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**Working document**

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# **Animal disease eradication, control and surveillance programmes**

## **Indicators**

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## I. INTRODUCTION

To evaluate the implementation of an eradication, control or surveillance programme, the effectiveness of the measures implemented and to measure progress, quantifiable and objective measurements (**indicators**) are needed.

**The scope** of this document is to list and describe which are, by disease, the **main indicators** used by the Commission during the process of evaluation of the results of the implementation of an eradication, control and surveillance programme (veterinary programmes) submitted by Member States for EU financial contribution.

Definition as in Annex I to Decision 2008/341/EC<sup>1</sup> apply to an eradication, control or surveillance programme:

- **Eradication programme:**

Programme to result in biological extinction of an animal disease or zoonosis. The final target of an eradication programme shall be to obtain the free or officially free-status of the territory according to Union legislation, where such possibility exists.

- **Control programme:**

Programme to obtain or maintain the prevalence of an animal disease or zoonosis below a sanitary acceptable level.

- **Surveillance programme:**

Surveillance programme refers to activities to collect and record data on specific diseases in defined populations over a period of time, in order to assess the epidemiological evolution of the diseases and the ability to take targeted measures for control and eradication.

The indicators will be obtained from different sources:

- the annual final reports sent by the Member states to the Commission providing financial and technical information on the implementation of the co-financed programmes. Commission Decision 2008/940/EC<sup>2</sup> (repealed by Commission Implementing Decision 2014/288/EU<sup>3</sup> from 1st January 2015) lays down standard reporting requirements for national programmes for the eradication, monitoring and control of certain animals diseases and zoonoses co-financed by the Community;
- "*The European Union Summary Report on Trends and Sources of Zoonoses, Zoonotic Agents and Food-borne Outbreaks*" drafted every year by European Food Safety Authority (EFSA) and European Centre for Disease Prevention and Control (ECDC) thereafter called EFSA/ECDC zoonoses report.
- other Commission data submitted by the Member States according to EU requirements.

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<sup>1</sup> OJ L 115, 25.04.2008, p.44

<sup>2</sup> OJ.L 335.13.12.2008.p.61.

<sup>3</sup> OJ L 147.17.05.2014.p.88.

## II. INDICATORS

**Indicators** are needed to:

- measure performances. These are key, quantifiable and objective measures that indicate whether – eradication, control or surveillance policy is effective;
- evaluate the success of a particular activity or the deficiency in a specific area.

The indicators are disease specific and divided in two main categories:

**a. Activities (AI):** to verify if the measures planned in the approved programmes are implemented as foreseen e.g. number of test in line with the approved programme, number of animals vaccinated.

**b. Progress (PI):** to measure the progress towards achievement of the objectives of the approved programme (eradication/control/surveillance) in relation to the evolution of the disease in previous years e.g. prevalence and incidence, evolution of free areas, number of outbreaks, number of animals affected, costs.

## III. INDICATORS BY DISEASE

Those indicators are based on EU legislation and/or other reference documents, as listed for each disease.

**Important preliminary remark:** all activities indicators listed in this document are compared to the target in the approved programme.

### 3.1. Bluetongue (BT)

EU legislation requirements for BT monitoring and surveillance programmes are laid down in Annex I to Commission Regulation (EC) No 1266/2007, amended by Commission Implementing Regulation (EU) No 456/2012.

#### Activities Indicators

##### 1. Surveillance:

- Number of animals sampled (This number shall be sufficient to detect prevalence of 20% or 5% in the target population with 95 % confidence in accordance with the status of the region/country);
- Number of samples for laboratory analysis.

## 2. Vaccination:

- Number or % of susceptible animals vaccinated per serotype and species.

### **Progress Indicators**

- Number of outbreaks compared to previous years (per serotype).
- Changes on the disease status in the Member State, as appropriate.(this indicator will be evaluated on the basis of other Commission data provided by the Member States according to EU requirements).

### **3.2. Transmissible Spongiform Encephalopathies (TSEs)**

EU legislative requirements for the monitoring (Annex III) and the eradication (Annex VII) of TSEs in bovines and small ruminants are laid down in Regulation (EC) No 999/2001.

