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The publication by WOAH of a self-declaration on its website does not reflect the official opinion of WOAH.

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- (iii) any direct or indirect consequences of any nature arising from or relating to the use of the information contained in a self-declaration.

## Self-declaration of the recovery of country freedom from infection with high pathogenicity avian influenza viruses in poultry by Sweden

**Declaration sent to the World Organisation for Animal Health (WOAH, founded as OIE) on 19 September 2022 by Dr Lena Hellqvist Björnerot, Chief Veterinary Officer and WOAH Delegate for Sweden, Swedish Board of Agriculture.**

### 1. Introduction

Sweden is submitting the following documentation for publication by the World Organisation for Animal Health (WOAH; founded as OIE), attesting that Sweden has regained disease freedom status from infection with *high pathogenicity avian influenza* (HPAI) viruses in poultry for the entire territory of Sweden from 28 January 2022. This is done in accordance with Article 10.4.6. of the WOAH *Terrestrial Animal Health Code (Terrestrial Code)*.

Sweden formally requests WOAH to publish this self-declaration for the recovery of country freedom from infection with HPAI viruses in poultry.

### 2. Avian influenza situation in Sweden

HPAI was first detected in Sweden in 2006 when HPAI subtype H5N1 was confirmed in wild birds. There were no new cases of HPAI in poultry in Sweden until the winter season of 2016/17, when HPAI subtype H5N8 became very widespread in Europe, with cases in both wild birds and domestic poultry in many countries. Sweden had four separate introductions of HPAI subtype H5N8 in poultry in 2017. Thereafter, HPAI virus was not detected in poultry in Sweden between January 2018 and November 2020.

During the winter season of 2020/21, there were 16 outbreaks of HPAI in poultry and 7 cases in other captive birds. The last outbreak was confirmed on 20 April 2021, and Sweden was considered as a country free from infection with HPAI viruses in poultry from 31 May 2021, according to the WOAH *Terrestrial Code*. However, no self-declaration was published on the dedicated WOAH webpage at that time.

In December 2021, three new outbreaks were confirmed in poultry, and the HPAI virus was also detected in three separate holdings with captive birds (non-poultry). Additionally, one case of HPAI in captive birds was confirmed in March 2022. All seven cases were confirmed to be HPAI subtype H5N1. All events were reported to WOAH via the World Animal Health Information System (WAHIS). All outbreaks and cases were confirmed by real-time polymerase chain reaction (PCR) and gene sequencing at the National Veterinary Institute (NVI), Sweden's national reference laboratory for avian influenza, in Uppsala, Sweden. The stamping-out policy (incl. cleaning and disinfection) of the last infected poultry establishment was completed on 28 December 2021. See table 1 below for more details of all outbreaks in poultry during 2020-2021.

On 28 January 2022, Sweden was again considered as a country free from HPAI according to the WOAH *Terrestrial Code*. In 2022, there have not been any confirmed cases of HPAI in poultry in Sweden.

For more information about the HPAI situation in Sweden, please see the NVI yearly [surveillance report for infectious diseases](#).

Table 1. Details of outbreaks of HPAI in poultry in Sweden during 2020 – 2021.

