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HEALTH & CONSUMERS DIRECTORATE-GENERAL  
Unit 04 - Veterinary Control Programmes

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

## **Survey programme for Avian Influenza in poultry and wild birds**

**Approved\* for 2009 by Commission Decision 2008/897/EC**

**Slovakia**

\* in accordance with Commission Decision 90/424/EEC



**Survey Plan for Avian influenza in poultry and wild birds in the Slovak Republic**  
Proposed on April 2008 for co-financing for 2009.

**1. Identification of the programme**

Member State: Slovak Republic

Disease: Avian influenza

Year of implementation: 2009

Reference of this document: AI SR 2009

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**2. Description of the surveillance programme in poultry**

**2.1. Objectives, general requirements and criteria**

Serological surveillance for LPAI subtypes H5 and H7 in poultry aim at:

- Detecting subclinical infections with LPAI of subtypes H5 and H7 thereby complementing early detection systems and subsequently preventing possible mutation of these viruses to HPAI.
- Detecting infections of LPAI H5 and H7 subtypes in specifically targeted poultry populations at specific risk for infections due to their husbandry system or the susceptibility specific species.
- Contributing to the demonstration of a free status of a certain country, region or compartment from notifiable avian influenza in the frame of international trade according to OIE rules.

*General requirements and criteria*

- *This survey shall be implementing from 1 January 2009 to 31 December 2009.*
- *Sampling shall cover a period appropriate to production periods for each poultry category as required.*

## 2.2. Design and implementation

### Surveillance for avian influenza in poultry

1. All positive findings shall be retrospectively investigated at the holding and the conclusions of this investigation shall be reported to the Commission and the CRI.
2. The following groups are included into the seroprevalence survey: breeding flocks, laying hens, rearing, broilers (only when it is risk) turkeys, water poultry, guinea fowls, farmed feathered game, birds belonging to the superorder Rantes.
3. The sampling shall be performed in the regions of the Slovak Republic (in territories administered by the District Veterinary and Food Administrations) in such a manner that the regions might be supposed as representative ones for the whole Slovak Republic, taking into account the following:
  - Samples shall be taken at the slaughterhouse
  - In case that during the year the poultry shall not be moved from the holding to slaughter or it shall be slaughtered on the territory of the SR, the blood samples shall be taken directly in the holding.
  - the number of holdings to be sampled (excluding ducks, geese and turkeys); that number shall be defined so as to ensure the identification of at least one infected holding if the prevalence of infected holdings is at least 5%, with a 95% confidence interval; (see Table 1)
  - the number of birds sampled from each holding shall be defined so as to ensure 95% probability of identifying at least one positive bird if the prevalence of sero-positive birds is  $\geq 30\%$ .5 birds shall be tested from each holding (except ducks, geese and turkeys)
  - In duck, geese and quail holdings blood samples for serological testing shall be taken preferably from birds which are

kept outside in fields. From each selected holding 40 – 50 blood samples shall be taken for serological testing. With regard to quails only adult (or laying) breeders shall be sampled

4. Blood samples for serological examination shall be collected from all species of poultry including those reared in free - range systems, from at least five to 10 birds (except ducks, geese and quails) per holding, and from the different sheds if more than one shed is present on a holding. In case of several sheds the sample size per holding should be increased appropriately. It is recommended to take at least 5 birds per shed. In case of broilers samples should be collected only if the holdings are located in a risk area.
5. Based on a risk assessment, the sampling design shall also consider:
  - o the types of production and their specific risks, shall be targeted to free range production, outdoor keeping and backyard flocks plus taking into account other factors such as multi age, use of surface water, a relatively longer life span, the presence of more than one species on the holding or other relevant factors.
  - o The number of turkey, duck and geese holdings to be sampled shall be defined to ensure the identification of at least one infected holding if the prevalence of infected holdings is at least 5%, with a 99% confidence interval (see Table 2).
  - o The time period for sampling shall coincide with seasonal production.

**Table 1: Number of poultry holdings to be sampling of each poultry category (except turkey, duck and geese holdings)**

<i>Number of holdings per poultry category per Member State</i>	<i>Number of holdings to be sampled</i>
<i>up to 34</i>	<i>all</i>
<i>35 - 50</i>	<i>35</i>
<i>51 - 80</i>	<i>42</i>
<i>81 - 250</i>	<i>53</i>
<i>&gt;250</i>	<i>60</i>

*Table 2: Number of turkey, duck and geese holdings to be sampled*

<i>Number of holdings per Member State</i>	<i>Number of holdings to be sampled</i>
<i>up to 46</i>	<i>all</i>
<i>47 - 60</i>	<i>47</i>
<i>61 - 100</i>	<i>59</i>
<i>101 - 350</i>	<i>80</i>
<i>&gt;350</i>	<i>90</i>

**Table 2.2.1 POULTRY HOLDINGS<sup>(a)</sup> (except ducks and geese) TO BE SAMPLED**

**Serological investigation according to point B of Annex I to Commission Decision 2007/268/EC<sup>1</sup> on holdings of broilers(only when at risk)**

NUTS (2) code <sup>(b)</sup>	Total number of holdings <sup>(c)</sup>	Total number of holdings to be sampled	Number of samples per holding	Total number of tests to be performed per method	Methods of laboratory analysis
SK01 – territory of Bratislava	4	1	5	5	HI for HS/H7
SK02 – territory of west Slovakia	61	6	5	30	HI for HS/H7
SK03 – territory of middle Slovakia	45	4	5	20	HI for HS/H7
SK04 – territory of east Slovakia	38	3	5	15	HI for HS/H7
Total	148	14		70	HI for HS/H7

(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) 2 can not be used, coordinates (long/lat- to write out) are requested.

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

Serological investigation according to point B of Annex I to Commission Decision 2007/268/EC<sup>2</sup> on holdings of fattening turkeys

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NTUS (2) code <sup>(b)</sup>	Total number of holdings <sup>(c)</sup>	Total number of holdings to be sampled	Number of samples per holding	Total number of tests to be performed per method	Methods of laboratory analysis
SK01 – territory of Bratislava	0	0	5	0	HI for HS/H7
SK02 – territory of west Slovakia	5	5	5	25	HI for HS/H7
SK03 – territory of middle Slovakia	2	2	5	10	HI for HS/H7
SK04 – territory of east Slovakia	2	2	5	10	HI for HS/H7
Total	9	9		45	HI for HS/H7

- (a) Holdings or herds or flocks or establishments as appropriate;
- (b) Refers to the location of the holding of origin. In case NTUS (Nomenclature of Territorial Units for Statistics) 2 can not be used, coordinates (long/lat- to write out) are requested.
- (c) Total number of holdings of one category of poultry in concerned NTUS 2 region.



