



submitted for obtaining EU financial contribution

Annex IV: Programme for the surveillance of Avian Influenza in poultry and wild birds

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- 6) You are invited to submit your programmes in English.

Document version number: 2022 1.0

Member state : SVERIGE

Disease Avian Influenza

This program is multi annual :

Request of Union co-financing from beginning : To end of

Request year for multiannual programme :

1. Contact data

Name Phone

Email Your job type within the CA :

Submission Date

27/05/2022 09:40:19

Submission Number

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ANNEX 4 : Standard requirements for the submission of surveillance programmes for avian influenza in poultry and wild birds

2. Description and implementation of the surveillance programme in poultry

2.1.1 Designation of the authorities in charge of supervising coordinating and implementing the programme. Please describe in details who designs, who implements, and who monitors the programme in poultry. (Roles of central authority, local authorities, vets, farmers, labs, hunting associations, etc.)

(max. 32000 chars) :

The Swedish Board of Agriculture (SBA) is the authority under the Ministry of Enterprise and Innovation. The Department of animal health and welfare at SBA have the mandate to decide about sampling, disease surveillance, eradication of epizootic diseases etc. This Department also compensates the farmer for economic losses due to decisions taken in accordance with the act on epizootic diseases.

The National Veterinary Institute (NVI) is also an authority under the Ministry of Enterprise and Innovation and the National Reference Laboratory for Avian Influenza. NVI has been appointed by SBA to organize and perform the surveillance programme for avian influenza in poultry since 2002. The Department of Animal Health and Antimicrobial Strategies is responsible for the programme at NVI and handles the planning of the programme, administration, giving instructions to veterinarians involved in the sampling, sending out sampling material etc. The Department of Virology, Immunobiology and Parasitology performs the analyses. The National Food Administration (SLV, an authority under the Ministry of Enterprise and Innovation) has official veterinarians employed regionally. These veterinarians are responsible for the sampling at the slaughterhouses.

2.1.2 Description of System in place for the registration of holdings

(max. 32000 chars) :

SBA is responsible for the system of registration in Sweden. Registration is a requirement for establishments with poultry. The Swedish poultry registers are briefly presented in the table below.

Register	Population covered	EU-legislation	National legislation
The Swedish poultry register	All poultry holdings	Regulation (EU) 2016/429 of the European parliament and of the council	Statens jordbruksverks föreskrifter och allmänna råd om registrering, godkännande, spårbarhet, förflyttning, införsel samt export med avseende på djurhälsa SJVFS 2021:13
The Swedish register of	All holdings with a capacity of at least	Council Dir. 1999/74/EC	Föreskrifter om ändring i Statens jordbruksverks

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laying hens	350 laying hen and sell eggs for consumption	Council Dir. 2002/4/EG	föreskrifter (SJVFS 2003:20) om registrering av anläggningar med värphöns SJVFS 2015:36
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2.1.3 Design (risk based surveillance, or surveillance based on representative sampling taking into account criteria in Annex II of Commission Delegated Regulation (EU) 2020/689.

Provide justification for the choice of the design. Please refer also explicitly to the objectives of the surveillance programme as mentioned in section 2 of Annex II Commission Delegated Regulation (EU) 2020/689.

(max. 32000 chars) :

For the year 2023 Sweden will continue to apply passive surveillance for poultry and wild birds and an active surveillance programme in poultry based on the representative sampling according to Decision 2010/367/EU that have been applied in previous years, with some modifications. A total revision of the AI surveillance programme will be carried out to comply with Commission Delegated Regulation (EU) 2020/689 but it may not be fully implemented for 2023. For 2023 blood samples will be taken according to Annex 1 Decision 2010/367/EU point 5, Tables 1 and 2, of this annex. For detailed information please see point 3, Tables 5.1 and 5.2.

All positive results will be followed up by further investigation at the holding and the Commission and the EURL will be informed of all results.

In the plan of AI- surveillance for 2023 we have taken into account the objectives in section 2 of Annex II of Delegated Regulation 2020/689. One area that we have strengthen for 2023 is the objective of detection of HPAI in poultry species which generally do not show significant clinical signs.

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

Please provide also a table with the number of poultry holdings and birds existing for each poultry type, and map with the geographic distribution and density of poultry holdings. (If not available, please explain)

(max. 32000 chars) :

The poultry production in Sweden is mainly concentrated to the southern third of the country. The number of holdings in this description consists of establishments with more than 350 poultry, see attached map.

