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## “ Re-emergence of Rift Valley Fever in Southern Africa : how can we better predict and respond ? ”

Bloemfontein, South Africa, February 16 - 18th, 2009

OIE standards for RVF control, vaccines and diagnosis



Dr. Lea Knopf  
Scientific and Technical Department OIE



# Evolution of OIE approach to animal disease control policies

- Realised need to enable developing/in-transition countries to apply standards for disease control
- Change from limited international movement to fast and diverse global pathways/travel
- Disease patterns change, need for new approach to disease risk mitigation
- Change from focus on only trade standards to standards and promotion of the capacity to control animal diseases and zoonosis worldwide



OIE Headquarters, Paris

# OIE disease control and disease eradication policy

## Generic aspects

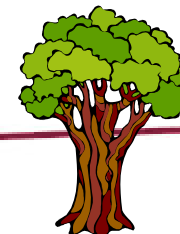
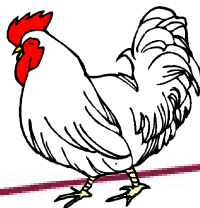
- Use standardized **definitions** and concepts – promote harmonization and equivalence
- Surveillance – to know what is the status quo
- **Transparency in notification** (humans, domestic and wild animals)
- Application of **minimum standards** for diagnostic techniques, vaccines that meet OIE criteria
- **Scientifically based criteria** for disease control programs and (national) legislation
- Application of **ethical principles** in trade and animal disease control
- Zoning/compartmentalization where appropriate
- Import risk analysis and evaluation of veterinary services
- **Protect human health** through control of disease/zoonosis in animals

# OIE international health standards *Codes and Manuals and the SPS Agreement*

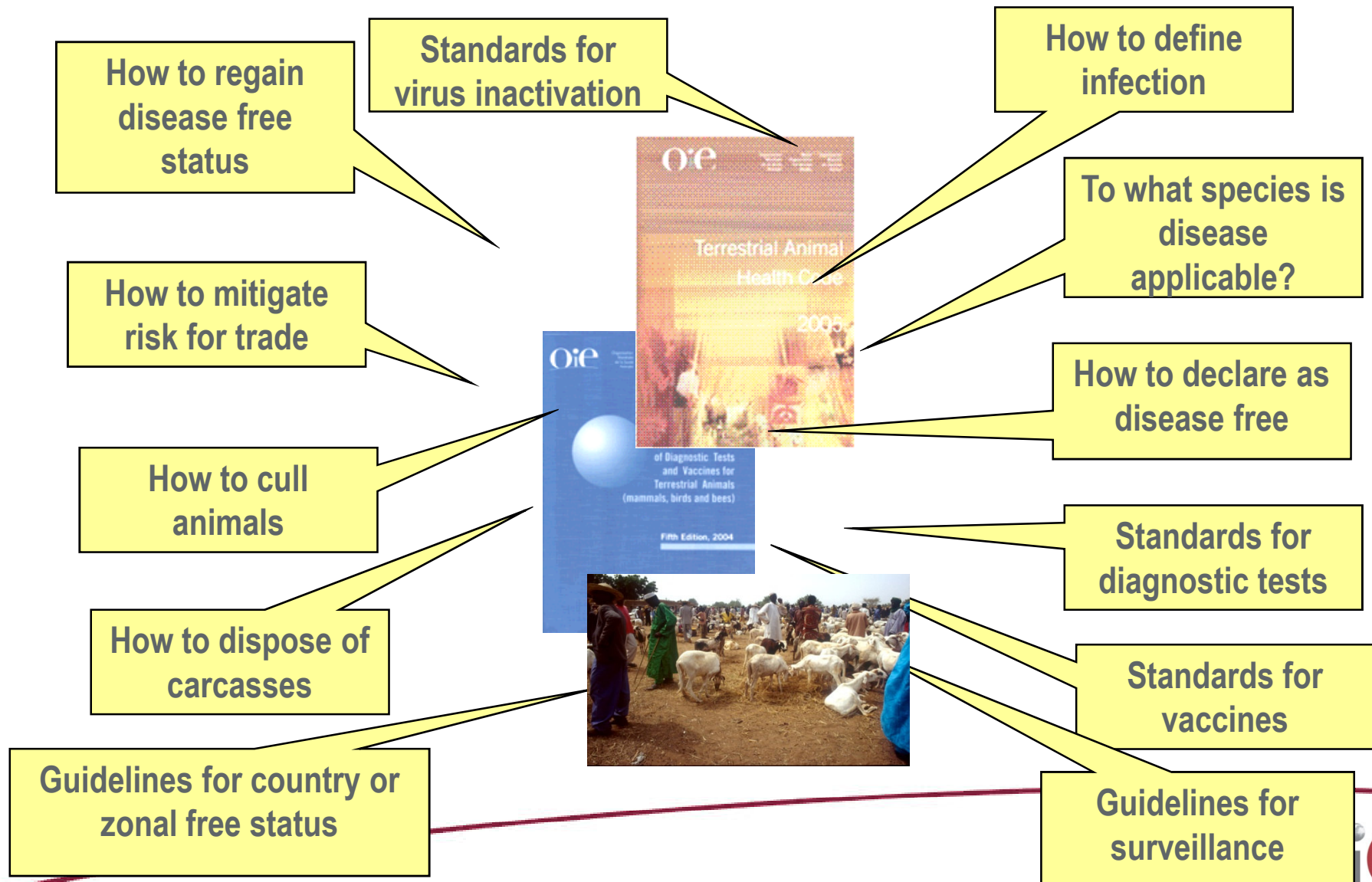
*Codes and Manuals must  
be used in context with  
Codex and SPS Agreement*



