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# HPAI in Hungary 2016-2017

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17. January 2017



## Current situation

### Earlier occurrence:

24.02.2015. Füzesgyarmat, Békés county, fattening duck holding

### First outbreak:

3. 11. 2016. Tótkomlós, Békés county, turkey holding

**Affected counties:** Bács-Kiskun, Békés,  
Nagykun-Szolnok és Hajdú-Bihar

- 226 holdings
- 2,4 million birds





## HPAI in wild and captive wild birds

1. 26.10.2016. Szeged, Fehér-tó, mute swan
2. 24.11.2016. Püspökladány, mallard
3. 29.11.2016. Tata, mute swan
4. 28.12.2016. Kocs, lesser white-fronted goose
5. 04.01.2017. Budapest, Harris's hawk (captive wild bird)
6. 05.01.2017. Jászberény, mute swan and white stork (captive wild birds)
7. 05.01.2017. Zamárdi, greylag goose
8. 06.01.2017. Gyékényes, mute swan
9. 12.01.2017. Gyékényes, mute swan

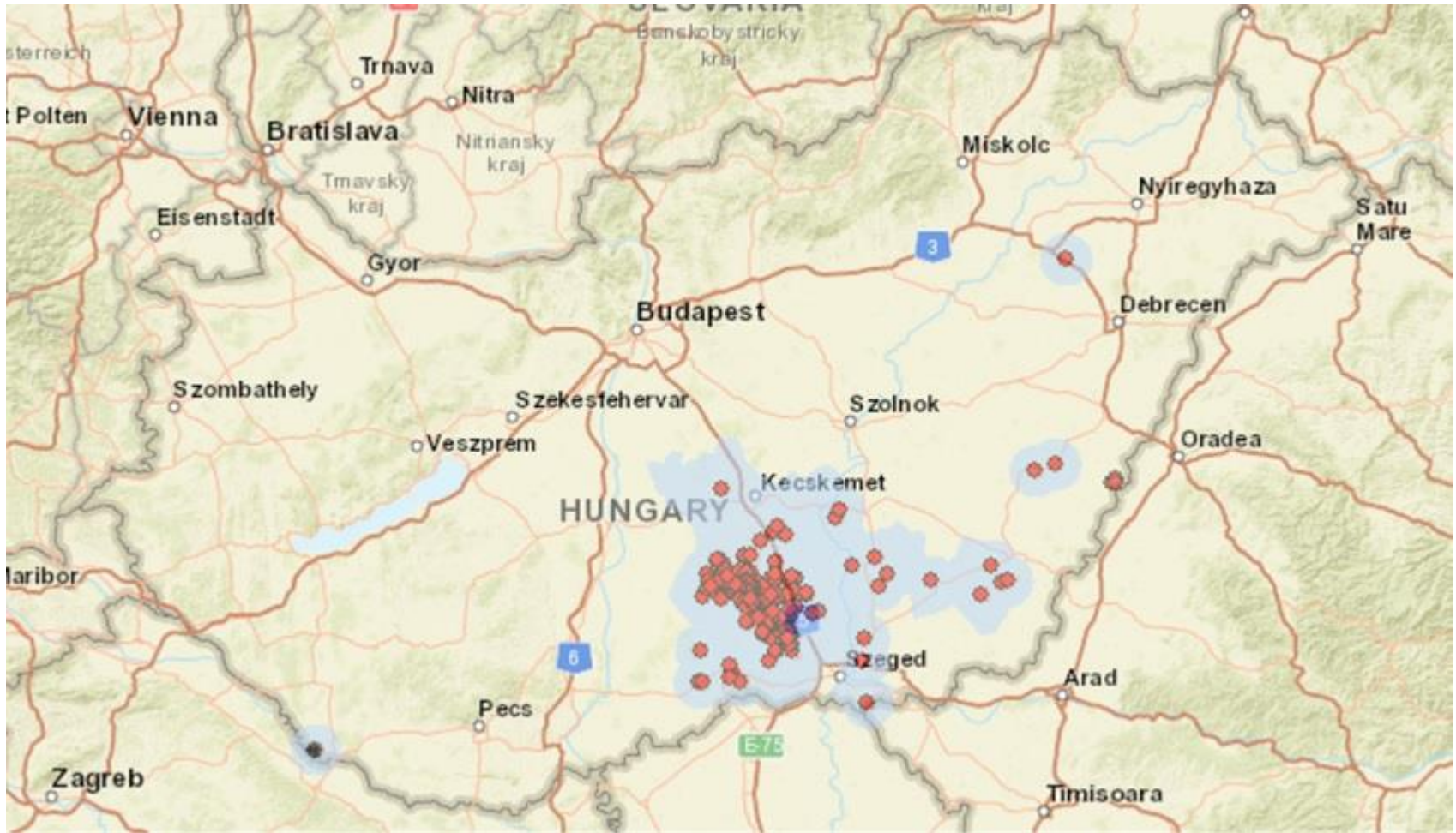


# Map of the outbreaks

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# Detailed map of the affected counties