Serological investigation according to point B of Annex I to Commission Decision 2007/268/EC<sup>3</sup> on holdings of chicken breeders

NUTS (2) code <sup>(b)</sup>	Total number of holdings <sup>(c)</sup>	Total number of holdings to be sampled	Number of samples per holding	Total number of tests to be performed per method	Methods of laboratory analysis.
SK01 – territory of Bratislava	3	3	5	15	HI for HS/II7
SK02 – territory of west Slovakia	24	24	5	120	HI for HS/II7
SK03 – territory of middle Slovakia	5	5	5	25	HI for HS/II7
SK04 – territory of east Slovakia	18	18	5	90	HI for HS/II7
Total	50	50		250	HI for HS/II7

(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) 2 can not be used, coordinates (long/lat- to write out) are requested.

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

**Serological investigation according to point B of Annex I to Commission Decision 2007/268/EC<sup>4</sup> on holdings of turkey breeders**

NUTS (2) code <sup>(b)</sup>	Total number of holdings <sup>(c)</sup>	Total number of holdings to be sampled	Number of samples per holding	Total number of tests to be performed per method	Methods of laboratory analysis.
SK01 - territory of Bratislava	0	0	5	0	HI for HS/H7
SK02 - territory of west Slovakia	4	4	5	20	HI for HS/H7
SK03 - territory of middle Slovakia	0	0	5	0	HI for HS/H7
SK04 - territory of east Slovakia	0	0	5	0	HI for HS/H7
Total	4	4		20	HI for HS/H7

- (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) 2 can not be used, coordinates (long/lat-co write out) are requested.  
 (c) Total number of holdings of one category of poultry in concerned NUTS 2 region.

Scrological investigation according to point B of Annex I to Commission Decision 2007/268/EC<sup>5</sup> on holdings of laying hens

NCUTS (2) code <sup>(b)</sup>	Total number of holdings <sup>(a)</sup>	Total number of holdings to be sampled	Number of samples per holding	Total number of tests to be performed per method	Methods of laboratory analysis.
SK01 – territory of Bratislava	4	4	5	20	HI for HS/H7
SK02 – territory of west Slovakia	13	13	5	65	HI for HS/H7
SK03 – territory of middle Slovakia	17	17	5	85	HI for HS/H7
SK04 – territory of east Slovakia	16	16	5	80	HI for HS/H7
Total	50	50		250	HI for HS/H7

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

(b) Refers to the location of the holding of origin. In case NCUTS (Nomenclature of Territorial Units for Statistics) 2 can not be used, coordinates (long/lat- to write out) are requested.

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

Serological investigation according to point B of Annex I to Commission Decision 2007/268/EC<sup>6</sup> on holdings of free range laying hens

NUTS (2) code <sup>(b)</sup>	Total number of holdings <sup>(a)</sup>	Total number of holdings to be sampled	Number of samples per holding	Total number of tests to be performed per method	Methods of laboratory analysis
SK01 – territory of Bratislava	0	0	5	0	HI for HS/17
SK02 – territory of west Slovakia	0	0	5	0	HI for HS/17
SK03 – territory of middle Slovakia	0	0	5	0	HI for HS/17
SK04 – territory of east Slovakia	0	0	5	0	HI for HS/17
Total	0	0	0	0	HI for HS/17

- (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) 2 can not be used, coordinates (long/lat- to write out) are requested.  
 (c) Total number of holdings of one category of poultry in concerned NUTS 2 region.

Serological investigation according to point B of Annex I to Commission Decision 2007/268/EC<sup>7</sup> on holdings of ratiies

NUTS (2) code <sup>(a)</sup>	Total number of holdings <sup>(b)</sup>	Total number of holdings to be sampled	Number of samples per holding	Total number of tests to be performed per method	Methods of laboratory analysis.
SK01 – territory of Bratislava	0	0	5	0	III for HS/H7
SK02 – territory of west Slovakia	3	3	5	15	HI for HS/H7
SK03 – territory of middle Slovakia	1	1	5	5	HI for HS/H7
SK04 – territory of east Slovakia	13	13	5	65	HI for HS/H7
Total	17	17		85	HI for HS/H7

(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) 2 can not be used, coordinates (long/lat- to write out) are requested.

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

**Serological investigation according to point B of Annex I to Commission Decision 2007/268/EC<sup>8</sup> on holdings of farmed feathered game  
(pheasants, partridges, quails...)**

NUTS (2) code <sup>(b)</sup>	Total number of holdings <sup>(c)</sup>	Total number of holdings to be sampled	Number of samples per holding	Total number of tests to be performed per method	Methods of laboratory analysis
SK01 – territory of Bratislava	3	3	5/40 (quails)	50	HI for HS/H7
SK02 – territory of west Slovakia	21	21	5	105	HI for HS/H7
SK03 – territory of middle Slovakia	6	6	5/40 (quails)	65	HI for HS/H7
SK04 – territory of east Slovakia	5	5	5	25	HI for HS/H7
Total	35	35		245	HI for HS/H7

(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) 2 can not be used, coordinates (longitude to write out) are requested.

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

**Serological investigation according to point B of Annex I to Commission Decision 2007/268/EC<sup>9</sup> on holdings of backyard flocks" (only when it is risk or suspicion)**

NUTS (2) code <sup>(b)</sup>	Total number of holdings <sup>(c)</sup>	Total number of holdings to be sampled	Number of samples per holding	Total number of tests to be performed per method	Methods of laboratory analysis.
SK01 – territory of Bratislava	6 000	10	5	25 PCR/25 HI for HS/H7	PCR/HI for HS/H7
SK02 – territory of west Slovakia	25 000	50	5	125 PCR/125 HI for HS/H7	PCR/HI for HS/H7
SK03 – territory of middle Slovakia	10 000	50	5	125 PCR/125 HI for HS/H7	PCR/HI for HS/H7
SK04 – territory of east Slovakia	13 000	50	5	125 PCR/125 HI for HS/H7	PCR/HI for HS/H7
Total	54 000	160		400 PCR/400 HI for HS/H7	PCR/HI for HS/H7

(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) 2 can not be used, coordinates (long/lat- to write out) are requested.

