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

Survey programme for Avian Influenza (AI)

Approved* for 2012 by Commission Decision 2011/807/EU

Ireland

* in accordance with Council Decision 2009/470/EC
Standard requirements for the submission of surveillance programmes for avian influenza

version: 2.1

1. Identification of the programme

   Member state: IRELAND

   Disease: avian influenza in poultry and wild birds

   Request of Community co-financing from beginning of: 2012 to end of 2012

1.1 Contact

   Name: Sally Gaynor

   Phone: +353 1 607 2338

   Fax: +353 1 607 7360

   Email: sally.gaynor@agriculture.gov.ie

2. Description of the surveillance programme in poultry

2.1 Objectives of surveillance programmes

(max. 32000 chars):

The objectives of the poultry survey are:

- 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 infection due to their husbandry system or species-specific susceptibility.
- Contributing to the demonstration of a free status from notifiable avian influenza in the frame of international trade according to OIE rules.

2.2 Design, implementation and target population

(max. 32000 chars):

Surveillance based on representative sampling as defined in Annex I of Commission Decision 2010/367/EU shall be carried out between 1 January 2012 and 31 December 2012. Sampling of poultry holdings and serological testing will be carried out by Department of Agriculture, Fisheries and Food (DAFF) staff
to detect the presence of antibodies to avian influenza virus. Sampling will be stratified throughout Ireland (NUTS2 regions: IE01 and IE02) so that it is representative of the whole member state. The general requirements are:

- Sampling will coincide with seasonal production where appropriate for certain poultry categories.
- Samples collected for other purposes will be used where possible.
- Testing will be carried out at the National Reference Laboratory (NRL) for avian influenza.
- All results will be sent to Community Reference Laboratory (CRL) for avian influenza for collation.
- The CRL will provide technical support and diagnostic reagents.

The approximate numbers of domestic fowl and turkeys on commercial sites, according to DAFF databases, is shown in Table A (attached). The number varies according to the time of year e.g. commercial turkeys are more numerous in the months leading up to Christmas. The approximate proportions of the different species are as follows: domestic fowl 90%, turkeys 8% and ducks < 1%. The population of poultry in June 2000 was 13.96 million (CSO Farm Census). This is the most recent year for which a complete farm census by region was carried out.

Figures for the numbers of commercial poultry holdings in each region are available from DAFF commercial poultry databases in April 2011, and are shown in Annex I (attached). Commercial poultry holdings are defined as those that supply approved slaughter plants or local abattoirs, approved/registered hatcheries or registered packing centres and dealers. DAFF introduced registration of all poultry and other captive bird holdings in 2005. In April 2011, 10,440 holdings have been registered. Of these just over 9,500 are considered as back yard flocks. The map in Annex II shows the number of commercial poultry holdings and backyard flocks in each county, as well as in each NUTS2 code region (IE01 and IE02). There are no commercial farmed game (ostrich or quail) holdings in Ireland.

Please refer to Section 5 of this form for a comprehensive list of the target poultry populations to be sampled as part of the representative sampling programme in 2012. It is not proposed to sample back yard flocks in 2012. Annex III (attached) shows the number of commercial flocks to be sampled in each NUTS2 region by species farmed on the holding.

### 2.2.1  Risk based surveillance (RBS)

(max. 32000 chars):

Not applicable.

### 2.2.2  Surveillance based on Representative Sampling

(max. 32000 chars):

The number of holdings to be sampled from each category within a region (NUTS2 code: IE01 and IE02) will be sufficient to give a 95% confidence of detecting at least one infected holding if the prevalence of infected holdings is 5%. The number of holdings to be sampled from each target population category within a region are outlined in Section 5 and were calculated according to the tables 1 and 2 in Annex I.
of Commission decision 2010/367/EU. A total of 305 holdings will be sampled. This will amount to approximately 6860 samples at 20 samples per house for duck and goose holdings or 10 samples per house for other species and an average of 2 houses per site (with double HI tests per sample). The number of samples to be tested per house on each turkey or chicken holding will be sufficient to give a 95% confidence of detecting at least one infected bird if the prevalence of infected birds is at least 30% (minimum 10 samples). Samplers will be asked to take 12 samples per house, to allow for a proportion of samples being unsuitable for testing. In the case of ducks and geese, 20 samples per holding will be taken. Birds kept outdoors will be targeted where possible. Sampling for virological testing shall only be used to follow-up serological positive testing results for avian influenza. In the event that samples are taken for virological examination, pooling of up to 5 samples from the same holding will be permitted. In the case of duck farms, 10 swabs will be taken from each holding.

