

# Regional and global success stories in animal disease control

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Importance of vaccines, diagnostics, and appropriate surveillance systems in disease control

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# Success in animal disease control is achievable

With the right approach

# Disease control components

- Regional collaboration
- Vaccination
- Disease awareness
- Biosecurity
- Animal identification and traceability
- Early detection and warning systems
- Laboratory diagnostic capacity
- Animal movement control
- Border control
- Immediate action

# Regional collaboration

- FMD control is a **long process**
- Many countries have achieved it
- A **regional approach** is necessary to **sustainably** eradicate the disease



**Figure:** EUROPE WOAH Members' official FMD status map, June 2022

# FMD control in Europe



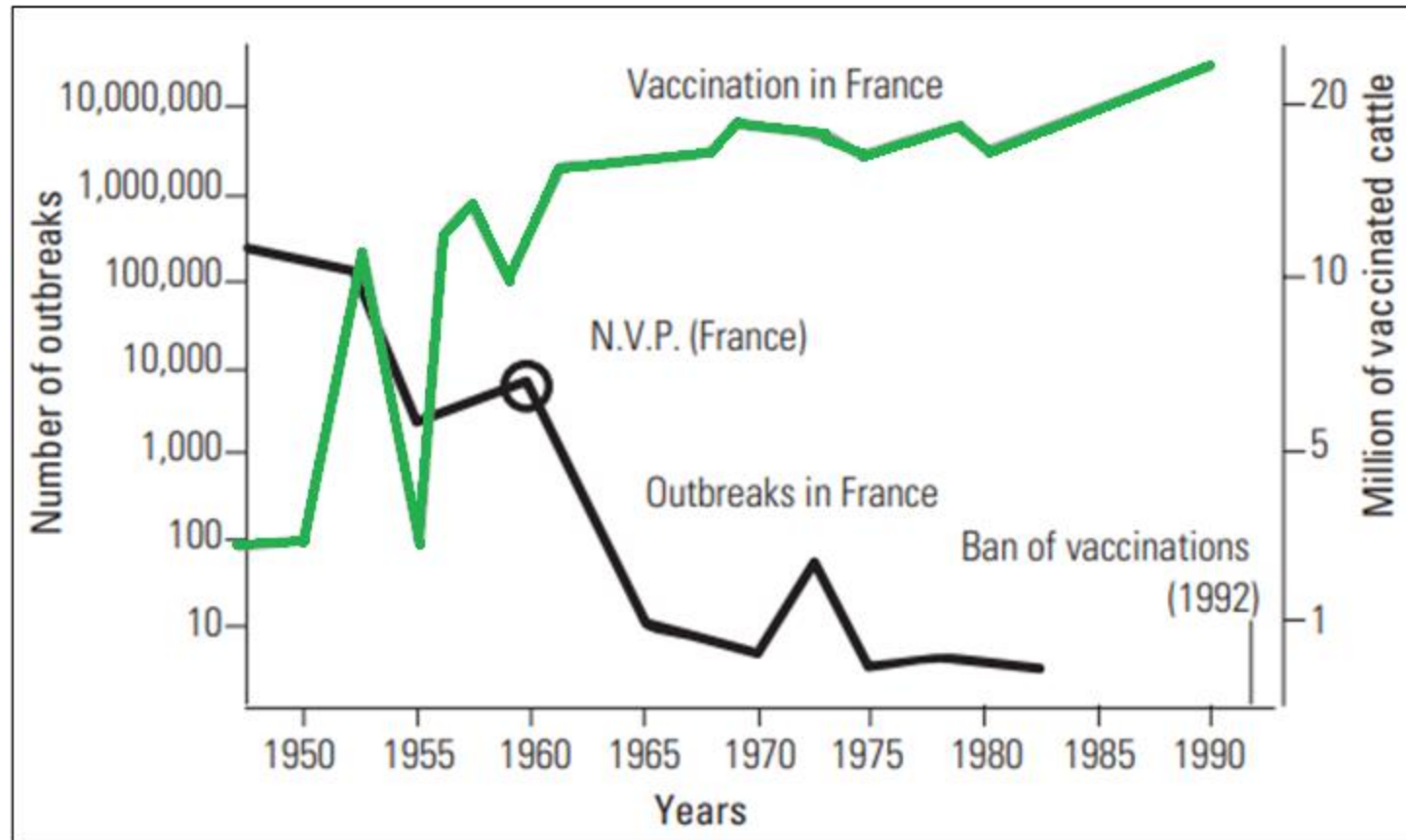
**Figure:** EUROPE WOAH Members' official FMD status map, June 2022

