

# World animal health situation for animal movements



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# **World Organisation for Animal Health (OIE)**



- → International intergovernemental organisation ñ 169 Member countries
  - In 1920, rinderpest occurred unexpectedly in Belgium, as a result of zebus, originating from India and destined for Brazil, transiting via the port of Antwerp.

    The need to fight animal diseases at global level led to the creation of the Office International des Epizooties through the international Agreement signed on January 25th 1924.
- → Recognized as reference Organisation by the World Trade Organisation
- → Objectives :
  - \*To ensure transparency in the global animal disease and zoonosis situation
  - \* To collect, analyse and disseminate veterinary scientific information
  - \* To encourage international solidarity in the control of animal diseases
  - \* Within its mandate under the WTO SPS Agreement, to safeguard world trade by publishing health standards for international trade in animals and animal products
  - \* To improve the legal framework and resources of national Veterinary Services
  - \*To provide a better guarantee of food of animal origin and to promote animal welfare through a science-based approach



# > Safety of animal movements

- ✓ National epidemiological system managed by veterinary services
  - => host population characteristics
  - => environmental assessment
  - => animal health surveillance
  - => monitoring system for controlling diseases
- ✓ Transparency in the world animal health situation
  - => by early detection and immediate notification
  - => by reporting the control of a disease which is appeared

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To avoid the apparition of disease, infection and to stop the propogation of possible disease, infection or emerging disease ....

### → Disease:

means the clinical and/or pathological manifestation of infection

### → Infection:

means the presence of the pathogenic agent in the host

### → Zoonosis:

means any <u>disease</u> or <u>infection</u> which is naturally transmissible from animals to humans

### → Emerging disease:

means a new <u>infection</u> resulting from the evolution or change of an existing pathogenic agent, a known <u>infection</u> spreading to a new geographic area or <u>population</u>, or a previously unrecognized pathogenic agent or disease diagnosed for the first time and which has a significant impact on animal or public health

( General definitions of OIE Terrestrial Animal Health Code )

# Animal health surveillance and monitoring system ( in order to have an appropriate level of protection

### → Appropriate level of protection:

means the level of protection deemed appropriate by the country establishing a sanitary measure to protect human or animal life or health within its territory

### → Surveillance:

means the investigation of a given population or subpopulation to detect the presence of a pathogenic agent or disease; the frequency and type of surveillance will be determined by the epidemiology of the pathogenic agent or disease, and the desired outputs

### **→** Monitoring:

means the continuous investigation of a given population or subpopulation, and its environment, to detect changes in the <u>prevalence</u> of a <u>disease</u> or characteristics of a pathogenic agent

( General definitions of OIE Terrestrial Animal Health Code )

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### → Prevalence of a disease:



means the total number of <u>cases</u> or <u>outbreaks of a disease</u> that are present in a population at risk, in a particular geographical area, at one specified time or during a given period

### → Case:

means an individual animal infected by a pathogenic agent, with or without clinical signs

### → Outbreak:

means the occurrence of one or more cases of a disease or an infection in an epidemiological unit

### → Epidemiological unit:

means a group of animals with a defined epidemiological relationship that share approximately the same likelihood of exposure to a pathogen. This may be because they share a common environment (e.g. animals in a pen), or because of common management practices. Usually, this is a herd or a flock. However, an epidemiological unit may also refer to groups such as animals belonging to residents of a village, or animals sharing a communal animal handling facitity

### Incidence:

means the number of new cases or outbreaks of a disease that occur in a population at risk in a particular geographical area within a defined time interval

( General definitions of OIE Terrestrial Animal Health Code )
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# **Early detection of disease**, infection or emerging disease

### → Early detection system:

### 🗵 As earlier the detection is done as quicker the response is activated

A system for the timely detection and identification of an incursion or emergence of disease/infection in a country, zone or compartment. An early detection system should be under the control of the <u>Veterinary Services</u> and should include the following characteristics: .

