



Risk of 'long-distance jumps' of African swine fever in Europe

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Background

- ASF outbreaks in new regions often not explained by wild boar movements
- Transmission of ASF over large distances mostly related to human-mediated spread
- How to predict or prevent these 'long-distance jumps' of ASF?

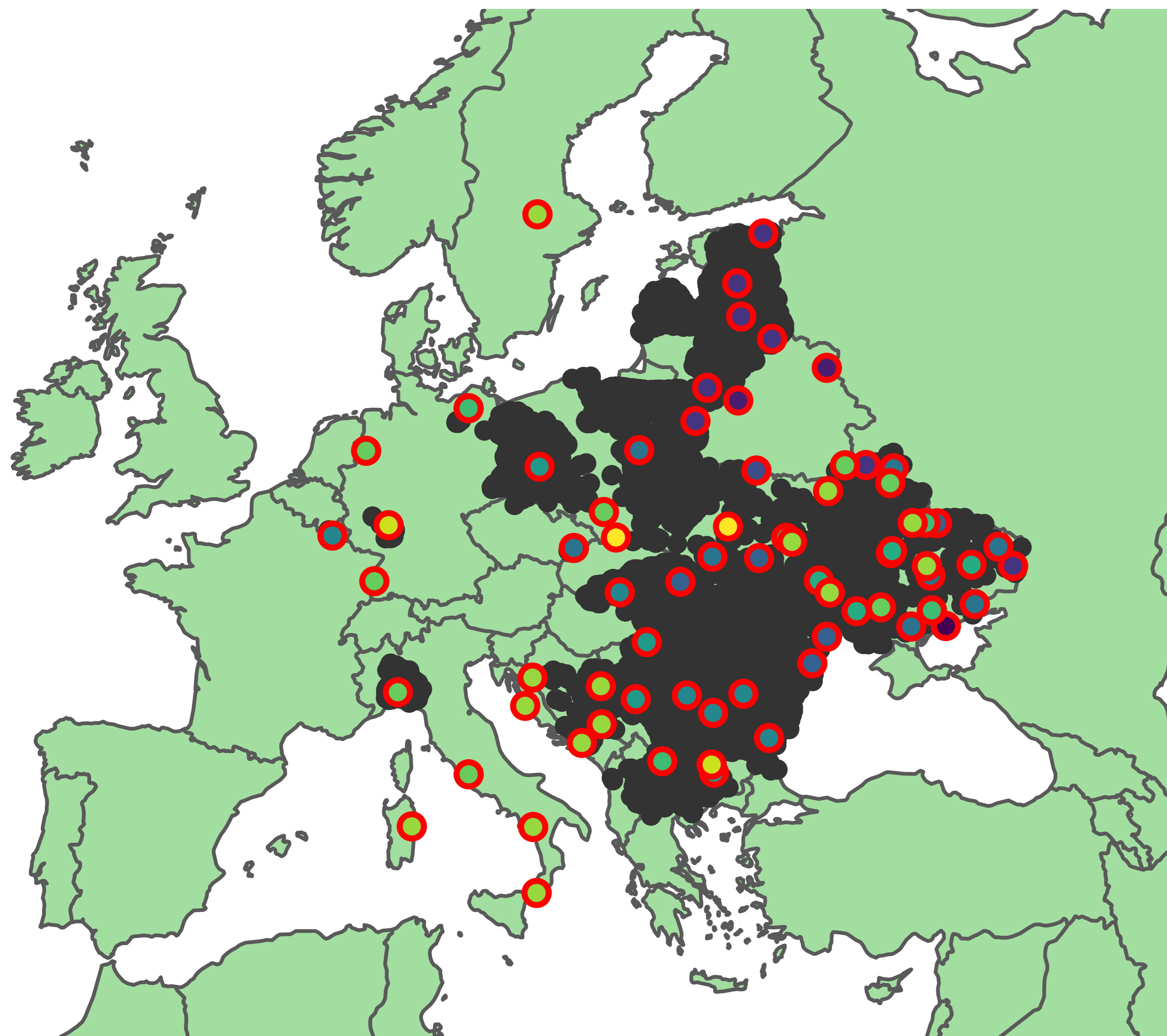
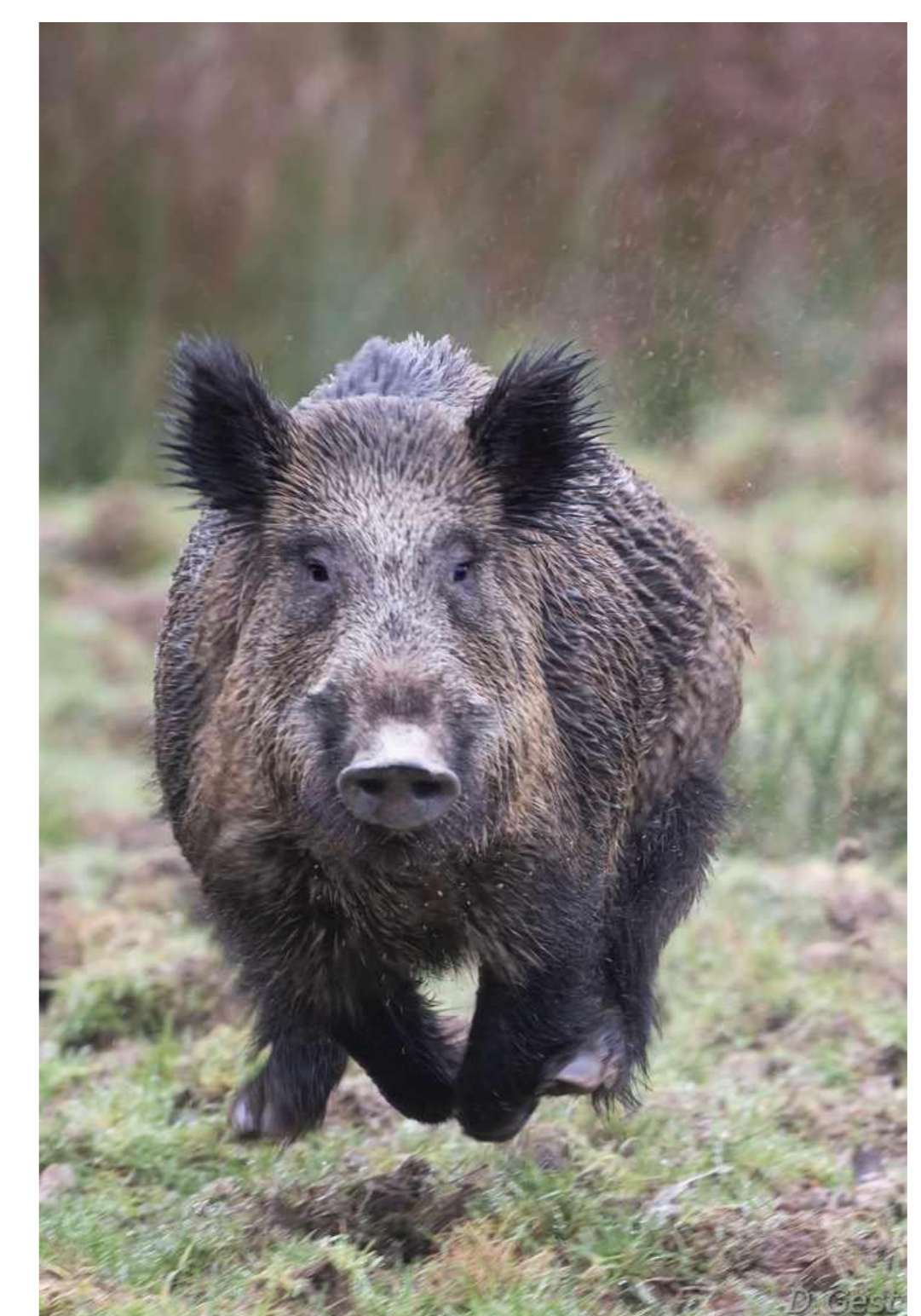