- National FMD control campaigns started in the **1960's**
- **All countries** (except 3) had annual vaccination programs



- Focus on cattle (100% coverage)
- Relied on the use of high-quality aluminium hydroxide vaccines with Saponin
- Non-vaccination policy implemented in **1992**

# National vaccination programs



Effect of the National Vaccination Program, N.V.P. (100% of cattle population) on reported outbreaks in France between 1962 and the ban of vaccination in 1992

# Improvements in vaccines

Early FMD vaccines were of low or even unsatisfactory quality mainly due to limitations in quality control



Stakeholders did not have confidence



Low vaccination coverage



Often not sufficiently purified to remove (NSPs)

The improvements are mainly due to the use of:

- reliable inactivants and potent adjuvants
- improved purification and concentration
- strict in-process and final product quality control



Can effectively reduce the viral replication in cattle in case of infection



# Vaccine distribution and delivery systems



- Defined **vaccination schedule**
- Effective vaccine distribution and delivery systems guarantee the appropriate **vaccinal coverage**
- Record keeping is essential



# Biosecurity standards and Disease awareness

- **National level:** Can prevent the **entry** of FMDV into the country
  - **Farm level:** Physical and managerial measures **prevent further spread**
- FMD awareness campaigns  
Essential to sustain disease control efforts



WOAH Basic  
Biosecurity promotion



WOAH farmer  
awareness materials

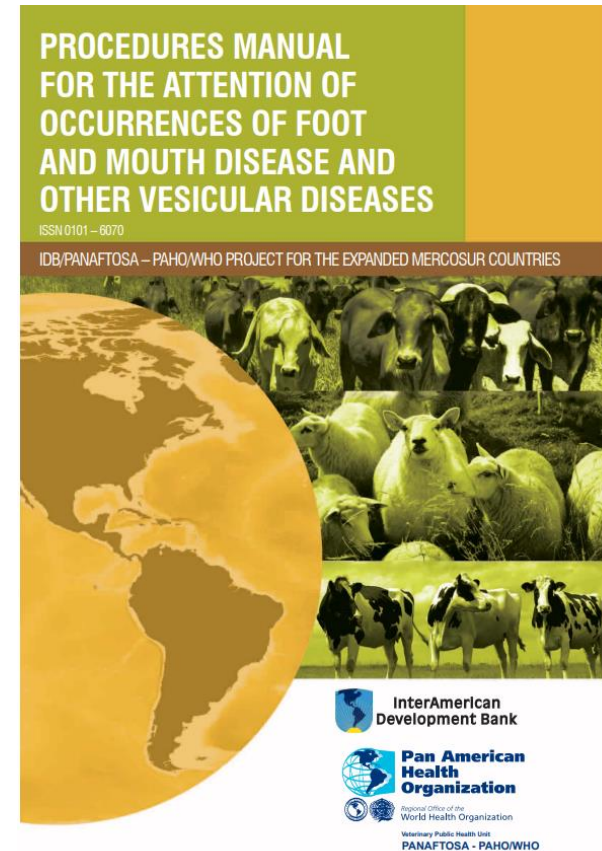
# Early disease detection and warning systems



**Stop the spread the virus**

**Necessary to** ensure the efficient early detection of the disease

**Need for** known disease notification procedures and subsequent actions



Example of good practices



# Surveillance capacities

## Regular surveillance:

clinical observations

+

serological testing



Monitor the occurrence and prevalence of FMD and allow characterization of the circulating viruses

FMD cannot be **clinically distinguished** from other vesicular diseases





# Animal identification and traceability system

Allow the identification of animals **throughout the production chain**



Essential information for:

- Keeping track of vaccinated animals
- Risk assessment
- Sanitary certification
- Market access



