Zoning for Animal Disease Control
(OIE’s roles and activities)

2018 Avian Health Workshop
17-19 July 2018, Tokyo, Japan
OIE in brief
OIE Mandate

Improving animal health and welfare worldwide

STANDARDS
for international trade of animals and animal products under the mandate given by the WTO

TRANSPARENCY
of the world animal disease situation including zoonoses

EXPERTISE
Collection and dissemination of veterinary scientific information animal disease prevention and control methods

SOLIDARITY
between countries to strengthen capacities worldwide Capacity building tools and programmes
182 countries on line

Early warning system

Monitoring system

Information from the Annual reports

Immediate notification

Follow-up & Final report

Six monthly report

Annual report

- Alert messages for specific epidemiological events & for emerging diseases
- Follow-up of outbreaks notified
  - Information for 118 OIE-listed diseases twice a year
- Veterinary Services’ capabilities
- Vaccine production
- National laboratories’ capabilities
- Animal population figures
- Human cases for zoonoses

And non official information tracking system
WTO SPS Agreement
Sanitary and Phytosanitary Measures

Objective of the SPS Agreement?

Recognises the right to protect human, animal, plant life or health

Avoiding unnecessary barriers to trade

Entered into force with the establishment of the WTO on 1 January, 1995
THE “3 SISTERS”

Standard-setting organisations

- food safety
  - CODEX
- animal health and zoonoses
  - OIE
- plant health
  - IPPC

Codex = Joint FAO/WHO Codex Alimentarius Commission
OIE = World Organisation for Animal Health
IPPC = International Plant Protection Convention (FAO)

WTO SPS Agreement recognises OIE as a reference organisation for international standards on animal health including zoonoses
OIE International Standards

CODES

Standards for disease control and safe international trade

MANUALS

Standards for laboratory diagnostic methods (and requirements for vaccines)

Standards to improve health and animal welfare, and veterinary public health
OIE Code Chapters relevant to Avian Health

General Provisions (Volume 1):

- Section 1: Animal disease diagnosis, surveillance and notification
- Section 2: Risk Analysis
- Section 3: Quality of veterinary services
- Section 4: General recommendations: Disease prevention and control
  - Chapter 4.3. Zoning and compartmentalization
  - Chapter 4.4. Application of compartmentalization
- Section 5: Trade measures, import/export procedures and veterinary certification
- Section 6: Veterinary public health
  - Chapter 6.4. Biosecurity procedures in poultry production
  - Chapter 6.5. Prevention, detection and control of Salmonella in poultry
- Section 7: Animal Welfare
  - Chapter 7.10. Animal welfare and broiler chicken production systems

Recommendations applicable to OIE Listed diseases (Volume 2):

- Section 10: Ave
### OIE Listed Diseases (2018)

#### Terrestrial Animal Total

<table>
<thead>
<tr>
<th>Disease</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>multiple species</td>
<td>23</td>
</tr>
<tr>
<td>cattle</td>
<td>14</td>
</tr>
<tr>
<td>sheep/goat</td>
<td>11</td>
</tr>
<tr>
<td>equine</td>
<td>11</td>
</tr>
<tr>
<td>swine</td>
<td>6</td>
</tr>
<tr>
<td>avian</td>
<td>13</td>
</tr>
<tr>
<td>lagomorph</td>
<td>2</td>
</tr>
<tr>
<td>bee</td>
<td>6</td>
</tr>
<tr>
<td>others</td>
<td>2</td>
</tr>
</tbody>
</table>

#### Aquatic Animal Total

<table>
<thead>
<tr>
<th>Disease</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>fish</td>
<td>10</td>
</tr>
<tr>
<td>molluscs</td>
<td>7</td>
</tr>
<tr>
<td>crustaceans</td>
<td>9</td>
</tr>
<tr>
<td>amphibiahs</td>
<td>3</td>
</tr>
</tbody>
</table>