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Laying hens

The number of laying hen holdings is 360 (2022). In 2021, 2 876 015 laying hens were slaughtered in Sweden. Swedish laying hens are slaughtered mainly at one slaughterhouse.

Chicken breeders (layers and broiler)

In May 2021, there were 33 holdings of parent flocks of laying hens or broilers registered in the Poultry Health Control Programme. There are one company that breeds grand parent flocks for broiler production. All of the breeding herds are regularly controlled for different diseases by blood sampling.

Turkey breeders

In May 2021, 3 holdings of parent flocks of turkeys were registered in the Poultry Health Control Programme. All of these are regularly controlled for different diseases by blood sampling.

Fattening turkeys

The number of commercial holdings of fattening turkeys in Sweden is 13 (2021). In 2021, 528 356 turkeys were slaughtered in Sweden.

Fattening geese and fattening ducks

In Sweden, ducks and geese are mainly bred and slaughtered in the most southern parts of the country. This production type is not very common. The majority of these birds are slaughtered during October and early November. In 2021, 11 906 ducks and 9 657 geese were slaughtered in Sweden.

Farmed game birds (waterfowl)

There are 43 holdings with waterfowl (mallards) for supplies of game registered in Sweden. In 2021 there were 9 holdings with mallard breeders sampled by a veterinarian at the holding.

2.1.3.2 Criteria and risk factors for risk based surveillance (1) Please describe the risk factors as regard the criteria set in Annex II of Commission Delegated Regulation (EU) 2020/689.

(max. 32000 chars) :

In the plan of AI- surveillance for 2023 we have taken into account the objectives in section 2 of Annex II of Delegated Regulation 2020/689. One area that we planned to strengthen already for 2022 was the objective of detection of HPAI in poultry species which generally do not show significant clinical signs.

For this category a risk-based surveillance is applied based on the following:

- The historical and current epidemiological situation.
 - The proximity of the establishments to water bodies or areas where migratory birds gather.
 - The geographical location of the establishments in relation to areas with a high density of poultry.
- Poultry production with ducks, geese and Anseriformes for supplies of game is very small in Sweden and this is only a minor part of our AI-surveillance program.

(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 Annex II of Commission Delegated Regulation (EU) 2020/689.

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2.2 Target populations

Please explain:

- 1) The strategy of selection of the holdings to be sampled. (Random, risk based, geographic distribution)
- 2) The number of holdings sampled, with regard to the minimum requirements set in Annex II section 9 to Commission Delegated Regulation (EU) 2020/689.
- 3) The number of samples taken in each holding with regard to the minimum requirements set in Annex II section 9 to Commission Delegated Regulation (EU) 2020/689.

(max. 32000 chars) :

The selection of holdings is randomized, convenience based, or risk based depending on the category. The number of establishments and the number of samples planned to be taken are currently more than required according to Annex II section 9 to Commission Delegated Regulation (EU) 2020/689.

Chicken breeders

Ten samples taken within the Poultry Health Control Programme from one flock per holding will be taken.

Turkey breeders

Samples taken in parent flocks of turkeys within the Poultry Health Control Programme will be used for the surveillance. Ten samples from one flock per holding will be taken.

Laying hens

In 2023, 60 of the indoor holdings shall be sampled at slaughter, 10 samples per holding. The selection is representative with some elements of convenience sampling.

Free range laying hens

In 2023, 53 holdings will be sampled at slaughter, 10 samples per holding. The selection is representative with some elements of convenience sampling.

Fattening turkeys

All holdings that send their birds for slaughter will be sampled at the slaughterhouse. Blood samples will be collected from ten birds per holding.

Fattening ducks

Risk-based surveillance will be carried out. Swabs will be sampled by a veterinarian at the holding in establishments with more than 1000 ducks. Twenty samples per holding will be taken. Blood samples will also be taken at slaughter, 20 samples per holding. If less than 20 birds, all ducks will be sampled.

Fattening geese

Risk-based surveillance will be carried out. Swabs will be sampled by a veterinarian at the holding in establishments with more than 1000 geese. Twenty samples per holding will be taken. Blood samples will also be taken at slaughter, 20 samples per holding. If less than 20 birds, all geese will be sampled.

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Farmed game birds (waterfowl)

A risk-based selection of holdings with mallards will be sampled by a veterinarian at the holding. Swabs and blood samples from 20 mallards per holding will be taken.

