HORIZON SCANNING REPORT
2ND SEMESTER OF 2025

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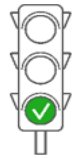
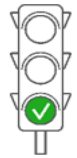
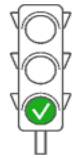
efsa
EUROPEAN FOOD SAFETY AUTHORITY

UPDATE ON “UNDER ANALYSIS” SIGNALS OF PREVIOUS CYCLE

Carbon Offsetting **Afforestation using monoculture or invasive species** can also harm ecosystems like natural grasslands.		EIOS-based surveillance system in place
QSAR-based safety assessments If food supplements on the EU market contain CMR-predicted substances, **how would EFSA assess them** under Reg. 1925/2006 (Art. 8) or the Novel Food Regulation?		Analysis ongoing on the “magnitude” of the problem. (**FP tailor-made activity + FUP**) Demonstration of absence of safety concern would fall on FBOs
Agrobioterrorism and cyberattacks on the food supply chain Geopolitical tensions may fuel **agrobioterrorism; Digitalization of agriculture** also raises vulnerability to cyberattacks, threatening food security and safety.		Topic of the **2026 external crisis exercise** Interests of several AF members to be part of the organising committee. DEFENSE FOOD

SCANNING – EXTERNAL REPORTS REVIEW

Year	Source	Title
2025	Singularity Hub	Dangerous AI-Designed Proteins Could Evade Today's Biosecurity Software
2025	EC	2025 Strategic Foresight Report
2025	EEA	Europe's environment and climate: knowledge for resilience, prosperity and sustainability
2025	ESPAS	ESPAS Horizon Scanning Signal Cards
2025	StaDG-ER	Vitamins dependencies
2025	Hackaday	Could space radiations mutate seeds for the benefit of humanity?
2025	IFPRI	Food policy – Lessons and priorities for a changing world
2025	JRC	Polycrisis exploration workshop
2025	CIFS	Exploring the futures of technology
2025	ECHA	Key areas of regulatory challenge
2025	Farsight	Europe's future – Four scenarios for the next decade
2025	OECD	Strategic foresight – toolkit for resilient public policy
2025	UK DEFRA	A UK Government food strategy for England, considering the wider UK food system

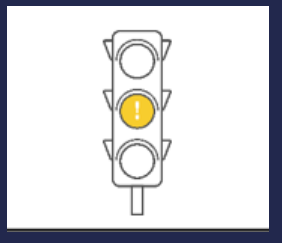
SIGNALS CONCLUDED BECAUSE ACTIONS IMPLEMENTED

Using air for CO2 extraction and utilisation - Synthesis of protein, bio-based chemicals - safety of the technologies used for this extraction? - Possible emerging issues in relevance to the use of these proteins, for example allergenicity issues or environmental impact?.		Brought to the attention of EEA Signal captured in a procurement to be signed to map future food innovation technologies and systems in relation to NF
Epidemic intelligence for animal diseases / zoonoses - critical for EFSA's horizon scanning capabilities. - established robust mechanisms for monitoring foodborne outbreaks and avian influenza - More limited for other animal diseases(e.g. lumpy skin disease, foot-and-mouth disease), and emerging zoonoses		Integration of epidemic intelligence in the AH area in progress Collaboration initiated with JRC, ECDC, WOAH and WHO on the use of EIOS (Epidemic Intelligence from Open Sources)
Fear Of Becoming Obsolete (FOBO) - emerging technologies threaten to make employees skills irrelevant - resulting stress, anxiety, and reduced job satisfaction, affecting work-life balance and worsening employee burnout		No report received so far from staff Anticipatory/preventive measures put in place to get EFSA staff realise that AI is intended to increase their performance rather than substituting them

SIGNALS CONCLUDED BECAUSE ACTIONS IMPLEMENTED

Warfare-related contaminants - chemicals are used in warfare operations (e.g. chloropicrin) - collapsed buildings release hazardous material (e.g. asbestos) - Radioactivity could be released from nuclear weapons or damaged nuclear plants - contaminated soils and groundwater in the long term;		EFSA does not assess radioactive contamination (Art. 31 of EURATOM Treaty) Assessment of chemical contaminants would be work as usual
Decarbonisation-related contaminants - Associated to a) raw-material extraction, b) improper waste management - Risk of soil and water contamination		EWS on emerging chemicals put in place under OSOA Regulation. Assessment of contaminants would be work as usual
fish sludge as source of phosphorus for feed - Phosphorus is an essential, finite resource classified as a Critical Raw Material by the EU since 2017. - Annex III of Regulation (EC) No 767/2009 prohibits the use in feed of *"all waste obtained from the various phases of urban, domestic and industrial wastewater treatment.*		- If marketed as feed additive, Reg. 1831/2003 (authorisation request) - EFSA 2025 presence of biological and chemical hazards in ash from Category 1 material after incineration, co-incineration, and combustion