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

**Table 2.2.2. DUCK AND GEESE HOLDINGS TO BE SAMPLED<sup>(a)</sup> according to point C of Annex I to Decision 2007/268/EC**

**Serological investigation**

NUTS 2 code <sup>(b)</sup>	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 to be performed per method	Methods of laboratory analysis
SK01 – territory of Bratislava	1	1	40	40	HI for HS/H7
SK02 – territory of west Slovakia	13	13	40	520	HI for HS/H7
SK03 – territory of middle Slovakia	0	0	0	0	HI for HS/H7
SK04 – territory of east Slovakia	0	0	0	0	HI for HS/H7
<b>Total</b>	<b>14</b>	<b>14</b>		<b>560</b>	<b>HI for HS/H7</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, coordinates (long/lat to write out) are requested.



### 2.3. Laboratory testing: description of the laboratory tests used

- Laboratory tests shall be carried out in accordance with the **avian influenza Diagnostic Manual (Commission Decision 2006/437/EC)** laying down the procedures for the confirmation and differential diagnosis of avian influenza (including examination of sera from ducks and geese by haemagglutination inhibition test).
- Laboratory diagnostics is performed by the National Reference Laboratory – The State Veterinary Institute in Zvolen. The National Reference Laboratory shall submit all results of serological and cultivation testing to the State Veterinary and Food Administration of the Slovak Republic and next the results shall be submitted to the Community Reference Laboratory (CRL) for their comparison and information exchange and flow.
- All avian influenza virus isolates shall be submitted to the CRL in accordance with Community legislation. Viruses of H5/H7 subtype shall be submitted without delay and shall be subjected to the standard characterisation tests (nucleotide sequencing/VP1) according to the avian influenza Diagnostic Manual.
- All results shall be sent to the Community Reference Laboratory for Avian Influenza (CRL) for collation. A good flow of information must be ensured. The CRL shall provide technical support and keep an enlarged stock of diagnostic reagents.
- The National Reference Laboratory shall submit to the CRL, H5 or H7 positive sera collected from Anseriformes in order that an archive be established to facilitate future test development.
- All positive serological findings shall be confirmed by the National Laboratories for avian influenza by a haemagglutination – inhibition test, using designated strains supplied by the Community Reference Laboratory for Avian Influenza:

#### **H5**

- (a) Initial test using Ostrich/Denmark/72420/96 (H5N2)
- (b) Test all positives with Duck/Denmark/64650/03 (H5N7) to eliminate N2 cross reactive antibody.

**H7**

(a) Initial test using Turkey/England/647/77 (H7N7)

(b) Test all positives with African Starling/983/79 (H7N1) to eliminate N7 cross reactive antibody.

### 3. Description of the surveillance programme in wild birds:

#### 3.1. Objectives, general requirements and criteria

*Objectives for surveys for avian influenza in wild birds*

*Virological surveillance for avian influenza in wild birds aim to identify the risk of introduction of AI viruses (LPAI and HPAI) to domestic poultry by:*

- *Ensuring early detection of HPAI H5N1 by investigating increased incidence of morbidity and mortality in wild birds, in particular in selected "higher risk" species listed in table 3*
- *In the event that HPAI H5N1 is detected in wild birds, then surveillance of live and dead wild birds should be enhanced to determine whether wild birds of other species can act as asymptomatic carriers or "bridge species" listed in table 4.*
- *Continuing a baseline surveillance of different species of free living migratory birds as part of continuous monitoring of LPAI viruses. Anseriformes (water fowl) and Charadriiformes (shorebirds and gulls) shall be the main sampling targets to assess if they carry LPAI viruses of H5 and H7 subtypes (which would in any case also detect HPAI H5N1 and other HPAI, if present). Higher risk species will be targeted in particular.*

Table 3

## LIST OF WILD BIRD SPECIES PRESENTING A HIGHER RISK IN RELATION TO AVIAN INFLUENZA\*

COMMON NAME	SCIENTIFIC NAME
Bewick's Swan	<i>Cygnus columbianus</i>
Whooper Swan	<i>Cygnus cygnus</i>
Mute Swan	<i>Cygnus olor</i>
<b>Geese</b>	
Pink-footed Goose	<i>Anser brachyrhynchus</i>
Bean Goose	<i>Anser fabalis</i>
Greater White-fronted Goose (European race)	<i>Anser albifrons albifrons</i>
Lesser White-fronted Goose	<i>Anser erythropus</i>
Greylag Goose	<i>Anser anser</i>
Barthacle Goose	<i>Branta leucopsis</i>
Brent Goose	<i>Branta bernicla</i>
Red-breasted Goose	<i>Branta nigricollis</i>
Canada Goose	<i>Branta canadensis</i>
<b>Ducks</b>	
Eurasian Wigeon	<i>Anas penelope</i>
Common Teal	<i>Anas crecca</i>
Mallard	<i>Anas platyrhynchos</i>
Northern Pintail	<i>Anas acuta</i>
Garganey	<i>Anas querquedula</i>
Northern Shoveler	<i>Anas clypeata</i>
Marbled Teal	<i>Marmaronetta angustirostris</i>

Red-crested Pochard	<i>Netta rufina</i>
Common Pochard	<i>Aythya ferina</i>
Tufted Duck	<i>Aythya fuligula</i>
<b>Waders</b>	
Northern Lapwing	<i>Vanellus vanellus</i>
Eurasian Golden Plover	<i>Pluvialis apricaria</i>
Black-tailed Godwit	<i>Limosa limosa</i>
Ruff	<i>Philomachus pugnax</i>
<b>Gulls</b>	
Black-headed Gull	<i>Larus ridibundus</i>
Common Gull	<i>Larus canus</i>

\*

This list is not a limiting list but is only meant to identify migratory species that may pose a high risk for introduction of avian influenza into the Community based on their migratory pattern involving areas where H5N1 HPAI has either occurred in wild birds or poultry. It is based on the Scientific opinion on "Migratory birds and their possible role in the spread of highly pathogenic avian influenza" adopted by the Animal Health and Welfare Panel of EFSA on 12 May 2006 and the work carried out by ORNIS Committee and contractors to European Commission's Environment Directorate-General . However, this list could be updated following results of further scientific studies as they become available and based on the risk assessment carried out by national authorities taking into account their specific ornithological situation.

