The epidemiology of avian influenza (AI) is complex. AI viruses constantly evolve by mutation and re-assortment with the emergence of new subtypes causing significant impact on animal health and production. Some AI subtypes can be zoonotic and therefore pose major threat to human health.

This report presents an overview of HPAI disease events (in poultry and non-poultry including wild birds) reported to the OIE’s early warning system (immediate notification and follow-up reports) by its Members, as well as non-Member Countries, during the period 04 December – 24 December, 2020 through the World Animal Health Information System (WAHIS). The stable situations reported in the six-monthly reports by two countries, namely Egypt and Indonesia, are not described in this report as this data for the second semester 2019 and first and second semester 2020 will be collected throughout the first semester of 2021.

The HPAI events (new outbreaks) are reported in Table 1.

Table 1: HPAI outbreaks reported through early warning system during 04 December – 24 December 2020

<table>
<thead>
<tr>
<th>REGION</th>
<th>COUNTRY</th>
<th>Administrative divisions affected</th>
<th>Subtype(s)</th>
<th>N° Outbreaks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asia</td>
<td>Chinese Taipei, Iran, Israel, Japan, Korea (Rep., of), Vietnam</td>
<td>26</td>
<td>H5N5, H5N6, H5N8</td>
<td>43</td>
</tr>
<tr>
<td>Europe</td>
<td>Belgium, Denmark, France, Germany, Ireland, Italy, The Netherlands, Norway, Poland, Russia, Slovenia, Sweden, Ukraine, United Kingdom</td>
<td>51</td>
<td>H5, H5N1, H5N8</td>
<td>31</td>
</tr>
</tbody>
</table>

1. Spatial distribution

Figure 1. New and ongoing outbreaks in poultry (04 December – 24 December, 2020)

In this period, 74 new outbreaks (red dots on the map) were notified in poultry, in 14 countries in Asia and Europe. The total ongoing HPAI outbreaks worldwide is 168 (blue dots on the map). They are distributed as follows: Africa (16), Asia (69), Europe (83).

2. Impact of the disease by Region in poultry

During the period (04 December – 24 December), a total of 4,811,316 animals were notified as losses in Asia and Europe in the ongoing and new outbreaks (2,255,702 * losses notified in the previous report).

* The impact of the disease is measured in terms of losses, which are calculated by the sum of dead and culled animals from the infected farm or backyard premises of the reported outbreak. In case of non-poultry the losses correspond to the dead animals reported.

3. Changes in the epidemiological situation

Countries/Territories with new outbreaks during the period.

Africa

No new outbreaks were reported in poultry and non-poultry during the period. Ongoing outbreaks are still present in South Africa and Nigeria in poultry (H5N6 and H5N8) and in South Africa in non-poultry (H5N8).

America

No new or ongoing outbreaks were reported during the period.

Asia

Six countries reported 43 outbreaks (H5N5, H5N6, H5N8) in poultry. Four countries reported 28 outbreaks (H5N8) in non-poultry. Ongoing outbreaks are still present in 8 countries in poultry (H5, H5N1, H5N2, H5N5, H5N6, H5N8, H7N9) and in 3 countries in non-poultry (H5,H5N6, H5N8, H7N9).

Europe

Eight countries reported 31 outbreaks (H5, H5N1, H5N8) in poultry. Thirteen countries reported 270 outbreaks (H5, H5N1, H5N3, H5N5,H5N8) in non-poultry. Ongoing outbreaks are still present in 11 countries in poultry (H5, H5N1, H5N5, H5N8) and in 9 countries in non-poultry (H5,H5N1, H5N3, H5N5, H5N8).

Oceania

No new or ongoing outbreaks were reported during the period.
Key messages

In the reporting period in Asia and Europe, **74 new HPAI outbreaks** were reported in **domestic birds** involving subtypes H5, H5N1, H5N5, H5N6 and H5N8 and **298 new outbreaks** in **non-poultry** involving subtypes H5, H5N1, H5N3, H5N5 and H5N8. In addition, 628 HPAI outbreaks in poultry and non-poultry are still ongoing in Europe, Asia and Africa involving different subtypes, namely H5, H5N1, H5N2, H5N3, H5N5, H5N6, H5N8 and H7N9. Since the last OIE update on the HPAI situation, the number of new and ongoing outbreaks reported by countries has significantly increased, notably in Europe.

- In Europe, the first outbreaks of HPAI H5N8 were reported in August 2020 in Russia in both poultry and wild birds. Since then, a new wave of epizootic outbreaks of H5N8 have been continuously reported in several European countries especially in wild birds, but also in poultry starting from mid October. The H5N8 virus has also reassorted with other wild bird influenza viruses to form new strains of H5N5 and H5N1 HPAI virus, which were also reported by countries. A similar situation of H5N8 epizootics associated with wild bird migration occurred in 2016/17. A few Asian countries also reported HPAI H5N8 outbreaks in poultry and/or wild birds. It is more likely that the source of introduction in these outbreaks is through migratory wild birds and onward local spread. Report of increased number of outbreaks in wild birds indicate periods of heightened risk in countries due to migratory flyways during this season. Consequently, improving on-farm biosecurity measures is a priority to reduce the likelihood of exposure to poultry.
- Outbreaks of H5N1, H5N2, H5N5, H5N6, H5N8 and H7N9 are continuing in Asian countries.
- The few ongoing outbreaks of H7N7 in Australia have been declared resolved.
- In Africa, ongoing outbreaks of H5N6 and H5N8 are continuing in Nigeria and South Africa.

Veterinary Authorities in the affected countries have responded to contain outbreaks in poultry with stamping out measures, heightened surveillance, and recommendations to poultry owners to increase biosecurity.

The OIE Standards, and the transparency of reporting through the OIE’s World Animal Health Information System, provide the framework for Veterinary Services to implement effective surveillance, reporting, and controls for avian influenza. Wild bird surveillance can indicate periods of heightened risk, and at these times measures to improve on-farm biosecurity may reduce the likelihood of exposure of poultry.