



EUROPEAN COMMISSION  
HEALTH AND CONSUMERS DIRECTORATE-GENERAL

Director General

SANCO/10268/2013

*Programmes for the eradication, control and monitoring of certain  
animal diseases and zoonoses*

## **Survey programme for Avian Influenza**

**Denmark**

**Approved\* for 2013 by Commission Decision 2012/761/EU**

\* in accordance with Council Decision 2009/470/EC

# Standard requirements for the submission of surveillance programmes for avian influenza

version : 2.2

## 1. Identification of the programme

Member state : DANMARK

Disease : avian influenza in poultry and wild birds

Request of Community co-financing from beginning of :

2013

to end of

2013

### 1.1 Contact

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## 2. Description and implementation of the surveillance programme in poultry

### 2.1.1 Designation of the central authority in charge of supervising and coordinating the departments responsible for implementing the programme

(max. 32000 chars) :

The central coordination activities at the DVFA are placed in the Animal Health Division. The Animal Health Division coordinates with the Veterinary Control Offices, The National Veterinary Institute and Danish Agriculture and Food Council.

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## 2.1.2 System in place for the registration of holdings

(max. 32000 chars) :

Commercial holdings with poultry like holdings with cattle, pigs, sheep, goats, and commercial holdings with deer, foxes, minks and fish are recorded in a central database, called the Central Husbandry Register (CHR), which is owned by the Ministry of Food, Agriculture and Fisheries. The rules for registration are laid down in an Order on registration of holdings in CHR. The CHR stores information on the unique holding code, the address and the geographic coordinates of the holding, data on the farmer, number of animals of all species and veterinary information. Commercial poultry farmers are obliged to register their holding in the CHR. Likewise poultry farmers are obliged to report if the holding is closed down. It is voluntary for owners of backyard flocks to register their holding in CHR. However, if outbreaks of HPAI H5N1 occur in wild birds or AIV H5 or H7 in a poultry holding, then it is also mandatory for owners of backyards flocks in zones to register their holding.

## 2.1.3 Design (risk based or surveillance based on representative sampling)

(max. 32000 chars) :

Risk based surveillance will be implemented for the entire Denmark.

Requirements and criteria stated in Commission Decision of 25 June 2010 (2010/367/EU) on the implementation of surveillance programmes for avian influenza in poultry and wild birds will be complied with.

All laboratory results from the surveillance will be transferred to a poultry database at the Danish Agriculture and Food Council, where the results are recorded. The DVFA has on line access to the database. Positive results are also send by e-mail directly from the National Veterinary Institute to the DVFA and the Veterinary Control Offices.

### 2.1.3.1 Short description of predominant poultry population and types of poultry production

(max. 32000 chars) :

135 million hatching eggs are being produced for the broiler production.

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102 million broilers are being produced for slaughter in Denmark.

10 million broilers are being produced for slaughter in Germany or the Netherlands.

2,6 million layers are being produced and app. 930 million table eggs are being produced.

800.000 hatching eggs are being produced for duck production.

630.000 ducks are being produced for slaughter in Germany.

1 million turkeys are being produced for slaughter in Germany.

1.4 million hatching eggs are being produced for production of partridges and pheasants.

Source: Danish Agriculture and Food Council

## 2.1.3.2 Criteria and risk factors for risk based surveillance<sup>(1)</sup>

(max. 32000 chars) :

By virtue of its geographical location, Denmark is a node on migration routes for many waterfowl that breed in particular Scandinavia, Russia and Siberia and winters in Europe and Africa. The shallow inlets and marine areas are important feeding areas, which are ice-free in most winters and several waterfowl are wintering. Denmark is therefore identified as a high risk area where preventive measures against AI in poultry holdings according to Commission Decision 2005/734/EC are in force all year round, including the early detection system.