### **Activities Indicators**

- Number of tests performed in bovine animals per category (slaughtered for human consumption, fallen stock, emergency slaughter, animals with clinical signs at ante-mortem inspection);
- Number of tests performed in sheep and in goats (slaughtered for human consumption, not slaughtered for human consumption);
- Number of random genotyping tests in ovine animals.

### **Progress Indicators**

- Number of classical BSE cases compared to previous years;
- Number of classical scrapie cases compared to previous years;
- Number of Member States free from classical scrapie (this indicator will be evaluated on the basis of other Commission data provided by the Member States according to EU requirements);

- Number of Member States with a negligible BSE risk (this indicator will be evaluated on the basis of other Commission data provided by the Member States according to EU requirements).

### **3.3. Avian Influenza (AI)**

EU legislation requirements for AI surveillance programmes are laid down in Commission Decision 2010/367/EC, on the implementation of surveillance programmes for avian influenza in poultry and wild birds.

#### **Activities Indicators**

1. Active surveillance in poultry: for Low Pathogenic Avian Influenza (LPAI) (of subtypes H5 and H7 in gallinaceous birds and for LPAI of subtypes H5 and H7 and Highly Pathogenic Avian Influenza (HPAI) in domestic waterfowl:
  - Number of poultry holdings sampled (split by the different poultry categories) ;
  - Number of samples taken.
2. Passive surveillance in targeted wild birds:
  - Number of wild birds sampled.

### **3.4. Zoonotic Salmonella**

EU legislation monitoring and control requirements are laid down in part B of Annex II to Regulation (EC) No 2160/2003 of the European Parliament and of the Council<sup>4</sup> indicating the relevant animal population and phases of production that sampling must cover.

Specific Regulations were subsequently adopted for each animal population including description of testing schemes:

- Commission Regulation (EU) No 200/2010 for breeders of *Gallus gallus*,
  - Commission Regulation (EU) No 517/2011 for laying hens of *Gallus gallus*,
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- Commission Regulation (EU) No 200/2012 for broilers of *Gallus gallus* and
- Commission Regulation (EU) No 1190/2012 for turkeys (*Meleagris gallopavo*)
- Commission Regulation (EC) No 1177/2006 on requirements for the use of specific control methods (eg: use of vaccines).

The *Salmonella* control programmes are currently implemented in specified poultry populations (breeding, laying and broiler flocks of *Gallus gallus* and in breeding and fattening turkeys).

#### **Activities Indicators (per poultry population)**

- Number of flocks officially sampled;
- Number of flocks sampled by Food Business Operators (FBO);
- Number of flocks vaccinated compared to the target in the approved programme.

#### **Progress Indicators (per poultry population)**

- Percentage of flocks tested positive for the target serovars compared to previous years (this indicator will be followed on the basis of the annual final reports sent by the Member States to the Commission);
- Percentage of flocks tested positive for the target serovars compared to previous year (this indicator will be followed on the basis of EFSA report on trends and sources of zoonoses);

### **3.5. Bovine Tuberculosis (TB)**

#### **EU legislation requirements are laid down in:**

1. Council Directive 64/432/EEC on animal health problems affecting intra-community trade in bovine animals and swine;
2. Council Directive 77/391/EEC introducing Community measures for the eradication of brucellosis, tuberculosis and leucosis in cattle;
3. Council Directive 78/52/EEC establishing the Community criteria for national plans for the accelerated eradication of brucellosis, tuberculosis and enzootic leucosis in cattle.
4. In addition: WD SANCO/10067/2013 on "Eradication of bovine tuberculosis in the EU" accepted by the "Bovine tuberculosis subgroup of the Task Force on monitoring animal disease eradication".

## **Activities Indicators**

### **1. Data on herds:**

- Percentage of herds tested;
- Number of positive herds depopulated.

### **2. Data on animals:**

- Percentage of animals tested ;
- Number of positive animals slaughtered or culled.

## **Progress Indicators**

### **1. Data on herds:**

- Herd prevalence compared to the target in the approved programme ;
- Herd prevalence compared to previous year;
- Herd incidence compared to the target in the approved programme;
- Herd incidence compared to previous year;
- Number of herds officially free (OF) on total number of herds under the programme compared to the target in the approved programme;
- Number of herds officially free (OF) on total number of herds under the programme compared to previous year;
- Number of herds with unknown status compared to the target in the approved programme;
- Number of herds with unknown status compared to previous year.

