

PROTOTYPE OF EARLY WARNING SYSTEM FOR HPAI IN THE EU

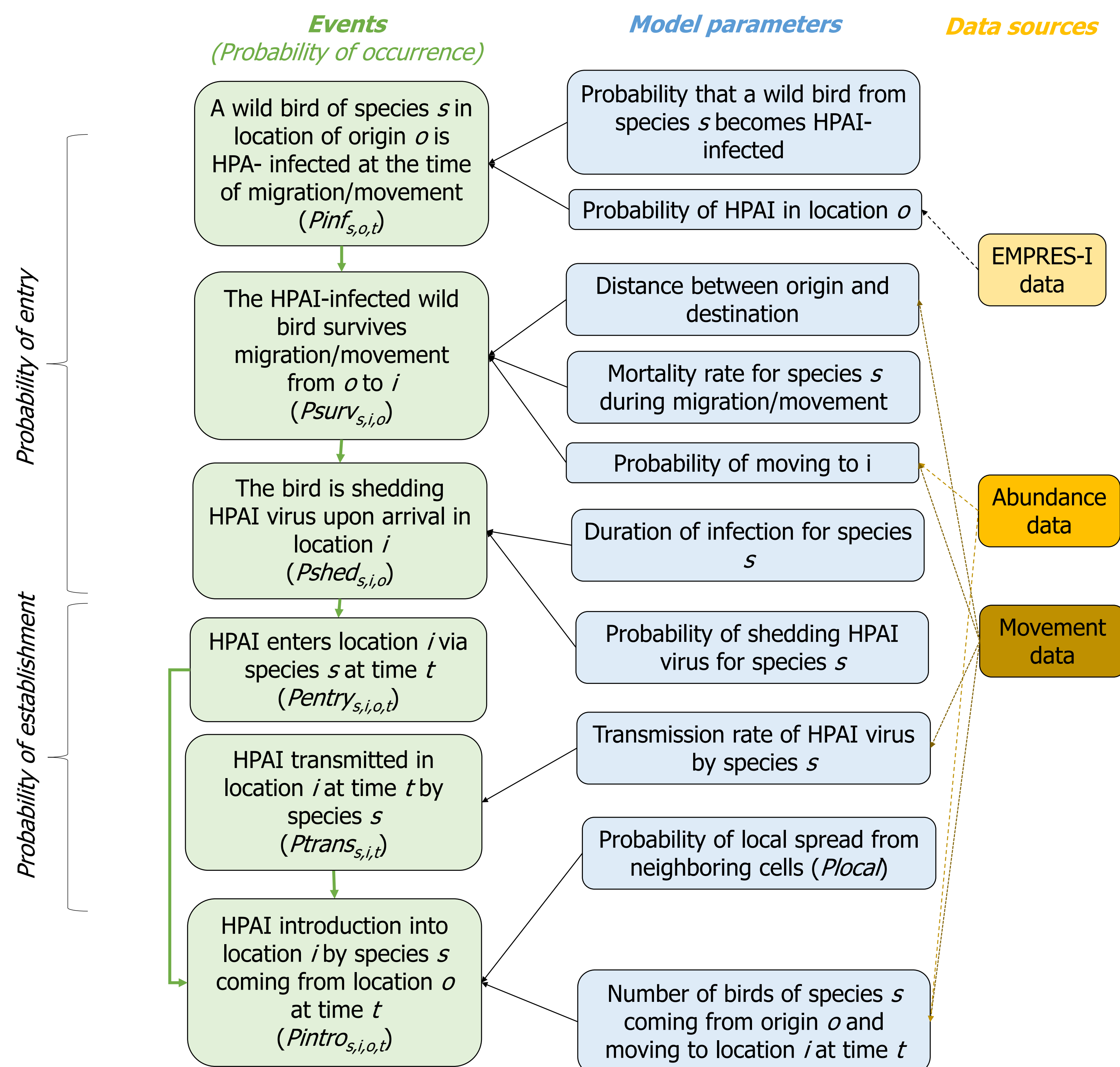
A. Fanelli¹, I. Aznar², A. Cameron¹, S.R. Baillie^{3,4,5}, J.G. Davies⁴, G.Gargallo⁶, C. Kampichler⁷, L. Kohnle², J. Stahl⁷, R.A. Robinson^{4,5}, H. Sierdsema⁷, C. Faverjon¹

1. Ausvet Europe, 2. EFSA, 3. EuroBirdPortal, 4. BTO, 5. EURING 6. Catalan Ornithological Institute, 7. Sovon



@ausvetgroup

SPATIOTEMPORAL RISK ASSESSMENT MODEL



A spatiotemporal risk assessment model based on the import risk assessment methodology was performed to estimate the probability of a Highly Pathogenic Avian Influenza (HPAI) outbreak in wild bird population by spatiotemporal unit across the European Union (EU). The weekly output is aggregated on a 50x50km grid cell.