Commercial holdings with more than 100 animals in a target group will be included in the surveillance program and tested once or more frequently. Breeder flocks will be tested once a year, pullets before release to egg production, outdoors layers four times a year and outdoor slaughter poultry before slaughter. In addition, turkeys are tested before slaughter. In risk areas, breeder flocks and indoor layers are tested twice a year. Risk areas are defined as areas 3 km from the coastal line and around large lakes. Holdings with game birds for restocking will be tested four times a year during the season from February to August. The first test is on blood samples from breeding animals and the three other tests are PCR test on offspring. Further, when poultry and game birds are traded, they had to be accompanied by a certificate stating that the herd had been tested within the preceding three months for poultry and two months for game birds.

The DVFA consider the inclusion of game birds for restocking in the programmes to be very important, due to the fact that especially mallards are known to be asymptomatic carriers of avian influenza virus. Evaluation of previous data from the Danish programme indicates that game bird holdings, which are tested 4 times during the breeding season, may be tested negative for LPAI subtype H5 or H7 in the first serological test (which is performed on breeding animals) but may test positive in one of the following routine tests in offspring (offspring are tested with PCR). The strategy with multiple samplings of game bird holdings has been justified as Denmark during the summer 2006 detected LP H5 on three locations

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in the last of the four samplings. This strategy will be continued.

- (1) Including maps showing target sampling sites identified as being particularly at risk for the introduction of avian influenza virus, taking into account criteria set out in point 4 of Annex I to Commission Decision 2010/367/EC.

## 2.2 Target populations (2)

(max. 32000 chars) :

Commercial holdings with more than 100 animals in a target population will be included and tested once or more frequently. The target populations will be:

- a) chicken breeders
- b) laying hens (indoor flocks in risk areas)
- c) free range laying hens
- d) free range broilers
- e) fattening turkey
- f) duck breeders
- g) fattening ducks
- h) geese breeders
- i) fattening geese
- j) farmed game birds (gallinaceous)
- k) farmed game birds (waterfowl)

- (2) including MS specific exceptional circumstances as described in Annex I point 3 of Commission Decision 2010/367/EU)

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## 2.2.1 POULTRY HOLDINGS (a) (except ducks, geese and farmed game birds (waterfowl e.g. mallards) to be sampled

Serological investigation according to Annex I to Commission Decision 2010/367/EU

Category : broilers (only when at risk) - free range broilers

delete this category

NUTS (2) (b)	Total number of holdings(c)	Total number of holdings to be sampled	Number of samples per holding	Total number of tests	Method of laboratory analysis
Nuts 2	24	24	10	480	Haemagglutination-inhibition-test (HI)
<b>Total</b>	24	24	10	480	

Add a new row

(a) Holdings or herds or flocks or establishments as appropriate.

(b) Refers to the location of the holding of origin. In case NUTS (Nomenclature of Territorial Units for Statistics) can not be used, region as defined in the programme by the Member States is requested

(c) Total number of holdings of one category of poultry in concerned NUTS 2 region.

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Category : fattening turkeys

delete this category

NUJTS (2) (b)	Total number of holdings(c)	Total number of holdings to be sampled	Number of samples per holding	Total number of tests	Method of laboratory analysis
Nuts 2	44	35	10	700	Haemagglutination-inhibition-test (HI)
<b>Total</b>	44	35	10	700	
Add a new row					

(a) Holdings or herds or flocks or establishments as appropriate.

(b) Refers to the location of the holding of origin. In case NUTS (Nomenclature of Territorial Units for Statistics) can not be used, region as defined in the programme by the Member States is requested

(c) Total number of holdings of one category of poultry in concerned NUTS 2 region.