3. **Target populations**

A representative sampling scheme of the following poultry species and production categories will be stratified throughout the country:
- Laying hens
- Free range laying hens
- Chicken breeders
- Turkey breeders
- Duck breeders
- Geese breeders
- Fattening turkeys (including holdings with more than one species on the holding)
- Fattening ducks (including holdings with more than one species on the holding)
- Fattening geese (including holdings with more than one species on the holding)
- Free range broilers (Broilers other than free-range birds will not be included in this survey, as their short life means that they are unlikely to sero-convert before they are slaughtered)

4. **Risk-based surveillance (RBS) method**

4.1 **Criteria and Risk factors**

4.1.1 **Criteria and risk factors for virus introduction into poultry holdings due to direct or indirect exposure to wild birds in particular those of identified 'target species'**
4.1.2. **Criteria and risk factors for virus spread within poultry holdings and between poultry holdings, as well as the consequences (impact) of the spread of avian influenza from poultry to poultry and between poultry holdings**

Not applicable

---

4.2. **Targeting of populations at risk**

Not applicable

---

4.3. **Targeting of poultry holdings to be sampled**

Not applicable
## 5. Poultry holdings to be sampled

### 5.1 Poultry holdings (except ducks, geese and mallard) to be sampled according to table 1 of Annex 1 to Decision 2010/367/EU

<table>
<thead>
<tr>
<th>Category: broilers free range</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>NUTS (2) (a)</th>
<th>Total number of holdings</th>
<th>Total number of holdings to be sampled</th>
<th>Number of samples per holding</th>
<th>Total number of tests to be performed per method</th>
<th>Method of laboratory analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>IE01</td>
<td>23</td>
<td>14</td>
<td>20</td>
<td>560</td>
<td>Haemagglutination-inhibition-test (HI)</td>
</tr>
<tr>
<td>IE02</td>
<td>45</td>
<td>28</td>
<td>20</td>
<td>1 120</td>
<td>Haemagglutination-inhibition-test (HI)</td>
</tr>
<tr>
<td>Total</td>
<td>68</td>
<td>42</td>
<td>20</td>
<td>1 680</td>
<td>X</td>
</tr>
</tbody>
</table>

(a) Refers to the location of the holding origin. In case NUTS 2 (Nomenclature of Territorial Units for Statistics) cannot be used, coordinates (longitude/latitude) are requested. Please fill-in these values directly in the field.

### Category: fattening turkeys

<table>
<thead>
<tr>
<th>NUTS (2) (a)</th>
<th>Total number of holdings</th>
<th>Total number of holdings to be sampled</th>
<th>Number of samples per holding</th>
<th>Total number of tests to be performed per method</th>
<th>Method of laboratory analysis</th>
</tr>
</thead>
</table>

(delete this category)

Add a new row
### Standard requirements for the submission of surveillance programmes for avian influenza

**version : 2.1**

<table>
<thead>
<tr>
<th>Category</th>
<th>NUTS (2) (a)</th>
<th>Total number of holdings</th>
<th>Total number of holdings to be sampled</th>
<th>Number of samples per holding</th>
<th>Total number of tests to be performed per method</th>
<th>Method of laboratory analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicken breeders</td>
<td>IE01</td>
<td>50</td>
<td>25</td>
<td>20</td>
<td>1 000</td>
<td>Haemagglutination-inhibition-test (HI)</td>
</tr>
<tr>
<td></td>
<td>IE02</td>
<td>58</td>
<td>28</td>
<td>20</td>
<td>1 120</td>
<td>Haemagglutination-inhibition-test (HI)</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>108</strong></td>
<td><strong>53</strong></td>
<td></td>
<td><strong>2 120</strong></td>
<td><strong>Add a new row</strong></td>
</tr>
<tr>
<td>(a) Refers to the location of the holding origin. In case NUTS 2 (Nomenclature of Territorial Units for Statistics) cannot be used, coordinates (longitude/latitude) are requested. Please fill-in these values directly in the field.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# Standard requirements for the submission of surveillance programmes for avian influenza

