Background paper

2.1 a Global situation: HPAI outbreaks in poultry- a synthesis of country reports to the OIE

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Summary

A tendency has been recently observed for highly pathogenic avian influenza (HPAI) virus subtype H5N1 to re-emerge in some countries that had already eradicated the disease. The HPAI H5N1 epizootic that started in South-East Asia at the end of 2003 and remained confined to this region in 2004, spread to other regions and continents in 2005 and 2006. Three new countries, namely Bangladesh, Kuwait and Saudi Arabia, have been affected in 2007.

In 2006, a total of 47 countries reported HPAI outbreaks due to the Asian strain of H5N1: 8 in Africa, 15 in Asia and 24 in Europe. The disease occurred in poultry and/or wild birds. In Europe the majority of confirmed cases involved wild birds. The very cold winter that occurred in central Europe in early 2006 is thought to have resulted in a movement of wild birds southwards (to Italy, the Balkan region, Greece, etc.) and been responsible for the cases of HPAI identified there during the first half of 2006.

The majority of affected countries succeeded in eradicating the disease in 2006. However, in some countries, such Indonesia, Egypt, Nigeria and to a certain extent the People's Republic of China, the disease became endemic and a large number of outbreaks went unreported.

In late March 2007, Bangladesh reported the occurrence of HPAI H5N1 in layer flocks in Dhaka Region. The disease had never been reported in Bangladesh before. Movement control has been implemented within a 10-km-radius zone around the outbreaks and a stamping out strategy is being used to control the disease. Veterinary Authorities are discussing the possible use of vaccination.

In February 2007, Kuwait reported an outbreak of HPAI in falcons in a zoo. Further outbreaks occurred in backyard chickens in March 2007.

At the end of March 2007, Saudi Arabia reported the reoccurrence of HPAI H5N1, in the Province of Ash Sharqiyah. The main control measures that have been applied are movement control inside the country, stamping out and quarantine.

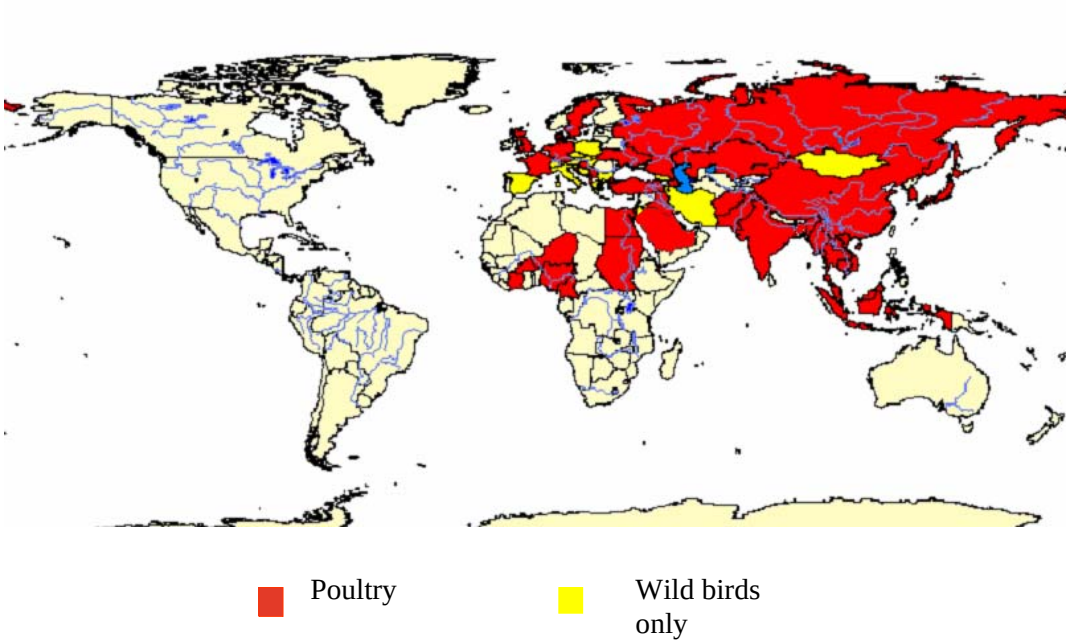
From these reports of the reoccurrence of HPAI H5N1 outbreaks in several previously affected countries, we can conclude that most of these countries are now better prepared for the early detection of and rapid response to new outbreaks of the disease. The majority of the Veterinary Services are now ready to tackle the disease when it occurs. A few countries that have been affected for several years are still having difficulty in bringing the disease under control. The endemic nature of the disease in these countries constitutes a permanent source of potential contamination for humans and could also be a source of contamination for other countries, through illegal movements of animals, for example. HPAI H5N1 in animals remains a threat to public health.