Category : chicken breeders

delete this category

NUJTS (2) (b)	Total number of holdings(c)	Total number of holdings to be sampled	Number of samples per holding	Total number of tests	Method of laboratory analysis
Nuts 2	465	60	10	1 200	Haemagglutination-inhibition-test (HI)
<b>Total</b>	465	60	10	1 200	

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	Add a new row
<p>(a) Holdings or herds or flocks or establishments as appropriate.                  (b) Refers to the location of the holding of origin. In case NUTS (Nomenclature of Territorial Units for Statistics) can not be used, region as defined in the programme by the Member States is requested                  (c) Total number of holdings of one category of poultry in concerned NUTS 2 region.</p>	

Category : laying hens (indoor flocks in risk areas)

delete this category

NUTS (2) (b)	Total number of holdings(c)	Total number of holdings to be sampled	Number of samples per holding	Total number of tests	Method of laboratory analysis
Nuts 2	36	35	10	700	Haemagglutination-inhibition-test (HI)
<b>Total</b>	36	35	10	700	
Add a new row					<b>X</b>

(a) Holdings or herds or flocks or establishments as appropriate.  
 (b) Refers to the location of the holding of origin. In case NUTS (Nomenclature of Territorial Units for Statistics) can not be used, region as defined in the programme by the Member States is requested  
 (c) Total number of holdings of one category of poultry in concerned NUTS 2 region.



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Category : free range laying hens

delete this category

NUTS (2) (b)	Total number of holdings(c)	Total number of holdings to be sampled	Number of samples per holding	Total number of tests	Method of laboratory analysis
Nuts 2	120	53	10	1 060	Haemagglutination-inhibition-test (HI)
<b>Total</b>	120	53	10	1 060	
Add a new row					

(a) Holdings or herds or flocks or establishments as appropriate.

(b) Refers to the location of the holding of origin. In case NUTS (Nomenclature of Territorial Units for Statistics) can not be used, region as defined in the programme by the Member States is requested

(c) Total number of holdings of one category of poultry in concerned NUTS 2 region.

Category : farmed game birds (gallinaceous)

delete this category

NUTS (2) (b)	Total number of holdings(c)	Total number of holdings to be sampled	Number of samples per holding	Total number of tests	Method of laboratory analysis
Nuts 2	193	53	10	1 060	Haemagglutination-inhibition-test (HI)
<b>Total</b>	193	53	10	1 060	

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Add a new row

(a) Holdings or herds or flocks or establishments as appropriate.

(b) Refers to the location of the holding of origin. In case NUTS (Nomenclature of Territorial Units for Statistics) can not be used, region as defined in the programme by the Member States is requested

(c) Total number of holdings of one category of poultry in concerned NUTS 2 region.

Add a category

<b>Total Poultry</b>	882	260	60	5 200					

2.2.2 DUCKS ,GEESE AND FARMED GAME BIRDS (WATERFOWL e.g. MALLARD) HOLDINGS (a) to be sampled.

Serological investigation according to Annex I to Commission Decision 2010/367/EU

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Category : duck breeders

delete this category

NUITS (2) (b)	Total number of duck and geese holdings	Total number of duck and geese holdings to be sampled	Number of samples per holding	Total number of tests	Method of laboratory analysis
Nuts 2	13	13	20	520	Haemagglutination-inhibition-test (HI)
<b>Total</b>	13	13	20	520	
<b>Add a new row</b>					

(a) Holdings or herds or flocks or establishments as appropriate.

(b) Refers to the location of the holding of origin. In case NUTS (2) code can not be used, region as defined in the programme by the Member State is requested

Category : fattening ducks (outdoor)

delete this category

NUITS (2) (b)	Total number of duck and geese holdings	Total number of duck and geese holdings to be sampled	Number of samples per holding	Total number of tests	Method of laboratory analysis
Nuts 2	62	59	20	2 360	Haemagglutination-inhibition-test (HI)
<b>Total</b>	62	59	20	2 360	
<b>Add a new row</b>					

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(a) Holdings or herds or flocks or establishments as appropriate.

(b) Refers to the location of the holding of origin. In case NUTS (2) code can not be used, region as defined in the programme by the Member State is requested

Category : geese breeders

delete this category

NUTS (2) (b)	Total number of duck and geese holdings	Total number of duck and geese holdings to be sampled	Number of samples per holding	Total number of tests	Method of laboratory analysis
Nuts 2	9	9	20	360	Haemagglutination-inhibition-test (HI)
<b>Total</b>	9	9	20	360	

Add a new row

(a) Holdings or herds or flocks or establishments as appropriate.

