaminated feed, wildlife movements, or human vectors (tourism). Despite the testing undertaken, no evidence of infected wildlife or deliberate introduction was found. Genetic links to Turkey/Pakistan suggest trade as a possible route for transmision, but still no conclusive evidence exists to support this hypothesis. The group reflected on the relevance of enhanced surveillance, cross-border cooperation, biosecurity measures and research to control the spread of FMD in Europe as well as addressing gaps in wildlife monitoring, feed safety risks, and human-vector risks. Global cooperation and vaccine preparedness are essential to prevent future outbreaks and mitigate economic and health consequences.

4.6 Increased public health risk of Tick-Borne Encephalitis in Europe - by Maurizio Ferri (FVE)

Tick-Borne Encephalitis (TBE), a zoonotic flavivirus, is a growing public health threat in Europe, driven by climate change that is expanding tick habitats and increasing human-animal interactions. TBE is transmitted via infected ticks (primarily Ixodes ricinus in southern Europe and I. persulcatus in northern regions). Among individuals who do show symptions it's estimated that 10-20% develop central nervous system involvement (encephalitis, meningitis, or meningo encephalitis), with fatal outcome depending on the viral subtype. Climate factors and ecological shifts, such as earlier tick activity due to milder winters, have accelerated TBE's spread. Italy, particularly northern regions like Veneto, an endemic area where approximately 40% of all TBEV cases in Italy occur in the last decade, and Lombardy, have reported a rise on infections linked to tick bites. Despite documented outbreaks of TBE caused by consumption of contaminated raw milk and cheese, no human cases have been reported so far in Italy. Although rare, breastfeeding transmission has also been reported. While surveillance data reveals underreporting of this disease due to asymptomatic or mild cases, animal reservoirs (rodents, deer) and migratory birds contribute to viral persistence and spread, underlining the urgency of applying

integrated One Health strategies. Some measures were identfied to help to mitigate public health risks, such us strengthen TBE vaccination in high-risk regions like Italy's Veneto, enhance surveillance via human-animal monitoring, reinforce seroprevalence studies, and vector tracking to identify hotspots as well as enforcing milk pasteurization in endemic areas, and raise awareness among healthcare providers and high-risk groups (hunters, farmers) to improve case detection. The group prompted to consolidate briefing notes previously dicussed on Vector Borne Diseases (VBD) to better assess this growing public health threat in Europe

4.7 Compounds in Functional Foods: Cognitive Promise or Emerging Risk? – by Mirka Piskorikova (AVC)

The presentation addressed the growing trend of neuroactive functional foods, products that claim to support mood, cognition, and stress. In the presentation it was highlighted that the term "functional foods" has no legal status in the EU, but it is widely used in the industry. The market is rapidly expanding, driven by consumer demand for non-pharmaceutical options during rising mental health challenges. The main concerns expressed were related to the growing role of social media and influencers in marketing these products without oversight from health professionals, the lack of a formal legal definition and regulatory category for such products and the insufficient long-term data on multi-product use and impact on vulnerable populations.

In the discussion it was highlighted by EFSA that in addition to Novel Food and Health Claims regulations, substances with physiological effects may also fall under Regulation 1925/2006, which covers other substances than vitamins and minerals, but assessing such multi-ingredient products remains complex and a growing priority, particularly regarding their links to mental health.

The stakeholders highlighted that the EU has a strong food safety framework covering also these type of foods and supplements, but some gaps remain in post-market surveillance and enforcement. They acknowledged misuse of this type of products as a concern but emphasised the need for stronger enforcement, better coordination of nutri-vigilance between all Member States, and regulatory flexibility to support innovation.

5. EFSA Environmental scanning activities

5.1 EFSA Update on Horizon Scanning Activities - by Bernard Bottex (EFSA)

A short overview about the horizon scanning workflow was provided. The process involves collecting signals/trends, analyzing them, and assessing their impact on EFSA's work program and strategy. A summary of the signals analysed during the first half of the year was presented to the participants, with an invitation to provide further information, as well as additional signals of possible relevance for this workflow. It was also highlighted that EFSA is also coordinating a multi-agency horizon scanning exercise to increase its preparedness and strategic development.