# Animal movements controls

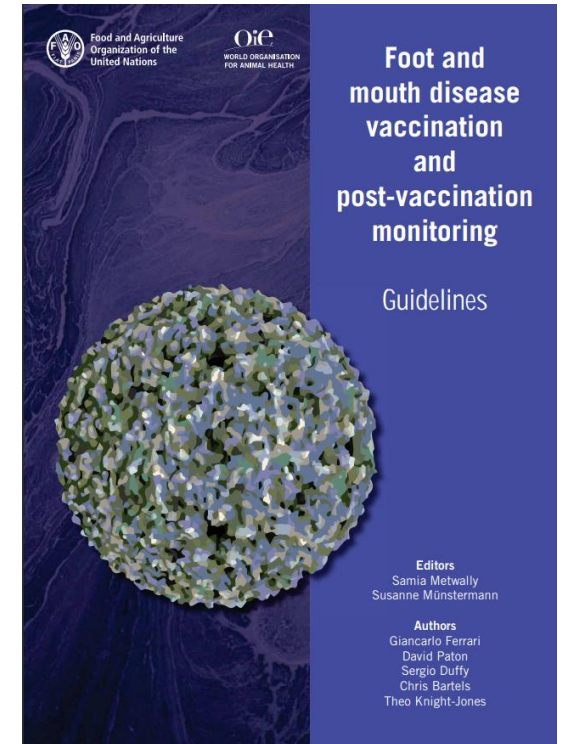
- Reduce the **risk of virus spread**
- Border control points, check points and quarantine stations



# Proving freedom from FMD

To achieve an FMD-free status:

- The **absence of virus circulation needs to be proven**
- **DIVA testing systems:** allow to demonstrate freedom from virus circulation, by showing the absence of (non-structural protein) **NSP antibodies**



