Avian influenza in wild birds – a need for new control strategies

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From February until April 2006, cases of highly pathogenic avian influenza (HPAI) virus Asian lineage H5N1 occurred in wild birds around Lake Constance. This lake is situated between Germany, Austria and Switzerland. No cases in domestic birds occurred. As a consequence of this outbreak, issues related to disease control measures against HPAI in wild birds were intensively discussed at an international level.

During the outbreak, measures applied in the European Union and Switzerland were primarily based on strategies derived from HPAI cases in domestic poultry, i.e. the implementation of protection and surveillance zones, accompanied by movement restrictions of animals and animal products. At the same time, surveillance was increased in both domestic and wild bird populations using active and passive surveillance approaches. The epidemiology of the outbreak of HPAI in wild birds at Lake Constance demonstrates that such disease control strategies are not adequate for cases of HPAI in wild birds.

As an alternative strategy, the implementation of a monitoring area is proposed. The extent of this area is established on a case-by-case basis including the entire affected area or lake. It can be adapted using local epidemiological and ornithological information. Within the monitoring area, risk-based surveillance of wild and domestic birds is applied. In addition, measures to prevent virus spread from wild to domestic bird populations are implemented. These should be proportionate to the current risk assessment. General biosafety measures for poultry holdings as well as indoor housing for holdings that are at higher risk of infection are recommended. In accordance with OIE standards, there should be no trade restrictions as long as no transmission to domestic poultry occurs.

The advantage of the monitoring area is that it is tailored to the dynamic nature of HPAI in wild birds, it encourages surveillance and therefore knowledge gain regarding wild birds; and control measures in domestic poultry are proportionate to the risk of transmission from wild to domesticated birds. The monitoring area can also be applied preventively, for example during times of peak bird migration, to protect poultry holdings situated in the proximity of important waterbird habitats.

Our experience demonstrates that HPAI in wild birds is a trans-boundary issue. Therefore, international coordination and standardization of control measures is important as risk communication will be unnecessarily challenged by the implementation of varying levels of risk management.

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