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# ANIMAL EPIDEMICS IN THE WORLD

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WORLD VETERINARY  
ASSOCIATION

# Animal Epidemics in the World: What the Data Say, What the Risks Are, and What Works

- **WOAH's World Animal Health Information System (WAHIS):** the official reporting backbone for listed terrestrial and aquatic diseases, aggregating immediate notifications and six-monthly reports from national veterinary authorities. ([WOAH](#))
- **FAO's EMPRES-i+:** a complementary early-warning and disease-intelligence platform that integrates official reports with field inputs—right down to mobile event reporting via the **EMA-i** app. ([FAOHome](#))

Today I'll summarize where we are, what's driving epidemics, which threats matter most now, and—crucially—what works.

# Where we are: the global epidemic landscape in 2024–2025

- **HPAI over 633 million poultry** have died or been culled worldwide since 2005, with an unprecedented **146 million in 2022** alone.
- **ASF** continues to grind through swine populations across Asia and Europe and remains present on Hispaniola in the Caribbean, with waves of outbreaks in 2025—**Vietnam** being a recent example of a sharp surge
- And we are watching the **re-emergence of New World screwworm (*Cochliomyia hominivorax*)** across Central America and Mexico—**tens of thousands of outbreaks** recorded in WAHIS since 2023—triggering major cross-border response financing and sterile-insect efforts
- **Bottom line:** epidemics of animals are no longer episodic; they're systemic.

# How we know: WAHIS and EMPRES-i+ are complementary, not redundant

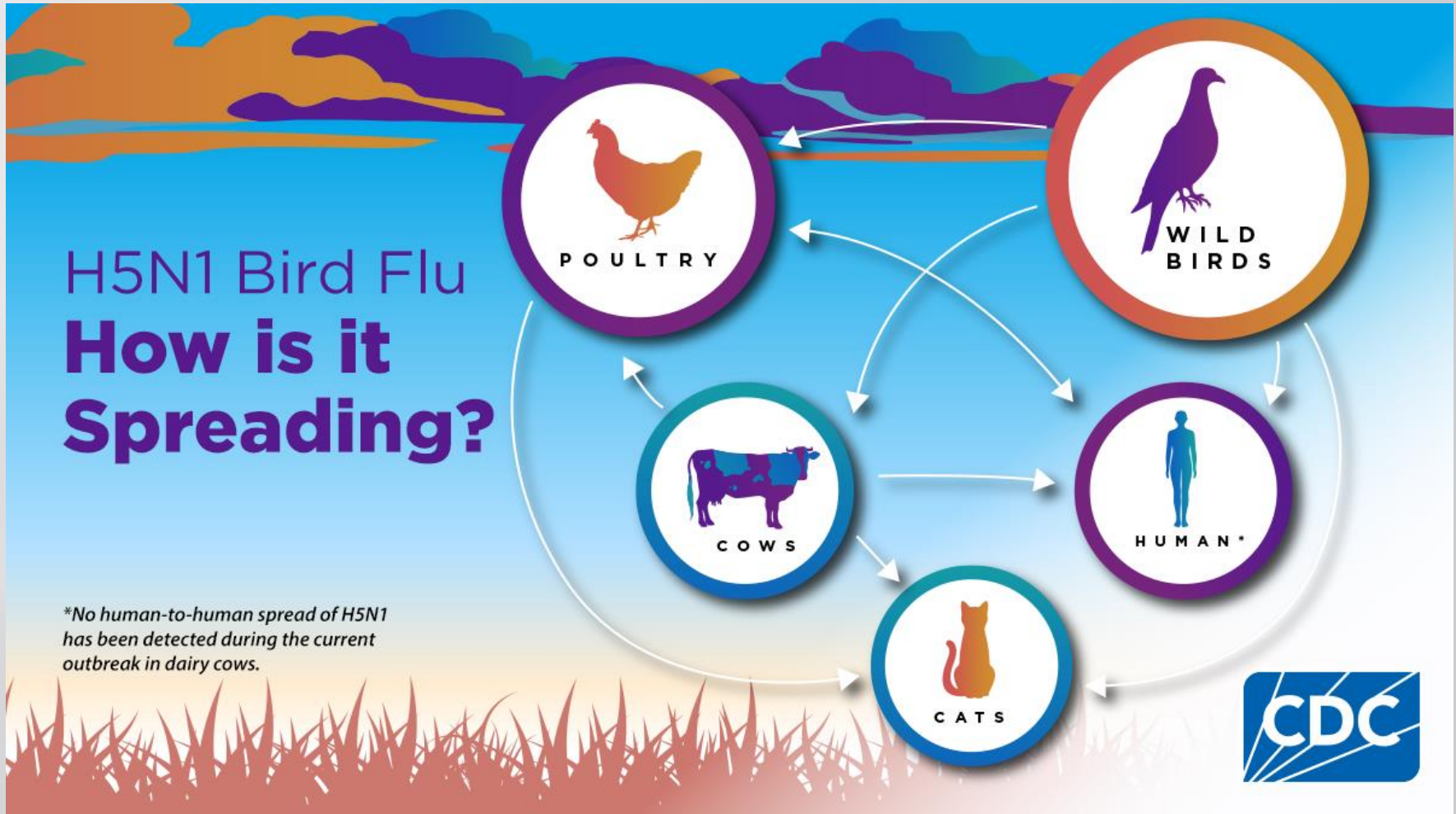
- **WAHIS** is the legally grounded, **official** channel: Members must report listed diseases; the system publishes **Immediate Notifications, Follow-up Reports**, and six-monthly updates. That's what underpins trade decisions and international standards. ([WOAH](#))
- **EMPRES-i+** excels at **situational awareness**: integrating multi-source disease events, mapping hundreds of thousands of records across **190+ countries**, and accelerating **field-to-dashboard** intelligence via EMA-i. ([FAOHome](#))