(b) Refers to the location of the holding of origin. In case NUTS (2) code can not be used, region as defined in the programme by the Member State is requested

Category : fattening geese (outdoor)

delete this category

NUTS (2) (b)	Total number of duck and geese holdings	Total number of duck and geese holdings to be sampled	Number of samples per holding	Total number of tests	Method of laboratory analysis
Nuts 2	25	25	20	1 000	Haemagglutination-inhibition-test (HI)
<b>Total</b>	25	25	20	1 000	

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Add a new row

(a) *Holdings or herds or flocks or establishments as appropriate.*  
 (b) *Refers to the location of the holding of origin. In case NUTS (2) code can not be used, region as defined in the programme by the Member State is requested*

Category : farmed game (waterfowl e.g. mallards)

delete this category

NUTS (2) (b)	Total number of duck and geese holdings	Total number of duck and geese holdings to be sampled	Number of samples per holding	Total number of tests	Method of laboratory analysis
Nuts 2	32	32	20	1 280	Haemagglutination-inhibition-test (HI)
<b>Total</b>	32	32	20	1 280	

Add a new row

(a) *Holdings or herds or flocks or establishments as appropriate.*  
 (b) *Refers to the location of the holding of origin. In case NUTS (2) code can not be used, region as defined in the programme by the Member State is requested*

Add a category

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<b>Total Ducks and geese</b>	141	138	100	5 520			

<b>Grand Total Poultry + Ducks/Geese</b>	1 023	398	160	10 720			

## 2.3 Sampling procedures, sampling periods and frequency of testing

(max. 32000 chars) :

Samling procedures stated in Commission Decision 2010/367/EU will be complied with.

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Sampling period will be 1 January 2013 - 31 December 2013.

## Frequency of testing:

### Hens:

#### Breeding flocks

In risk areas: 10 blood samples twice a year from each flock.

Outside risk areas: 10 blood samples once a year from each flock.

#### Central-rearing and pullet rearing flocks

10 blood samples from each flock.

### Laying hens

Indoors flocks in risk areas: 10 blood samples twice a year from each flock.

Free range flocks: 10 blood samples four times a year from each flock.

### Free range broilers

10 blood samples four times a year from the herd (before slaughter).

### Turkeys:

#### Breeding flocks

In risk areas: 10 blood samples twice a year from each flock.

Outside risk areas: 10 blood samples once a year from each flock.

At the moment there are no such flocks in Denmark.

#### Fattening turkeys

10 blood samples from each flock before slaughter.

### Ducks and geese:

#### Breeding flocks

In risk areas: 20 blood samples twice a year from each flock.

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Outside risk areas: 20 blood samples once a year from each flock.

Free range fattening geese and ducks including mallards  
20 blood samples four times a year from the herd (before slaughter).

Farmed game birds:

Mallards

Herds are tested four times during the season:

- First test: 20 blood samples from breeding animals before initiation of egg laying.
- Second test: 10 killed, 2 weeks old ducklings from the first batch (tested by PCR-test).
- Third test: 10 killed, 2 weeks old ducklings from the intermediate batch (tested by PCR-test).
- Fourth test: 10 killed, 2 weeks old ducklings from the last batch (tested by PCR-test).

Pheasants and partridges

Herds are tested four times during the season:

- First test: 10 blood samples from breeding animals before initiation of egg laying.
- Second test: 10 killed, 2 weeks old chickens from the first batch (tested by PCR-test).
- Third test: 10 killed, 2 weeks old chickens from the intermediate batch (tested by PCR-test).
- Fourth test: 10 killed, 2 weeks old chickens from the last batch (tested by PCR-test).

Herds with trade of poultry and farmed game birds:

If the herd has not been involved in a regular quarterly sampling scheme, the herd has to be tested before sale.

From herds with more than 100 animals at the time of trade:

- 1) From hens, turkeys, pheasants and partridges: 10 blood samples.
- 2) From geese and ducks including mallards: 20 blood samples.

The herds test result is valid up to three months and two months for game birds.