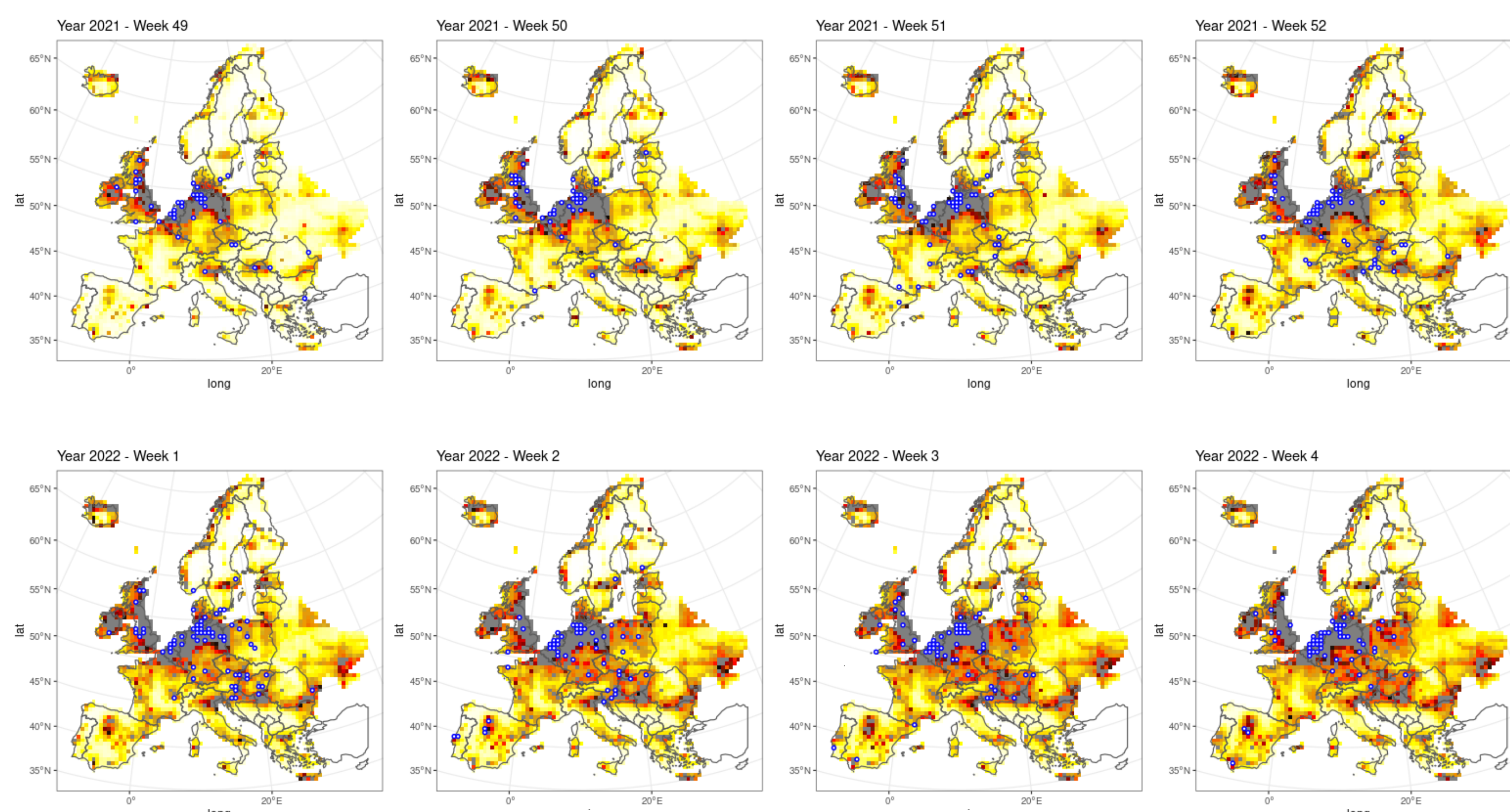
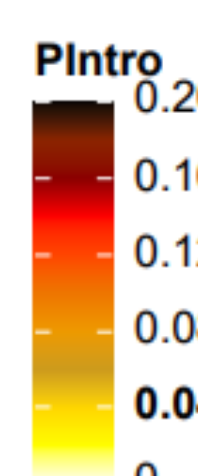
The input data are:

- Expected abundance of 12 wild bird species
- Long-distance movement of migratory populations
- Short-distance movement of migratory populations
- EMPRES-i data on HPAI outbreaks (H5 and H7) in wild birds