Table 4. LIST OF BIRDS LIVING IN PROXIMITY TO DOMESTIC POULTRY\*\*

Common name	Scientific name	Probability of contact with poultry
<b>Group 1. Species intimately associated with poultry production in Europe</b>		
Domestic Goose	<i>Anser anser domesticus</i>	High
Domestic Mallard	<i>Anas platyrhynchos</i>	High
Domestic Muscovy Duck	<i>Carina moschata</i>	High
Feral Pigeon	<i>Columba livia</i>	High
House Sparrow	<i>Passer domesticus</i>	High
<b>Group 2. Species which may share farmland also used by domesticated poultry in north Europe</b>		
Eurasian Golden Plover	<i>Pluvialis apricaria</i>	Low
Northern Lapwing	<i>Vanellus vanellus</i>	Medium
Black-headed Gull	<i>Larus ridibundus</i>	High
Common Gull	<i>Larus canus</i>	High
Herring Gull	<i>Larus argentatus</i>	Low
Wood Pigeon	<i>Columba palumbus</i>	High
Eurasian Collared Dove	<i>Streptopelia decaocto</i>	High
Ring-necked Pheasant	<i>Phasianus colchicus</i>	High
Larks species	<i>Alauda &amp; Galerida spp</i>	Low
Pipits		Low

Wagtails		Medium
Fieldfare	<i>Turdus pilaris</i>	Medium
Redwing	<i>Turdus iliacus</i>	Medium
Black-billed Magpie	<i>Pica pica</i>	High
Eurasian Jackdaw	<i>Corvus monedula</i>	High
Rook	<i>Corvus frugilegus</i>	Medium
Carriion Crow	<i>Corvus corone</i>	Medium
Raven	<i>Corvus corax</i>	Low
Starling	<i>Sturnus vulgaris</i>	High
Spotless Starling	<i>Sturnus unicolor</i>	High
House Sparrow	<i>Passer domesticus</i>	High
Eurasian Tree Sparrow	<i>Passer montanus</i>	High
Finches		Medium
Buntings	<i>Miliaria, Emberiza</i> <i>spp</i>	Medium

**Group 3. Species which may share wetlands also used by domesticated water birds in Northern Europe**

Egrets	<i>Egretta</i> spp.	Low
Heron	<i>Ardea</i> and other spp.	Medium
Cormorant	<i>Phalacrocorax</i> <i>carbo</i>	Medium
Storks	<i>Ciconia</i> spp.	Low
Mute Swan	<i>Cygnus olor</i>	Medium
Greylag Goose	<i>Anser anser</i>	Medium

Canada Goose	<i>Branta canadensis</i>	Low
Ducks	<i>Anas &amp; Aythya</i> spp.	Low
Mallard	<i>Anas platyrhynchos</i>	High
Common Coot	<i>Fulica atra</i>	Medium
Moorhen	<i>Gallinula chloropus</i>	Medium

\*\* This list is not an exhaustive list but is only meant to identify resident or non-migratory European bird species that live in proximity to domestic poultry (especially in N.W. Europe) and which have the theoretical potential to transfer HPAI H5N1 from potential asymptotically infected wild birds ("bridge species"). It is based on the Scientific opinion on "Migratory birds and their possible role in the spread of highly pathogenic avian influenza" adopted by the Animal Health and Welfare Panel of EFSA on 12 May 2006 and the work carried out by ORNIS Committee and contractors by European Commission's Environment Directorate-General (DG ENV). However, this list could be updated and expanded following results of further scientific studies as they become available. In particular, DG ENV has commissioned Wetland International and EURING to review, update and expand the preliminary analysis of higher risk species and sites in the light of H5N1 outbreaks in Europe in 2006, and to identify other High Risk bird species which might act as "bridge species" between wild birds and poultry and/or humans in different parts of Europe. The results should be available by end of June 2007.

### General requirements and criteria

Surveillance shall be implemented from 1 January 2009 to 31 December 2009.



### **3.2. Design and implementation**

Surveillance in wild birds in the Slovak Republic will be realized in co-operation with the ornithological or hunting organizations.

#### ***Passive surveillance (sick and dead wild birds) shall be targeted on:***

- birds belonging to identified Higher risk species listed in table 3 and other wild birds living in close proximity with the;
- areas where increased incidence of morbidity and mortality in wild birds occurs;
- areas close to the lakes and waterways where birds were found dead, and in particular when these areas are in proximity to domestic poultry farms.

#### **Active surveillance (living and clinically healthy and/or clinically diseased, injured or hunted) shall be targeted on:**

- migratory birds belonging to the order of Anseriformes (waterfowl) and Charadriiformes (shorebirds and gulls)
- at identified areas for concentration and mixing of high number of migratory birds involving different species and in particular when these areas are in proximity to domestic poultry farms
- a selection of higher risk species.

#### **Investigations of living and dead wild birds in areas where HSN1 cases have been detected shall ideally be targeted on birds:**

- wild birds or poultry to possibly identify asymptomatic carriers;
- in areas epidemiologically linked to these cases;
- coming possibly in close contact to domestic poultry holdings (protection zone, surveillance zone and area B), which might function as „bridge species“.

## *Sampling procedures*

- *Oropharyngeal and cloacal swabs for virological examination shall be taken from apparently healthy free living birds. If for any reason it is impractical to take cloacal swabs from live birds carefully collected fresh faeces samples may serve as an alternative. However, traceability in case of mixed sites frequented by different bird species should be ensured.*
- *Cloacal swabs, tracheal/oropharyngeal swabs and/or tissues (brain, heart, lung, trachea, kidney, intestines) from wild birds found dead or shot shall be sampled for virus isolation and molecular detection (PCR).*
- *Specific care has to be taken for the storage and transport of samples. Swabs must be chilled immediately on ice or with frozen gel packs and submitted to the laboratory as quickly as possible. Samples must not be frozen unless absolutely necessary. If available, swabs must be placed in antibiotic or specific virus transport medium so that they are fully immersed. Placing samples in medium for transportation must be done in addition to chilling and not as an alternative to chilling. In the absence of such medium swabs must be returned to their casing and submitted dry. If rapid transport within 48 hours to the laboratory in transport medium at 4 Celsius) is not guaranteed, samples shall be immediately frozen, stored and then transported on dry ice. Storage and transport of samples may be affected by a variety of factors so the method selected should be fit for purpose.*
- *Sampling procedures shall be carried out in accordance with the avian influenza diagnostic manual (Commission Decision 2006/437/EC) laying down the procedures for the confirmation and differential diagnosis of avian influenza.*

**Table 3.2.1. WILD BIRDS - investigation according to the surveillance programme for avian influenza in wild birds set out in Annex II to Decision 2007/268/EC**