## 2.4. Laboratory testing : description of the laboratory tests used and follow up investigations



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*Description of the used serological tests : (max 32000 chars)*

Serological tests will be carried out using haemagglutination inhibition test (HI test) in accordance with the avian influenza diagnostic manual (Commission Decision 2006/437/EC). The antigens and control sera will be received from the Community Reference Laboratory. Using four HA units of antigen in the tests, sera with titres equal to or above 16 (4 log<sub>2</sub>) will be considered positive.

The virus strains provided by the Community Reference Laboratory will be used as antigen in the initial test. Samples that are positive in tests with the initial antigen will be subjected to a further confirmatory test with the recommended strain for the specific H-subtype. A serum sample will be considered positive only if HI titres were equal to or above 16 with both anti-gens of the same subtype.

## 3. Description and implementation of the surveillance programme in wild birds

3.1.1 *Designation of the central authority in charge of supervising and coordinating the departments responsible for implementing the programme and relevant collaborating partners (e.g. epidemiologists, ornithologists, nature bird observation and hunter organisations).*

*(max. 32000 chars) :*

The DVFA is the central authority responsible for implementing the programme. The central coordination activities are placed in the Animal Health Division. The Animal Health Division coordinates with the Veterinary Control Offices, The National Veterinary Institute and Danish Nature Agency.

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## 3.1.2 Description and delimitation of the geographical and administrative areas in which the programme is to be applied

*(max. 32000 chars)* :

The entire Denmark, please see also point 3.2

## 3.1.3 Estimation of the local and/or migratory wildlife population

*(max. 32000 chars)* :

Table showing the local and migratory wildlife population in Denmark:

Species - Total population size

Widgeon - 1500000

Teal - 500000

Mallard - 4500000

Pintail - 60000

Shoveler - 40000

Tufted Duck - 1200000

Goldeneye - 1000000-1300000

Common Pochard - 350000

Common Eider - 760000

Greater Scaup - 310000

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Great Cormorant - 75000a

Whooper Swan - 59000

Mute Swan - 250000

Bewick's Swan - 20000

Taiga Bean Goose - 70000-90000

Pink-footed Goose - 42000

Greater White-fronted Goose - 1000000

Greylag Goose - 500000

Barnacle Goose - 420000

Light-bellied Brent Goose - 7000

Dark-bellied Brent Goose - 200000

Lapwing - 5100000-8400000

Golden Plover - 140000-210000

Great Black-backed Gull 180000

Herring Gull - 1700000-3600000b

Common Black - 1200000-2250000

a: Subspecies *sinensis* breeders in Denmark

b: Subspecies *argentatus* breeding/wintering i NW-Europe

Waterbird Population Estimates. 2006. Simon Delany and Derek Scott (eds.). Fourth Edition. Wetlands International, Hageningen, The Netherlands.

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## 3.2 Design, criteria, risk factors and target population(3)

(max. 32000 chars):

Requirements and criteria stated in Commission Decision of 25 June 2010 (2010/367/EU) on the implementation of surveillance programmes for avian influenza in poultry and wild birds will be compiled with.

A passive surveillance programme by laboratory investigation of moribund wild birds or birds found dead listed in Annex II, part 2 in 2010/367/EU, will be implemented.

All laboratory results from the surveillance will be recorded in a database which also is available to the public at the DVFA homepage. Positive results are also send be e-mail directly from the National Veterinary Institute to the DVFA.

Additionally a national active surveillance programme in live wild birds is planned to be implemented in live wild birds.


- (3) *Areas at risk (wetlands in particular where links with high density poultry populations), previous positive findings as referred to in point 2 of Part 1 of Annex II to Commission Decision 2010/367/EC should be taken into account and if possible complemented by a map.*

### 3.2.1 WILD BIRDS focussed on target species

Investigations according to the surveillance programme set out in Part 2 of Annex II to Decision 2010/367/EC

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NUTS (2) code/region (a)	Wild birds to be sampled (b)	Total number of birds to be sampled	Estimated total number of samples to be taken for active surveillance (c)	Estimated total number of samples to be taken for passive surveillance
Nuts 2	Wild birds found dead according to 	80	0	80
<b>Total</b>	0	80	0	80
<b>Add a new row</b>				

(a) Refers to the place of collection of birds/samples. In case NUTS 2 (Nomenclature of Territorial Units for Statistics) can not be used, region as defined in the programme by the Member State is requested. Please fill-in these values directly in the field.