Think of WAHIS for **validated status** and EMPRES-i+ for **operational decisions** and **field granularity**. Used together, they shorten the time from signal to action. ([WOAH - Africa](#))

# The Major Epidemics Right Now

1. **Highly Pathogenic Avian Influenza (HPAI): still panzootic, with an expanded mammalian footprint**
2. **African Swine Fever (ASF): a persistent, high-impact epidemic**
3. **Foot-and-Mouth Disease (FMD): endemicity plus flare-ups**
4. **Lumpy Skin Disease (LSD): a fast-moving vector-borne threat to cattle**
5. **Bluetongue and Epizootic Haemorrhagic Disease (EHD): climate-sensitive viruses on the move**
6. **New World Screwworm (NWS): a re-emergent parasitic threat in the Americas**
7. **Aquatic animal epidemics: quieter, but consequential**

# Highly Pathogenic Avian Influenza (HPAI)



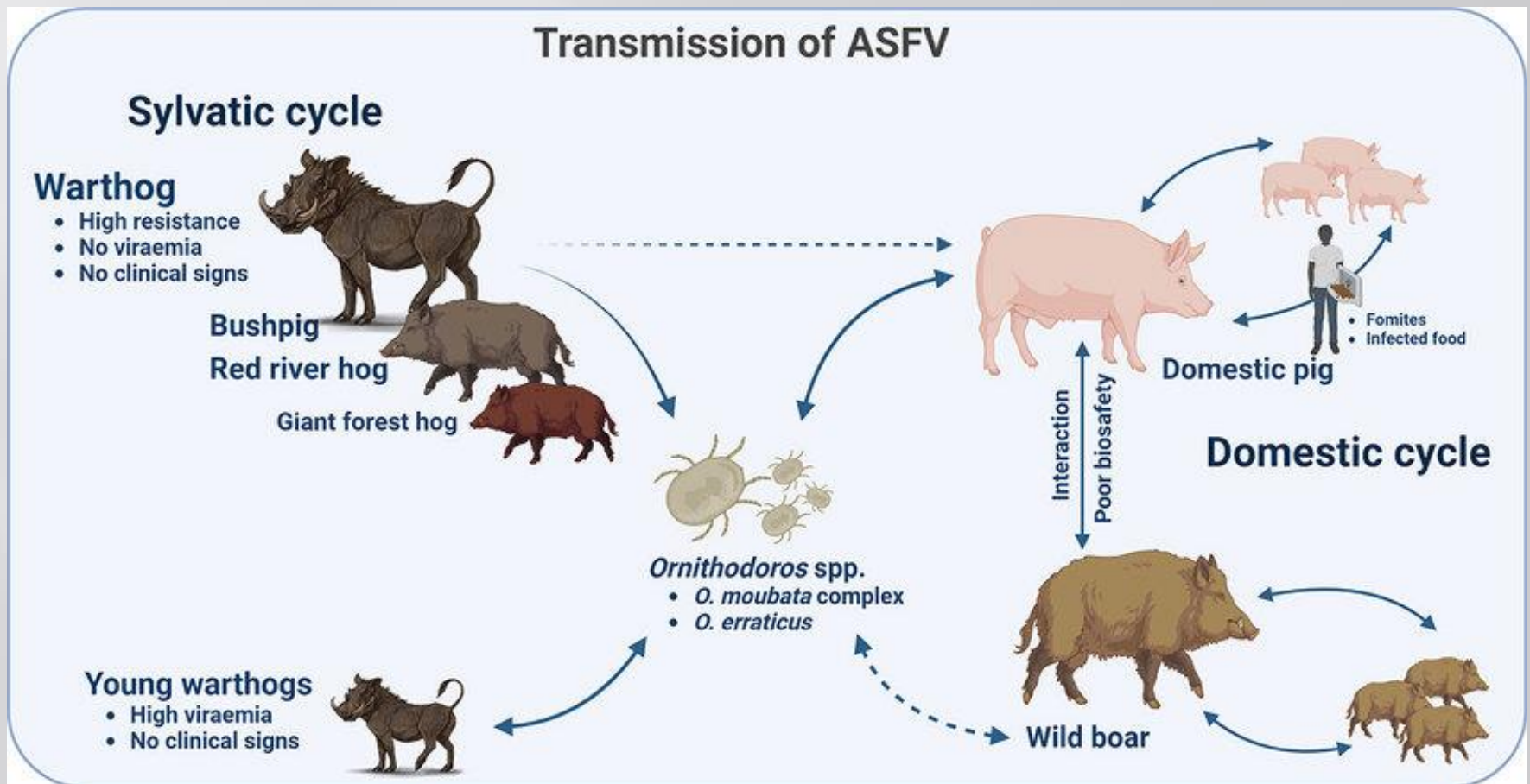
# Highly Pathogenic Avian Influenza (HPAI)

- **H5N1 clade** has battered poultry, spilled into wild birds and some mammals, and—unusually—into **dairy cattle in the United States** beginning March 2024. – human infections
- **new poultry outbreaks in Denmark and Iran**, and countries continue to adjust strategies—**France**, for example, is **resuming duck vaccination** for the third year running

**What works:** rigorous **farm biosecurity**, humane **stamping-out** where required, **targeted vaccination** in at-risk sectors, **wildlife surveillance**, and strong **worker protections**—all consistent with WOAAH/WHO/FAO guidance. ([WOAH](#))

# African Swine