

Emerging Risks in Food Fraud

A view from the Global Harmonization Initiative

Asli Solmaz-Kaiser

Registered Stakeholder, Global Harmonization Initiative (GHI)

Member, GHI Working Group on Ethics in Food Safety Practices

Where food fraud meets the broader question of ethical practice

Scope of the Working Group

- Food fraud
- Ethical traceability
- Animal Welfare and Consumer Protection
- Whistleblower Protection
- AI & Food Safety Ethics
- Sustainable Food Systems
- Food System Governance & Accountability

The WG's mission is to investigate ethical questions across these areas and produce consensus guidance for regulators, industry, and the wider scientific community.

Concrete deliverables

- 2021 launch of the GHI Whistleblower Food Safety Incident Report Site

Current scientific activity (2025–2026)

- Position Paper on Food Safety Culture and Food Safety Professionals — near completion
- GHI Ethics Code training programme in development
- Development of a welfare-based reference model examining the relationships between animal welfare indicators and food safety.
- 2021 paper on Food Safety Professionals, proposing to establish FSPro's as a regulated and protected profession and 2026 update

GHI Whistleblower Food Safety Incident Report Site

whistle.globalharmonization.net

2021

launched — predates the EU Whistleblower Protection Directive enforcement deadline (Dec 2021)

36 langs

currently live — including Turkish, Arabic, Bengali, Swahili, Vietnamese, Mandarin

Anonymous

GHI does not know the identity of reporters; reports are scientist-triaged

How the channel operates

1

Anonymous report

Sector employee submits via the platform

2

Triage by scientists

GHI experts filter for substance vs. revenge claims

3

Escalation

Serious cases passed to authorities in the country of interest

4

Investigation request

GHI formally requests investigation by the national authority

Relevance to emerging risks: a signal source for incidents that have not yet surfaced through RASFF, FDA, or national authorities. The reports are unstructured — at present, not systematically integrated with regulatory monitoring.

How a fraud signal becomes a selected case

Inputs & clustering

Inputs — ~80 regulators, ~200K signals a day

- RASFF, FDA, MFDS, EU FFN; trade, scientific and national-language press; market signals (price, harvest, trade-volume, weather); scientific literature

Cluster & match

- signals grouped into discrete events; commodity and substance matching; lead time measured against regulatory classification

Selection & interpretation

Compliance filter

- every source URL scanned; brand-, company- or product-named sources dropped; a case that loses all its sources is dropped

Select — four criteria

- cluster strength, multi-source corroboration, novelty, supply-chain depth; ordered by criticality

Interpret

- the AI agent surfaces what is structural, not noise; interpretation is AI-generated, every case cited to primary documents

Limitations: pre-2024 fraud notifications are sparse; news data carries publication-volume bias — acknowledged at case level.

The structural problem in food fraud surveillance

Regulatory classification of a fraud event is downstream — it confirms what has already happened.

The signals that precede it — harvest loss, price collapse, trade restriction, regional supply shock, whistleblower disclosure — are upstream, unstructured, and dispersed across thousands of sources.

The gap between an upstream signal and a regulatory classification is typically eight to twelve months.

That gap is the emerging-risk window.

Case 1

Case 1

Iron in milled spices and botanical powders

Metallic iron in ground products, mechanism not yet established

Substance / hazard: Metallic iron fragments in milled spices and botanical powders

Signal type: Authority surveillance — [Korean MFDS](#) import notifications (2023–2026)

Regulatory status: Not in the EREN 2024 emerging list; not in any EFSA mandate; Reg 10/2011 covers FCM plastics, not equipment-source metal

Why emerging: 85 findings, 53 in herbs and spices, accelerating year on year; exceedances to 672.5 mg/kg vs a 10 mg/kg limit. Mechanism — equipment wear, weight adulteration, soil residue, or other — not yet established^[7]

Case 2

Case 2

Ethylene glycol via food-processing equipment

Industrial coolant entering food through equipment, not adulteration

Substance / hazard: Ethylene glycol; leakage from refrigeration or processing equipment into food