(b) General description of the wild birds are intended to be sampled in the framework of the active and passive surveillance.

(c) Voluntary, to be included for information purposes, not eligible for cofinancing.

## 3.3 Sampling procedures and sampling periods

max 32000 chairs:

Sampling procedures stated in Commission Decision 2010/367/EU will be complied with.

Sampling period will be 1 January 2013 - 31 December 2013.

## 3.4 Laboratory testing : description of the laboratory tests used

max 32000 chairs:

National Veterinary Institute is the National Reference Laboratory (NRL) for the diagnosis of AI. The NRL performs all serological and virological

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diagnostic analyses for AI in Denmark. Virological tests will be performed according to methods required by the Diagnostic Manual (Decision 2006/437/EC).

The primary diagnostic procedures will be based on real-time-RT-PCR or RT-PCR methods, but will also include virus isolation by inoculation in SPF embryonated eggs. The methods conform to the methods required by with the Diagnostic Manual.

The specific RT-PCR analysis for general influenza A applied primers are specific to the viral matrix (M) gene. The H5 and H7 specific analyses apply primers, which only detects the viral haemagglutinin (HA) gene of the H5 and H7 subtypes, respectively.

Samples from dead or sick wild birds:

Analyses for general influenza virus (M-gene) and specific H5 subtype RT-PCR detection are performed on all samples received for influenza diagnosis.

- 1) If a sample is tested positive in general and negative for H5, a supplementary H7 analysis is performed.
- 2) If a sample is detected positive for H5 or H7 the RT-PCR product is sequenced for confirmation of the H5 or H7 subtype and for characterisation of the virus in terms of pathogenicity.
- 3) If a sample is positive by the M-gene RT-PCR the sample is inoculated in SPF embryonated eggs.

Virus cultivation utilise 8-10 days old embryonated SPF eggs, which are inoculated by the allantoic route. The eggs are incubated for one week and the harvest of allantoic fluid is tested for presence of haemagglutinating viruses. Agglutinating viruses are H-typed by HI test. In addition, identification of RT-PCR and sequencing is carried out in accordance with the above description.

A final characterisation of a virus isolate is done by conventional neuraminidase test (N-typing). In addition, a N-1 specific RT-PCR method may be applied to samples collected either directly from sick or dead birds or harvested from inoculated SPF embryonated eggs.

## 4. Description of the epidemiological situation of the disease in poultry during the last five years

max 32000 chars :

In 2006, the surveillance of AI in poultry was extended and more intensified than previous programmes. Besides the surveillance programme for poultry, the programmes included game birds for restocking and holdings (with more than 100 animals) trading poultry or game birds. Holdings situated in

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appointed risk areas were tested more frequently than holdings outside risk areas. During the surveillance, ten flocks or holdings were found to have serologic positive samples. The holdings were managed as holdings under suspicion for avian influenza. However, testing with PCR showed no circulating virus in any of these holdings. Due to routine PCR-testing on offspring from game birds, detection of LPAI was done in three game bird holdings with mallards (one H5N2 and two H5N3) in 2006. These three holdings were all culled due to the detection of LPAI H5. In two of these holdings, the infection was thought to originate from contact with wild birds. In the third holding, the infection most likely originated from indirect contact with one of the other infected holdings. There were no clinical signs in any of these holdings.