**version : 2.1**

## Laying hens

<table>
<thead>
<tr>
<th>NUTS (2) (a)</th>
<th>Total number of holdings</th>
<th>Total number of holdings to be sampled</th>
<th>Number of samples per holding</th>
<th>Total number of tests to be performed per method</th>
<th>Method of laboratory analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>IE01</td>
<td>3</td>
<td>3</td>
<td>20</td>
<td>120 Haemagglutination-inhibition-test (HI)</td>
<td>X</td>
</tr>
<tr>
<td>IE02</td>
<td>0</td>
<td>0</td>
<td>20</td>
<td>0 Haemagglutination-inhibition-test (HI)</td>
<td>X</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>3</td>
<td>3</td>
<td></td>
<td>120</td>
<td></td>
</tr>
</tbody>
</table>

(a)Refers to the location of the holding origin. In case NUTS 2 (Nomenclature of Territorial Units for Statistics) cannot be used, coordinates (longitude/latitude) are requested. Please fill-in these values directly in the field.

## Add a new row

<table>
<thead>
<tr>
<th>Category :</th>
<th>laying hens</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>NUTS (2) (a)</th>
<th>Total number of holdings</th>
<th>Total number of holdings to be sampled</th>
<th>Number of samples per holding</th>
<th>Total number of tests to be performed per method</th>
<th>Method of laboratory analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>IE01</td>
<td>80</td>
<td>38</td>
<td>20</td>
<td>1 520 Haemagglutination-inhibition-test (HI)</td>
<td>X</td>
</tr>
<tr>
<td>IE02</td>
<td>32</td>
<td>15</td>
<td>20</td>
<td>600 Haemagglutination-inhibition-test (HI)</td>
<td>X</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>112</td>
<td>53</td>
<td></td>
<td>2 120</td>
<td></td>
</tr>
</tbody>
</table>

(a)Refers to the location of the holding origin. In case NUTS 2 (Nomenclature of Territorial Units for Statistics) cannot be used, coordinates (longitude/latitude) are requested. Please fill-in these values directly in the field.

## Add a new row
### Standard requirements for the submission of surveillance programmes for avian influenza

**version : 2.1**

#### Category: free range laying hens

<table>
<thead>
<tr>
<th>NUTS (2) (a)</th>
<th>Total number of holdings</th>
<th>Total number of holdings to be sampled</th>
<th>Number of samples per holding</th>
<th>Total number of tests to be performed per method</th>
<th>Method of laboratory analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>IE01</td>
<td>100</td>
<td>36</td>
<td>20</td>
<td>1 440</td>
<td>Haemagglutination-inhibition-test (HI)</td>
</tr>
<tr>
<td>IE02</td>
<td>49</td>
<td>17</td>
<td>20</td>
<td>680</td>
<td>Haemagglutination-inhibition-test (HI)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>149</td>
<td>53</td>
<td></td>
<td>2 120</td>
<td></td>
</tr>
</tbody>
</table>

(a) Refers to the location of the holding origin. In case NUTS 2 (Nomenclature of Territorial Units for Statistics) cannot be used, coordinates (longitude/latitude) are requested. Please fill-in these values directly in the field.

#### Category: backyard flocks

<table>
<thead>
<tr>
<th>NUTS (2) (a)</th>
<th>Total number of holdings</th>
<th>Total number of holdings to be sampled</th>
<th>Number of samples per holding</th>
<th>Total number of tests to be performed per method</th>
<th>Method of laboratory analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>IE01</td>
<td>4 170</td>
<td>0</td>
<td>0</td>
<td>0 NA</td>
<td>NA</td>
</tr>
<tr>
<td>IE02</td>
<td>5 410</td>
<td>0</td>
<td>0</td>
<td>0 NA</td>
<td>NA</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>9 580</td>
<td>0</td>
<td></td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>
### 5.2 Ducks, geese and mallard holdings to be sampled according to table 2 of Annex I to Decision 2010/367/EU