In 2023 all establishments with more than 1000 ducks, geese or Anseriformes for supplies of game located in areas defines as high risk regions for HPAI will be included in the surveillance program. The high risk regions are: Blekinge, Gotland, Halland, Kalmar, Skåne, Stockholm, Södermanland, Uppsala, Västergötland, Östergötland and parts of Jönköping. There will be sampling event per establishment in 2023 and sampling will be carried out using oropharyngeal and cloacal swabs analysed with PCR in pools of five. Establishments in these regions that are more than 20 km from water bodies or areas where migratory birds gather may be excluded from the surveillance program. The risk can vary considerable within a region and the work of establishing higher resolution risk areas is still ongoing.

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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

Targets for year

2023

Category : laying hens

delete this category

In the column "Total number of samples", please put 0 if the same samples have already been counted for another laboratory analysis (example : for HI-H5 and HI -H7 test, only 1 sample should be counted)

NUTS (2) (b)	Total number of holdings(c)	Total number of holdings to be sampled	Number of samples per holding	Total number of samples	Total number of tests	Method of laboratory analysis	
SE11	2	1	10	10	10	ELISA test	X
SE12	71	20	10	200	200	ELISA test	X
SE21	27	6	10	60	60	ELISA test	X
SE22	45	9	10	90	90	ELISA test	X
SE23	60	19	10	190	190	ELISA test	X
SE31	6	5	10	50	50	ELISA test	X
SE32	3	0	10	0	0	ELISA test	X
SE33	5	0	10	0	0	ELISA test	X

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Total					600	
						Add a new row
<p>(a) <i>Holdings or herds or flocks or establishments as appropriate.</i></p> <p>(b) <i>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</i></p> <p>(c) <i>Total number of holdings of one category of poultry in concerned NUTS 2 region.</i></p>						

Category : free range laying hens

delete this category

In the column "Total number of samples", please put 0 if the same samples have already been counted for another laboratory analysis (example : for HI-H5 and HI -H7 test, only 1 sample should be counted)

NUTS (2) (b)	Total number of holdings(c)	Total number of holdings to be sampled	Number of samples per holding	Total number of samples	Total number of tests	Method of laboratory analysis	
SE11	5	1	10	10	10	ELISA test	X
SE12	55	24	10	240	240	ELISA test	X
SE21	24	13	10	130	130	ELISA test	X
SE22	23	6	10	60	60	ELISA test	X
SE23	20	7	10	70	70	ELISA test	X
SE31	10	2	10	20	20	ELISA test	X
SE32	4	0	10	0	0	ELISA test	X
Total					530		
						Add a new row	
<p>(a) <i>Holdings or herds or flocks or establishments as appropriate.</i></p> <p>(b) <i>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</i></p> <p>(c) <i>Total number of holdings of one category of poultry in concerned NUTS 2 region.</i></p>							

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Category : chicken breeders

delete this category

In the column "Total number of samples", please put 0 if the same samples have already been counted for another laboratory analysis (example : for HI-H5 and HI -H7 test, only 1 sample should be counted)

NUTS (2) (b)	Total number of holdings(c)	Total number of holdings to be sampled	Number of samples per holding	Total number of samples	Total number of tests	Method of laboratory analysis	
SE12	10	10	10	100	100	ELISA test	X
SE21	4	4	10	40	40	ELISA test	X
SE22	17	17	10	170	170	ELISA test	X
SE23	2	2	10	20	20	ELISA test	X
Total					330		
Add a new row							
<p>(a) Holdings or herds or flocks or establishments as appropriate.</p> <p>(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</p> <p>(c) Total number of holdings of one category of poultry in concerned NUTS 2 region.</p>							

Category : turkey breeders

delete this category

In the column "Total number of samples", please put 0 if the same samples have already been counted for another laboratory analysis (example : for HI-H5 and HI -H7 test, only 1 sample should be counted)

NUTS (2) (b)	Total number of holdings(c)	Total number of holdings to be sampled	Number of samples per holding	Total number of samples	Total number of tests	Method of laboratory analysis	
SE23	2	2	10	20	20	ELISA test	X

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SE31	1	1	10	10	10	ELISA test	X
Total					30		
						Add a new row	
<p>(a) Holdings or herds or flocks or establishments as appropriate.</p> <p>(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</p> <p>(c) Total number of holdings of one category of poultry in concerned NUTS 2 region.</p>							