- a) representative coverage of target animal populations by field services;
- b) ability to undertake effective <u>disease</u> investigation and reporting;
- c) access to laboratories capable of diagnosing and differentiating relevant <u>diseases</u>;
- d) a training programme for <u>veterinarians</u>, <u>veterinary para-professionals</u> and others involved in handling animals for detecting and reporting unusual animal health incidents
- e) the legal obligation of private veterinarians in relation to the Veterinary Authority
- f) timely reporting system of the event to the <u>Veterinary Services</u>
- g) a national chain of command

( Definitions of OIE Terrestrial Animal Health Code )

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# **Early detection of disease**, infection or emerging disease

### **☒** Better reactivity hoped with notifiable disease

### → Notifiable disease:

means a <u>disease</u> <u>listed by the <u>Veterinary Authority</u>, and that, as soon as detected or suspected, must be brought to the attention of this <u>Authority</u>, in accordance with national regulations</u>

( General definitions of OIE Terrestrial Animal Health Code )

### Animal health surveillance is essential



- √ to detect disease or infection
- ✓ to monitor disease trends
- √ to control endemic and emerging diseases
- ✓ to support claims for freedom from <u>disease</u> or <u>infection</u>
- ✓ to provide data to support the risk analysis process, for both animal health and/or public health purposes
- ✓ to substantiate the rationale for sanitary measures

### Surveillance data

- ✓ underpin the quality of disease status reports
- $\checkmark$  should satisfy information requirements for accurate risk analysis both for <u>international trade</u> as well as for national decision-making

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# **Quality of the surveillance system: critical items**



( Appendix 3.8.1. of OIE Terrestrial Animal Health Code )

### ✓ Organisation of the Veterinary services

The *Veterinary Services* must be able to demonstrate by means of appropriate legislation, sufficient financial resources and effective organisation that they are in a position to have control of the establishment and application of animal health measures, and of international veterinary certification activities

<u>November 2005</u>: National Veterinary Services are recognised as an International Public Good. Their improvement via internal or external evaluation, particularly in developing countries, is central to the management of the avian influenza world crisis or other zoonoses and emerging and re-emerging animal diseases.

### Population

Surveillance should be carried out in such a way as to take into account all animal species susceptible to the infection in a country, <u>zone</u> or <u>compartment</u>. The surveillance activity may cover all individuals in the population or part of them. When surveillance is conducted only on a <u>subpopulation</u>, care should be taken regarding the inferences made from the results

### ✓ Epidemiological unit

The relevant *epidemiological unit* for the surveillance system should be chosen taking into account factors such as carriers, reservoirs, vectors, immune status, genetic resistance and age, sex, and other host criteria

# Quality of the surveillance system: critical items



### Clustering

Clustering may occur at a number of different levels (e.g. a cluster of infected animals within a herd, a cluster of pens in a building, or a cluster of farms in a <u>compartment</u>). Clustering should be taken into account in the design of surveillance activities and the statistical analysis of surveillance data, at least at what is judged to be the most significant level of clustering for the particular animal population and infection

### ✓ Case and outbreaks definitions

Clear and unambiguous case and outbreak definitions should be developed and documented for each pathogen under surveillance

### → Case definition:

set of criteria used to classify an animal or epidemiological unit as a case

### Case

means an individual animal infected by a pathogenic agent, with or without clinical signs

### → Outbreak definition:

set of criteria used to classify the occurrence of one or more cases in a group of animals or units as an outbreak  $\frac{1}{2}$ 

### → Outbreak of disease or infection:

means the occurrence of one or more  $\underline{cases}$  of a  $\underline{disease}$  or an  $\underline{infection}$  in an  $\underline{epidemiological\ unit}$ 

( Definitions of OIE Terrestrial Animal Health Code )

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# Quality of the surveillance system: critical items



### Analytical methodologies

Surveillance data should be analysed using appropriate methodologies, and at the appropriate organisational levels to facilitate effective decision making

### Testing

Surveillance involves the detection of <u>disease</u> or <u>infection</u> by the use of appropriate case definitions based on the results of one or more tests for evidence of infection or immune status. Imperfect sensitivity and/or specificity will have an impact on the conclusions from surveillance The values of sensitivity and specificity for the tests used should be specified, and the method used to determine or estimate these values should be documented

### ✓ Quality assurance

Surveillance systems should incorporate the principles of quality assurance and be subjected to periodic auditing to ensure that all components of the system function and provide verifiable documentation of procedures and basic checks to detect significant deviations of procedures from those documented in the design.