SIGNALS WITH ANALYSIS ONGOING



AI-designed proteins - evading current biosecurity screening software. - dual-use challenge: could accelerate beneficial innovation in biotechnology but also create new biosecurity vulnerabilities if misused or undetected.		Absence of methodology to evaluate sequence-function risk when the sequence does not match existing databases. High relevance considering rapid convergence of AI and synthetic biology

ANY COMMENT ON CLASSIFICATION?

Not further considered

1. Neurodiversity in EFSA
2. Digital market and risk assessment
3. Space mutagenesis
4. Critical raw materials dependency
5. Electrically conductive substrate for boosting plant growth

Analysis ongoing

1. AI-designed proteins

Already dealt with

1. Using air for CO2 extraction and utilisation
2. Epidemic intelligence for animal diseases / zoonoses
3. Fear Of Becoming Obsolete (FOBO)
4. Warfare-related contaminants
5. Decarbonisation-related contaminants
6. Fish sludge as source of phosphorous for feed

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

Contact us if you run your own horizon scanning

- Germany
- The Netherlands
- … ?

Multi-agency horizon scanning

Foresight On Demand

RTD/2023/OP/0011 lot 1 - Multi-agency horizon scanning for *preparedness* and future-proof *strategy development* in *a one-health* approach

Horizon-Scanning Process

Pilot a standing joint horizon-scanning process, possibly implemented in the context of the EU-ANSA Futures Cluster's activities.

Trend Analysis

Joint collection and analysis of trends, early signs of potential development and driving forces

Impact Translation

Translation into Agencies-specific impacts on work programmes and strategy

Contribution to Commission Reports

Stronger contribution of EU Agencies to the Commission Strategic Foresight reports

European Environment Agency

EUROPEAN MEDICINES AGENCY
SCIENCE MEDICINES HEALTH

ecdc
EUROPEAN CENTRE FOR DISEASE PREVENTION AND CONTROL

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

SCENARIOS FOR 2035

EU-governance high

Health Transformation after Wake-up Call

One Health Governance in a Digitalized, Climate-Challenged Europe

Technology and innovation dynamic high

Technology and innovation dynamic low

Better safe than sorry: Nature-Smart Europe in the Age of Prevention

Keep it private!

Nationalism and egocentrism in Europe

EU-governance low

One Health through Multi-agency Foresight work – the way forward!

Disconnected Agency Efforts

Siloed, uncoordinated foresight initiatives

Sense Making

Analyze workshop input for insights by JAN 2026

Impact Definition

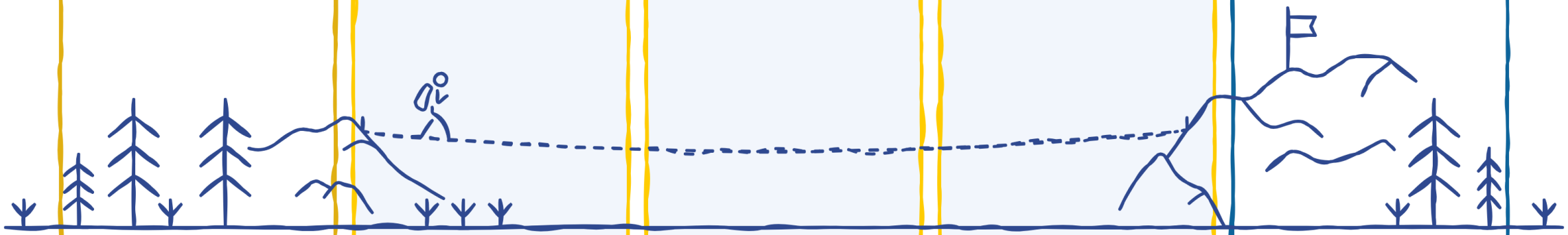
Define agency-specific impacts on strategy and work programmes all 2026

Collaboration Areas

Identify potential areas for joint work from 2027 onwards

Standardized Joint Approach

Coordinated, collaborative foresight and intelligence



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