NUTS (2) code/region <sup>(a)</sup>	Wild birds to be sampled <sup>(b)</sup>	Total number of birds to be sampled	Estimated total number of samples to be taken for active surveillance	Estimated total number of samples to be taken for passive surveillance
SK01 – territory of Bratislava	<ul style="list-style-type: none"> <li>▪ "higher risk" species listed in table 3</li> <li>▪ "bridge species" listed in table 4</li> <li>▪ other species found dead</li> </ul>	200	100	100
SK02 – territory of west Slovakia	<ul style="list-style-type: none"> <li>▪ "higher risk" species listed in table 3</li> <li>▪ "bridge species" listed in table 4</li> <li>▪ other species found dead</li> </ul>	200	100	100
SK03 -- territory of middle Slovakia	<ul style="list-style-type: none"> <li>▪ "higher risk" species listed in table 3</li> <li>▪ "bridge species" listed in table 4</li> <li>▪ other species found dead</li> </ul>	200	100	100
SK04 – territory of east Slovakia	<ul style="list-style-type: none"> <li>▪ "higher risk" species listed in table 3</li> <li>▪ "bridge species" listed in table 4</li> <li>▪ other species found dead</li> </ul>	200	100	100
<b>Total</b>		<b>800</b>	<b>400</b>	<b>400</b>

(a) Refers to the place of collection of birds/samples. In case NUTS 2 code can not be used, region as defined in the programme by the Member State is requested

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

### 3.3. Laboratory testing: description of the laboratory tests used

- Laboratory tests shall be carried out in accordance with the *avian influenza diagnostic manual (Commission Decision 2006/437/EC) laying down the procedures for the confirmation and differential diagnosis of avian influenza*.
- Laboratory diagnostics is performed by the National Reference Laboratory. The State Veterinary Institute in Zvolen. The National Reference Laboratory shall submit all results of serological and cultivation testing to the State Veterinary and Food Administration of the Slovak Republic and next the results shall be submitted to the Community Reference Laboratory (CRL) for their comparison and information exchange and flow.
- All results shall be sent to the Community Reference Laboratory for Avian Influenza (CRL) for collation. A good flow of information must be ensured. The CRL shall provide technical support and keep an enlarged stock of diagnostic reagents.
- All avian influenza virus isolates of cases in wild birds shall be submitted to the CRL, in accordance with Community legislation, unless derogation according to paragraph 4 of Chapter V under Differential diagnosis in the avian influenza Diagnostic Manual laid down in Commission Decision 2006/437/EC is granted. Viruses of H5/H7 subtype shall be submitted without delay and shall be subjected to the standard characterisation tests (nucleotide sequencing/VP) according to the said avian influenza Diagnostic Manual.
- All samples collected in the surveillance for avian influenza in wild birds shall be tested as soon as possible by molecular techniques if available and according to the diagnostic manual (Commission Decision 2006/437/EC). These tests shall only be carried out in laboratories able to guarantee quality assurance and using methods recognised by the CRL for avian influenza. In addition, methods used must be produced acceptable results in the most recent comparative ring test of national laboratories. Initial screening using M gene PCR is recommended, with rapid testing of positives for H5 (but within 2 weeks) and in case of a positive finding analysis of the cleavage site must be undertaken as soon as possible to determine whether or not it has a highly pathogenic avian influenza (HPAI) or a low pathogenic avian influenza (LPAI) motif. If H5 HPAI is confirmed further analysis to determine the N type must be done rapidly (even this can only provide evidence eliminating N1).
- At the laboratory, pooling of up to five samples taken from the same species of wild birds collected at the same site and same time may be permitted when it can be ensured that, in case of a positive finding, the individual samples can be identified and retested.
- Serological surveillance shall not be applied for avian influenza investigations in wild birds because serological methods cannot distinguish between HP and LP strains and antibody findings do not allow inference in relation to the likely location where wild birds might have become infected. However, serological surveillance might be important to study in which resident or migrating bird species H5/H7 viruses are/were prevalent (or endemic). Such analysis shall only be performed by specialised laboratories using a carefully selected panel of antigens to ensure the detection of haemagglutination specific antibodies (i.e. to eliminate the possibility of interference from N specific antibodies).

**4. Description of the epidemiological situation of the disease in poultry during the last five years**  
 For year 2003 we have not data for surveillance of avian influenza in poultry holdings.

**Number of samples investigated in 2004 in poultry holdings**

		Investigated samples
Gallus gallus	broilers	-
	laying hens	-
	<b>total</b>	<b>915</b>
Water poultry	geeses	-
	ducks	-
	<b>total</b>	<b>128</b>
Turkey	turkey	<b>74</b>
Farmed feathered game	pheasants	-
	ostriches	-
	partridges	-
	quails	-
	guinea-fowl	-
	pigeons	-
	Wild turkey	-
	Wild ducks	-
	<b>total</b>	<b>247</b>
	Exotic birds	psittacae
European serin		-
<b>total</b>		-
<b>Total</b>		<b>1364</b>

Number of samples investigated in 2005 in poultry holdings

		Investigated samples
Gallus gallus	broilers	787
	laying hens	263
	<b>total</b>	<b>1050</b>
Water poultry	geeses	162
	ducks	98
	<b>total</b>	<b>260</b>
Turkey	turkey	71
Farmed leathered game	pheasants	257
	ostriches	107
	partridges	17
	quails	5
	quinea-fowl	1
	pigeons	12
	Wild turkey	15
	Wild ducks	37
	<b>total</b>	<b>451</b>
	Exotic birds	psittacae
European serin		2
<b>total</b>		<b>17</b>
<b>Total</b>		<b>1849</b>

**Number of samples investigated in 2006 in poultry holdings**

	Investigated samples
Gallus gallus	
broilers	40
Laying hens	199
pullets	6
Non - identified	84
Water poultry	
ducks	54
geese	14
Turkeys	
turkey	3
Guinea - fowl	2
Farmed feathered game	
Quails	1
partridge	1
Wild ducks	48
pheasants	246
ostriches	101
pigeon	11
Wild turkey	11
Exotic birds	
psittacae	5
<b>total</b>	<b>2271</b>

