100TH ADVISORY FORUM
PARMA, 10-11 JUNE 2026

HORIZON SCANNING REPORT

1ST SEMESTER OF 2026

KNOW Unit

efsa
EUROPEAN FOOD SAFETY AUTHORITY

YOUR CONTRIBUTION TO EFSA HORIZON SCANNING

Bring a signal to our attention

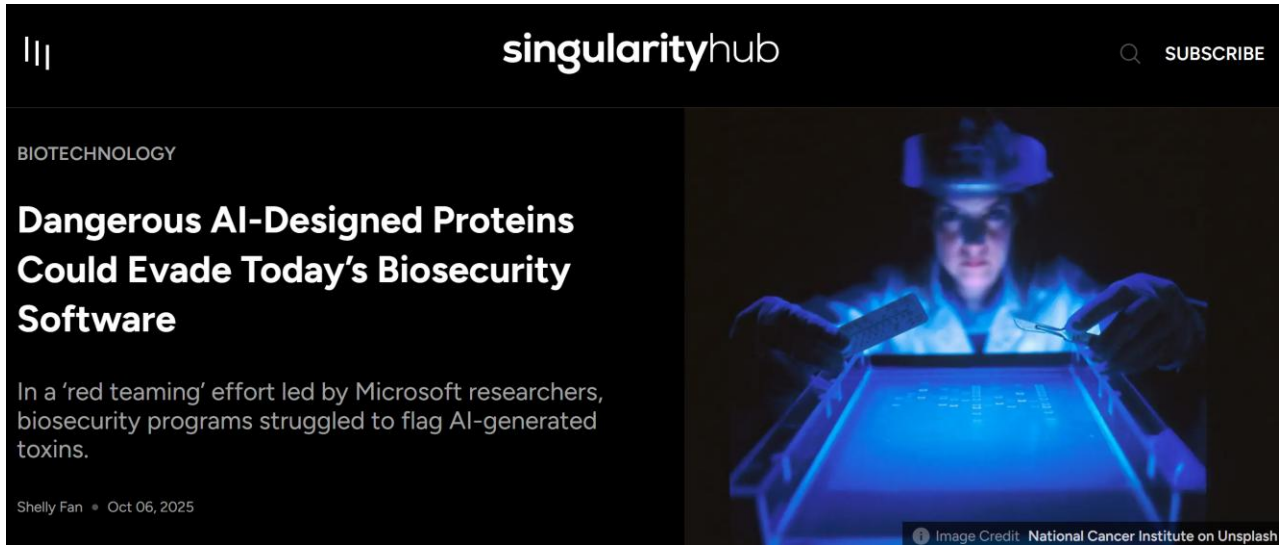
- Not currently addressed by existing EFSA work program and/or strategy
- Not covered by existing regulatory framework
- Would require capacity building by EFSA
- Can impact/challenge EFSA regulatory duties

Member States with running horizon scanning activities

- **Sweden**
- **The Netherlands**
- France (plant health)
- Germany
- Hungary
- Ireland
- Spain

UPDATE ON “UNDER ANALYSIS” SIGNALS OF PREVIOUS CYCLE

AI-designed proteins and other “new-to-nature” food and feed products - Evading current biosecurity screening software - Challenge traditional comparative safety assessment models (e.g. allergenicity / toxicity assessment of xenoproteins, nutritional assessment of new-to-nature products)		Member States consulted via Focal Points: no activity in this area Topic included in CSO Procurement; mapping of stakeholders, expertise and opportunities for interaction 2nd half of 2026



SCANNING

Year	Source	Title
2025	AXA Insur.	Future Risks Report
2025	CIDOB	The world in 2026 – 10 issues that will shape the international agenda
2025	EC	A strategic framework for a competitive and sustainable EU bioeconomy
2025	EEA	Europe's environment 2025
2026	JRC ESPAS	Signs of new – January 2026
2026	JRC ESPAS	Signs of new – March 2026
2026	JRC ESPAS	Signs of new – April 2026
2026	JRC ESPAS	Horizon scanning newsletter #10
2025	UNDP	Eurasia development landscape 2040
2025	FAO	Artificial intelligence for food safety
2026	FAO	2026 global report on food crises
2026	FSAI	Science strategy 2026-2030
2026	Nature	The science of 2050
2026	UKFSA&FSS	Thematic report on emerging food innovations in the UK
2025	UNEP	Frontiers 2025 – the weight of time
2026	WEF	The global risks report 2026
2026	WHO	Ultra-processed foods: a One Health agenda for action and accountability (webinar)

SIGNALS CONCLUDED BECAUSE ACTIONS IMPLEMENTED

Reverse food manufacturing - Recovery and extraction of valuable nutrients from food waste stream, by-products or surplus to create new food or feed ingredients - Challenge: high variability of input materials, increasing processing complexity and limiting standardisation		Related to previous horizon scanning signals (circular feed / fish sludge a source of phosphorous for feed) Guidance in place to handle possible assessment requests; only need occurrence and food/feed consumption data once regulatory challenges have been addressed
Rise of networked citizenship - Digital platforms shape what becomes visible, what gains attention and which voices are amplified. - Able to question, reinterpret or contest EFSA's scientific assessment in highly visible digital spaces, even when these challenges are not based on scientific evidence - Governing and shaping networks is as important as producing high quality information;		Team COM Strategic Communications: experimenting networks listening tools (COMET Project)