# Quality of the surveillance system: critical items



### ✓ Data collection and management

The success of a surveillance system is dependent on a reliable process for data collection and management.

Even where data are collected for non-survey purposes (e.g. during disease control interventions, inspections for movement control or during disease eradication schemes), the consistency and quality of data collection and event reporting in a format that facilitates analysis, is critical.

Factors influencing the quality of collected data include:

- the distribution of, and communication between, those involved in generating and transferring data from the field to a centralised location;
- the ability of the data processing system to detect missing, inconsistent or Inaccurate data, and to address these problems;
  - maintenance of disaggregated data rather than the compilation of summary data;
  - minimisation of transcription errors during data processing and communication

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# ➤ Interests of a good surveillance system



- ✓ Better management and transparency at national and international level
  - → to respect the international obligations of notification:

Countries shall make available to other countries, through the OIE, whatever information is necessary to minimise the spread of important animal <u>diseases</u> and to assist in achieving better worldwide control of these <u>diseases</u>

To achieve this, countries shall comply with the <u>notification</u> requirements specified in Article 1.1.2.3. of the Terrestrial Animal Health Code.

=> Chapter 1.1.2 of OIE Terrestrial Animal Health Code

→ to assume the responsabilities for importation:

The importation of <u>animals</u> and animal products involves a degree of <u>disease risk</u> to the <u>importing country</u>. This <u>risk</u> may be represented by one or several <u>diseases</u> or <u>infections</u>.

The import requirements included in the <code>international veterinary certificate</code> should assure that <code>commodities</code> introduced into the <code>importing country</code> comply with the national level of protection that it has chosen for animal and human health.

<u>Importing countries</u> should restrict their requirements to those justified for such level of protection

=> Chapter 1.2.1 of OIE Terrestrial Animal Health Code

### → to assume the responsabilities for exportation:



An *exporting country* should be prepared to supply the following information to *importing countries* on request:

- a) information on the animal health situation and national animal health information systems to determine whether that country is free or has *free zones* of listed diseases, including the regulations and procedures in force to maintain its free status;
- b) regular and prompt information on the occurrence of transmissible *diseases*;
- c) details of the country's ability to apply measures to control and prevent the relevant <u>listed diseases</u>;
- d) information on the structure of the  $\underline{\textit{Veterinary Services}}$  and the authority which they exercise;
- e) technical information, particularly on biological tests and vaccines applied in all or part of the national territory

=> Chapter 1.2.1 of OIE Terrestrial Animal Health Code

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# ► Interests of a good surveillance system



- ✓ Facilitate the official recognition of the sanitary status of the country
  - → For disease status managed by the OIE
    - 1995: Adoption of the first procedure of recognition of sanitary status
    - 1996: first list of Member countries and zones free of FMD without vaccination
    - To date: Specific procedures for

Foot and mouth disease,

Rinderpest,

Contagious bovine pleuropneumonia, Bovine spongiform encephalopathy

→ For other diseases during bilateral negociations

# Global animal health information system



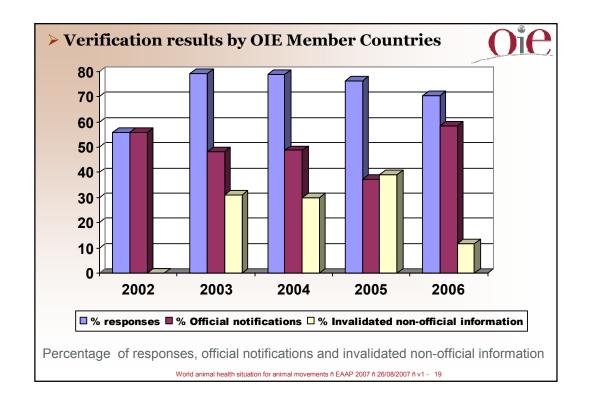
- ✓ OIE Early warning system
  - → Official reports sent by Member countries
  - → Reports sent by Reference laboratories
- ✓ OIE Active search and verification of non official information
  - → Scientific publications, ProMed, GPHIN, Copernic, news
  - → with Member country verification
- ✓ OIE / FAO / WHO Joint Initiative: GLEWS
  - → tracking: list of priority animal diseases, zoonoses and emerging diseases
  - → exchange of data to check with integration of OIE Member country verification