Category : fattening turkeys

delete this category

In the column "Total number of samples", please put 0 if the same samples have already been counted for another laboratory analysis (example : for HI-H5 and HI -H7 test, only 1 sample should be counted)

NUTS (2) (b)	Total number of holdings(c)	Total number of holdings to be sampled	Number of samples per holding	Total number of samples	Total number of tests	Method of laboratory analysis	
SE22	12	12	10	120	120	ELISA test	X
SE23	6	6	10	60	60	ELISA test	X
Total					180		
						Add a new row	
<p>(a) Holdings or herds or flocks or establishments as appropriate.</p> <p>(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</p> <p>(c) Total number of holdings of one category of poultry in concerned NUTS 2 region.</p>							

Add a category

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Totals	Total number of tests	Total number of samples
Total poultry 2023	1 670	1 670

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

Targets for year **2023**

Category : fattening ducks

delete this category

In the column "Total number of samples", please put 0 if the same samples have already been counted for another laboratory analysis (example : for HI-H5 and HI -H7 test, only 1 sample should be counted)

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 samples	Total number of tests	Method of laboratory analysis	
SE22	4	4	20	80	20	PCR test	X
SE22	0	0	20	80	80	ELISA test	X
Total					100		
						Add a new row	

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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 : duck breeders

delete this category

In the column "Total number of samples", please put 0 if the same samples have already been counted for another laboratory analysis (example : for HI-H5 and HI -H7 test, only 1 sample should be counted)

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 samples	Total number of tests	Method of laboratory analysis	
SE22	1	1	20	20	5	PCR test	X
Total					5		
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 : geese breeders

delete this category

In the column "Total number of samples", please put 0 if the same samples have already been counted for another laboratory analysis (example : for HI-H5 and HI -H7 test, only 1 sample should be counted)

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 samples	Total number of tests	Method of laboratory analysis	
SE22	1	1	20	20	5	PCR test	X
Total					5		
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

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Category : fattening geese

delete this category

In the column "Total number of samples", please put 0 if the same samples have already been counted for another laboratory analysis (example : for HI-H5 and HI -H7 test, only 1 sample should be counted)

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 samples	Total number of tests	Method of laboratory analysis	
SE22	3	3	20	60	15	PCR test	X
SE22	0	0	20	60	60	ELISA test	X
Total					75		
Add a new row							
<p>(a) <i>Holdings or herds or flocks or establishments as appropriate.</i></p> <p>(b) <i>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</i></p>							

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

delete this category

In the column "Total number of samples", please put 0 if the same samples have already been counted for another laboratory analysis (example : for HI-H5 and HI -H7 test, only 1 sample should be counted)

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 samples	Total number of tests	Method of laboratory analysis	
SE 11-33 (whole of Sweden)	43	12	20	240	60	PCR test	X
SE 11-33 (whole of Sweden)	0	0	20	240	240	ELISA test	X
SE 11-33 (whole of Sweden)	0	0		10	10	Virus isolation test	X
Total					310		
Add a new row							

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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*

Add a category

Totals	Total number of tests	Total number of samples
Total ducks and geese and farmed game birds 2023	495	810

TOTALS for Poultry (2.2.1) + Ducks and Geese (2.2.2) and farmed game birds for year :

2023

Poultry + Ducks/Geese /farmed game birds	Total number of tests
Grand Total	2 165
Grand Total ELISA	2 050
Grand Total agar	0
Grand Total HI tests (H5)	0
Grand Total HI tests (H7)	0
Grand Total Virus Isolation test	10
Grand Total PCR test	105
Grand Total Samplings	2 480

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2.3 Sampling procedures, sampling periods and frequency of testing taking into account criteria set out in Annex II of Commission Delegated Regulation (EU) 2020/689.

For each poultry category please detail the place of sampling (holding or slaughterhouse), the period and frequency of the testing, and who is in charge of the sampling.