Fever (ASF): a persistent, high-impact epidemic

## Transmission of ASFV



# African Swine Fever (ASF): a persistent, high-impact epidemic

- ASF remains **uncontrolled in much of Asia** and **recurrent in Europe**, with continued detection in wild boar and domestic herds. WOAHA's consolidated WAHIS analyses (Jan 2022–Apr 2025) recorded **over one million domestic pig cases** and **more than two million animal losses** across reported regions. 2025 also brought a strong rebound in wild-boar cases in parts of Europe. ([WOAH](#))
- **Vietnam** saw a sharp uptick in mid-2025 despite earlier vaccine efforts; uptake has been limited, and authorities stress biosecurity plus vaccination where appropriate

**What works:** hardening **biosecurity and movement controls**, **compensation** to support reporting, **carcass removal** in wildlife, and **progressive control** via the **GF-TADs Global Initiative**—all anchored on reliable surveillance and transparent reporting. ([WOAH](#))

# Foot and Mouth Disease (FMD): endemicity plus flare-ups



# Foot and Mouth Disease (FMD): endemicity plus flare-ups

FMD remains endemic across swathes of Africa and Asia, with **regional flare-ups**—for example, **SAT1 lineage activity reported in 2025** in parts of the Middle East. The **Progressive Control Pathway for FMD (PCP-FMD)** guides countries step-by-step from risk reduction to control and, ultimately, towards freedom, dovetailing with WOAHA's standards and Performance of Veterinary Services (PVS) Pathway. ([GOV.UK](#))