### **2. Data on animals:**

- Animals prevalence compared to the target in the approved programme;
- Animals prevalence ( on total number of animal tested) compared to previous year;
- Number of positive animals compared to the target in the approved programme;
- Number of positive animals compared to previous year;

Changing of the disease status in the Member States.(this indicator will be evaluated on the basis of other Commission data provided by the Member States according to EU requirements).



### **3.6. Bovine Brucellosis**

#### **EU legislation requirements are laid down in:**

1. Council Directive 64/432/EEC on animal health problems affecting intra-community trade in bovine animals and swine;
2. Council Directive 77/391/EEC introducing Community measures for the eradication of brucellosis, tuberculosis and leucosis in cattle;
3. Council Directive 78/52/EEC establishing the Community criteria for national plans for the accelerated eradication of brucellosis, tuberculosis and enzootic leucosis in cattle;
4. WD SANCO/6095/2009 on "Eradication of bovine, sheep and goats brucellosis in the EU" accepted by the "Bovine and sheep and goats brucellosis subgroup of the Task Force on monitoring animal disease eradication.

#### **Activities Indicators**

##### **1. Data on herds:**

- Percentage of herds tested ;
- Number of positive herds depopulated.

##### **2. Data on animals:**

- Percentage of animals tested;
- Number of positive animals slaughtered or culled.

##### **3. Data on vaccination:**

###### **a. Data on herds**

- Total number of herds vaccinated.

###### **b. Data on animals**

- Number of animals vaccinated.

## **Progress Indicators**

### **1. Data on herds:**

- Herd prevalence compared to the target in the approved programme ;
- Herd prevalence compared to previous year ;
- Herd incidence compared to the target in the approved programme;
- Herd incidence compared to previous year;
- Number of herds officially free (OF) on total number of herds under the programme compared to the target in the approved programme;
- Number of herds officially free (OF) on total number of herds under the programme compared to previous year;
- Number of herds with unknown status compared to the target in the approved programme;
- Number of herds with unknown status compared to previous year.

### **2. Data on animals:**

- Animals prevalence on total number of animal tested compared to the target in the approved programme;
- Animals prevalence on total number of animal tested compared to previous year;
- Number of positive animals compared to the target in the approved programme;
- Number of positive animals compared to previous year;
- Changing of the disease status in the member States. (this indicator will be evaluated on the basis of other Commission data provided by the Member States according to EU requirements).

### **3.7. Ovine and caprine Brucellosis**

#### **EU legislation requirements are laid down in:**

1. Council Directive 91/68/EEC on animal health conditions governing intra-community trade in ovine and caprine animals.
2. WD SANCO/6095/2009 on "Eradication of bovine, sheep and goats brucellosis in the EU" accepted by the "Bovine and sheep and goats brucellosis subgroup of the Task Force on monitoring animal disease eradication.

#### **Activities Indicators**

##### **1. Data on herds:**

- Percentage of herds tested ;
- Number of positive herds depopulated.

##### **2. Data on animals:**

- Percentage of animals tested;
- Number of positive animals slaughtered or culled.

##### **3. Data on vaccination:**

###### **a. Data on herds**

- Total number of herds vaccinated.

###### **b. Data on animals**

- Number of animals vaccinated.

## **Progress Indicators**

### **1. Data on herds:**

- Herd prevalence compared to the target in the approved programme;
- Herd prevalence compared to previous year;
- Herd incidence compared to the target in the approved programme;
- Herd incidence compared to previous year;
- Number of herds officially free (OF) on total number of herds under the programme compared to the target in the approved programme;
- Number of herds officially free (OF) on total number of herds under the programme compared to previous year;
- Number of herds with unknown status compared to the target in the approved programme;
- Number of herds with unknown status compared to previous year.

### **2. Data on animals:**

- Animals prevalence on total number of animal tested compared to the target in the approved programme;
- Animals prevalence on total number of animal tested compared to previous year;
- Number of positive animals compared to the target in the approved programme;
- Number of positive animals compared to previous year;
- Changing of the disease status in the Member States. (this indicator will be evaluated on the basis of other Commission data provided by the Member States according to EU requirements).

