The epidemiology of avian influenza (AI) is complex. AI viruses constantly evolve by mutation and reassortment 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 25 December – 14 January, 2021 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 25 December – 14 January, 2021

<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>Africa</td>
<td>Senegal</td>
<td>1</td>
<td>H5N1, H5N5, H5N6, H5N8</td>
<td>79</td>
</tr>
<tr>
<td>Asia</td>
<td>Cambodia, Chinese Taipei, Hong Kong, India, Iran, Israel, Japan, Korea (Rep. of), Vietnam</td>
<td>42</td>
<td>H5, H5N8</td>
<td>40</td>
</tr>
<tr>
<td>Europe</td>
<td>Belgium, France, Germany, Hungary, Ireland, Italy, Lithuania, The Netherlands, Poland, Russia, Slovakia, Slovenia, Sweden, Ukraine, United Kingdom</td>
<td>39</td>
<td>H5, H5N8</td>
<td>39</td>
</tr>
</tbody>
</table>

1. Spatial distribution

Figure 1. New and ongoing outbreaks in poultry (25 December – 14 January, 2021)

In this period, 215 new outbreaks (red dots on the map) were notified in poultry, in 18 countries in Africa, Asia and Europe. The total ongoing HPAI outbreaks worldwide is 372 (blue dots on the map). They are distributed as follows: Africa (16), Asia (143), Europe (213).

Figure 2. New and ongoing outbreaks in non-poultry, including wild birds (25 December – 14 January, 2021)

In this period, 79 new outbreaks were notified in non-poultry in 17 countries in Asia and Europe. The total ongoing HPAI outbreaks (blue dots on the map) in these bird populations is 422. They are distributed as follows: Africa (5), Asia (70), and Europe (347).

2. Impact of the disease by Region in poultry

During the period (25 December – 14 January, 2021), a total of 7,383,756 animals were notified as losses in Africa, Asia and Europe in the ongoing and new outbreaks (4,811,316 * 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

One new outbreak was reported in poultry in Senegal (H5N1) 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

Eight countries reported 79 outbreaks (H5N1, H5N5, H5N6, H5N8) in poultry. Four countries reported 40 outbreaks (H5, H5N8) in non-poultry. Ongoing outbreaks are still present in 9 countries in poultry (H5, H5N1, H5N2, H5N5, H5N6, H5N8, H7N9) and in 3 countries in non-poultry (H5,H5N6, H5N8, H7N9).

Europe

Nine countries reported 135 outbreaks (H5, H5N8) in poultry. Twelve countries reported 39 outbreaks (H5, H5N1, H5N5, H5N8) in non-poultry. Ongoing outbreaks are still present in 13 countries in poultry (H5, H5N1, H5N5, H5N8) and in 10 countries in non-poultry (H5,H5N1, H5N3, H5N5, H5N8).

Oceania

No new or ongoing outbreaks were reported during the period.
In the reporting period **215 new HPAI outbreaks** were reported in **domestic birds** (subtypes H5, H5N1, H5N5, H5N6 and H5N8) in Asia, Europe and Africa and **79 new outbreaks** in **non-poultry** (subtypes H5, H5N1, H5N5 and H5N8) in Asia and Europe. In addition, 794 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. The number of new and ongoing outbreaks reported by countries notably in Asia and Europe continue to be significant during this period.

- 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. 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.
- In Asia, Cambodia and India reported reoccurrence of H5N1 and H5N8 outbreaks respectively in poultry, while Hong Kong reported first occurrence of H5N8 in non-poultry faecal environmental samples. Ongoing outbreaks of 
  - H5N1, H5N2, H5N5, H5N6, H5N8 and H7N9 are also continuing in few Asian countries.
- In Africa, Senegal reported HPAI H5N1 in layer poultry farms, becoming the first occurrence of HPAI in the country. Outbreaks of H5N6 and H5N8 are ongoing 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.