5. 2 Compendium of Botanical (COMBO) EFSA Database – by Eirini Kouloura (EFSA)

The EFSA Compendium of Botanicals is a hazard database that can be used when assessing the safety of botanicals and botanical preparations. The compendium has evolved through three versions, i.e. V1, V2, V3, with each version expanding the list of plant species and refining the composition and toxicity information for these plants. V3 released in April 2025 includes additionally information on the toxicity characterisation and QSAR predictions of the substances of concern identified in plant species listed in the Compendium. The database now contains 2,701 plant species and 1,538 naturally occurring substances whose toxicity has been characterized. The compendium is regularly used in the assessment of novel foods and feed additives.

5.3 HoliFOOD project- Latest results/achievements/milestones of the project - by Frederic Bayer (EUFIC)

In the latest HOLiFOOD project update, it was noted that while main results are expected by late 2025 and early 2026, important progress has been made. Recent lab work focused on lentils in 2024, with maize and poultry research ongoing through 2025. New AI prediction and time-series models are being developed to classify and forecast mycotoxin contamination. Extensive databases combining monitoring data, climate trends, and consumption patterns feed these models. Advanced mass spectrometry and on-site qPCR tools are under development to detect emerging pathogens quickly. Living Labs are testing how these tools integrate into practical risk assessment. Communication with scientists and policymakers continues, ensuring legal and ethical AI use. Two key events were announced: an interactive Living Lab on June 18th, 2025, and a dedicated AI workshop on June 13th, 2025.

5.4 EREN updates & 10th survey - by Milen Georgiev and Raquel Garcia Matas (EFSA)

The key topics presented and discused at last EREN meetig included the revised terms of reference, stakeholder engagement and case studies like hepatitis E virus and plant-based meat substitutes. Also microbial risks in plant-based diets, early warning systems, and crisis response frameworks were disucssed. Future plans include to organise thematic sessions (e.g., horizon scanning) and a revised newsletter. The session underscored the importance of stakeholder collaboration, continuous monitoring, and adaptive risk analysis, emphasizing dynamic updates to the Emerging Risk Analysis Platform (ERAP) that allows real-time updates to briefing notes, enabling re-evaluation of risks with new data.

A brief description on the issues subject to the latest survey and the feedback collected at the latest EREN meeting[1] were presented.

(1) **Antiparasitic drug resistance in livestock**: Multidrug-resistant soil-transmitted helminths were found in German sheep farms due to climate change, anthelmintic overuse, and poor grazing management. The topic highlights food security concerns. The topic was classifified as an "Emerging Risk", recommending EU-wide residue monitoring and research into non-chemical alternatives.
(2) **Bioplastics as food contact materials:** The shift toward bioplastics like Polylactic Acid (PLA) raises concerns over chemical migration and allergen risks. Heat exposure releases contaminants and labeling gaps complicate control and traceability. The topic was clasified as"Emerging Risk", recommending harmonized safety protocols, migration studies, and stricter oversight of chemical recycling process. The information will be shared with the CEF Panel for consideration in future updates of FCM guidelines.
(3) ***Burkholderia gladioli* in fermented foods**: A fatal poisoning case in North America from homemade fermented corn highlighted Burkholderia gladioli toxin dangers, exacerbated by warmer conditions. Home fermentation safety is being addressed by some countires in Europe, but diagnostic challenges remain. The issue was classified as "Emerging Risk" recommending public awareness campaigns, clinician training, and monitoring .The information will be shared with the BIOHAZ Panel for information and possible follow up recommendation
(4) **Cafodos as fish preservative**: Cafodos masks fish spoilage, enabling the sale of histamine-contaminated products. New detection methods are being developed to address this issue. The topic was clasified as "Emerging Risk", noting that it is mostly a risk management issue, and recommended enhanced histamine monitoring. The issue will be brought to the attention of the EU Food Fraud Network for possible follow up.
(5) S*treptocuccus suis*: A neonatal meningitis case in Italy from raw pork highlighted *Streptococcus suis* risks, with vertical transmission concerns. European cases are rare, but surveillance and education gaps exist. The issue was classified as "Further Information Needed", with emphasis on One Health collaboration and standardized reporting.
(6) Tralopyril in salmon production:raised concerns over tralopyril in aquaculture nets, noting its bioaccumulation in salmon tissues and detection in fish faeces. The network classified the topic as "Further Information Needed", waiting for the results of planned study in Norway; new toxicity or exposure data will be shared with EFSA's CONTAM Team for information and relevance reassessment.