OIE Listed Diseases 88+29= 117

### Avian diseases and infections

- Avian chlamydiosis
- Avian infectious bronchitis
- Avian infectious laryngotracheitis
- Avian mycoplasmosis (*Mycoplasma gallisepticum*)
- Avian mycoplasmosis (*Mycoplasma synoviae*)
- Duck virus hepatitis
- Fowl typhoid
- Infection with avian influenza viruses
- Infection with influenza A viruses of high pathogenicity in birds other than poultry including wild birds
- Infection with Newcastle disease virus
- Infectious bursal disease (Gumboro disease)
- Pullorum disease
- Turkey rhinotracheitis
OIE Reference Centres

Collaborating Centre

World centre of research, expertise, standardization of techniques and dissemination of knowledge on a specialty

Reference Laboratory

World reference centre of expertise on designated pathogens or diseases

World Distribution of OIE Collaborating Centres

World Distribution of OIE Reference Laboratories

<table>
<thead>
<tr>
<th>OIE Collaborating Centres</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Collaborating Centre</td>
</tr>
<tr>
<td>2 or 3 Collaborating Centres</td>
</tr>
<tr>
<td>4 or 5 Collaborating Centres</td>
</tr>
<tr>
<td>More than 5 Collaborating Centres</td>
</tr>
<tr>
<td>No OIE Collaborating Centre</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OIE Reference Laboratories</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 to 3 OIE Reference Labs</td>
</tr>
<tr>
<td>4 to 10 OIE Reference Labs</td>
</tr>
<tr>
<td>11 to 20 OIE Reference Labs</td>
</tr>
<tr>
<td>More than 20 OIE Reference Labs</td>
</tr>
<tr>
<td>No OIE Reference Labs</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>World</th>
<th>Asia</th>
</tr>
</thead>
<tbody>
<tr>
<td>CC</td>
<td>51</td>
<td>11</td>
</tr>
<tr>
<td>Topic</td>
<td>46</td>
<td>11</td>
</tr>
<tr>
<td>Country</td>
<td>26</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>World</th>
<th>Asia</th>
</tr>
</thead>
<tbody>
<tr>
<td>RL</td>
<td>260</td>
<td>48</td>
</tr>
<tr>
<td>Disease</td>
<td>119</td>
<td>38</td>
</tr>
<tr>
<td>Country</td>
<td>39</td>
<td>8</td>
</tr>
<tr>
<td>Expertise: OIE Reference Centres for Avian Health</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avian chlamydiosis</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Avian infectious bronchitis</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Turkey rhinotracheitis</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Avian infectious laryngotracheitis</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Avian tuberculosis</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Avian mycoplasmosis</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Infectious with avian influenza viruses</td>
<td>Australia</td>
<td>Dr. F. Wong</td>
</tr>
<tr>
<td></td>
<td>P.R. China</td>
<td>Dr. H. Chen</td>
</tr>
<tr>
<td></td>
<td>India</td>
<td>Dr. C. Tosh</td>
</tr>
<tr>
<td></td>
<td>Japan</td>
<td>Prof. H. Kida</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Duck virus hepatitis</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Fowl typhoid</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Pullorum disease</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Infectious bursal disease</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Infection with Newcastle disease virus</td>
<td>Australia</td>
<td>Dr. S. Mccullough</td>
</tr>
<tr>
<td></td>
<td>P.R. China</td>
<td>Dr. Z. Wang</td>
</tr>
<tr>
<td></td>
<td>R.O. Korea</td>
<td>Dr. K.S. Choi</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Marek's disease</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
PVS Pathway Cycle

**ORIENTATION**
- A. Sub-Regional Orientation Training Workshop
- B. Sub-Regional Lessons Learnt Workshop

**TARGETED SUPPORT**
- A. One Health Integration (PVS/IHR)
- B. Veterinary Legislation Support
- C. Sustainable Laboratories
- D. Veterinary and Paraprofessional Education
- E. OIE National Focal Points Training

**EVALUATION**
- A. PVS Evaluation
- B. PVS Evaluation Follow Up
- C. PVS Self-Evaluation
- D. PVS Evaluation (aquatic)
- E. Specific Content (XXX)

**PLANNING**
- A. PVS Gap Analysis
- B. PVS Strategic Planning Support
**GF-TADs**

- Joint FAO/OIE initiative, launched in 2004
- The only available **coordinating** mechanism:
  - promoting synergies among international agencies,
  - avoiding contradictions and duplication in policy and programmes