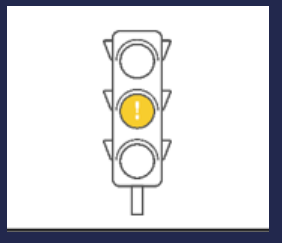
SIGNALS CONCLUDED BECAUSE ACTIONS IMPLEMENTED

Thawing permafrost and polar ice - Thawing permafrost and polar ice release long-trapped microorganisms and legacy contaminants, including radioactive materials, into soils and water systems; - No direct evidence links ancient microorganisms to food or feed contamination; - Indirect pathways hydrological changes may mobilize pathogens and chemicals, while wildlife shifts create exposure routes and possible AMR gene transfer.		- significant uncertainty and knowledge gaps, warranting further research - Flag to EEA (environmental monitoring system) as well as an EFSA further EFSA research need
Ultra-Processed Foods (UPFs): One Health Considerations - UPFs associated with increased risk of major chronic diseases - Production relies on intensive monocultures and energy-intensive agricultural inputs, affecting environmental sustainability; - Strong dependence on plastics and other food contact materials; - High use of ultra-processed feeds is associated with adverse health outcomes in livestock and companion animals		- Risk for EFSA reputation if looking only at human health considerations - Scoping paper on future science needs under preparation by DGs RTD, SANTE & AGRI, following up on SAM's scoping workshop on UPFs

SIGNALS CONCLUDED BECAUSE ACTIONS IMPLEMENTED

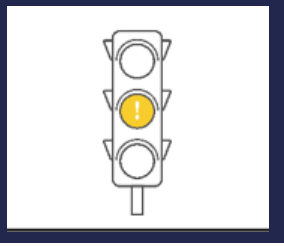
A world beyond the 2°C threshold - The world is unlikely to remain below the Paris agreement's 2°C threshold; the time horizon by when this value will be exceeded is debated. - EFSA models or opinions using temperature projections (e.g. mycotoxins, vector-borne plant/animal diseases assessments) focus on near to medium term		EFSA's SEED project integrates Copernicus climate data into the EFSA Data Lake, providing observational and scenario-based datasets to support teams in selecting appropriate time horizons and scenarios for risk assessment.

SIGNALS WITH ANALYSIS ONGOING



AI-amplified trust synthetic science and the spread of false certainty - The recent cases of “bixonimania” and “the girl who fooled Poland” - Risk of AI amplified misinformation and inflated expertise in science raises concerns about the reliability of external sources, experts and evidence. - Impact on speed of risk assessment?		Tools and verification processes in place?
Geo-economic tensions and the weaponisation of food/feed supply chains - Disruptions may trigger sudden shifts in sourcing and product reformulation, increasing uncertainty regarding contaminants, residues, and nutritional composition - May affect upstream data needed for EFSA risk assessments. - Links to crisis response, as geo-economic shocks may shorten timelines for risk assessment (e.g. emergency authorisations).		EFSA agility and preparedness? Access to fragmented data; Risk/benefit assessment under high political pressure; Multiplication of urgent requests.

SIGNALS WITH ANALYSIS ONGOING



Quantum technologies - Quantum sensing (ultra-sensitive measurements) -> interpretation? - Quantum computing (optimization and simulation) -> strengthening NAMs and mechanistic risk assessment - Quantum chemistry (molecular modelling for materials and reactions) -> huge opportunities and risks (accelerated development of harmful biological agents or toxins)		- Capacity building on quantum technologies - Collaboration with EU partners on cyber/data governance expectations -> Check if signal considered by other EU Agencies (e.g. EMA if Qt is involved in pharmacological developments)
Legacy pollutants - Climate driven floods recognized as major triggers of legacy pollutant (heavy metals, POPs and PAHs) remobilization - Monitoring of climate induced floodings associated with sediment resuspension to anticipate localized food/feed chemical (and microbiological) contamination - Copernicus European Flood Awareness System		Worth investing resources as part of preparedness activities? Could feed into the early warning and action system on emerging chemicals Signal flagged for possible EEA follow up at June's EREN meeting

ANY COMMENT ON CLASSIFICATION?

Not further considered

1. Banning genetically modified wildlife (Nature)

Analysis ongoing

1. AI-amplified trust (EFSA)
2. Geo-economic confrontation and weaponisation of food/feed supply chains (WEF, JRC ESPAS, FAO)
3. Quantum technologies (WEF)
4. Legacy pollutants (UNEP)

Actions already implemented

1. AI-designed proteins and other “new-to-nature” food and feed products (SingularityHub)
2. Reverse food manufacturing (UKFSA&FSS)
3. Rise of networked citizenship (JRC ESPAS)
4. Thawing permafrost and polar ice (UNEP)
5. Ultra-Processed Foods: One Health Considerations (EFSA, WHO)
6. A world beyond the 2°C threshold (EEA, UNEP)

Multi-agency foresight

External Scientific Report

Fraunhofer ISI · insight foresight institute · AIT · VTT · Finland Futures Research Centre · Foresight On Demand

APPROVED: 19 March 2026
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Multi-Agency Foresight with One Health Approach

Deliverable 5: Final Report

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Abstract

European societies are facing increasingly complex and interconnected challenges at the

European Environment Agency · European Medicines Agency · ecdc · FRA European Union Agency for Fundamental Rights

European Agency for Safety and Health at Work · efsa · EUDA European Union Drugs Agency · EIGE European Institute for Gender Equality

FRONTEX · ETF Working together Learning for life European Training Foundation · European Commission · ECHA European Chemicals Agency

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