OIE-WAHIS report ID	OIE-WAHIS outbreak no.	Date confirmed as HPAI	Serotype	Municipality	Production type	Number susceptible animals	Disinfection finalised
IN_36620	1000139554*	2020-11-16	H5N8	Ystad	Turkeys	5.100	2020-11-19
IN_37416	1000142550*	2021-01-03	H5N8	Sjöbo	Parent poultry (broiler)	84.864	2021-01-19
FUR_37677	1000143880*	2021-01-15	H5N8	Skurup	Turkeys	2.350	2021-01-17
IN_37742	1000144057*	2021-01-18	H5N5	Mönsterås	Egg laying hens	1.928.376	2021-02-25
FUR_38278	1000146784*	2021-02-16	H5N8	Simrishamn	Turkeys	3.500	2021-02-18
IN_149026	ob_82692	2021-02-24	H5N8	Linköping	Broiler chickens	14.300	2021-02-27
FUR_149065	ob_82754	2021-03-02	H5N8	Trelleborg	Pheasants (game restocking)	470	2021-03-03
IN_149033	ob_82703	2021-03-02	H5N8	Kungsbacka	Breeding, show poultry	263	2021-03-03
IN_149037	ob_82708	2021-03-03	H5N5	Trelleborg	Egg laying hens	18.000	2021-03-06
FUR_149053	ob_82735	2021-03-09	H5N8	Mjölby	Egg laying hens	24.000	2021-03-14
FUR_149100	ob_82789	2021-03-13	H5N8	Linköping	Egg laying hens	33.000	2021-03-17
FUR_149105	ob_82797	2021-03-14	H5N8	Sjöbo	Parent poultry (broiler)	53.200	2021-03-18
FUR_149116	ob_82835	2021-03-15	H5N8	Mjölby	Egg laying hens	22.700	2021-03-21
FUR_149116	ob_82836	2021-03-15	H5N8	Mjölby	Egg laying hens	26.400	2021-03-20
FUR_149153	ob_82901	2021-03-16	H5N8	Tomelilla	Turkeys	30.000	2021-03-24
FUR_149618	ob_84892	2021-04-20	H5N8	Eslöv	Egg laying hens	17.819	2021-04-26
IN_152946	ob_93919	2021-12-13	H5N1	Skurup	Turkeys	6.100	2021-12-15
FUR_153010	ob_94144	2021-12-17	H5N1	Simrishamn	Rearing parent stock	20.000	2021-12-22
FUR_153196	ob_94642	2021-12-28	H5N1	Ystad	Turkeys	15.939	2021-12-28

### 3. Control and eradication measures for HPAI outbreaks

In Sweden, EU legislation applies. Notably, before the 21<sup>st</sup> of April 2021, measures were applied in accordance with Council Directive (EC) 2005/94. Since the 21<sup>st</sup> of April 2021, the new Animal Health Law ([Regulation \(EU\) 2016/429](#)) and [Commission Delegated Regulation \(EU\) 2020/687](#) have been applied. According to the new legislation, the following control measures have been applied since 21<sup>st</sup> of April 2021.

Disease control measures were immediately implemented on all infected holdings under the supervision of official veterinarians. All appropriate and necessary biosecurity measures were taken to avoid any possible spread of the disease. A stamping out policy was implemented on all infected holdings, with carcasses safely disposed of by official destruction. A protection zone (PZ) of 3 km radius and a surveillance zone (SZ) of 10 km radius were established around the infected holding.

Other control measures were applied at the infected holdings, in accordance with Articles 10.4.23. to 10.4.25:

- meat of poultry slaughtered and eggs collected from the holding during the period between the probable date of introduction of HPAI on holding were traced and disposed of;

- all products, materials, or substances likely to be contaminated were kept isolated until they were disposed of or treated in such a way as to ensure the destruction of the avian influenza virus;
- Immediately after the completion of the safe disposal of carcasses, the following measures were implemented to avoid the spreading of the disease:
- all premises, including housing facilities, equipment and vehicles likely to be contaminated were cleaned and disinfected.

Epidemiological investigations at the infected premises were conducted, for the purpose of identifying possible sources and spread of infection and samples were collected for laboratory examination from kept birds of listed species. No further outbreaks were identified through epidemiological investigations. It was concluded that the most likely route of virus introduction into infected premises was via direct or indirect contact with wild birds due to the known presence of HPAI in wild birds in the area leading to high infection pressure.

In the restriction zones (PZ and SZ), the following measures were applied in accordance with [Commission Delegated Regulation \(EU\) 2020/687](#).