Key words: Avian Influenza, World Organisation for Animal Health; epizootic.

A tendency has been recently observed for highly pathogenic avian influenza (HPAI) virus subtype H5N1 to re-emerge in some countries that had already eradicated the disease. The HPAI H5N1 epizootic that started in South-East Asia at the end of 2003 and remained confined

to this region in 2004, spread to other regions and continents in 2005 and 2006. Three new countries, namely Bangladesh, Kuwait and Saudi Arabia, have been affected in 2007 (Figure 1).

Figure 1. Countries having notified HPAI H5N1 between December 2003 and May 2007.



In 2006, a total of 47 countries reported HPAI outbreaks due to the Asian strain of H5N1: 8 in Africa, 15 in Asia and 24 in Europe. The disease occurred in poultry and/or wild birds. In Europe the majority of confirmed cases involved wild birds. The very cold winter that occurred in central Europe in early 2006 is thought to have resulted in a movement of wild birds southwards (to Italy, the Balkan region, Greece, etc.) and been responsible for the cases of HPAI identified there during the first half of 2006.

The majority of affected countries succeeded in eradicating the disease in 2006. However, in some countries, such as Indonesia, Egypt, and Nigeria, the disease became endemic and many outbreaks went unreported. The People's Republic of China has recently reported (March 2007) HPAI in chickens in Lhassa, capital of Tibet Autonomous Region, with 680 dead out of a total of 7,670 birds. Stamping out has been applied. Mass vaccination is applied in this country, which could indicate that the disease is endemic in certain regions of the country.

In November 2006, the Republic of Korea reported the reoccurrence of HPAI virus subtype H5N1, the previous reported outbreak having been in March 2004. Seven outbreaks were reported between November 2006 and March 2007. Stamping-out was applied to poultry in the affected farms.

Vietnam reported the reoccurrence of HPAI H5N1 in December 2006, five months after the previous reported outbreak in August 2006. Vietnam has used blanket vaccination against HPAI to control the disease.

Thailand reported the reoccurrence of HPAI H5N1 in January 2007, the first reported outbreaks in the country since 2 August 2006. The disease first occurred in Thailand in January 2004 and took almost 32 months to eradicate. Thailand uses stamping out as its strategy to eradicate the disease and vaccination is prohibited. Continuous intensive surveillance is in place.

In early 2007, Japan reported outbreaks of HPAI H5N1 in Miyasaki and Okojama, in the southern part of the country. The previous occurrence of the disease was in March 2004. A stamping out strategy is used to control the disease and vaccination is prohibited.

In January 2007 and within the framework of its active surveillance programme for avian influenza, Hong Kong (Special Administrative Region of the People's Republic of China) has reported cases of HPAI H5N1 in dead wild birds (*Lonchura punctulata*). This species distributed in the southern part of the People's Republic of China (Yunnan, Guangxi, Fujian and Hainan), Taipei China, Northern Thailand, Laos, Cambodia and Vietnam. An intensive surveillance system is in place on all poultry farms and in other locations in Hong Kong. No evidence of the disease has been found in domestic birds.

Hungary reported the reoccurrence of HPAI in January 2007, in two flocks of geese in Csongrad county. The first was a flock of 3,355 geese in a commercial unit in Szentes-Lapistó, Szentes, and the second was a flock of 9,386 geese in Derekegyház-Ördöngös, Szentes. These were the first reported outbreaks in the country since June 2006.