In spring 2006, one outbreak of HPAI H5N1 was reported in a back-yard flock with clinically diseased and dead birds. The outbreak of HPAI was the first outbreak in poultry ever recorded in Denmark. The outbreak occurred during the epidemic of HP H5N1 in wild birds in the Baltic area. The virus was of the same type as the one that had previously been detected in wild birds in the area. It was concluded, that the source of infection most likely was wild birds, possibly transmitted by direct contact. However, no direct evidence exists for this hypothesis. This outbreak did not cause any secondary outbreaks, and reoccurrence of HPAI H5N1 in poultry has not been observed since then.

The extended and more intensified surveillance programme in poultry and game birds for restocking has continued since 2006.

In 2007, eight seropositive holdings were managed as holdings under suspicion for avian influenza. However, testing with PCR showed no circulating virus in any of these holdings.

In 2008, seven seropositive holdings were managed as holdings under suspicion for avian influenza. The holdings were investigated and samples for virological examination were taken. One holding was found positive by virological tests. The holding had breeding geese, ducks and mallards. There had been a serological reaction against H5 in the breeding geese. Following an investigation of tracheal and cloacal swabs low pathogenic H7N1 was detected by PCR followed by sequencing in cloacal swabs from the domestic ducks. The most likely source of infection is introduction by wild birds as low pathogenic avian influenza H7N1, with sequence identical with isolates from the domestic ducks, were detected in wild mallards in a nearby lake.

In 2009, three seropositive holdings were managed as holdings under suspicion for avian influenza. However, testing with PCR showed no circulating virus in any of these holdings.

In 2010, five seropositive holdings were managed as holdings under suspicion for avian influenza. The holdings were investigated and samples for virological examination were taken. Two holdings with mallards were found positive with low pathogenic avian influenza H7. The mallards were tested in accordance with the surveillance programme and there had not been clinical signs of disease among the animals. Following an investigation of tracheal and cloacal swabs low pathogenic H7N1 was detected in one of the holding, in the other holding virus isolation was not possible. There was no

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epidemiological link between the two outbreaks. The most likely source of the two infections is introduction by wild birds.

In 2011, one seropositive holding was managed a a holding under suspicion for avian influenza. However, testing with PCR showed no circulating virus in the holding.

## 5. Description of the epidemiological situation of the disease in wild birds during the last five years

(max. 32000 chars):

From 2006 - 2010 the surveillance programme in wild birds consisted of a passive surveillance in wild birds found dead and an active surveillance of live birds in waterfowl reservoirs and along migratory flyways, birds living in proximity to domestic poultry and surveillance of hunted game birds. In the active surveillance samples were taken as cloacal and tracheal swabs from each bird. The results from the active surveillance programmes shows that the low pathogenic forms of avian influenza occurs naturally among Danish waterfowl, especially in ducks.

During the spring of 2006, an epidemic of HP H5N1 in wild birds occurred in the Baltic area. In Denmark the first finding of HPAI H5N1 in wild birds was confirmed on 14 March 2006. A sequence analyses revealed that the virus isolated in Denmark was similar to the viruses found in other European countries. In total, 44 wild birds were found infected with HPAI H5N1 in six counties in March-May of 2006. The last case was confirmed on 29 May. In total, 1190 dead birds were examined in 2006. The dead wild birds were sent in from the whole country but the positive findings were concentrated in the southeastern part of Denmark especially along the Baltic Sea. The infected birds were found in areas where the density of wild ducks and swans is normally high in winter/early spring. Since 2006 , HP H5N1 has not been detected in wild birds in Denmark.

## 6. Measures in place as regards the notification of the disease



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(max. 32000 chars) :

## Poultry:

All suspicions of AI including poultry showing clinical symptoms of the disease must be reported to the veterinary authorities as laid down in Order No. 693 of 21 June 2007 (HPAI) and Order No. 943 of 14 September 2006 (LPAI) with later amendments. Seropositive holdings will be managed as holdings under suspicion for avian influenza. Holdings will be investigated and samples for examination will be taken. The Veterinary Control Offices will impose movement restrictions on the farm and on possible contact farms.