**What works:** risk-based **vaccination** with matched strains, **movement management**, and continuous **performance assessment** of veterinary services under GF-TADs coordination. ([FAOHome](#))

# **Lumpy Skin Disease (LSD): a fast-moving vector-borne threat to cattle**



# **Lumpy Skin Disease (LSD): a fast-moving vector-borne threat to cattle**

Once largely confined to Africa, **LSD** spread through the Middle East and the Balkans in the last decade, reached **Japan in 2024**, and in **June–July 2025** was **confirmed in Italy and France**; **Spain** has just reported its **first outbreak**. The disease is not a human health risk, but it's economically punishing for dairies and beef producers. ([GOV.UK](#))

**What works: rapid vaccination** with homologous vaccine where available, movement controls, vector management, and early case detection to avoid explosive spread. ([WOAH](#))

# Bluetongue and Epizootic Haemorrhagic Disease (EHD): climate-sensitive viruses on the move



# Bluetongue and Epizootic Haemorrhagic Disease (EHD): climate-sensitive viruses on the move

- Europe has seen a **rapid expansion of BTV-3 bluetongue** since its emergence in the Netherlands (2023), with spread across **Belgium, Germany, France** and beyond, and **overwintering** that hints at changing vector ecology. France and others ramped vaccination to contain impacts. ([WOAH](#))
- **EHDV-8** likewise surged in **western France** from late 2023. By **November 2023**, France had recorded **3,500+ farm outbreaks**; 2025 activity has been more variable but remains a watch-item with seasonal vector rises. ([GOV.UK](#))

**What works:** surveillance at the **vector–livestock interface**, **vaccination** where feasible, movement zoning, and integrating climate/entomological data into forecasts. ([WOAH](#))

# **New World Screwworm (NWS): a re-emergent parasitic threat in the Americas**



# **New World Screwworm (NWS): a re-emergent parasitic threat in the Americas**

After re-establishment south of the Darién, **NWS** has **spread north** through Central America since 2023 into **Mexico**. WOAHA notes **20,000+ WAHIS-reported animal outbreaks** across seven countries in the region. The U.S. has committed **\$109.8 million** to support binational control and to strengthen the **sterile insect technique** barrier. ([WOAHA](#))

**What works:** **intensive surveillance, wound management, strict movement controls, and sustained sterile male releases**—a rare case where eradication is technically feasible with steady financing and cross-border governance. ([APHIS](#))

# **Aquatic animal epidemics: quieter, but consequential**



# **Aquatic animal epidemics: quieter, but consequential**

**Tilapia lake virus (TiLV)** continues to cause episodic high-mortality events in farmed tilapia; WOAAH lists it as a notifiable aquatic disease, and U.S. APHIS maintains a sector alert. Meanwhile, **white spot syndrome virus (WSSV)** remains the most economically devastating viral pathogen in global shrimp farming. ([WOAH](#))

**What works: biosecure hatcheries, SPF broodstock, movement controls, and robust water management**—principles as old as aquaculture, but newly urgent as production intensifies. ([SpringerLink](#))

# Cross-cutting drivers

1. **Climate and vectors.** The northward creep of **Culicoides** vectors has expanded bluetongue and EHD risk zones, with overwintering potential in some settings. WOAAH directly links the spread of BTV-3 to shifting climatic suitability. ([WOAH](#))
2. **Wildlife–livestock interfaces.** HPAI circulation in wild birds, ASF in wild boar, and camelid reservoirs for MERS-related risks illustrate why wildlife surveillance matters. WOAAH/WHO/FAO joint notes keep public-health risk for H5 **low**, but exposures at the animal–human interface remain **low-to-moderate** risk. ([WOAH](#))
3. **Trade and movement.** The same logistics that power food systems also power virus travel—hence the need for **zoning, compartmentalization, and certification** aligned to WOAAH Codes. ([WOAH](#))
4. **System capacity.** Transparent, timely reporting through **WAHIS** and field-level intelligence via **EMPRES-i+** correlate with faster control. ([WOAH](#))

# What works: a practical playbook

- 1) **Invest in Veterinary Services and the PVS Pathway.**
- 2) **Use WAHIS and EMPRES-i+ together.**
- 3) **Biosecurity is non-negotiable.**
- 4) **Vaccinate strategically.** From **HPAI vaccination in ducks** in France to **LSD and FMD** in at-risk cattle, vaccination must be **risk-based, strain-matched, and paired with surveillance.**  
([wattagnet.com](http://wattagnet.com))
- 5) **Zoning and compartmentalization.**
- 6) **Wildlife and vector surveillance.**
- 7) **Data discipline.** Ensure **Immediate Notifications** are prompt and **Follow-up Reports** complete.