(max. 32000 chars):

The surveillance programme for avian influenza will run from 1 January 2023 to 31 December 2023. Holdings will be sampled once annually after taken into consideration possible seasonal factors in the production. Laying hens and fattening turkeys are sampled at slaughter and therefore sampled rather evenly throughout the year. If geese and ducks are sampled at slaughter it will be done mainly in October-November. For parent flocks of laying hens, broilers or turkeys, samples taken within the Poultry Health Control Programme will be used for the surveillance programme. These samples are taken throughout the year. Farmed feathered game are sampled at the holding throughout the year. At the slaughterhouse, the veterinarian is in charge of the sampling, but the sampling may also be performed by other person, under the responsibility of the veterinarian. In ducks, geese and farmed feathered game, the owner is responsible for calling a veterinarian to perform the sampling, and the veterinarian is in charge of the sampling procedure.

2.4. Laboratory testing: description of the laboratory tests used.

Please describe the tests to be used and their purpose (screening test or confirmatory test or follow-up investigations) for each category of poultry.

Please explain the number of tests calculation for each poultry category, and if it is in line with Annex II to Commission Delegated Regulation (EU) 2020/689.

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

In poultry flocks, the initial tests within the screening programme are blood samples, which are serologically analysed by an ELISA-test (IDEXX Influenza A Ab test). Positive results were confirmed with haemagglutination inhibition (HI) tests (for subtypes H5 and H7) in accordance with the OIE guidelines. If a HI test is positive, PCR tests are performed as a follow up. Cloacal and oropharyngeal swabs from 60 birds (or all birds if less than 60) in the positive holding

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are then taken. The two swabs (cloacal and oropharyngeal) from each bird are pooled into one single sample, which generates 60 samples in total. These 60 samples are analysed for the detection of AIV genome by using an M-gene qRT-PCR. Samples found positive for the matrix gene were further analysed by qRT-PCR specific for the haemagglutinin gene of H5 and H7 and virus pathotyping by amplicon sequencing. All laboratory investigations will be carried out in accordance article 6, section 1, part II of delegated regulation (EU) 2020/689. All laboratory testing will be performed at the National Veterinary Institute (NVI), Uppsala, Sweden. All virus isolates will be sent to the EU Reference Laboratory (EURL). The Swedish Board of Agriculture (SBA) will report to the Commission in accordance with Implementing Regulation (EU) 2020/2002 laying down rules for Union notification and Union reporting of listed diseases.

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

3.1.1 Designation of the authorities in charge of supervising, coordinating, and implementing the programme and relevant collaborating partners (e.g. epidemiologists, ornithologists, nature bird observation and hunter organisations).

Please describe in detail who designs, who implements, and who monitors the programme in wild birds.

Please detail the system in place to detect the dead wild birds; please explain who delivers the wild birds to the laboratory.

(max. 32000 chars):

The program will be supervised by the Swedish Board of Agriculture (SBA) in close cooperation with a working group on wild birds at the National Veterinary Institute (NVI). The working group on wild birds are in close collaboration with ornithologist.

Since the programme is designed as a passive surveillance programme by NVI and SBA, all wild birds found dead or moribund are included. The programme is implemented by NVI, and dead birds are sent to them by Swedish ornithologists, hunters and the public. SBA is monitoring the programme in cooperation with NVI.

The system targets all wild birds (except small passerine birds and Columbiformes) found dead or moribund. NVI keep close contact with organisations for

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Swedish ornithologists and hunters to get information about the population of wild birds and to get these organisations to send dead birds to NVI for sampling. NVI also informs the public about sending wild birds for sampling when found dead. Members of the public can report dead or sick birds through a webbapplication at NVI.

If a species of wild bird has already been found positive within a municipality another bird of the same species and same municipality will not be sampled within the same 30 day period.

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

(max. 32000 chars) :

The passive surveillance will be carried out in all parts of Sweden.

3.1.3 Estimation of the local and/or migratory wildlife population

Please provide main species, number of birds, migratory routes, geographic distribution or risk areas.

(max. 32000 chars) :

In Sweden there are in total 490 different bird species identified. Around 200 are non-migratory/resident and the rest are migratory birds to a greater or lesser extent. The majority of the birds stay in the south and middle of Sweden and a smaller part in the northern part.

In summer there are around 550 million birds individuals and 450 million leave Sweden in the end of the summer or in autumn. The majority of the migratory birds arrive to Sweden in March to June, depending on climatic conditions, mostly from the south and east and a very limited number from the north.

According to standardized surveys the number of wintering geese today are about four times higher compared to 20 years ago. The same pattern is true for roosting geese (October counts). The number of wintering Anatidae (swans, geese, ducks) in general has increased markedly during past decades.

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Wild bird observations can be recorded in a report system called Artportalen which is used by NVI to monitor the wild bird situation including migrations status.