- poultry were kept indoors and separated from wild birds and other animals;
- additional animal health surveillance was put in place for poultry in the protected zone with the obligation to immediately notify the Swedish Board of Agriculture of any signs of disease;
- additional biosecurity measures were put in place (if not already done). For example, equipment for the decontamination of boots and other footwear, as well as equipment for personal decontamination, was set up at the barrier points and at all entrances and exits to the animal areas;
- official veterinarians performed at least one visit to all poultry establishments located in the PZ and selected poultry establishments in SZ. During the visit, clinical examinations were performed, and samples were taken if any abnormalities were noted;
- movements of poultry and other kept birds, products and materials within, to and from the zones were prohibited;
- general and specific conditions for safe movements and derogations from the abovementioned measures were applied when necessary, in accordance with national and EU legislation.

In addition to these measures, all operators keeping poultry or captive birds are obliged by law to apply biosecurity measures to prevent disease transmission between poultry flocks and from wild birds to poultry or captive birds. The measures aim to prevent the introduction and/or spread of infectious agents directly or indirectly to, from and within the holding, for example, via animals, products, feed, vehicles, equipment, or humans. Biosecurity measures for holdings keeping poultry or captive birds must be in accordance with the [Swedish Board of Agriculture's regulations and general guidelines on biosecurity measures as well as reporting and monitoring of infectious animal diseases and infectious agents \(SJVFS 2021:10\)](#), which contains provisions supplementing the requirements set out in [Regulation \(EU\) 2016/429](#). The Swedish Board of Agriculture may also decide to implement different levels of protection in high-risk areas, with increased biosecurity measures, read more in section 5.1. The industry's own plans and guidelines also form an important part of the preventive work with biosecurity measures to reduce the risk of introduction and spread of infections.

#### 4. Surveillance and early warning system

Sweden has a surveillance programme in both domestic and wild birds designed for the rapid detection of the disease, in order to be able to introduce preventive measures as early as possible to prevent any spread of disease, but also to demonstrate freedom from infection with HPAI and LPAI viruses subtypes H5/H7. The programme includes active and passive surveillance in accordance with Chapter 1.4 and Articles 10.4.26 to 10.4.30 of the *Terrestrial Code* and the [Commission Delegated Regulation \(EU\) 2020/689](#), supplementing the requirements set out in [Regulation \(EU\) 2016/429](#). For more information, please read NVI's yearly [surveillance report for infectious diseases](#).

##### 4.1. Passive surveillance in poultry

Avian influenza is a notifiable disease in Sweden in accordance with national legislation: [the Epizootic Act \(1999:657\)](#) and [Regulation and general guidelines of the Swedish Board of Agriculture on biosafety measures and](#)

[notification and monitoring of animal diseases and infectious agents \(SJVFS 2021:10\)](#). HPAI viruses of all subtypes, as well as LPAI viruses of H5 and H7 subtypes are included in the act, and cases are notifiable upon suspicion.

Furthermore, Sweden has an early warning system in place in accordance with Articles 1.4.5 and 10.4.27 of the *Terrestrial Code* and national legislation [SJVFS 2021:10](#). Anyone who has reason to suspect that an epizootic disease has affected animals in their care must immediately report this to a veterinarian. This includes reporting of abnormal mortality, other signs of serious illness or significantly reduced production. A veterinarian or someone else who in their profession comes into contact with animals or products of animals and who has reason to suspect that a case of epizootic disease has occurred must urgently report this to the Swedish Board of Agriculture. If an animal disease or infectious substance covered by the obligation to report is suspected, found or confirmed in a laboratory, the laboratory is responsible for reporting. On clinical suspicion of AI or Newcastle disease, laboratory analyses for both diseases are generally performed. The operators and veterinarians shall take the necessary actions to prevent any spread of disease while waiting for confirmation when suspecting an epizootic disease.

Epidemiological investigations are made in cooperation between the Swedish Board of Agriculture and the National Veterinary Institute in order to confirm or rule out any suspected cases in accordance with article 6 in [Commission Delegated Regulation \(EU\) 2020/687](#). If there is a well-founded reason to assume that a case of HPAI has occurred, the Swedish Board of Agriculture shall, in accordance with [Commission Delegated Regulation \(EU\) 2020/687](#) and the [Epizootic Act \(1999:657\)](#), place the establishment under official surveillance and immediately impose preliminary restrictions and additional biosecurity measures. The Swedish Board of Agriculture may also order preventive killing if necessary.