# GF-TADs

GLOBAL FRAMEWORK FOR THE  
PROGRESSIVE CONTROL OF  
TRANSBOUNDARY ANIMAL DISEASES

...



Food and Agriculture  
Organization of the  
United Nations



World Organisation  
for Animal Health

**8) Worker safety.**

**9) Cross-border collaboration via GF-TADs. ([gf-tads.org](http://gf-tads.org))**

**10) One Health governance.** The **Quadripartite** (FAO, WOAHA, WHO, UNEP) **One Health Joint Plan of Action (2022–2026)** provides a platform for integrating animal, human, plant, and environmental health. Use it to align ministries and budgets. ([World Health Organization](http://WorldHealthOrganization))

**11) Finance prevention.** The **World Bank** estimates that prevention has a striking return on investment; the **Pandemic Fund** has expanded project pipelines globally. Don't wait for a crisis to fund preparedness. ([World Bank](http://WorldBank))

**12) Learn and adapt.** After-action reviews

# Five priority threats to watch in the next 12–18 months

1. **HPAI seasonal resurgence.** Expect continued activity in wild birds and sporadic poultry outbreaks, with variable mammalian spillover. Maintain occupational protections; global public-health risk remains **low**, per the latest joint assessment, but vigilance is warranted. ([offlu](#))
2. **ASF pressure in Asia/Europe.** Watch **wild boar** corridors and human-mediated jumps; recent spikes in Europe's wild boar serve as a warning. ([swinehealth.org](#))
3. **BTV-3 & EHD** in Europe. Vector seasons plus overwintering risk argue for proactive vaccination and surveillance. ([WOAH](#))
4. **LSD expansion westward** from Italy/France and into Iberia—now confirmed in **Spain**—with trade implications for dairy and beef. ([Reuters](#))
5. **New World screwworm northward spread** in Mexico and Central America; keep sterile-insect capacity funded and ready to surge. ([WOAH](#))