### Focus/priorities (GF-TADs 5-year Action Plan)

<table>
<thead>
<tr>
<th>Priority diseases (Vertical)</th>
<th>ASEAN Southeast Asia</th>
<th>SAARC South Asia</th>
<th>SPC Pacific</th>
<th>East Asia</th>
</tr>
</thead>
<tbody>
<tr>
<td>FMD</td>
<td></td>
<td>○</td>
<td></td>
<td>○</td>
</tr>
<tr>
<td>Avian influenza</td>
<td>○</td>
<td>○</td>
<td></td>
<td>○</td>
</tr>
<tr>
<td>Swine diseases</td>
<td>○</td>
<td>○</td>
<td></td>
<td>○</td>
</tr>
<tr>
<td>PPR</td>
<td>○</td>
<td>○</td>
<td></td>
<td>○</td>
</tr>
<tr>
<td>Rabies</td>
<td>○</td>
<td>○</td>
<td></td>
<td>○</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Priority topics (Horizontal)</th>
<th>Reinforcement of Veterinary Services</th>
<th>Improving Advocacy</th>
</tr>
</thead>
</table>

**Focus topics (Horizontal)**

- Reinforcement of Veterinary Services
- Improving Advocacy
“One Health” Concept

A global strategy for managing risks at the Animal – Human - Ecosystems interface

Tripartite agreement of 3 Directors General

3 Priorities

Zoonotic influenzas

⇒ OFFLU, OIE/FAO expertise network on animal influenza

Antimicrobial resistance

⇒ OIE closely participated to the elaboration of the WHO Global Action plan

Rabies
Global control of canine rabies

⇒ Next WHO-OIE Global conference in Dec. 2015
Official disease status and self-declaration
Official disease status and self-declaration

- Member Countries may request **official recognition by the OIE as to**
  - BSE (the risk status of a country or zone),
  - FMD (the freedom of a country or zone with or without vaccination),
  - CBPP, ASF, PPR and CSF (freedom of a country or zone).

- Member Countries may wish to request an **endorsement by the OIE** of their official control programme for FMD, PPR and CBPP.

- Member Countries may wish to make a **self-declaration** as to the freedom of a country, zone or compartment from an OIE listed disease. The Member Country may inform the OIE of its claimed status and the OIE may publish the claim. Publication does not imply endorsement of the claim.
### Official Disease Status (2018)

<table>
<thead>
<tr>
<th>Disease</th>
<th>Official status</th>
<th>Number of Members</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>World</td>
</tr>
<tr>
<td>FMD</td>
<td>Free, w/o vaccination (zone)</td>
<td>68 (11)</td>
</tr>
<tr>
<td></td>
<td>Free, with vaccination (zone)</td>
<td>2 (8)</td>
</tr>
<tr>
<td></td>
<td>Official control programme</td>
<td>6</td>
</tr>
<tr>
<td>BSE</td>
<td>Negligible BSE risk (zone)</td>
<td>48 (2)</td>
</tr>
<tr>
<td></td>
<td>Controlled BSE risk</td>
<td>5 (1)</td>
</tr>
<tr>
<td>CBPP</td>
<td>Free</td>
<td>16 (1)</td>
</tr>
<tr>
<td></td>
<td>Official control programme</td>
<td>1</td>
</tr>
<tr>
<td>AHS</td>
<td>Free</td>
<td>70</td>
</tr>
<tr>
<td>PPR</td>
<td>Free (zone)</td>
<td>56 (1)</td>
</tr>
<tr>
<td>CSF</td>
<td>Free (zone)</td>
<td>35 (2)</td>
</tr>
</tbody>
</table>

Figures in parentheses denote those recognised as having free zone(s) with relevant status.
Free from disease

OFFICIAL DISEASE STATUS RECOGNITION

- FMD
- CBPP
- BSE
- AHS
- PPR
- CSF

APPLICATION FOR

SELF-DECLARATION PUBLICATION

ANY OTHER DISEASE OF TERRESTRIAL AND AQUATIC ANIMALS

- SCIENCE BASED AND ROBUST ASSESSMENT
- LIST OF OFFICIALLY FREE MEMBERS ADOPTED BY THE WORLD ASSEMBLY
- ANNUAL RECONFIRMATION PROCEDURE