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

(max. 32000 chars) :

The surveillance program of wild birds in Sweden is designed as a passive programme, which includes all groups of wild birds (except small passerine birds and Columbiformes), but targets species (EFSA 2017) are prioritised. The birds are collected from all parts of Sweden and sent to the National Veterinary Institute in Uppsala for sampling. Members of the public are encouraged to report findings of dead or sick birds to NVI through a web application.

(3) Areas at risk (wetlands in particular where links with high density poultry populations), previous positive findings as referred to in Annex II to Commission Delegated Regulation (EU) 2020/689 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 conformity with Annex II to Commission Delegated Regulation (EU) 2020/689

Targets for year

2023

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NUTS (2) code/region (a)	Total number of wild birds to be sampled	Estimated total number of wild birds to be samples for passive surveillance	Type of test	Number of tests	
SE 11-33 (whole of Sweden)	800	800	PCR test	1 200	X
SE 11-33 (whole of Sweden)	0	0	Virus isolation test	200	X
SE 11-33 (whole of Sweden)	0	0	Gene sequencing	100	X
Total	800	800		1 500	
Add a new row					
<p>(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.</p>					

	Total number of tests
Total number of tests	1 500
Total Virus isolation tests	200
Total PCR tests	1 200
Total Other tests	100
Total number of wild birds to be sampled for passive surveillance	800

3.3 Sampling procedures and sampling periods

Please also explain which samples are taken from wild birds

max 32000 chars :

Wild birds found dead or moribund are sent by post by the finder through existing routines to the National Veterinary Institute in Uppsala for sampling and analysis. In case of enhanced investigations, organisations contracted beforehand will locally look for dead or moribund wild birds for further examination and sampling at NVI. From dead birds, two swab samples (cloacal and tracheal) are collected.

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3.4 Laboratory testing: description of the laboratory tests used .

Please explain also which laboratory do the tests for the wild birds, and which, and how many tests are planned for each wild bird

max 32000 chars :

The birds are collected and sent to the National Veterinary Institute (NVI) for sampling. Two samples are taken from each bird, and these are analysed at the NVI for the detection of avian influenza virus genome by using an M-gene realtime PCR (Spackman et al). Positive samples are further analysed for detection and identification of H5 and H7 viruses, including virus pathotyping by amplicon sequencing (Slomka et al). If virus genome is detected virus isolation and further subtyping are performed. The viruses isolated are sent to EURL.

4. Short description of the epidemiological situation of the disease in poultry during the last five years

max 32000 chars :

During the wild bird epidemic of HPAI H5N8 in 2016-17, Sweden detected 4 separate introductions of H5N8 to poultry of which two were layer farms and two were small backyard hobby flocks. In addition, two detections were made in small holdings of "other captive birds". In the spring of 2018, HPAI H5N6 circulated in wild birds and was also detected in a small holding with "other captive birds" through passive clinical surveillance. In the late spring of 2018, a game bird holding of breeding pheasants was found positive for LPAI H5 through the surveillance program. The 2020-2021 HPAI epidemic was the worst on record in Sweden. HPAI of types H5N8 or H5N5 was confirmed on 16 holdings with poultry and 7 holdings with captive birds. The outbreaks were located in areas where migratory birds are prevalent and Skåne and Östergötland regions had the largest numbers of outbreaks. Most outbreaks were suspected to be due to introductions from wild birds. In the HPAI season 2021-2022 so far, in total 7 outbreaks were confirmed, 3 were holdings with poultry and 4 with captive birds. All outbreaks in 2022 were HPAI subtype H5N1. Except for the detection of LPAI H5 in 2018 pheasants, all detections of AI in poultry the last years in Sweden has been through sampling following passive clinical surveillance.

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5. *Short description of the epidemiological situation of the disease in wild birds during the last five years*

(max. 32000 chars):

Over the winter and early spring of 2016-17 a total of 57 detections of HPAI H5N8 was made within the wild bird surveillance program. Prior to 2016, 220-320 birds were sampled yearly within the program. Due to both increased amounts of birds found dead due to HPAI H5N8 and increased awareness, more birds have then been submitted for autopsy, and thus sampled within the AI surveillance program increasing the sampled numbers to 350-450 birds. In 2018 HPAI H5N6 was detected in 15 cases between February and June, all birds of prey. No cases were found in 2019. In the 2020-2021 season, 152 cases of HPAI H5N8 or H5N5 have been detected in wild birds between Skåne region in the south and Dalarna region in the north. There was high mortality in wild birds during winter/spring of 2021 and the reports of dead wild birds peaked in March. A selection of reported dead birds was sampled in the surveillance and the selection was based on species, location and timing in relation to previous positive findings. Findings of HPAI in wild birds were located mainly along the coasts and in the southern third of the country and Skåne region had the highest number of cases. So far in 2022, 21 cases of HPAI H5N1 have been detected in wild birds.