<table>
<thead>
<tr>
<th>NUTS (2) (a)</th>
<th>Total number of duck and geese holdings</th>
<th>Total number of duck and geese holdings to be sampled</th>
<th>Number of samples per holding</th>
<th>Total number of tests to be performed per method</th>
<th>Method of laboratory analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>IE01</td>
<td>16</td>
<td>16</td>
<td>40</td>
<td>1,280</td>
<td>Haemagglutination-inhibition-test (HI)</td>
</tr>
<tr>
<td>IE02</td>
<td>22</td>
<td>22</td>
<td>40</td>
<td>1,760</td>
<td>Haemagglutination-inhibition-test (HI)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>38</strong></td>
<td><strong>38</strong></td>
<td></td>
<td><strong>3,040</strong></td>
<td></td>
</tr>
</tbody>
</table>

(a)Refers to the location of the holding origin. In case NUTS 2 (Nomenclature of Territorial Units for Statistics) cannot be used, coordinates (longitude/latitude) are requested. Please fill-in these values directly in the field.
6. Frequency and period for testing

Blood samples for serological testing will be taken from poultry (including ducks and geese). Commercial turkeys and ducks will be sampled in the slaughter plant, or if this is not possible fattening turkeys will be sampled on farm. Testing of breeding birds will be carried out on samples submitted under the Poultry Health Programme. Commercial layers and back yard flocks will be sampled on-farm. Sampling will take place between 1 January 2012 and 31 December 2012.

- Sampling will coincide with seasonal production where appropriate for certain poultry categories.
- Samples collected for other purposes will be used where possible. In cases where a holding is sampled more than once different flocks will be chosen at each sampling.

All positive serological findings will be retrospectively investigated on the holdings, in accordance with Directive 2005/94/EC, and the conclusions reported to the Commission and the CRL. Samples found positive for H5 or H7 in poultry will be reported to the Commission. Samples found positive for highly pathogenic avian influenza will be notified immediately in accordance with Council Directive 82/894/EC via the Animal Disease Notification System. The measures on confirmation of HPAI as laid down in Council Directive 2005/94/EC will be applied in the event that HPAI is confirmed. In the event of confirmation of HPAI H5N1 the additional measures laid down in Commission Decision 2006/415/EC will be applied. Directive 2005/94/EC will be applied if LPAI is confirmed.

7. Laboratory testing
All testing will be carried out at the National Reference Laboratory at the Central Veterinary Research Laboratory, Backweston Campus, Staccumny Lane, Celbridge, Co. Kildare. The Community Reference Laboratory (CRL), Weybridge, UK will provide technical support and antigen reagents. Laboratory testing will be carried out in accordance with the diagnostic procedures for confirmation and differential diagnosis of avian influenza laid down in the avian influenza diagnostic manual (Commission Decision 2006/437/EC). Serological screening will be carried out using the haemagglutination inhibition (HI) test (including in ducks and geese). A double (H5/H7) HI test will be carried out on each sample. The H5 strains used in the HI test will be: Initial Teal/England/7894/06 (H5N3), N3 elimination Chicken/Scotland/59 (H5N1). The H7 strains used in the HI test will be: Initial Turkey/England/647/77 (H7N7), N7 elimination African Starling/983/79 (H7N1).

All serological and virological results will be sent to the Community Reference Laboratory (CRL) for collation. The results will be submitted quarterly by the end of the month following the end of each quarter, in the format laid down by the Commission.

8. Description of the surveillance programme in wild birds

8.1 Objectives of surveillance

Virological surveillance for avian influenza in wild birds aimed at identifying 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.
• in the event that HPAI H5N1 is detected in wild birds, then surveillance of live and dead wild birds will be enhanced to determine whether wild birds of other species can act as asymptomatic carriers or “bridge species”.