### **3.8. Rabies**

There are no specific EU legislative requirements on the implementation of rabies eradication and monitoring/surveillance.

The assessment is based on the following references:

1. Report of the Scientific Committee on Animal Health and Animal Welfare: The oral vaccination of foxes against rabies (2002);
2. EFSA external scientific report: Development of harmonised schemes for monitoring and reporting of rabies in animals in the European Union (2010);
3. OIE Terrestrial Animal Health Code 2012 (chapter 8.10. Infection with Rabies virus);
4. WHO expert consultation on rabies (2005);
5. General recommendations of different meetings of the rabies subgroup of the Task Force for monitoring animal disease eradication.

#### **Activities Indicators**

- Number of vaccine batches controlled before distribution;
- Number of oral vaccination campaigns performed within the year;
- Total number of baits distributed per campaign;
- Density per campaign (number of baits per square kilometre distributed) ;
- Area covered with oral rabies vaccination per campaign;
- Number of monitoring tests for vaccination effectiveness on target species per campaign ;
- Number of surveillance tests performed (passive surveillance)

#### **Progress Indicators**

- Number of rabies cases (excluding bat cases) compared to previous year;
- Number of rabies cases in previously (last year) case-free areas compared to previous year;
- Percentage of sero-conversion in target species (juvenile /adult separately) compared to previous year;
- Percentage of vaccine uptake in target species (juvenile/adult separately) compared to previous year.

### **3.9. Classical Swine Fever (CSF)**

#### **EU legislation requirements are laid down in:**

1. Council Directive 2001/89/EC on Community measures for the control of CSF;
2. Commission Decision 2002/106/EC approving a diagnostic manual establishing diagnostic procedures, sampling methods and criteria for evaluation of the laboratory tests for the confirmation of VCSF;
3. WD SANCO/7032/2010 guidelines on surveillance, monitoring, control and eradication of CSF in wild boars.

#### **Activities Indicators**

##### **Active surveillance in domestic pigs**

- Number of clinically examined pig holdings;
- Number of holdings tested;
- Number of animals tested;
- Number of samples for serological tests;
- Number of samples for virological tests.

##### **Active surveillance in wild boar/feral pigs**

- **Number of wild boar/feral pigs tested for active surveillance.**

##### **Passive surveillance in wild boar/feral pigs**

- Number of wild boar/feral pigs tested for passive surveillance.

##### **Vaccination in wild boar/feral pigs**

- Total number of baits distributed;
- Total number of baits/km<sup>2</sup>;
- Total area of vaccination.

### **Progress Indicators**

- Number of serologically positive domestic pigs compared to previous year;
- Number of virologically positive domestic pigs compared to previous year;
- Number of serologically positive wild boar/feral pigs compared to previous year;
- Number of virologically positive wild boar/feral pigs compared to previous year.

### **3.10. African Swine Fever (ASF)**

#### **EU legislation requirements are laid down in:**

1. Council Directive 2002/60/EC on specific provisions for the control of ASF;
2. Commission Decision 2003/422/EC approving an ASF diagnostic manual.
3. SANCO/7138/2013 (Rev 4) Working Document on Guidelines on surveillance and control of African swine fever in feral pigs and preventive measures for pig holdings.
4. EFSA panel on AHAW: Scientific opinion on African swine fever. EFSA Journal 2014,12(4): 3628 (77pp).

### **Activities Indicators**

#### **Active surveillance in domestic pigs**

- Number of clinically examined pig holdings;
- Number of holdings tested;
- Number of animals tested;

- Number of samples for serological tests;
- Number of samples for virological tests.

#### **Active surveillance in wild boar/feral pigs**

- **Number of wild boar/feral pigs tested for active surveillance.**

#### **Passive surveillance in wild boar/feral pigs**

- Number of wild boar/feral pigs tested for passive surveillance.

#### **Progress Indicators**

- Number of serologically positive domestic pigs compared to previous year;
- Number of virologically positive domestic pigs compared to previous year ;
- Number of serologically positive wild boar/feral pigs compared to previous year;
- Number of virologically positive wild boar/feral pigs compared to previous year;
- Number of outbreaks compared to previous year.