

98TH ADVISORY FORUM
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HORIZON SCANNING REPORT 2ND SEMESTER OF 2025

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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, WOAHA and WHO on the use of [EIOS](#) (Epidemic Intelligence from Open Sources)

Fear Of Becoming Obsolete (FBOB)

- 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 <ul style="list-style-type: none">- 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 <ul style="list-style-type: none">- 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 <ul style="list-style-type: none">- 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 <i>“all waste obtained from the various phases of urban, domestic and industrial wastewater treatment.</i>		<ul style="list-style-type: none">- 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

Bioelectricity

- An electrically conductive substrate has been developed to boost plant growth by an average of 50%
- requires an energy-efficient low-voltage current for enhanced plant growth.



Improvement of hydroponic agriculture. Still scientific exploratory field; negative effect of the low voltage electric field?



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

Analysis ongoing



1. AI-designed proteins
2. Bioelectricity

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



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



SCENARIOS FOR 2035

Health Transformation after Wake-up Call



EU-governance high



One Health Governance in a Digitalized, Climate- Challenged Europe

Technology and
innovation dynamic
high

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



Keep it private!

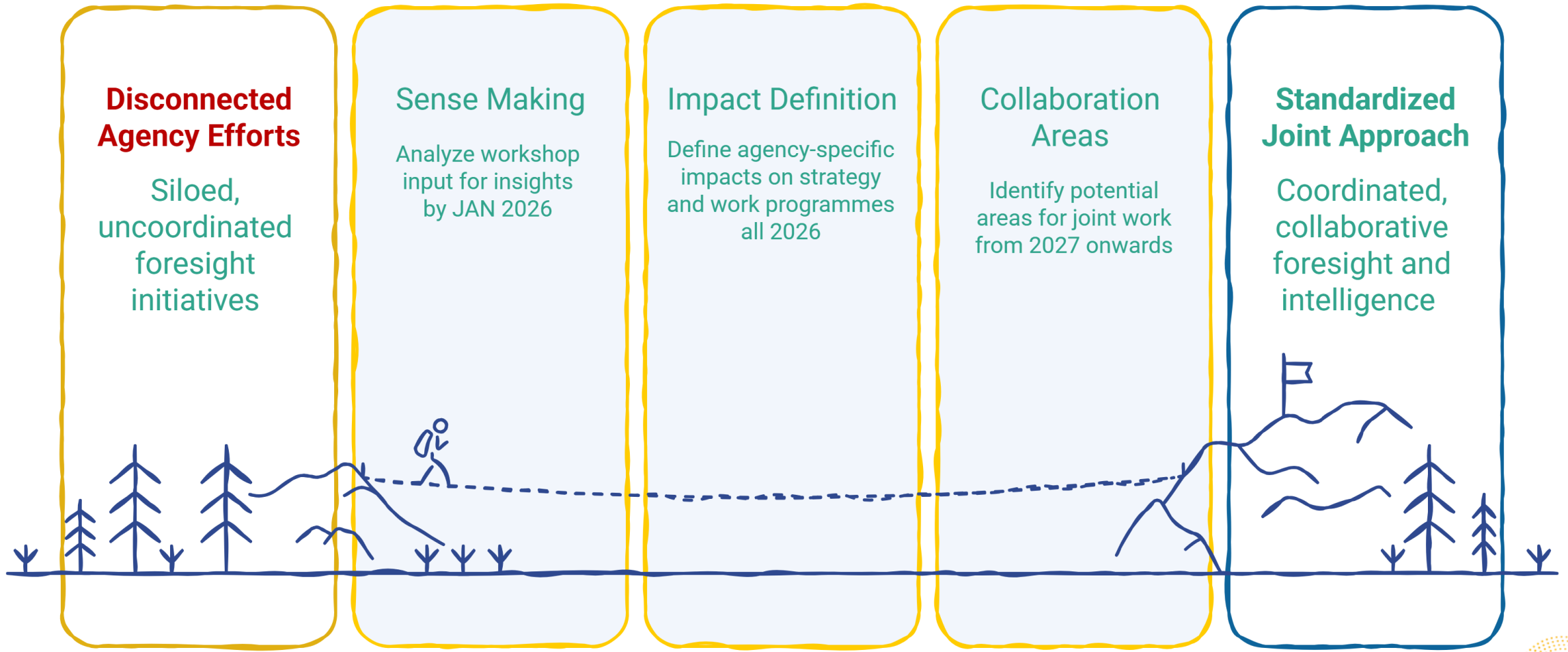
EU-governance low

Technology and
innovation dynamic
low

Nationalism and egocentrism in Europe



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



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