**International standard setting organizations**



# OIE standards horizontal and vertical chapters



# OIE standards and RVF

## Main considerations :

- Historically RVF occurrence is limited to known regions, but a change in risk factors could favor outbreaks in previously uninfected countries posing a threat to human and animal health
- Epidemics of RVF may occur in infected areas after flooding, long inter-epidemic phases
- Immunization is one of the method for controlling the disease
- Generic means of vector control and exposure reduction of mammalian host to insect vector available
- Provisions for minimum requirements for diagnostic laboratories and vaccine production
- In RVF-free countries, vaccines and diagnostic tests should be limited to those using inactivated virus
- ....



# International trade and the *Manual*

## Role of diagnostic laboratories

should comply with the OIE **general provisions** of the *Manual of Diagnostic Tests and Vaccines*, especially:

- Chapter 1.1.2 on biocontainment and biosafety regulations
- Chapter 1.1.3 on quality management in veterinary testing laboratories

use one of the techniques approved and described in the OIE *Manual of Diagnostic Tests and Vaccines*

## Role of livestock owners

- Compliance with vaccination schemes (as provided by the manufacturer and under supervision of veterinary authority)
- Legal animal movement

# OIE recommended diagnostic tests

## Identification of the agent

*From blood (febrile phase) and or from liver, spleen or brain (post mortem)*

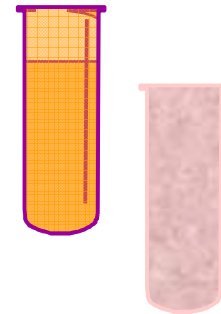
- Primary virus isolation: Cell culture (VERO, BHK, CER) or hamster, mouse inoculation
- Immunofluorescence (serum, smears, tissue)
- Agar gel-immunodiffusion (AGID)
- reverse-transcriptase PCR
- Histopathology (e.g. in combination with immunostaining)

## Serology

*Determine response to vaccination*

- Virus neutralisation test (VNT)
- Indirect ELISAs: good sensitivity and detection of recent infection.
- Haemagglutination Inhibition (HI): indicative of recent infection. Titers are much lower than those following vaccination.

*Prescribed tests for international trade!*

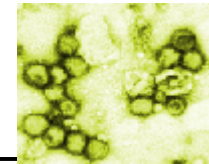




# Recommms on Vaccines and Vaccination

## ➤ Described vaccines

- Inactivated vaccines
  - *Recommended for use in pregnant animals and in RVF-free countries*
  - *Boosters needed, annual re-vaccination*
- Attenuated live vaccines
  - *Known to be abortogenic*
  - *~ lifelong immunity against clinical disease*
- Two new vaccine candidates produced from human RVF virus isolates are undergoing extensive testing with a view to replacing existing vaccines , not yet at a stage where it can be recommended for use (Clone 13 and MV P12)



## ➤ Vaccination strategy (manufacturers recommendations!)

- Planning
- Endemic, inter-epidemic, free country or zone
- Mass vaccination campaigns versus targeted vaccination
- Efficacy and safety !

Coming soon...

## Part II: Recommendations on trade and surveillance