[1] https://www.efsa.europa.eu/sites/default/files/2025-06/Minutes_33rd_EREN_May_2025.pdf

(7) Edible food coatings" :a topic that raised safety concerns from bioactive additives (e.g., quercetin linked to endocrine disruption) and allergens, despite functional benefits, with calls for further information in long-term health impact studies,
(8) Vertical farming and mercury contamination: a Singapore case linked to LED coating vapors prompts regulatory changes and highlighting possible cross-contamination risks in integrated fish-plant systems. Further information highlighting the need for revised HACCP protocols and EU-wide LED standards, as well as audits for indoor farming systems.
(9) Fish-based milk analogues (e.g., from fish protein): the topic sparks debates on allergenicity and heavy metal contamination, though deemed non-emerging due to limited European consumer relevance.

5.5 Foresight experience: An Emerging Risk Identification System (ERIS) for New Zealand's Food Industry - by Nicola King (ESR New Zealand)

The FAO's April 2024 Food Safety Foresight Framework meeting convened global experts to draft a report on detecting emerging food safety risks, emphasizing foresight methods and Artificial Intelligenge (AI)/Machine Learning (ML) integration. The key outcomes included collaborative development of a framework to guide institutions in establishing food safety foresight programs, addressing challenges like stakeholder engagement, resource limitations, and sustainable funding. Participants highlighted the value of shared experiences, case studies, and adaptive approaches to emerging risks. The final report, expected in September 2025, will provide principles for effective foresight, practical examples, and recommendations for stakeholder collaboration.The meeting underscored the critical role of cross-sector collaboration, stakeholder alignment, and long-term investment in addressing food safety challenges. While AI/ML tools face adoption barriers due to funding constraints, the report emphasizes the need for evidence-based flexible frameworks to manage uncertainties. Sustainable funding models and network-building remain pivotal to advancing food safety foresight globally.

6. StaDG-ER members – Follow-up on previous issues discussed

6.1 Follow up on Veterinary Vaccine Shortage as a driver of Emerging Issues - by Rimma Ishimbaeva (AVC)

A presentation was given about lack of veterinary vaccine availability identified by various stakeholders (authorities, animal health organisations, academia and farmers) which, combined with political instability and inaccurate disease reporting, may pose a risks to animal and human health, as well as food security. Vaccine shortages may also lead to increased use of antibiotics in farms. It was clarified that in Europe, vaccines availability is managed by the European Medicines Agency (EMA) and some national regulators. While many international and European efforts are underway, there is a growing demand for a coordinated One Health approach to addressing this issue.

6.2 Additional information on the "Sugar and sugar-sweetened beverages in relation to premature aging in adult survivors of childhood cancer"- by Stephan Ronsmans (UNESDA)

The topic of sugar and sugar-sweetened beverages in relation to premature aging in adult survivors of childhood cancer was discussed, with a study finding an association between increased consumption of sugar-sweetened beverages and a higher Deficit Accumulation Index (DAI), a measure of premature aging based on 44 aging-related health conditions. The study's limitations, including its cross-sectional design, measurement error, and special population, were highlighted, making it difficult to confirm causality and generalize the results to a broader population. The discussion highlighted the study's limitations, including the lack of temporality and the potential for overestimation or underestimation of the association between DAI and sugar-sweetened beverage consumption.