Rules for compensation of farmers with animals, that have to be killed due to infection with AI subtype H5 or H7, are laid down in Order No. 239 of 12 April 1991 concerning expenses and compensation related to eradication and prevention of animal diseases as amended by Order No. 812 of 29 October 1999. The animals are compensated at the market value and the DVFA cover 20% of the estimated loss of profits.

## Wild birds:

In case the general public find dead birds in nature they have to contact the Veterinary Control Offices. If AI is suspected the birds are under appropriate safety measures collected and brought to The National Veterinary Institute for virological examination.

## 7. Costs

### 7.1 Detailed analysis of the costs

#### 7.1.1 Poultry

(max. 32000 chars) :

The application for financial contribution for the programme in poultry and game birds for restocking only includes the estimated total expenditure on eligible measures. That means that only the number of holdings to be sampled according to table 1 and table 2 in Commission Decision 2010/367/EU are

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stated in tables 2.2.1 and 2.2.2, rather than the total number of holdings to be sampled (and for some categories also testing more than once per year), under here PCR-tests of samples from game birds offspring, to be tested according to the Danish AI surveillance programme.

Serological test HI test for H5 and H7:

Price for laboratory examinations:

Price for one H5 test: 59 DKK = 7,93 Euro

Price for one H7 test: 59 DKK = 7,93 Euro

Estimated total number of PCR-tests (confirmatory tests): 50

Estimated total number of VI tests: 5

Price for one PCR-test: 344 DKK = 46,24

Price for one VI-test: 739 DKK = 99,33

Exchange rate 30 March 2012: EUR 1 = 7,4399 DKK

## 7.1.2 Wild birds

(max. 32000 chars):

Estimated number of dead or sick wild birds to be tested: 80

Estimated total number of PCR-tests : 80

Estimated total number of VI tests: 8

Price for one PCR-test: 600 DKK = 80,65

Price for one VI-test: 2160 DKK = 290,33

Exchange rate 30 March 2012: EUR 1 = 7,4399 DKK

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## 7.2 Summary of the costs

### 7.2.1 Poultry surveillance

#### Detailed analysis of the cost of the programme - poultry

Laboratory testing	Number of tests	Unitary test cost (per method) in €	Total cost (€)
ELISA test	0	0	0
agar gel immune diffusion test	0	0	0
Haemagglutination-inhibition-test (HI) for H5 (specify number of tests for H5)	5 360	7.93	42504.8
Haemagglutination-inhibition-test (HI) for H7 (specify number of tests for H7)	5 360	7.93	42504.8
Virus isolation test	5	99.33	496.65
PCR test	50	46.24	2312
Other please specify here	0	0	0
<b>Add a new row</b>			



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## 7.2.2 Wild bird surveillance

### Detail analysis of the cost of the programme - wild birds

Laboratory testing				
Methods of laboratory analysis	Number of tests	Unitary test cost (per method) in €	Total cost (€)	
Virus isolation test	8	290.33	2322.64	
PCR test	80	80.65	6452	
Other please specify here	0	0	0	
			Add a new row	
Sampling				
Samples	80	5	400	
Other measures				

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Other please specify here	Number	Unitary cost in €	Total cost (€)
	0	0	0
			<b>Add a new row</b>
<b>Total wild birds Testing + Sampling + Other measures</b>	168		9 174,64 €
<b>Grand Total Poultry + Wild birds</b>	16303		99 672,89 €

## Attachments

### IMPORTANT :

- 1) The more files you attach, the longer it takes to upload them .
- 2) This attachment files should have one of the format listed here : [.zip](#),[.jpg](#),[.jpeg](#), [.tiff](#), [.tif](#), [.xls](#),[.doc](#), [.bmp](#), [.pna](#).
- 3) The total file size of the attached files should not exceed 2 500Kb (+- 2.5 Mb). You will receive a message while attaching when you try to load too much.
- 4) IT CAN TAKE **SEVERAL MINUTES TO UPLOAD** ALL THE ATTACHED FILES. Don't interrupt the uploading by closing the pdf and wait until you have received a Submission Number!
- 5) Zip files cannot be opened (by clicking on the Open button). All other file formats can be opened.

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