Number of samples investigated in 2007 in poultry holdings

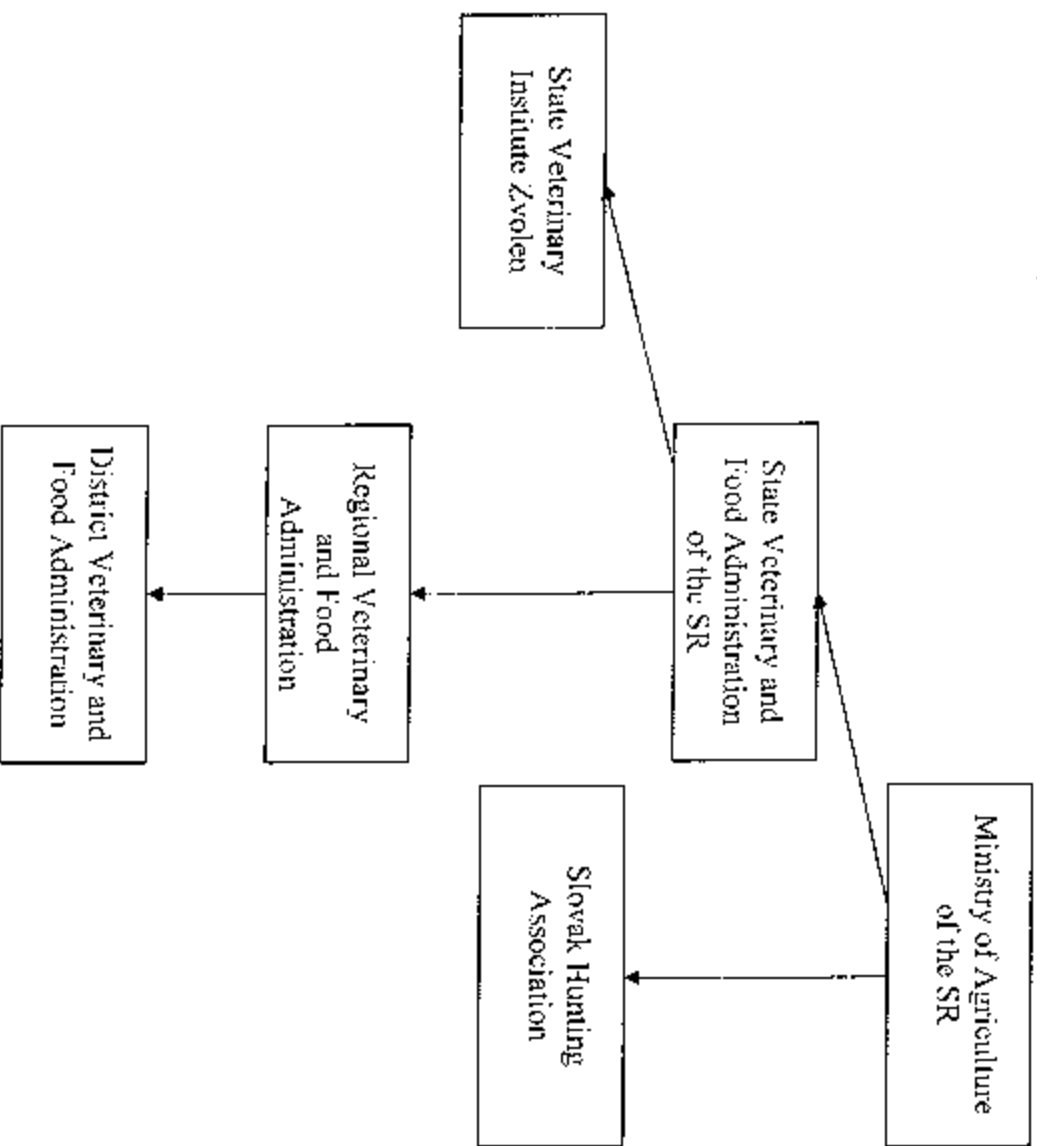
		Investigated samples	Positive samples
Gallus gallus	broilers	462	
	laying hens	507	
	pullets	77	
	Non-identified	470	
	geeses	43	
	ducks	186	1 for H4N6
Water poultry			
Turkey	turkey	112	
Harmed feathered game	pheasants	246	
	ostriches	101	
	partridges	1	
	quails	66	
	guinea-fowl	5	
	pigeons	11	
	Wild turkey	11	
	Wild ducks	48	
	psiatae	5	
	Exotic birds		
<b>Total</b>		<b>2351</b>	<b>1</b>



**4.1 Measures included in the programme for surveillance in poultry**

4.1.1. Designation of the central authority in charge of supervising and coordinating the departments responsible for implementing the programme

*Central authority charged with supervising and coordinating the department responsible for implementing the programme is the State Veterinary and Food Administration of the Slovak Republic.  
Departments responsible for implementing the programme are Regional (8) and District (40) Veterinary and Food Administrations.*



### **Ministry of Agriculture of the SR**

- is a central authority of state administration
- shall approve the Survey Plan for Avian Influenza

### **Forestry section shall**

- prepare a legislative frame;
- make a conception of waterfowl breeding and hunting with emphasis on the avian influenza and requirements coming from the agricultural animal production after a new Act on Hunting in the implementary regulations shall enter into force.

### **State Veterinary and Food Administration of the SR shall**

- propose a survey plan for disease;
- evaluate monitoring in the SR;
- take measures based on the development of disease situation in the SR;
- submit reports to the EC;
- propose a budget for the survey plan execution to the Minister of Agriculture.

### **Regional Veterinary and Food Administration shall**

- evaluate monitoring and disease situation in the region;
- control over observance of ordered measures;
- methodically direct.

### **District Veterinary and Food Administration shall**

- methodically direct hunters regarding the sampling and sending of specimens;
- evaluate monitoring and disease situation in the district;
- pay out financial reimbursements.

### **State veterinary Institute Zvolen shall**

- perform laboratory diagnostics;
- evaluate and process data of investigations in the SR;
- provide professional services.

### **Slovak Hunting Association shall**

*co-operate with state administration authorities.*

4.1.2. System in place for the registration of holdings

According to § 7, para 2, latter d) and § 39 para 10, of the Act No. 39/2007 Coll. on veterinary care.

4.1.3. Data on vaccination carried out

No vaccination performed in previous years.