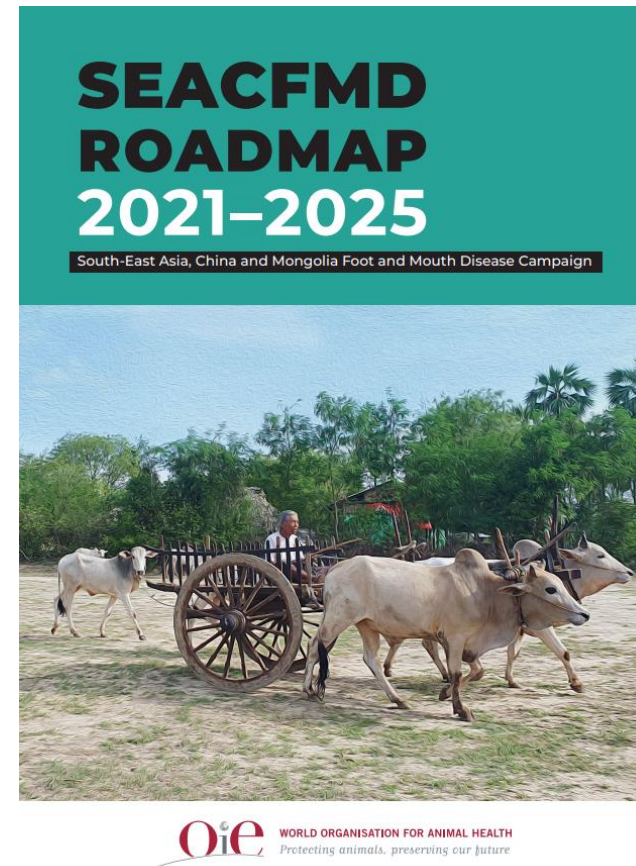


# Current FMD campaigns

## South America



## Southeast Asia



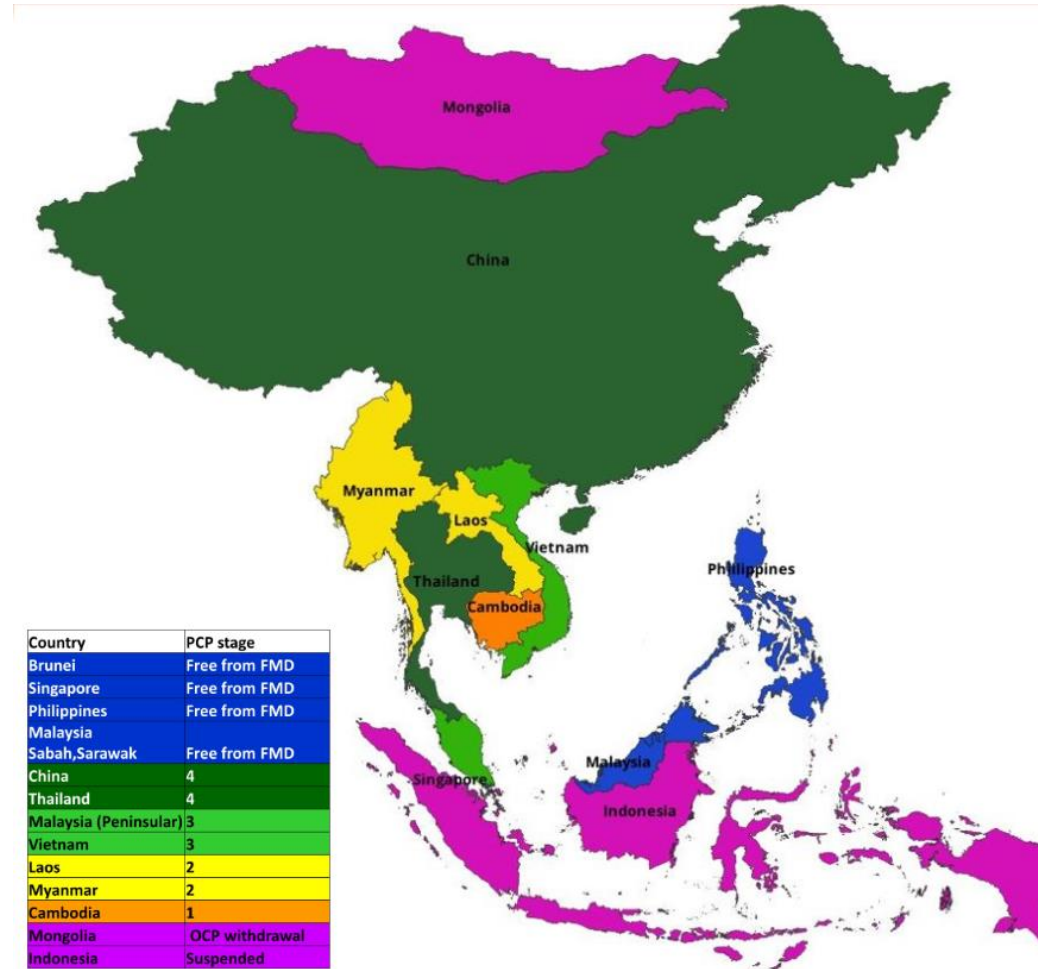


# FMD control in Southeast Asia



South-East Asia, China and  
Mongolia Foot and Mouth  
Disease (SEACFMD) Campaign