- DOCUMENTED STATEMENT
- UNDER THE RESPONSIBILITY OF OIE MEMBER
- OIE MEMBER CLAIMS FREEDOM
- OIE PUBLISHES THE COUNTRY’S CLAIM
DISCLAIMER: responsibility lies solely with the Delegate

**Introduction**

Reference to the OIE Codes

The OIE, after performing an administrative and laboratory assessment or a satisfactory reporting of the disease-free status of a country, a zone or a compartment ("self-declaration"), as described in the standard operating procedures for self-declarations, reserves the right to publish or not the self-declaration on its website. There shall be no right of appeal from this decision nor any recourse of any kind.

The publication by the OIE of a self-declaration on its website does not reflect the official opinion of the OIE.

Responsibility for the information contained in a self-declaration lies entirely with the OIE Delegate of the Member concerned.

Neither the OIE nor any person acting on its behalf may be held responsible for:

(i) any errors, inaccuracies or omissions in the content of a self-declaration;
(ii) the use which may be made of the information contained in a self-declaration;

(iii) any direct or indirect consequences of any nature arising from or relating to use of the information contained in a self-declaration.

In accordance with the provisions of the Terrestrial Animal Health Code (Terrestrial Code) or the Aquatic Animal Health Code (Aquatic Code), OIE Members may wish to self-declare the freedom of their country, zone or compartment from a disease. A Member wishing to publish its self-declaration for disease freedom, should provide the relevant documented evidence of compliance with the provisions of the relevant chapter(s) of the Code.

Publications of self-declaration of disease freedom are handled in an objective and transparent manner, governed by the Standard Operating Procedure here below.

**List of recently published Self-declarations**

<table>
<thead>
<tr>
<th>Country</th>
<th>From</th>
<th>To</th>
<th>Self-declared freedom from</th>
<th>Country/zone / compartment</th>
<th>Status (Link to WAHIS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burkina Faso</td>
<td>27/10/2017</td>
<td></td>
<td>Highly Pathogenic Avian Influenza (PDF)</td>
<td>Country</td>
<td>Active</td>
</tr>
<tr>
<td>Belgium</td>
<td>25/09/2017</td>
<td></td>
<td>Highly Pathogenic Avian Influenza (PDF)</td>
<td>Country</td>
<td>Active</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>13/09/2017</td>
<td></td>
<td>Avian Influenza in poultry (PDF)</td>
<td>Country</td>
<td>Active</td>
</tr>
</tbody>
</table>

**SOPs**

**List of the archives**
Timelines

Exchanges between the Member Country and the OIE

- Control and eradication of the disease/ Demonstration of disease freedom
- Decision to request its publication by the OIE
- Submission to the OIE
- OIE review

Anticipated submission of early draft

Publication on the OIE website
Self-declarations since 2000

173 self-declarations
62 countries

Number of self-declarations per year

Number of self-declarations of terrestrial animals diseases freedom

- Avian Influenza
- Classical swine fever *
- African swine fever
- Swine vesicular disease
- Rabies
- Newcastle disease
- Bluetongue
- Equine Disease Free Zone
- Glanders
- Caprine and ovine...
- Fowl Typhoid...
- Pulmonary Disease
- African horse sickness *
- Aujeszky's disease
- Echinococcus granulosus
- Equine influenza
- Equine Disease Free Zone
- Infection with equine...
- Infectious...
- Nipha virus
- Peste des petits...
- Rabbit haemorrhagic...
- Scrapie

* Before these diseases were included in the procedures for official recognition
Zoning and Compartmentalisation
Evolvement of country freedom approach over years

- Initially only country freedom from disease
- Not all Member Countries could comply for country freedom
- Introduced concept of zone free from disease – with or without vaccination (for FMD)
- Introduced concept of buffer zone – later replaced by protection zone
- Further refined to smaller area of freedom based on biosecurity principles - compartment
- Introduced concept of containment zone – similar to EU concept of regionalisation
- All of these are trade facilitating mechanisms, while they may also assist disease control or eradication within a country’s territory.
**ZONE/REGION**

Means a clearly defined part of a territory containing an animal *subpopulation* with a distinct health status with respect to a specific *disease* for which required *surveillance*, control and biosecurity measures have been applied for the purpose of *international trade*.