6.3 Next edition (2026) of the COCERAL Mycotoxins management report – by Gianlucca Nurra (COCERAL)

The upcoming COCERAL Mycotoxin Management report for the 2024-2025 crop year aims to improve geographical coverage and member participation, targeting a 50% representation of EU trade. The

report will enhance sections on mycotoxins, climate change, and EU regulatory processes, incorporating risk classification for mycotoxins and food/feed products. The publication is expected by early 2026.

6.4 Bluetongue Virus (BTV) and Epizootic Hemorrhagic Disease Virus (EHDV): general outlines of the 2023-2024 epidemic - by Christian Quinet (FESASS) & 6.5 Global warming and emergence of vector borne diseases in Europe by Stephan Zientara

In 2024, Bluetongue virus (BTV), caused by a highly mutable *Orbivirus*, re-emerged in Belgium and neighbouring countries. Transmitted by biting midges (*Culicoides*), BTV is seasonal, peaking in summer. The disease affects sheep and cattle, causing symptoms like salivation, mouth lesions, and high mortality rates. In Belgium, the outbreak led to a substantial increase in animal deaths, particularly in sheep and cattle, with notable spikes in mortality and abortions. The disease's pathogenicity varies by serotype. The BTV-38, for instance, is particularly lethal. Hydrocephalus in foetuses and young calves was a major complication in the 2024 outbreak, leading to long-term reductions in livestock numbers and milk production. Epizootic Hemorrhagic Disease (EHD) is caused by another Orbivirus, and it also poses threats, particularly in Southern Europe. EHD, which has seven serotypes, was detected in Spain, France, Sardinia, and Sicily, with over 3,000 cases reported. While not yet in Northern Europe, the disease highlights the need for vigilant monitoring and vaccination to prevent spread

These diseases are transmitted by biting midges and mosquitoes. They spread rapidly across Europe exacerbated by global warming, and with multiple serotypes causing outbreaks in various countries triggering significant health and economic impacts on livestock. The introduction pathways for these viruses are hypothesized to include wind-borne transmission, international trade, and the movement of infected animals or semen. Proactive measures, including a One Health strategy, are essential to address the ongoing risk of new virus introductions and serotypes. Some potential risks of disease transmission were discussed such as international trade through flower imports and containers, also questioning the role of insects as disease vectors in these shipments. Although mosquito control strategies like sterile insect technique seem to be successful, ticks may pose a problem with no current effective control methods. The group agreed that effective management requires improved collaboration among European and neighboring countries, enhanced detection and diagnostic methods, robust vector control measures, and the development of multi-serotype vaccines and antiviral treatments.

7. Reporting and monitoring

7.1 Annual Report 2024 - by Ludovica Peli (EFSA)

The 2024 annual report on emerging risks and horizon scanning was published in May 2025. Compared to previous versions, it has been expanded to address also horizon scanning activities. The report is divided into five main sections: emerging risk assessment results, horizon scanning workflow, EFSA projects on horizon scanning, partner contributions, and future activities. New elements include tables and figures categorising risks and signals. Participants were invited to provide feedback on the new format and suggestion for further improvements.

7.2 News monitoring info - by Katerina Vlachou (EFSA)

As part of EFSA's scanning activities for potential risks/ trends, EFSA receives weekly media reviews. An Excel file compiling news items from various sources, categorized by area has been created. The file aims to track potential emerging issues that have not reached the stage of becoming briefing notes but still would be beneficial to be stored. Participants were reminded about the FoodSafeR digital platform that allows broader and more interactive sharing of emerging issues. Stakeholders interested in getting access to this platform were invited to contact the Secretariat.

8. Final discussions & Conclusions

The next meeting (34th StaDG-ER) will take place in Brussels on 25–26 November 2025.