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

Please explain also briefly the measures implemented in case of suspicion or confirmation of the disease

(max. 32000 chars):

Both in case of suspicion and confirmed case of avian influenza, measures are taken in accordance with the requirement of COMMISSION DELEGATED REGULATION (EU) 2020/687.

In case of a positive sample in the surveillance program we always put the holding under official control, take new samples and take all the necessary measures according to the legislation until we have confirmed or ruled out the suspicion. In case the disease is confirmed, we notify the information in ADIS.

According to our epidemiological investigation all outbreaks were suspected to be due to introductions from wild birds. There has been no evidence of secondary spread between poultry establishments, however occurrence of airborne spread could not be ruled out in single cases.

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C. Financial information

1. Identification of the implementing entities - financial circuits/flows

Identify and describe the entities which will be in charge of implementing the eligible measures planned in this programme which costs will constitute the reimbursement/payment claim to the EU. Describe the financial flows/circuits followed.

Each of the following paragraphs (from a to e) shall be filled out if EU cofinancing is requested for the related measure.

a) Implementing entities - **sampling**: who perform the official sampling? Who pays? (e.g. authorised private vets perform the sampling and are paid by the regional veterinary services (state budget); sampling equipment is provided by the private laboratory testing the samples which includes the price in the invoice which is paid by the local state veterinary services (state budget))

(max. 32000 chars):

The official sampling at holdings regarding poultry is performed by authorised private vets and official vets employed by SBA. The sampling is paid by SBA (state budget) and the sampling equipment is provided by the National Veterinary Institute. Sampling at the slaughterhouses are performed by official vets employed by NFA. The sampling costs is paid by SBA (state budget) and the sampling equipment is provided by the National Veterinary Institute. The

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sampling of wild birds is performed by vets at the National Veterinary Institute, after the birds have been delivered there. The sampling is paid by the state budget.

b) Implementing entities - **testing**: who performs the testing of the official samples? Who pays? (e.g. regional public laboratories perform the testing of official samples and costs related to this testing are entirely paid by the state budget)

(max. 32000 chars):

The testing is performed by the National Veterinary Institute and is paid for by SBA.

c) Implementing entities - **compensation**: who performs the compensation? Who pays? (e.g. compensation is paid by the central level of the state veterinary services, or compensation is paid by an insurance fund fed by compulsory farmers contribution)

(max. 32000 chars):

No compensation for sampling is paid to the farmers. The testing is compulsory for those.

d) Implementing entities - **vaccination** : who provides the vaccine and who performs the vaccination? Who pays the vaccine? Who pays the vaccinator? (e.g. farmers buy their vaccine to the private vets, send the paid invoices to the local state veterinary services which reimburse the farmers of the full amount and the vaccinator is paid by the regional state veterinary services)

(max. 32000 chars):

No vaccination is permitted in Sweden.

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e) Implementing entities - **other essential measures**: who implements this measure? Who provides the equipment/service? Who pays?

(max. 32000 chars):

N.A.

2. Source of funding of eligible measures

All eligible measures for which cofinancing is requested and reimbursement will be claimed are financed by public funds.

yes

no

3. Additional measures in exceptional and justified cases

In the "*Guidelines for the Union co-funded veterinary programmes*", it is indicated that in exceptional and duly justified cases, additional necessary measures can be proposed by the Member States in their application.

If you introduced these type of measures in this programme, for each of them, please provide detailed technical justification and also justification of their cost:

N.A.

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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 : jpg, jpeg, tiff, tif, xls, xlsx, doc, docx, ppt, pptx, bmp, pna, pdf.
- 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) Only use letters from a-z and numbers from 1-10 in the attachment names, otherwise the submission of the data will not work.

List of all attachments

		Attachment name	File will be saved as (only a-z and 0-9 and -_):	File size
			Total size of attachments :	