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

For year 2003 we have not data for surveillance of avian influenza in wild birds

2004

	AIV	
	Investigated samples	Positive samples
Wild birds	128	0

2005 - Total investigated 328 samples

AIV					
Species	Investigated	Positive samples	Species	Investigated	Positive samples
Pigeon	38		wagtail	1	
turtledove	11		Owl	3	
Gull	1		Snipe	2	
sparrow	3		starling	2	
titmouse	4		Crow	4	
magpie	5		Swan	6	
woodpecker	4		Hawk	1	
blackbird	19		jackdaw	1	
greylag	2		hawfinch	2	
Wild duck	134		Green woodpecker	1	
swallow	1		Heron	1	
Jay	5		pheasant	63	
Falcon	3		Non identified	9	

2006 - Total investigated 1769 samples

AIV					
Species	Investigated	Positive samples	Species	Investigated	Positive samples
pigeon	124		owl	67	
turtledove	88		snipe	1	
gull	17		starling	92	
sparrow	43		crow	60	
titmouse	69		swan	160	
magpie	7		hawk	42	
woodpecker	11		corrorant	21	
blackbird	228		hawfinch	26	
greylag	3		White stork	15	
Wild duck	237		heron	67	
redbird	20		pheasant	93	
jay	3		snaw	1	1
falcon	60	1	others	211	
wagtail	3				

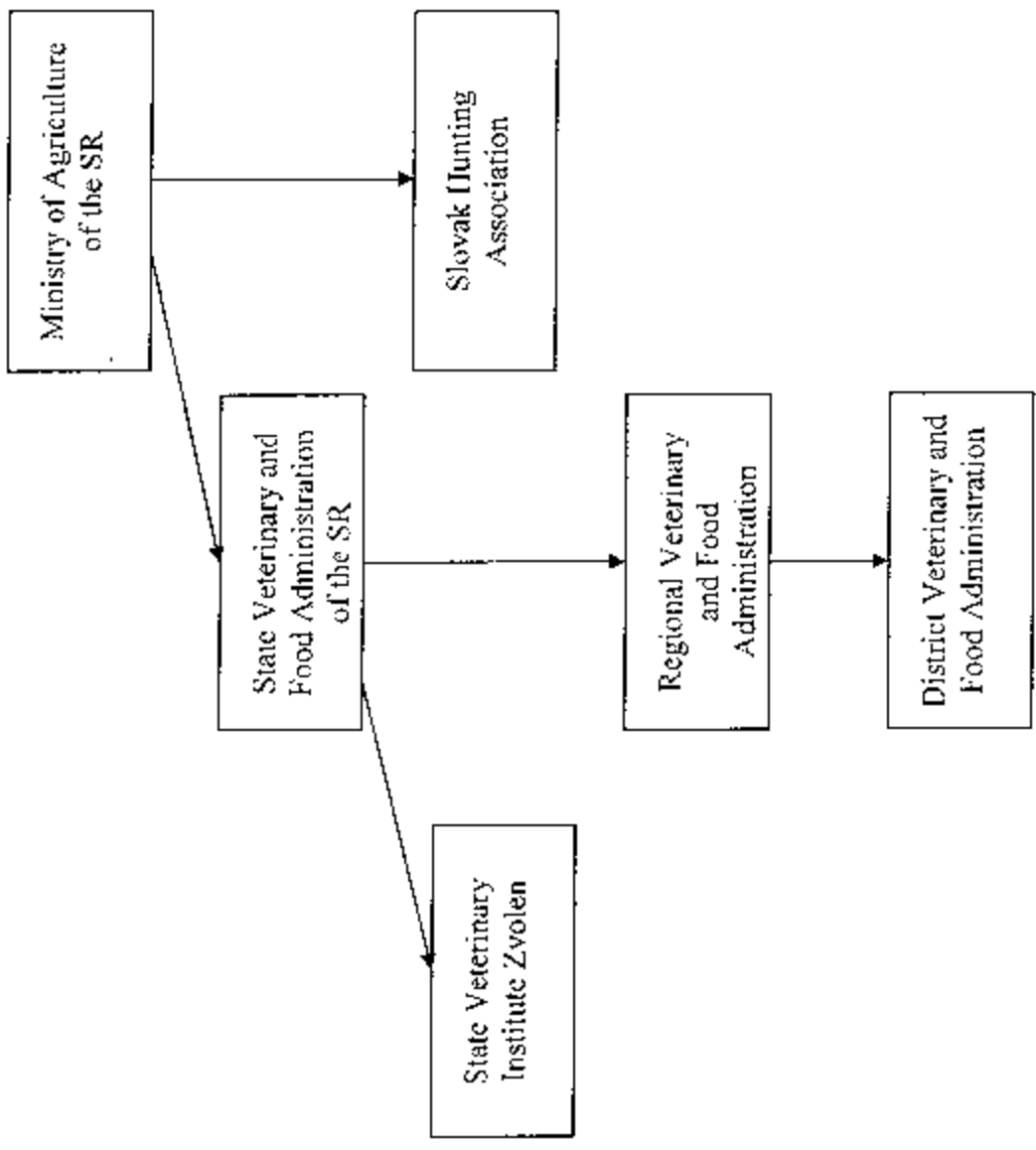
species	AIV	
	Investigated	Positive samples
pigeon	7	
turtledove	1	
blackbird	13	
Wild duck	84	
redbird	1	
falcon	1	
swan	26	
hawk	1	
White stork	2	
heron	1	
pheasant	36	
martlet	3	
nutpecker	1	
Rook	2	
Waxwing	8	
Jackdaw	1	
swallow	2	
baldicoot	2	
others	1	
total		

**5.1. Measures included in the programme for surveillance in wild birds**

5.1.1. Designation of the central authority in charge of supervising and coordinating the departments responsible for implementing the programme

*Central authority charged with supervising and coordinating the department responsible for implementing the programme is the State Veterinary and Food Administration of the Slovak Republic.  
Departments responsible for implementing the programme are Regional (8) and District (40) Veterinary and Food Administrations.*





### **Ministry of Agriculture of the SR**

- is a central authority of state administration
- shall approve the Survey Plan for Avian Influenza

### **Forestry section shall**

- prepare a legislative frame;
- make a conception of waterfowl breeding and hunting with emphasis on the avian influenza and requirements coming from the agricultural animal production after a new Act on Hunting in the supplementary regulations shall enter into force.

### **State Veterinary and Food Administration of the SR shall**

- propose a survey plan for disease;
- evaluate monitoring in the SR;
- take measures based on the development of disease situation in the SR;
- submit reports to the EC;
- propose a budget for the survey plan execution to the Minister of Agriculture.

### **Regional Veterinary and Food Administration shall**

- evaluate monitoring and disease situation in the region;
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- methodically direct hunters regarding the sampling and sending of specimens;
- evaluate monitoring and disease situation in the district;
- pay out financial reimbursements.