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## Outbreaks in numbers

- **Bács-Kiskun** 177 holdings / 1 996 000 birds
  - **Békés** 13 holdings / 81 000 birds
  - **Csongrád** 28 holdings / 333 000 birds
  - **Jász-Nagykun** 6 holdings / 11 000 birds
  - **Hajdú-Bihar** 2 holdings / 12 500 birds
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## Outbreaks in numbers

- ducks 124 holdings / 1 703 000 birds
  - laying hens 2 holdings / 323 000 birds
  - goose 49 holdings / 203 000 birds
  - ducks and geese 6 holdings / 92 000 birds
  - broilers 1 holdings / 70 000 birds
  - turkeys 4 holdings / 37 000 birds
  - backyard 40 holdings / 7500 birds
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## Outbreaks in numbers

- 186 large-scale holdings (500 or more birds)
    - average size: 13300 birds
  - 40 small scale holdings (500 or less birds)
    - average size: 200 birds
    - in 17 holdings: less than 100 birds
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## Symptoms

- Morbidity and mortality have been very diverse





## Symptoms

- In some cases healthy flocks turned out to be positive
    - based on samples taken during preventive killing
    - based on samples taken before taken for slaughter
  - Towards the other end of the scale: 100% mortality in backyard flocks
  - In ducks: neurological symptoms are typical
  - In geese: bloody diarrhea, neur. symptoms after 2-3 days
  - In hens: shaking of head, diarrhea, rapid death
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## Control measures

In accordance with Council Directive 2005/94/EC and Diagnostic Manual 2006/437

- restricted zones – enlarged to cover high density areas
  - culling and safe disposal of the birds
    - method of culling
  - movement restrictions
    - derogations
  - preventive killing in the areas of 1km radius circle around the outbreaks in high-density territories
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## Further measures in place

- Orders of the CVO:
  - closed feeding of poultry in the whole territory of Hungary, closed, safe keeping of feed
  - closed keeping of poultry (or use of proper net in the outside areas) in Bács-Kiskun, Békés, Csongrád nad Hajdú-Bihar
- National Disease Control Centre
- Crisis Management Team (human management, logistics)
- awareness: TV, radio, internet
- Map of restricted zones available and searchable online:
- poultry: <http://airterkep.nebih.gov.hu/aaijo/bjk/bjk.htm>
- captive wild birds: [http://airterkep.nebih.gov.hu/aaijo/bjk/bjk\\_vad.htm](http://airterkep.nebih.gov.hu/aaijo/bjk/bjk_vad.htm)



## Epidemiological investigation and tracing

- Source: wild birds
    - further spread: identified risks (next slide)
  - Tracing
    - No poultry have been moved from the affected holdings to EU Member States or Third Countries
  - Experts assisting the Local Disease Control Centers
  - Active surveillance - cooperation with BirdLife Hungary
  - Increased surveillance program for poultry transports dispatched from free parts of the affected countries
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## Epidemiological investigation and tracing

### Identified risks

- Source: wild birds
    - proximity of wetlands, migratory birds flying over the holdings, (visual stains caused by them at the premises)
    - confirmed cases in wild birds
    - positive findings in wild birds worldwide
  - Spread between holdings
    - proximity of holdings (occasionally neighbours)
    - integrated production systems
  - Technology, feed
  - Wind: southeastern
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## Epidemiological investigation and tracing

- Based on the partial sequences, the virus is H5N8 HPAI with a cleavage site: PLREKRRKR/RGLF,
  - forms a new subtype of H5N8
  - very probably originating from wild birds from eastern China, on the northern migration route as in case of other AIV clades for ex. 2.3.2
  - further to Mongolia and to India (in New Delhi there is already H5N8) and further to Russia
  - after that, there was a big jump to Europe, Hungary
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## CVET mission

19-21. december 2016

Thanks to the mission team for the visit.

Findings and recommendations have been used to  
enhance the measures.

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# Thank you for your attention!