In late January 2007, the United Kingdom reported the reoccurrence of HPAI, the outbreak occurring in a turkey meat production plant in Upper Holton, Suffolk, England. Virological examinations revealed the virus to be of Asian lineage and molecular genetic studies revealed that the nucleotide sequence of the haemagglutinin gene was identical to that of the isolate of HPAI H5N1 from an outbreak in domestic geese in Hungary. The source of introduction of the disease into the affected farm is not yet known and investigations are in progress. The previous occurrence of HPAI H5N1 reported by the United Kingdom was in March 2006, when a single case was confirmed in a wild whooper swan found dead at Anstruther in Scotland. No domestic poultry were affected at that time.

In February 2007, Turkey reported the reoccurrence of HPAI H5N1 in Batman and Dyarbakir, located in the eastern part of the country. The previous occurrence in Turkey was in March 2006. In early April 2007, Turkey declared this event resolved.

In early February 2007, Pakistan reported the reoccurrence of the disease in backyard poultry in North-West Frontier Province, not very far from the border with the People's Republic of China. The previous reported outbreak was in July 2006.

Laos reported the reoccurrence of HPAI in early February 2007 near the capital, Vientiane, nearly seven months after the previous reported outbreak in July 2006.

In February 2007, Russia reported three outbreaks of HPAI H5N1 in Krasnodarskiy Kray, near the Black Sea, in native chickens and traditionally raised ducks, geese and turkey cocks. Further outbreaks were reported in Moskovskaya region, near Moscow. The source of infection is thought to have been birds bought from a live bird market in Sadovod, near Moscow, since birds bought at this market had been introduced into the affected backyard flocks. Vaccination is permitted as a control measure. These were the first reported outbreaks in Russia since August 2006.

In February 2007, Kuwait reported an outbreak of HPAI in falcons in a zoo. Further outbreaks occurred in backyard chickens in March 2007.

At the end of February and in early March 2007, Myanmar reported outbreaks of HPAI H5N1 in Rangoon. These were the first outbreaks of the diseases since April 2006.

At the end of February and in the middle of March 2007, Afghanistan reported outbreaks of HPAI H5N1 in backyard poultry and turkeys in the provinces of Nangarhar, Kabul and Kunar. These were the first outbreaks of the disease since March 2006. Border and inter-provincial quarantines were strictly enforced, including chicken markets in Jalalabad, Kunar and Kabul city. Vaccination of breeder chickens and turkeys with a vaccine against avian influenza virus subtype H5N2 started in Jalalabad on 21 February 2007.

In late March 2007, Bangladesh reported the occurrence of HPAI H5N1 in layer flocks in Dhaka Region. The disease had never been reported before. Movement control was implemented

within a 10-km-radius zone around the outbreaks. A stamping out strategy is being used to control the disease. Veterinary Authorities are discussing about the use of vaccination.

At the end of March 2007, Saudi Arabia reported the reoccurrence of HPAI H5N1, in the Province of Ash Sharqiyah. The main control measures that have been applied are movement control inside the country, stamping out and quarantine.

In April 2007, Cambodia reported the reoccurrence of HPAI H5N1 in Kg. Cham province, the affected population being backyard poultry (ducks and chickens) in a village. This was the first occurrence of the disease in Cambodia since September 2006. Stamping out was undertaken on 11 April 2007.

From these reports of the reoccurrence of HPAI H5N1 outbreaks in several previously affected countries, we can conclude that most of these countries are now better prepared for the early detection of and rapid response to new outbreaks of the disease. The majority of the Veterinary Services are now ready to tackle the disease when it occurs. A few countries that have been affected for several years are still having difficulty in bringing the disease under control. The endemic nature of the disease in these countries constitutes a permanent source of potential contamination for humans and could also be a source of contamination for other countries, through illegal movements of animals, for example. HPAI H5N1 in animals remains a threat to public health.