# Closing remarks - update

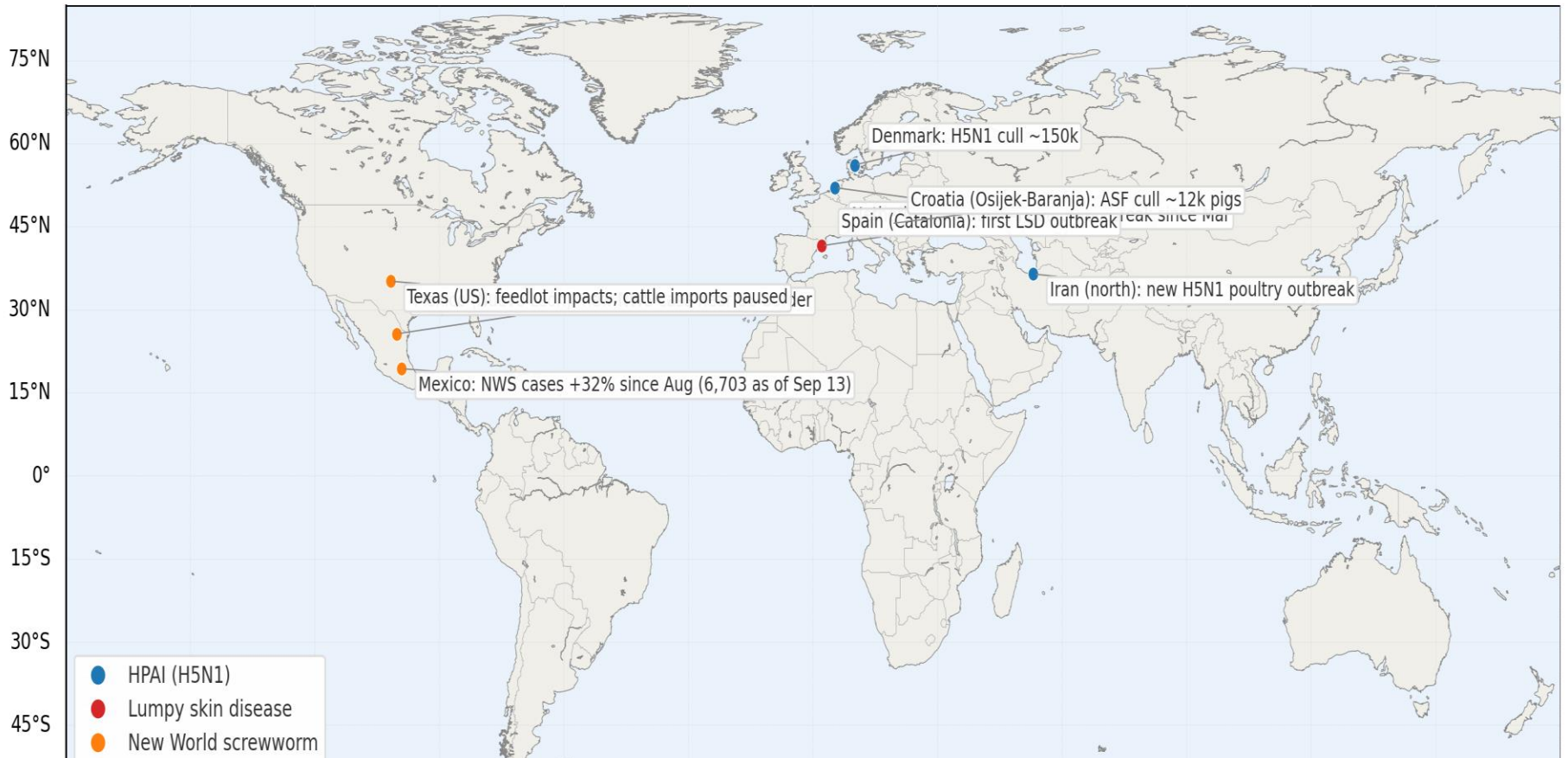
“Since **October 1-8, 2025**, we’ve seen **HPAI** re-ignite in **Denmark** and the **Netherlands**, plus a fresh **WOAH-reported** outbreak in **Iran**. **Lumpy skin disease** has now crossed into **Spain**, extending the cattle threat seen in **France** and **Italy** this summer. On the Americas front, **New World screwworm** continues to climb in **Mexico** and tug at the **U.S.-Mexico cattle trade**, while **ASF** remains active in **southeastern Europe**. These headlines reinforce our core message: the risks are **transboundary**, and the response must be **data-driven**—plugging **WAHIS** alerts straight into **EMPRES-i+** maps, then acting fast on **biosecurity**, **vaccination** where appropriate, **movement controls**, and **cross-border coordination**.”