8.2 Surveillance design

The survey will comprise of passive surveillance of moribund wild birds or wild birds found dead. This will be primarily directed towards “target
Standard requirements for the submission of surveillance programmes for avian influenza

version : 2.1

This list was updated in April 2011 in accordance with Annex II Part 2 of Commission decision 2010/367/EU. Dead birds found in areas close to the sea, lakes and waterways, especially in areas with a high density of poultry holdings will be targeted. In the event of an outbreak of HPAI H5N1, other species that may act as “bridge species” between higher risk species such as migratory water fowl and poultry will also be sampled. The list of species in Annex IV will be amended in line with up-to-date information received from the Commission. They may include species that act as scavengers (corvidae, some raptors) and some passerine species. This will be carried out in cooperation with the National Parks and Wildlife Service and BirdWatch Ireland. Samples notified by the public, National Parks and Wildlife Service or Birdwatch Ireland will be collected by Department of Agriculture staff.

A total of up to 500 samples will be taken. (NB. The number of birds that are found dead and reported is subject to many variables that cannot be predicted e.g. weather, media coverage, public interest and perception)

8.3 Sampling procedures

Oropharyngeal swabs and cloacal swabs, containing faeces or fresh faeces will be taken from hunted birds. Tissue samples (from the brain, heart, lung, kidney and intestines) will be taken from birds found dead. Pooling of up to 5 samples from birds of the same species collected at the same site at the same time will be permitted in the laboratory. Where pooled samples are taken, it will be ensured that individual samples can be retested, in the event of a positive finding in order to verify the species, location and date of sampling. Samples will be transported to the CVRL in transport medium at 4oC within 48 hours. All negative and positive results will be reported quarterly to the Commission. In the event that HPAI H5N1 is suspected or confirmed, the measures laid down in Commission Decision 2006/563/EC will be applied. Within the high-risk area, active surveillance will be carried out on wild birds of both high-risk and “bridge” species. Co-financing for hunted birds (active surveillance) will not be sought in 2012.

8.4 Laboratory testing

For wild birds, the polymerase chain reaction (PCR) test will be used. Samples will be screened with the RRT PCR (M gene) test, with rapid testing of positives for H5 and H7 (within 2 weeks). Virus isolation test will be carried out on all positive samples. All viruses isolated will be sent to the CRL. H5 and
Standard requirements for the submission of surveillance programmes for avian influenza

H7 subtypes will be subjected to characterisation (nucleotide sequencing) to determine whether they are highly pathogenic or low pathogenic at the NRL. Characterisation of neuraminidase will be carried out at the CRL. The results will be submitted quarterly by the end of the month following the end of each quarter, in the format laid down by the Commission.

8.5. WILD BIRDS - Investigation according to the surveillance programme for avian influenza in wild birds set out in Annex II to Decision 2010/367/EU

<table>
<thead>
<tr>
<th>NUTS (2) code/region (a)</th>
<th>Wild birds to be sampled</th>
<th>Total number of birds to be sampled</th>
<th>Estimated total number of samples to be taken for active surveillance</th>
<th>Estimated total number of samples to be taken for passive surveillance</th>
</tr>
</thead>
<tbody>
<tr>
<td>IE01 &amp; IE02</td>
<td></td>
<td>500</td>
<td>500</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>500</td>
<td>0</td>
<td>500</td>
</tr>
</tbody>
</table>

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

Add a new row

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

Outbreaks of both highly pathogenic and low pathogenic avian influenza have historically occurred in Ireland. The last outbreak of highly pathogenic avian influenza occurred in 1983. There have been 6 introductions of low pathogenic avian influenza into poultry flocks since that time. Low pathogenic strains of avian influenza have also been isolated from wild birds in each year of the EU survey. A list of all isolates of avian influenza that have been detected in Ireland is given in Table B (attached).

There have been no outbreaks of HPAI or LPAI in Ireland in poultry in the last 5 years. A single flock (representing 0.3% of flocks tested) was positive on serological testing in 2009. This was a free range layer flock of 5,400 birds in Co. Waterford in the Southeast of the country (NUTS IE02), which was sampled.
in October. On epidemiological investigation, the flock had no history of clinical signs in the birds and no evidence of increased mortalities or drop in egg production. Further testing confirmed low seropositive results for H5, and the results of PCR tests carried out on cloacal and oro-pharyngeal swabs were negative.

9.1 Measures included in the programme for surveillance in poultry

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

(max. 32000 chars):
The Department of Agriculture, Fisheries and Food is responsible for supervising and coordinating the programme in poultry.