### **State veterinary Institute Zvolen shall**

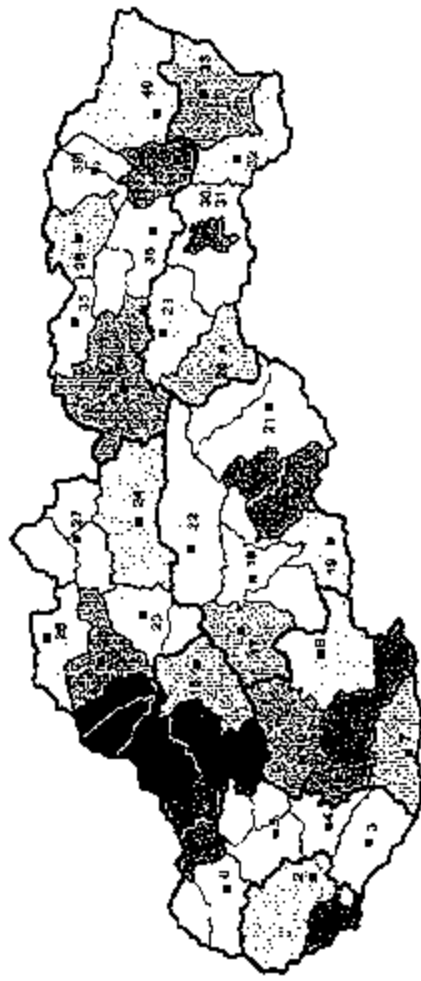
- perform laboratory diagnostics;
- evaluate and process data of investigations in the SR;
- provide professional services.

### **Slovak Hunting Association shall**

co-operate with state administration authorities.

5.1.2. Description and delimitation of the geographical and administrative areas in which the programme is to be applied  
The programme will be carried out on the all territory of the Slovak Republic.

A map of the Slovak Republic showing the area of District Veterinary and Food Administrations (40).



1 Bratislava	11 Topoľčany	21 Rimavská Sobota	31 Košice – okolie
2 Senec	12 Šaľa	22 Banská Bystrica	32 Trebišov
3 Dunajská Streda	13 Nové Mesto nad Váhom	23 Martin	33 Michalovce
4 Galanta	14 Trenčín	24 Liptovský Mikuláš	34 Poprad
5 Trnava	15 Púchov	25 Žilina	35 Stará Ľubovňa
6 Senica	16 Prievidza	26 Čadca	36 Prešov
7 Komárno	17 Žiar nad Hronom	27 Dolný Kubín	37 Vranov nad Topľou
8 Nové Zámky	18 Zvolen	28 Rožňava	38 Bardejov
9 Levice	19 Veľký Kráľ	29 Spišská Nová Ves	39 Svidník
10 Nitra	20 Lučenec	30 Košice – mesto	40 Humenné

### 5.1.3. Estimation of the local and/or migratory wildlife population

On the basis of data from Faunistic Commission of the Slovak Ornithological Society in 2007, 349 species of wild birds were occurred in the Slovak Republic, from which 222 were local species and 127 migratory wild birds.

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

In case of suspicion or confirmation of avian influenza in poultry and in wild birds, measures will be applied according to National Contingency Plan for case of suspicion and occurrence of avian influenza in the territory of the Slovak Republic, which legal basis is following:

- Act No 39/2007 Coll. on veterinary care
- Ordinance of the Government of the Slovak Republic No 367/2007 Coll. on measures for avian influenza control (transposed Council Directive 2005/94/EC)
- Commission Decision No 2006/437/EC of 4 August 2006 approving a Diagnostic Manual for avian influenza as provided for in Council Directive No 2005/94/EC
- Commission Decision No 2006/415/EC of 14 June 2006 concerning certain protection measures in relation to highly pathogenic avian influenza of the subtype H5N1 in poultry in Community and repealing Decision 2006/135/EC
- Commission Decision No 2006/563/EC of 11 August 2006 concerning certain protection measures in relation to highly pathogenic avian influenza of subtype H5N1 in wild birds in the Community and repealing Decision 2006/115/EC
- Commission Decision No 2007/119/EC of 16 February 2007 amending Decisions 2006/415/EC, 2006/416/EC and 2006/563/EC as regards the identification mark to be applied to fresh poultry meat

## 7.

### Costs

#### 7.1. Detailed analysis of the costs:

##### **7.1.1. Poultry**

- From poultry holdings have to be taken blood samples, from each holding 5 samples and from holdings of ducks, geese and quails 40 samples. Blood samples have to be investigated by haemagglutination – inhibition test for H5 and for H7.
- In case of suspicion of infection of avian influenza in poultry holdings (drop in feed and water intake higher than 20%, drop in egg production higher than 5%, mortality rate higher than 3% in a week, any clinical sign or post – mortem lesion suggesting infection of avian influenza) have to be taken blood samples and dead animals (in case of high mortality). Dead animals have to be investigated by PCR test or virus isolation test. Estimated total cost for surveillance of avian influenza in poultry in 2009 is 49 220 €.

##### **7.1.2. Wild birds**

- Samples from wild birds have to be investigated by PCR test, which unitary cost 63 €. We estimate that in 2009, the NRL will sampled 800 wild birds (summary for active and passive surveillance). Estimated total cost for surveillance of avian influenza in wild birds in 2009 is 58 400 €.

## 7.2 Summary of the costs

### 7.2.1. Poultry surveillance

Measures eligible for co-financing surveillance in poultry				
Methods of laboratory analysis	Number of tests to perform per method	Unitary test cost (per method)	Total cost	
Serological pre-screening <sup>10</sup>				
Haemagglutination-inhibition-test (HI) for H5/H7 <sup>11</sup>	3850 (1925 for H5/1925 for H7)	5.2 €	20 020 €	
Virus isolation test				
PCR test	400	73 €	29 200 €	
Other measures to be covered	Specify activities			
Sampling				
Others				
<b>Total</b>			<b>49 220 €</b>	

<sup>10</sup> Specify the laboratory test to be used.

<sup>11</sup> Specify number of tests for H5 and for H7.

7.2.2. Wild bird surveillance

Measures eligible for co-financing surveillance wild birds			
Methods of laboratory analysis	Number tests to perform per method	Unitary test cost (per method)	Total cost
Serological pre-screening			
Haemagglutination-inhibition-test (HI) for H5/H7			
Virus isolation test			
PCR test	800	73 €	58 400 €
Other measures to be covered	Specify activities		
Sampling			
Others			
<b>Total</b>			<b>58 400 €</b>