Figure 1. 'Long distance jumps' in Europe over the period 2012 – 2025 when considering distance in time (<365 days) and space (>100 km) to previous reported outbreaks. Source: WAHIS (WOAH).

Objective

To identify risk indicators for 'long-distance jumps' of ASF

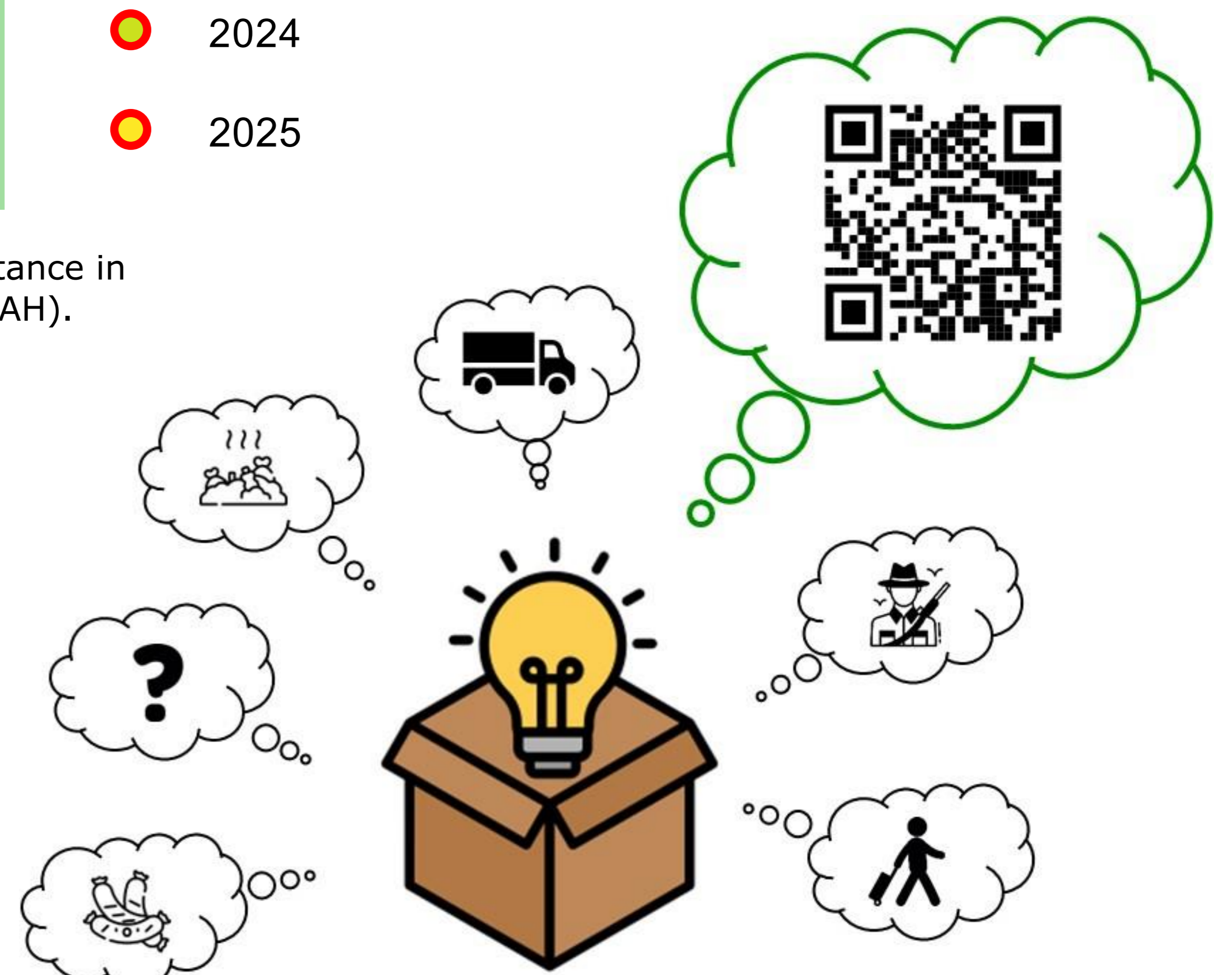


Approach

Exploring machine learning as a tool to identify risk indicators

Input into machine learning

- Historical 'long-distance jumps' of ASF in Europe
 - Dependent on definition in time and space (Fig. 1)
- Global databases including:
 - Populations: humans, livestock, wildlife
 - Ecology and land use: urban, agriculture, forest
 - Weather and climate: temperature, rainfall, radiation
 - Infrastructure: roads, railways, waterways, footpaths
- Data representing disease dynamics
 - First: broad inventory of risk factors and introduction routes
 - Literature review
 - Expert opinion
 - **YOU !!**
 - Next: identification of (proxy) variables to represent risk factors



<https://app.wooclap.com/ASFJUMPS>

Please help us to identify any possible routes of ASF incursion
Scan the QR code to post your ideas in our brainstorming box

Anticipated results

- Risk indicators to target for prevention, early detection and control
- Identification of hot spot areas for ASF incursion

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