9.1.2 System in place for the registration of holdings

(max. 32000 chars):
Holdings containing birds of any type and number must be registered with the Department of Agriculture, Fisheries and Food under S.I. No. 42 of 2008. Registration is carried out at the local District Veterinary Office. The register is maintained on the Animal Health Computer System (AHCS).
9.1.3 Data on vaccination carried out

(Vaccination of zoo birds against avian influenza is carried out in Ireland under Commission Decision 2007/598/EC, as amended by SI 57 of 2010. Two zoos currently contain vaccinated birds. The vaccine subtype used is H5N2. Vaccination of poultry against avian influenza is prohibited.)

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

(Surveillance of wild birds for avian influenza has been carried out since 2003. The results of the surveys for the last 5 years are shown in Tables C and D (attached). The birds that were positive were all ducks (teal, wigeon or mallards) and positive for LPAI.)

10.1 Measures included in the programme for surveillance in wild birds

(A passive surveillance system shall be specifically directed towards target species of wild birds found dead or moribund. Virological surveillance for avian)
influenza in wild birds aimed at identifying 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.
• in the event that HPAI H5N1 is detected in wild birds, then surveillance of live and dead wild birds will be enhanced to determine whether wild birds of other species can act as asymptomatic carriers or “bridge species”.

Testing of samples will be carried out at the NRL. All results shall be sent to the CRL for collation (every 3 months – within 4 weeks of the end of the reporting period). The CRL shall provide technical support and keep a stock of diagnostic reagents. Antigens for use in the surveillance will be supplied to NRL by the CRL to ensure uniformity. All avian influenza virus isolates of cases in wild birds will be submitted to the CRL in accordance with Community legislation, unless a derogation according to paragraph 4 of Chapter V under Differential diagnosis in the avian influenza Diagnostic Manual laid down in Decision 2006/437/EC is granted. Viruses of H5/H7 subtype will be submitted without delay and will be subjected to the standard characterisation tests (nucleotide sequencing/IVPI) according to the said diagnostic manual.

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

The Department of Agriculture, Fisheries and Food is responsible for supervising and coordinating the implementation of the programme. The Department is assisted in the collection of active wild bird samples by hunters (members of the Regional Game Councils). Active surveillance is not require under Commission decision 2010/367/EU, therefore details are not included in this plan.

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

Sampling of wild birds will be passive surveillance only, although wild birds found dead or moribund in Monaghan, Cavan, Louth, Limerick, Clare and Wexford will be targeted because of the density of commercial poultry and the proximity of waterfowl.
10.1.3  Estimation of the local and/or migratory wildlife population

Ireland has an abundance of wetlands - both coastal and inland. Water bird counts are taken at some 690 sites annually, as part of the Irish Wetland Bird Survey. Sites of international importance, supporting a mean of more than 20,000 birds in the 1998/99 to 2002/3 surveys are as follows:

- Wexford Harbour & Slobs
- Dundalk Bay
- Shannon & Fergus Estuary
- Lough Foyle
- Lough Corrib
- Dublin Bay
- Little Brosna Callows
- Tralee Bay, Lough Gill & Akeragh Lough
- Lough Swilly
- Ballymacoda
- Shannon Callows
- Rogerstown Estuary

Waterbirds wintering in Ireland include wild fowl (swans, geese, ducks, divers, grebes and cormorant), waders (includes oystercatcher, plover, lapwing, sandpiper, curlew and woodcock) and gulls. Almost 140 water bird species have been recorded, of which 58 species occur in significant numbers at a variety of sites (33 wildfowl, 20 wader, 5 gull). Overall, 20 waterbird species occur in internationally important numbers at one or more wetland sites. There are 18 waterbird species on the quarry list (three goose species, 12 ducks, and three waders), and the hunting of most of these species is confined to the period 1 September to 31 January.

Most wintering waterbird species in Ireland are migratory and arrive between July and early November. There are two principal flyways: the East Atlantic Flyway and the Eastern or Baltic Flyway. The east Atlantic Flyway includes Iceland and Greenland which are also used as staging areas for species that breed further west in the Canadian Arctic. Species that use this flyway include the Light-bellied brent goose and Greenland white fronted goose. The eastern flyway extends from Scandanavia to Siberia. Birds that breed in Siberia migrate from there in a southwesterly direction along the Arctic Ocean...
shoreline or across the tundra to the Baltic Sea and then on to the North Sea and countries of north Western Europe. The breeding origin of most species wintering in Ireland, are countries in northerly (Arctic) latitudes. However, Ireland supports small numbers of some species during the breeding season. These are considered as partial migrants (some remain all year in Ireland, whilst others migrate further south in winter).