#### **4.2. Active surveillance in poultry**

In addition to the passive surveillance based on clinical suspicions, Sweden has a risk-based active surveillance program in selected groups of poultry and captive birds of *Galliformes* species in accordance with [Commission Delegated Regulation \(EU\) 2020/689](#). The active surveillance programme includes kept game birds (mallards), layers, breeders, turkeys, geese and ducks. Ten blood samples from each holding are collected except for holdings with geese, ducks or mallards, where 20 samples from each flock are collected. For holdings with mallards, geese and ducks, 20 swabs will also be taken for PCR testing. In flocks with fewer individuals than the abovementioned sample size, all individuals are sampled.

The surveillance programme for poultry is based on both representative sampling and risk-based surveillance depending on the category. The serological and virologic analyses are performed at the National Veterinary Institute. All poultry samples are collected at slaughter under the supervision of an official veterinarian, except for breeders, ducks, geese and game birds (mallards). Blood samples from breeders and game birds are collected at their holdings. Breeders are sampled late in their production period. Samples are analysed using an ELISA (IDEXX Influenza A Ab Test). Positive results are confirmed with haemagglutination inhibition tests (for subtypes H5, H7 and H5N8) in accordance with the WOAH guidelines. Swabs from mallards, ducks and geese are collected at their holdings, these samples are analysed using an M-gene qRT-PCR.

#### **4.3. Results from surveillance in poultry 2021**

In 2021, from both active and passive surveillance, 1925 blood samples were collected from a total of 184 poultry holdings.

Following clinical suspicion, HPAI was detected in 27 holdings during 2021 (18 poultry and nine other captive birds). The suspicions were raised because of increased mortality and, in some cases, combined with a range of clinical signs such as depression, unresponsiveness, drooping of the wings, incoordination, respiratory distress or diarrhoea. As part of the passive surveillance, avian influenza was investigated in 81 poultry holdings during 2021 of which 76 were investigated because of clinical suspicions, three because of follow up from serological surveillance, one following postmortem findings and one as part of contact tracing.

Three flocks with game birds (mallards) had single serologically positive H5 results with haemagglutination inhibition tests. These flocks were investigated with oropharyngeal and cloacal swabs with PCR and found negative for avian influenza H5 and H7. In addition, there were positive ELISA results in 12 holdings, which were then found negative using haemagglutination inhibition tests. All other serological samples were found negative for avian influenza virus subtypes H5 and H7.

#### 4.4 Surveillance in wild birds

The surveillance in wild birds is passive and based on birds found dead or diseased and submitted for post-mortem examination. The public is encouraged to report findings of dead or sick birds to the National Veterinary Institute through a web application. Reports are assessed, and carcasses are sent to the National Veterinary Institute in Uppsala for analysis. Samples taken, including swab (both cloacal and tracheal) or/and different organs collected from birds are analysed for the presence of the HPAI virus by using an M-gene qRT-PCR. Samples found positive for the matrix gene are further analysed by qRT-PCR specific for the haemagglutinin gene of H5 and H7 and qRT-PCR specific for the neuraminidase gene of N1, N5, N6 and N8, and virus pathotyping by amplicon sequencing.

Table 2. Number of wild birds analysed for HPAI and number of positive wild birds, during 2021 and 2022 until 2022-09-09.

Year	Quarter	Analysed	Positive
2021	Q1	322	69
	Q2	203	25
	Q3	139	23
	Q4	116	27
2022	Q1	129	18
	Q2	140	33
	Q3 (until 2022-09-09)	143	28