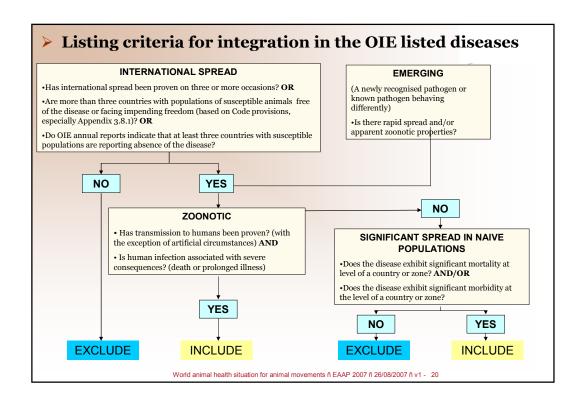
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# > Results of the OIE active search and verification

Year	Number of letters	Answers	No response	Official notifications
2002	32	18	14	18
2003	29	24	5	14
2004	85	67	18	39
2005	97	74	23	36
2006	118	83	35	69





# **New World Animal Health Information System (WAHIS)**



- ✓ Immediate notification of disease, emerging disease

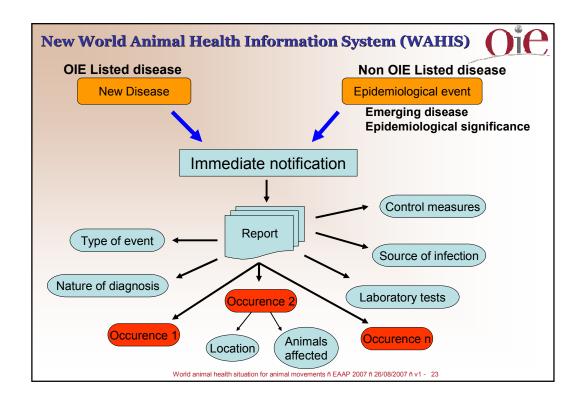
  or pahogenic with an epidemiological significance to other countries
- ✓ Weekly reports: Follow-up to the immediate notification to inform on progress of the epidemiological situation
- ✓ Final report :
  - if the occurences are ended
  - if the situation becomes endemic => six-monthly report
- ✓ To report regularly on OIE-listed diseases at least once each six months
- ✓ Annual report

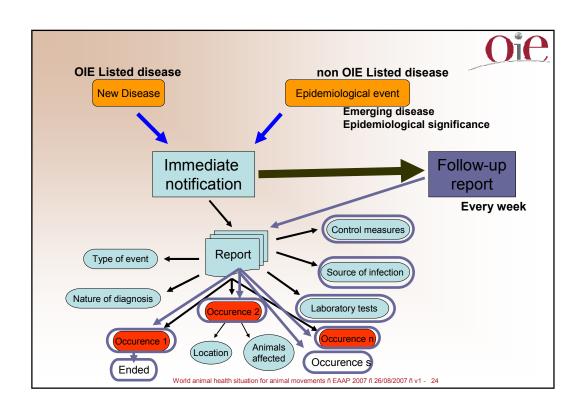
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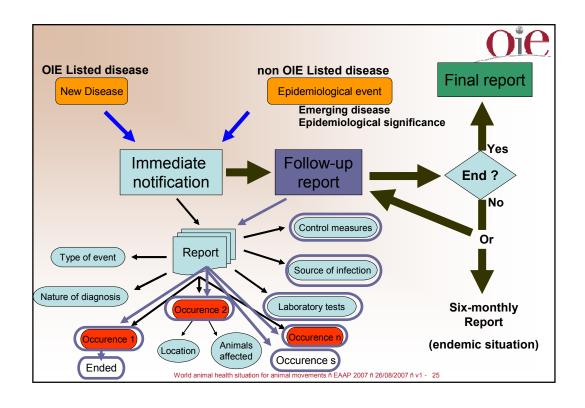
# Member countries shall send to the OIE Central Bureau within 24 hours, info on any of the following events:

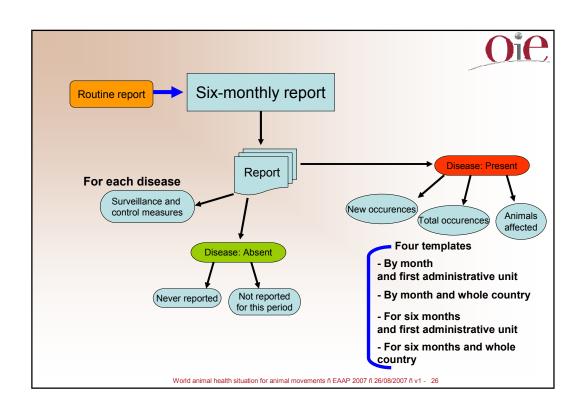


- •first occurrence of a listed disease and/or infection in a country or zone/compartment
- •re-occurrence of a listed disease and/or infection in a country or zone/compartment, following a report declaring the outbreak ended
- •first occurrence of a new strain of a pathogen in a country or zone/compartment
- •a sudden and unexpected increase in the distribution, incidence, morbidity or mortality of a disease prevalent within a country or zone/compartment
- •an emerging disease with significant morbidity or mortality, or zoonotic potential
- •evidence of change in the epidemiology of a listed disease (including host range, pathogenicity, strain) in particular if there is a zoonotic impact









# **FAO-WHO-OIE Annual report**



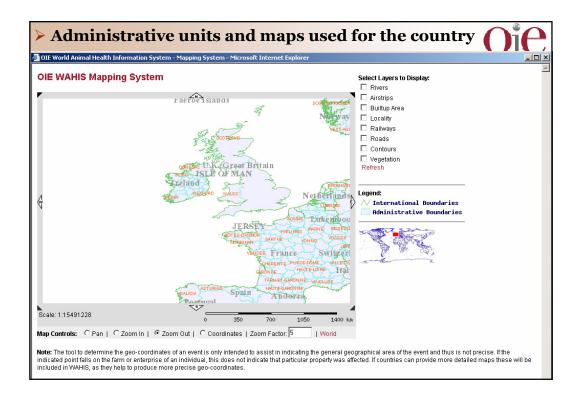
- New form in January 2006
- > non OIE listed diseases for OIE member Countries
- > OIE and non OIE listed diseases for other Countries
  - ✓ Qualitative information (disease occurrence),
  - ✓ To notify diseases present in the country: template for the whole Country for the six months period
- ➤ Livestock population (by first administrative division)
- > Human cases and deaths for OIE listed zoonotic diseases
- > Veterinarians and animal health technicians
- > National reference laboratories
- Production of vaccines

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# New World Animal Health Information System (WAHIS)



- The new World Animal Health Information System allows to register all the different kinds of report
- The system uses maps and geographic coordinates for the outbreaks
- An access (login, password) will be available to each Delegate
- During the first access, the Delegate will check
  - \* the choice of the administrative unit as the first administrative unit
  - \* the list of the first administrative units
  - \* the map used for the country with the first administrative unit



# New World Animal Health Information System (WAHIS)



- > For each kind of report, the new World Animal Health Information

  System allows the Delegate or the nominee to save a draft, to print

  the report, to save the report on their computer and to transmit

  the report to the OIE
- > The Delegate or the nominee can edit existing reports
- > For the six-monthly report, the system will agregate existing data for the refered period for the diseases which have been notified
- ➤ The six-monthly and annual reports can be made in several steps