Signal type: Real-world incident — [FSSAI investigation](#), Andhra Pradesh (Feb–Mar 2026)

Regulatory status: [Reg 231/2012](#) covers EG/DEG only as named additive impurities; [Reg 10/2011](#) covers plastic FCM, not equipment coolants; no EU horizontal framework

Why emerging: 16 confirmed deaths traced to a coolant leak; the equipment-to-food route is unaddressed. Parallels the MOAH-from-lubricants story before it was regulated

Case 3

Case 3

Delta-9-THC in fruit gummies for the EU market

A cannabinoid unauthorised in food, in a children's-confectionery format

Substance / hazard: Delta-9-THC at 1,790 µg/kg in fruit gummies whose visual and textural format is indistinguishable from standard children's confectionery

Signal type: Authority surveillance — RASFF official market-control notification, Slovenia (May 2026)

Regulatory status: No maximum permitted level listed — the substance is unauthorised in food in the notifying Member State; the children's-format pairing sits outside any specific control

Why emerging: Novel hazard-product combination — an unauthorised cannabinoid in a format that bypasses age-gating. The gap is substance × matrix × route together, not the substance alone

Case 4

Case 4

Cooking-grade palm oil cut with industrial wax and dyes

A daily staple adulterated to bulk volume and fake the quality colour cue

Substance / hazard: Candle wax and artificial dyes added to cooking-grade palm oil to bulk volume and fake the quality colour cue

Signal type: Regulator alert plus news cluster — LASCOPA alert, Lagos (21 May); twelve publishers in 48 hours

Regulatory status: Regulator-confirmed adulteration; one premises sealed, no traceability safeguard on the product

Why emerging: The 48-hour, twelve-publisher media burst is the news-cluster signal in its clearest form — open-source media surfaces it before any formal notification

Case 5

Case 5

Pork chemically treated and sold as beef — fifteen tons

Species substitution compounded with banned chemical treatment

Substance / hazard: Approximately fifteen tons of pork soaked in animal blood and a banned chemical to alter colour and texture, then sold as higher-value beef

Signal type: Real-world enforcement — Vietnamese law-enforcement seizure (May 2026)

Regulatory status: Species substitution breaches authenticity and labelling rules; the banned-chemical residue adds an undisclosed toxicological layer, with no framework for the combination

Why emerging: Compounded fraud — economic deception and direct chemical exposure in one product

Three observations for EFSA StaDG-ER

1 Organic-claim fraud has become the fastest-growing classified category in EU enforcement.

The Q1 2026 EU FFN cohort alone — 15 notifications, two-thirds in DACH — represents a step change in enforcement intensity, not a coincidence.

2 Upstream signals systematically precede regulatory classification by 8 to 12 months.

Climate, market, trade, supply and whistleblower signals are available before notifications. They are unstructured, multilingual, and dispersed — and not yet systematically integrated with monitoring systems such as RASFF.

3 The GHI Whistleblower channel is a signal source EFSA does not currently use.

It is anonymous, global, scientist-triaged, and operates across 36 languages. It captures incidents that have not surfaced through formal regulatory channels. Methods exist to integrate this kind of unstructured signal into emerging-risk surveillance.

Sources & references

References

Primary sources for the five cases

Authority notifications, regulatory texts, and the iComplai May 2026 bulletin

Case 1 — Iron, Korea: Korean MFDS import notifications, 2023–2026 (mfds.go.kr)

Case 2 — Ethylene glycol, India: FSSAI investigation, Andhra Pradesh, Feb–Mar 2026 (Deccan Chronicle); Reg (EU) 10/2011; Reg (EU) 231/2012

Case 3 — Delta-9-THC, Slovenia: [European Commission RASFF notification 845113](#), 20 May 2026

Case 4 — Palm oil, Nigeria: LASCOPA alert, reported by [Punch](#), [P.M. News](#), [Vanguard](#) and 9 further outlets, 21–23 May 2026

Case 5 — Pork as beef, Vietnam: [VnExpress](#) and [Tuoi Tre News](#), 12 May; [VietNamNet](#), 13 May 2026