REAL-TIME UPDATE

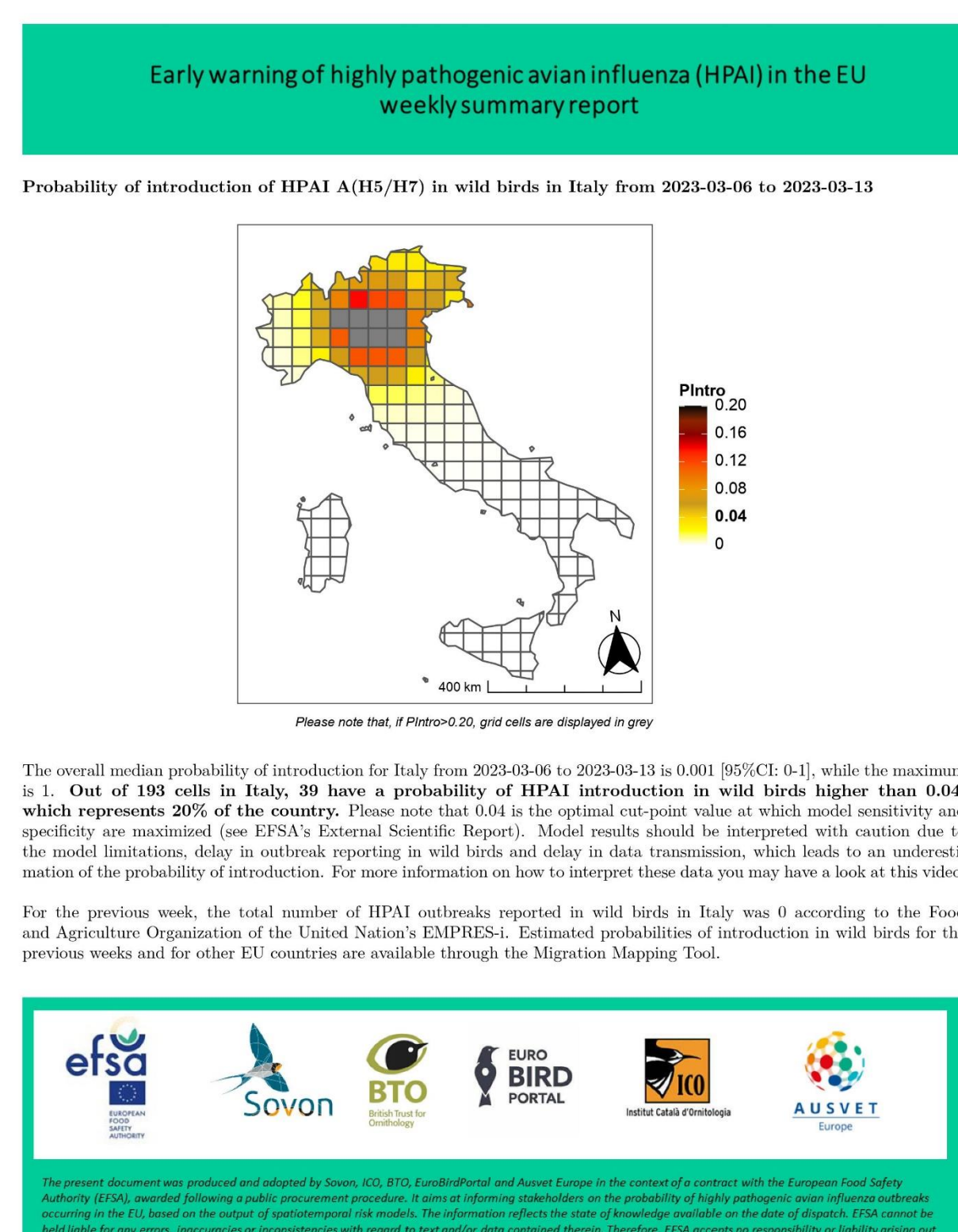


The spatiotemporal risk assessment model is updated on real time based on the latest HPAI outbreaks reported in wild birds in Europe. A Shiny graphical user interface (GUI) has been developed to show the model results. By autumn 2023 the model will be incorporated in the Migration Mapping Tool (MMT).



HPAI outbreaks are indicated as blue dots on the corresponding maps. Please note that, if $P_{intro} > 0.20$, grid cells are displayed in grey.

ALERT SYSTEM



Country-specific weekly reports are sent to the EFSA's contact points for Avian Influenza.

NEXT STEPS

Integrate the model into the MMT (EURING)

Add more wild bird species

Test different data sources for data on HPAI outbreaks

Include risk for poultry

2025



Institut Català d'Ornitologia



DISCLAIMER: The present document was produced and adopted by Sovon, ICO, BTO, EuroBirdPortal and Ausvet Europe in the context of a contract with the European Food Safety Authority (EFSA), awarded following a public procurement procedure. It aims at informing stakeholders on the probability of highly pathogenic avian influenza outbreaks occurring in the EU, based on the output of spatiotemporal risk models. The information reflects the state of knowledge available on the date of dispatch. EFSA cannot be held liable for any errors, inaccuracies or inconsistencies with regard to text and/or data contained therein. Therefore, EFSA accepts no responsibility or liability arising out of, or in connection with the information provided. The present document is not to be considered an output adopted by EFSA.