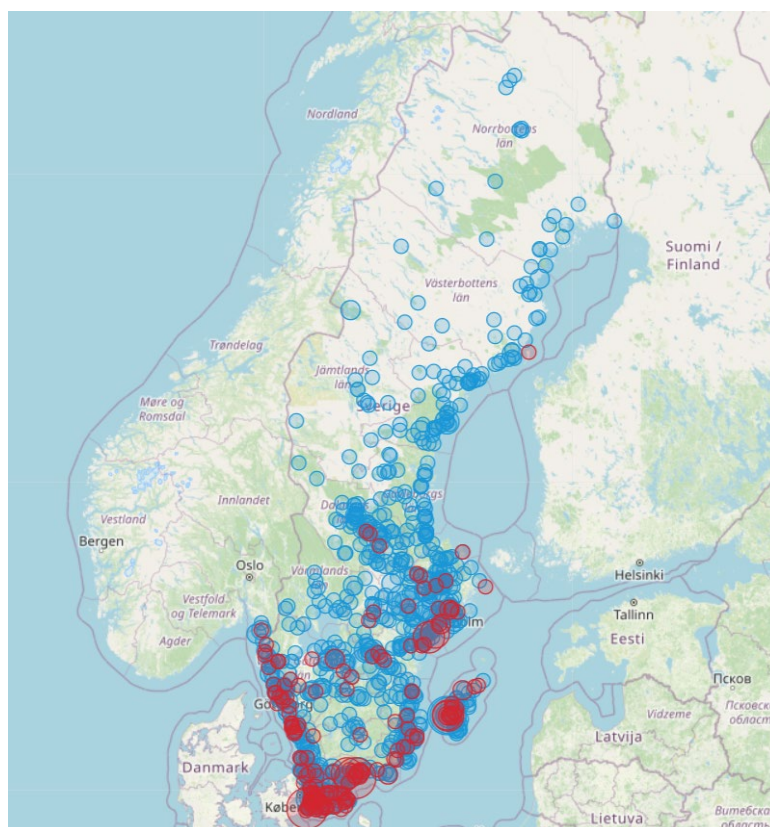


Figure 1. Map of samples collected from wild birds from 2021-01-01 until 2022-09-09. Blue markings indicate sampled, red markings indicate positive samples. The map can be found here with updated figures: <https://www.sva.se/amnesomraden/smittlage/smittlage-for-fagelinfluensa/>.

## 5. Other measures implemented to maintain freedom

### 5.1. Awareness campaign and risk mitigation measures

Continuous epidemiological risk assessments are made and published by the National Veterinary Institute based on the current epidemiological situation. Information about the epidemiological situation related to avian influenza, including recommendations and guidance to keepers of poultry and other captive birds, veterinarians and general public, is continuously published on the Swedish Board of Agriculture's website, as well as other public authorities' websites, and shared via social media and press releases. Information is also communicated by e-mail to official veterinarians, poultry organisations and other stakeholders. The authorities also carry out, when needed, training efforts for the veterinarians and industry.

To reduce the risk of infection, the Swedish Board of Agriculture may decide to implement different levels of protection with increased biosecurity measures to protect domestic poultry and captive birds against avian influenza. The levels of protection may cover the whole country or certain areas of the country, and different levels of protection may be decided in different parts of the country. The animal keeper is always responsible for preventing any introduction of diseases through different biosecurity measures, including following the instructions given by the authorities. The industry's Poultry Health Control Program also includes clear practical guidelines for the preventive work with biosecurity measures to reduce the risk of introduction and spread of infections.

The current level of protection implemented is governed by the Swedish Board of Agriculture and is based on a risk assessment made by the National Veterinary Institute. The risk assessment regarding avian influenza is continuously evaluated by considering both national and international data in order to enable swift adjustments to the level of protection implemented based on the current disease situation. In high-risk areas, poultry kept for commercial purposes must be kept indoors, while hobby flocks and other captive birds shall be kept indoors or in an enclosure with protection from contact with wild birds. In restriction zones, all susceptible animals must be kept indoors. The animal keeper has to monitor the health situation carefully to be able to detect and notify any suspected cases of avian influenza.

### 5.2. Registration of poultry holdings

The Swedish Board of Agriculture is responsible for maintaining a central register of animal holdings, including poultry and other captive birds, in accordance with [Commission Implementing Regulation \(EU\) 2019/1715](#). The purpose of the register is to allow efficient tracing of contagious diseases (e.g., avian influenza and Newcastle disease). Each farm is registered and given a unique production site number. Businesses and private individuals have to register, regardless of the number of birds or the purpose of the holding. This applies for chickens, turkeys, guinea fowl, ducks, mallards, geese, quail, pigeons, pheasants, partridges and ratites.