**SUBPOPULATION**

Means a distinct part of a *population* identifiable according to specific common animal health characteristics.
Subpopulation

- Separated by natural or artificial barriers or, in certain situations, by the application of appropriate management practices
Principles for defining and establishing a zone

- Extent of a zone and its geographical limits established by the Veterinary Authority
  - Natural, artificial and/or legal boundaries
  - Made public through official channels
Principles for defining and establishing a zone

- Animals and herds belonging to such subpopulations need to be recognisable as such through a clear epidemiological separation
  - identification of the subpopulation
  - establishment and maintenance of its health status by preventing contact with zones of different status
  - measures will depend on the epidemiology of the disease, environmental factors, the health status of animals in adjacent areas, applicable biosecurity measures and surveillance.
  - Key principle in terms of the Code is to prevent the introduction of the pathogen
Principles for defining and establishing a zone

- Existence of a valid animal identification system
- Prevent movement across boundaries
- Imports, importation and imported products also applies to zones/compartments within a country

Animal movements into and out of the zone should be well documented and controlled
Practicalities of a zoning approach

- Encourage more efficient use of resources within certain parts of a country
- Progressive approach for moving towards country freedom
- In case of an outbreak in a officially recognised zone, the status of other officially recognised zones would not be suspended – provided integrity is maintained
- Maintenance is the critical concept once freedom is obtained – more difficult than achieving free status
Protection zone

- Not an officially approved zone by OIE
- Done on the choice of the Member Country (Not compulsory)
- To preserve the health status of animals in a free country or zone, from adjacent countries or zones of different animal health status.
- Can be inside or outside a free zone
- Measures based on the epidemiology of the disease to prevent introduction of the virus and to ensure early detection.
- Should include intensified movement control, surveillance, animal identification and animal traceability, awareness campaign, etc.
Containment zone

- In the event of limited outbreaks in a country or zone previously free of a disease
- A single containment zone, including all cases
- For the purposes of minimising the impact and of trade
- Not a never-ending application – as soon as disease outbreak is resolved should be merged
Ch. 4.3. Zoning and Compartmentalisation

Zoning vs. Compartmentalisation

- **Zoning**: animal subpopulation defined primarily on a geographical basis (using natural, artificial or legal boundaries) – **single** disease

- **Compartmentalisation**: animal subpopulation defined primarily by management and husbandry practices related to biosecurity – could be for **multiple** diseases

- Biosecurity plan for compartment specific to the disease (s) is essential

- In practice, spatial considerations and good management (including biosecurity plans) for both

- Where zoning is difficult to achieve – compartments could be considered
Principles for defining and establishing a compartment

- The factors defining a compartment should be established by the Veterinary Authority on the basis of relevant criteria such as management and husbandry practices related to biosecurity, and made public through official channels.

- For a compartment, the biosecurity plan should describe the partnership between the relevant industry and the Veterinary Authority, and their respective responsibilities. It should also describe the routine operating procedures to provide clear evidence that the surveillance conducted, the live animal identification and traceability system, and the management practices are adequate to meet the definition of the compartment.

- The biosecurity plan should also describe how the measures will be audited to ensure that the risks are regularly re-assessed and the measures adjusted accordingly.
Application of compartmentalization

- Chapter 4.4 provide a structured framework for the application and recognition of compartments within countries or zones.

- They include “Separation of a compartment from potential sources of infection”, “Documentation”, “Surveillance of the agent of disease”, “Diagnostic capabilities and procedures”, and so on.

- The “Checklist on the practical application of compartmentalization for Avian Influenza and Newcastle Disease” is available on the OIE website.

- The document lists the principal issues that need to be addressed. Some issues are relevant to the infrastructure within which compartmentalisation for ND and/or AI may be effectively implemented and others apply to the establishment and operation of individual compartments.

http://www.oie.int/en/standard-setting/overview/application-of-compartmentalisation/
Thank you for your attention

Hirofumi Kugita
OIE Regional Representative of Asia and the Pacific
h.kugita@oie.int