Invited Attendees:

1. StaDG-ER Members, EC and EFSA Staff

	Name	Organisation	Attending/Apologies
1	Lauren Tuchman	Association for Natural Medicine in Europe e.V (ANME)	Attending (online)
2	Mihai Ionita	Association of the European Self-Care Industry (AESGP)	Attending (online)
3	Rimma Ishimbaeva	AVC Association of Veterinary Consultants	Attending (online)
4	Miroslava Piskorikova	AVC Association of Veterinary Consultants (Alternate)	Attending (in person)
5	Miguel Angel Prieto Arranz	Cefic (European Chemical Industry Council)	Apologies
6	Gianluca Nurra	COCERAL AISBL	Attending (in person)
7	Jan Dahl	Copa and Cogeca	Attending (in person)
8	Ondina Afonso	EuroCommerce	Attending (online)
9	Hélène Collignon	European Biostimulant Industry Council (EBIC)	Apologies
10	Sara García Figuera	European Biostimulant Industry Council (EBIC)	Apologies
11	Lea Pallaroni	European Compound Feed Manufacturers' Federation (FEFAC)	Attending (online)
12	Arnaud Bouxin	European Compound Feed Manufacturers' Federation (FEFAC)	Apologies
13	Christian Bruun Kastrup	European Dairy Association (EDA)	Apologies
14	Fanny Courivaud	European Dairy Association (EDA)(Alternate)	Attending (online)
15	Christian Quinet	European Federation for Animal Health and Sanitary Security (FESASS)	Attending (online)
16	Frederic Bayer	European Food Information Council (EUFIC)	Attending (online)
17	Nina McGrath	European Food Information Council (EUFIC)	Apologies
18	Lis Alban	European Livestock and Meat Trades Union (UECBV)	Apologies
19	Maurizio Ferri	Federation of Veterinarians of Europe (FVE)	Attending (in person)
20	Patrick Coppens	Food Supplements Europe	Attending (online)
21	Paul Anthony Hepburn	FoodDrinkEurope	Apologies
22	Ricard Celorio	FoodDrinkEurope (Alternate)	Apologies
23	Laura Martín Oropesa	FoodServiceEurope	Attending (online)
24	Jérémy Belzunces	IBMA - International Biocontrol Manufacturers Association	Apologies
25	Jeroen Meeussen	IBMA - International Biocontrol Manufacturers Association	Attending (online)
26	Christophe Derrien	International Platform of Insects for Food and Feed (IPIFF)	Apologies
27	Zeynep Sinangil	International Platform of Insects for Food and Feed (IPIFF) (Alternate)	Apologies
28	Blanca Suarez	Nanotechnology Industries Association	Apologies
29	Kalila Hajjar	Primary Food Processors (PFP)	Attending (in person)
30	Luigi Tozzi	SAFE Food Advocacy Europe (SAFE)	Attending (in person)
31	Antoine D'haese	SAFE Food Advocacy Europe (SAFE)	Apologies

32	Bizhan Pourkomailian	Serving Europe	Apologies
33	Stefan Ronsmans	Union of European Beverages Associations (UNESDA)	Attending (in person)
34	Paolo Paturno	CLITRAVI	Apologies
35	Roberta Virgili	CLITRAVI(Alternate)	Attending (in person)
36	Nicola Colombo	Global Head of SGS DIGICOMPLY representing TIC Council	Apologies
37	Eleni Gkana	EC / EU representative	Attending (online)
38	Sandrine Amsler	EC / EU representative	Apologies

Raquel Garcia Matas	EFSA	Attending (in person)
Bernard Bottex	EFSA	Attending (in person)
Aikaterini Vlachou	EFSA	Attending (in person)
Milen Georgiev	EFSA	Attending (in person)
Angelo Maggiore		Apologies
Georgia Gkrintzali	EFSA	Attending (online)
Ludovica Peli	EFSA	Attending (in person)
David Bravo	EFSA	Attending (in person)
Eirini Kouloura	EFSA	Attending (in person)

2. External speaker

Name	Organisation	Attending /Apologies
Nicola King	Institute of Environmental Science and Research (ESR), New Zealand	Attending (online)
Stephan Ziantara	Director of the ANSES laboratory	Attending (online)