officially formed in **1997**



# Peste des petits ruminants (PPR)



**GLOBAL STRATEGY  
FOR THE CONTROL  
AND ERADICATION  
OF PPR**



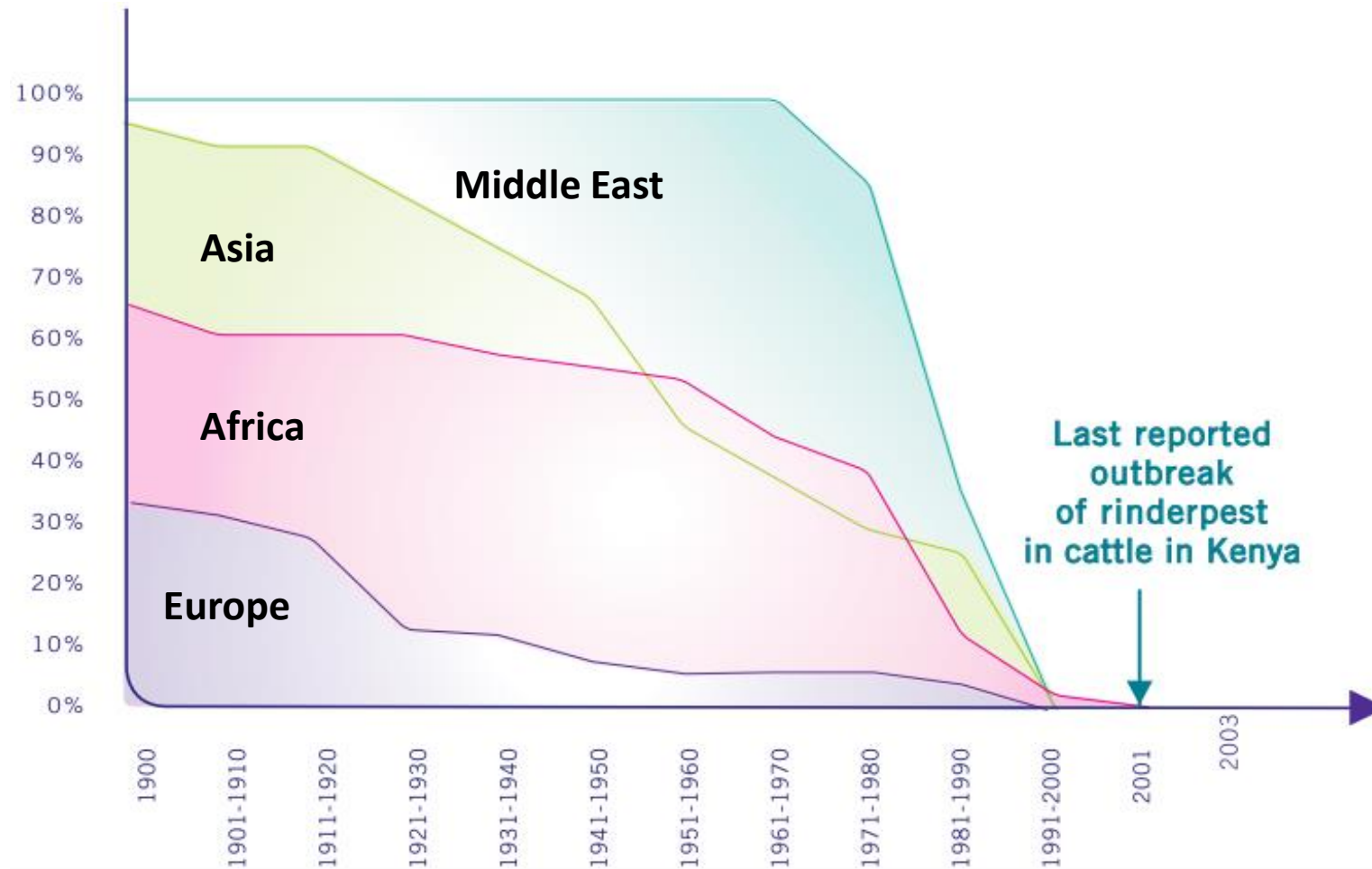
**Quality vaccines**

**Uninterrupted cold chain**

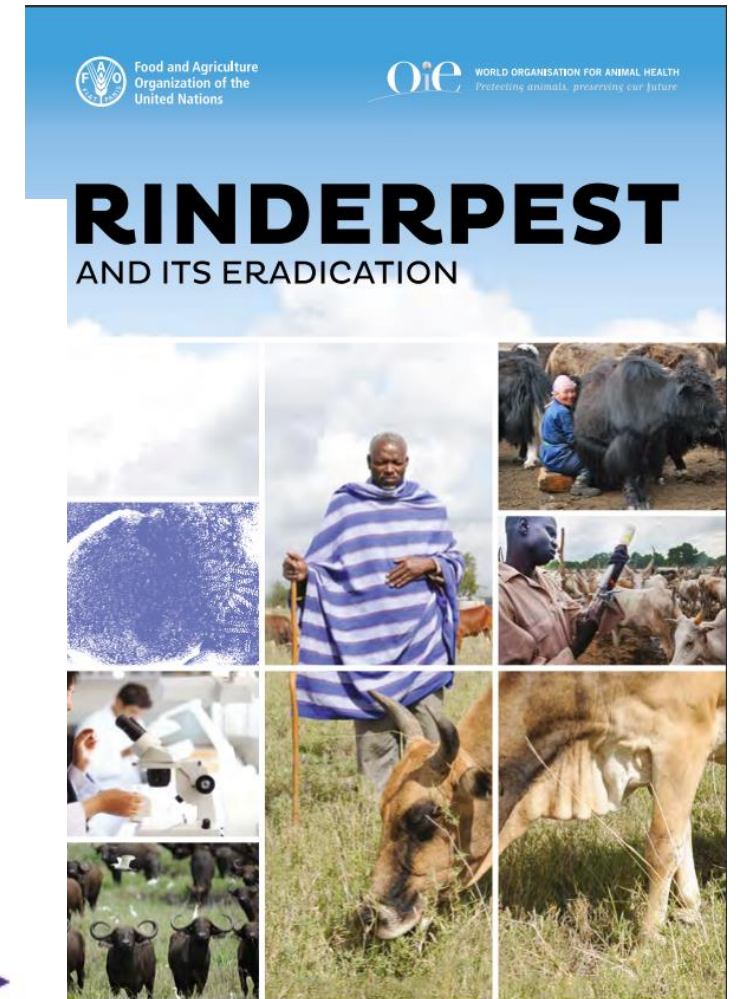
**Realistic estimation of vaccine quantity**

# Rinderpest

Share of infected countries in the different regions of the world



Reported outbreaks over the last 100 years





# Thank you for your attention!