During winter, there is regular movement of waterbirds between roosting and feeding sites. Many swans and geese fly up to 20 km to wetland roosts at night. Large-scale movements also occur, which are directly related to weather conditions. In particular, during cold snaps, species move from inland wetlands to larger riverine or coastal locations, which are less likely to freeze. In cold weather periods in Europe, a number of species from northern Europe and Britain move west to Ireland. In extreme situations, wigeon and teal move south to France and Iberia, where they may mix with populations breeding on the Black Sea/Mediterranean.

11. Measures in place as regards the notification of the disease

(max. 32000 chars):

Arrangements to notify the Department of Agriculture, Fisheries and Food of any unusual mortalities in wild birds have been made with the following organisations:

- National Parks and Wildlife Service (NPWS which is part of the Department of Environment, Heritage and Local Government)
- National Association of Regional Game Councils
- BirdWatch Ireland

The list of target species has been circulated to staff/members of these organisations.

A protocol for cooperation has been agreed between the NPWS and the Department of Agriculture, Fisheries and Food. This was updated in April 2007 and circulated to NPWS and DAFF staff.

The list of target species and a poster showing pictures of the most common of these species is available on the Department of Agriculture, Fisheries and Food website. The list has been circulated to Department of Agriculture, Fisheries and Food District Offices, Local Authorities and local libraries.

An avian influenza help-line to deal with reports of dead wild birds is operated by the Department of Agriculture, Fisheries and Food. Department of Agriculture, Fisheries and Food veterinary and technical staff at local level are available to recover dead wild birds.

12. Costs
12.1  Detailed analysis of the costs

12.1.1  Poultry

The detailed analysis of the costs for the survey in poultry is set out in Annex V (attached).

12.1.2  Wild birds

The detailed analysis of the costs for the survey in wild birds is set out in Annex VI (attached).
### 12.2 Summary of the costs

#### 12.2.1 Poultry surveillance

<table>
<thead>
<tr>
<th>Methods of laboratory analysis</th>
<th>Number of tests to perform per method</th>
<th>Unitary test cost (per method) in €</th>
<th>Total cost (€)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELISA test</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>agar gel immune diffusion test</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Haemagglutination-inhibition-test (H5) for H5</td>
<td>6 840</td>
<td>8</td>
<td>54 720</td>
</tr>
<tr>
<td>Haemagglutination-inhibition-test (H1) for H7</td>
<td>6 840</td>
<td>8</td>
<td>54 720</td>
</tr>
<tr>
<td>Virus isolation test</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>PCR test</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>13 680</strong></td>
<td></td>
<td><strong>109 440,00 €</strong></td>
</tr>
</tbody>
</table>

**Other measures to be covered**

| NA                                             | 0                                    | 0                                 | 0              |

**Add a new row**

**Total**                                                                                      | 0                                      | 0                                       | 0,00 €
### 12.2.2 Wild bird surveillance

<table>
<thead>
<tr>
<th>Methods of laboratory analysis</th>
<th>Number of tests to perform per method</th>
<th>Unitary test cost (per method) in €</th>
<th>Total cost (€)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haemagglutination-inhibition-test (HI) for H5/H7</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Virus isolation test</td>
<td>50</td>
<td>60</td>
<td>3000</td>
</tr>
<tr>
<td>PCR test</td>
<td>1000</td>
<td>11</td>
<td>11000</td>
</tr>
<tr>
<td>Other please specify here</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1 050</strong></td>
<td><strong>71,00 €</strong></td>
<td><strong>14 000,00 €</strong></td>
</tr>
</tbody>
</table>

**Other measures to be covered**

| Sampling                                               | 1000                                  | 20                                 | 20 000          |
| **Total**                                               | **1000**                              | **20,00 €**                        | **20 000,00 €** |
Standard requirements for the submission of surveillance programmes for avian influenza
version : 2.1

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.