According to the central register of poultry holdings in Sweden, in August 2022, there are 4743 poultry holdings (not including holdings with captive birds) and the total number of poultry is 36 702 000.

### 5.3. Import or introduction of poultry and poultry products

Import of poultry, poultry products and hatching eggs are subject to veterinary controls in accordance with the [Official Control Regulation \(EU\) 2017/625](#) and supplementing EU Regulations, which in turn is in accordance with Chapter 10.4 of the *Terrestrial Code*. The consignments must be accompanied by an animal health certificate issued by an official veterinarian in the third country. Each consignment is subject to veterinary controls at designated border control posts of the European Union. The third country of origin must be approved and listed in [Implementing Regulation \(EU\) 2021/404](#). Accompanying animal health certificates shall be in line with [Implementing Regulations \(EU\) 2020/2235](#) and [2021/403](#), which is in accordance with the *Terrestrial Code* Articles 10.4.7 to 10.4.22.

Movements of poultry and hatching eggs between EU Member States shall comply with the requirements set out in [Chapter 8 of part II of Commission Delegated Regulation \(EU\) 2020/688](#), supplementing [Animal Health Regulation \(EU\) 2016/429](#). The consignments must come from approved and registered establishments where disease monitoring is carried out. Moreover, general requirements regarding means of transport and containers in which animals and hatching eggs are transported are set out in Chapter 1 of part II of the same regulation. The animal health requirements, the certificate accompanying the transport and the requirements for transport containers comply with Chapter 10.4. of the *Terrestrial Code*.

### **5.6. Vaccination against HPAI has not been applied in Sweden**

Sweden does not apply vaccination against HPAI in poultry. According to § 5 in the Swedish Board of Agriculture's regulations on prevention and control of certain animal diseases (SJVFS 2021:48) the Swedish Board of Agriculture can, under specific conditions, give permission to vaccination against HPAI. No birds were vaccinated in 2020, 2021, or in 2022 to date.

## **6. Conclusions**

Considering that in Sweden;

- infection with high pathogenicity avian influenza viruses is a notifiable disease;
- an ongoing awareness programme is in place to ensure proper notification of suspicions of high pathogenicity avian influenza in poultry and other captive birds, as well as encourage reporting of suspicions in wild birds from the public;
- measures to prevent the introduction of the infection or infestation are in place;
- surveillance is carried out in accordance with Chapter 1.4 and Articles 10.4.26. to 10.4.30 of the *Terrestrial Code* and there is an early warning system in place for relevant species;
- An awareness programme is in place related to avian influenza risks and the specific biosecurity and management measures to address them.
- Commodities are imported in accordance with Articles 10.4.7 to 10.4.22
- a stamping out policy, including cleaning and disinfection has been applied to all infected holdings following confirmation of the infection with HPAI virus in poultry;
- EU legislation is applied;
- stamping-out policy, including cleaning and disinfection, of the last infected holding was completed on 28 December 2021.

**The WOA Delegate of Sweden declares that the country complies with the requirements to self-declare freedom from infection with high pathogenicity avian influenza viruses in poultry as of 28 January 2022, in accordance with Chapters 1.4. and 1.6. and Article 10.4.6. of the *Terrestrial Code* (2022) and consistent with the information provided to WAHIS.**

Statement to be included in the self-declaration document.

I, the undersigned, *Lena Hellqvist Björnerot*, Delegate of Sweden to the World Organisation for Animal Health (WOAH), takes responsibility for the self-declaration of freedom from Infection with high pathogenicity avian influenza viruses in accordance with the provisions of Chapter 10.4 of the Terrestrial Animal Health Code.

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Drawn up on 16 September 2022

Signature of the Delegate:



Lena Hellqvist Björnerot  
Chief Veterinary Officer Sweden