# Animal Epidemics – Hot Map (Week of Oct 8, 2025)

One dot per headline • Color-coded by disease • Coastlines base map

One dot per headline • Color-coded by disease • Coastlines basemap

## Animal Epidemics – Hot Map (Week of Oct 8, 2025)

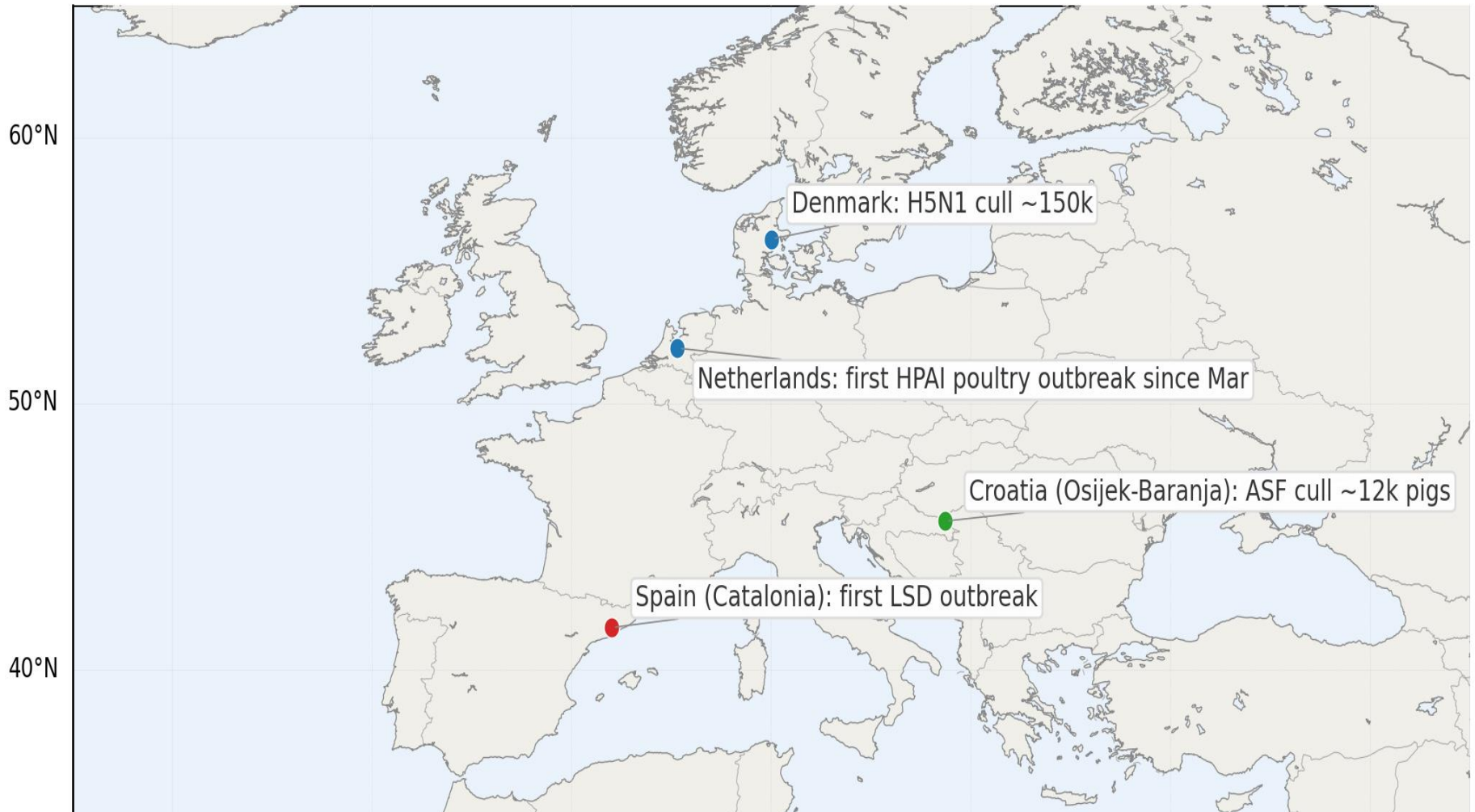


# Animal Epidemics – Europe & North Africa Hot Map

Regional zoom • One dot per headline • Coastlines basemap

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## Animal Epidemics – Europe & North Africa Hot Map (Week of Oct 8, 2025)



# Conclusion from crisis response to continuous prevention

## Prevention is possible...

We have the tools—**WAHIS** for transparency, **EMPRES-i+** for speed, **GF-TADs** for coordination, **WOAH Codes** for harmonization, and a **One Health** plan that aligns sectors under one roof. And we have proof that funding prevention pays back. The challenge is execution: **discipline in data, discipline in biosecurity, and discipline in financing.** ([WOAH](#))

If we do those things—consistently, year in and year out—we can bend the curve of animal epidemics and protect the people and ecosystems that depend on healthy animals.

# Thank you for your attention!

## Quick reference for cited systems and initiatives

- **WOAH – WAHIS** (official notification and monitoring of listed diseases). ([WOAH](#))
- **FAO – EMPRES-i+ & EMA-i** (early warning and disease intelligence). ([FAOHome](#))
- **GF-TADs** (FAO–WOAH platform for transboundary animal diseases). ([gf-tads.org](#))
- **Quadripartite One Health Joint Plan of Action (2022–2026)**. ([World Health Organization](#))