African Swine Fever

A global threat to the pig industry

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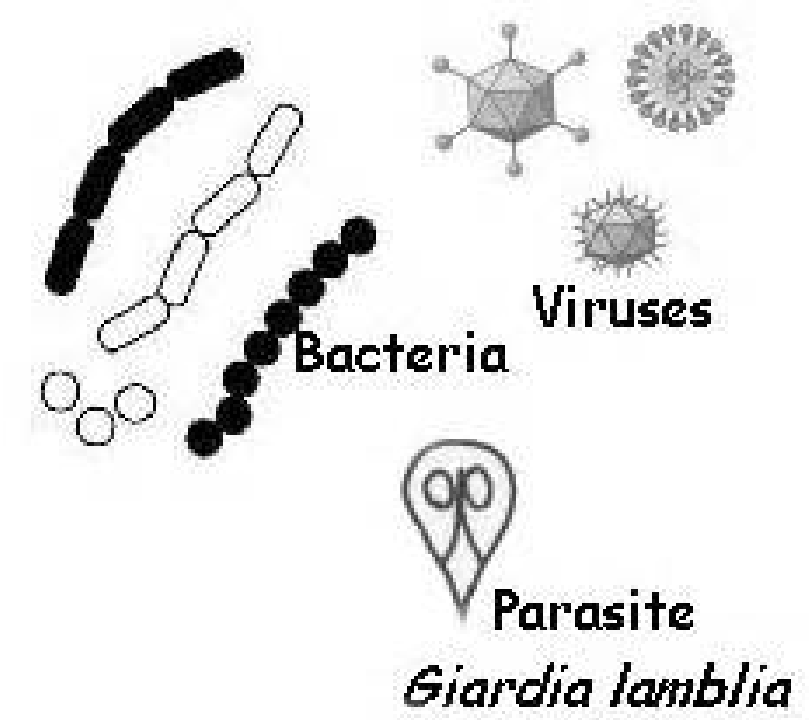
Global Animal Resource Sicience

AGENDA :

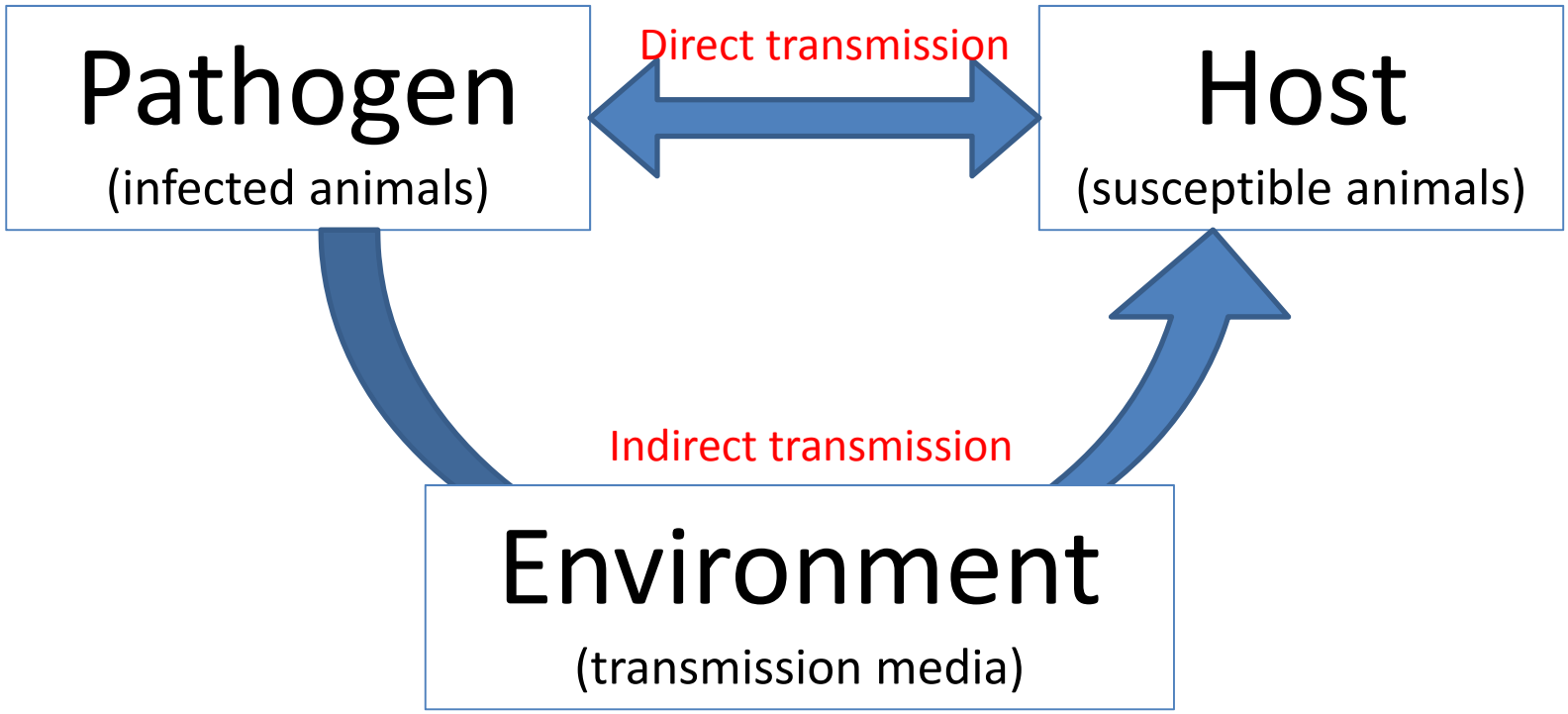
- **ASF Main Characteristic**
- **ASF Epidemiological evolution and update**
- **The risk for the global pig industry**
- **Future Challenges and Control Measures**

What are infectious diseases

- Diseases caused by infection
- Infection is the invasion of the host animal by micro-organisms (viruses, bacteria, fungi and parasites) and their multiplication.



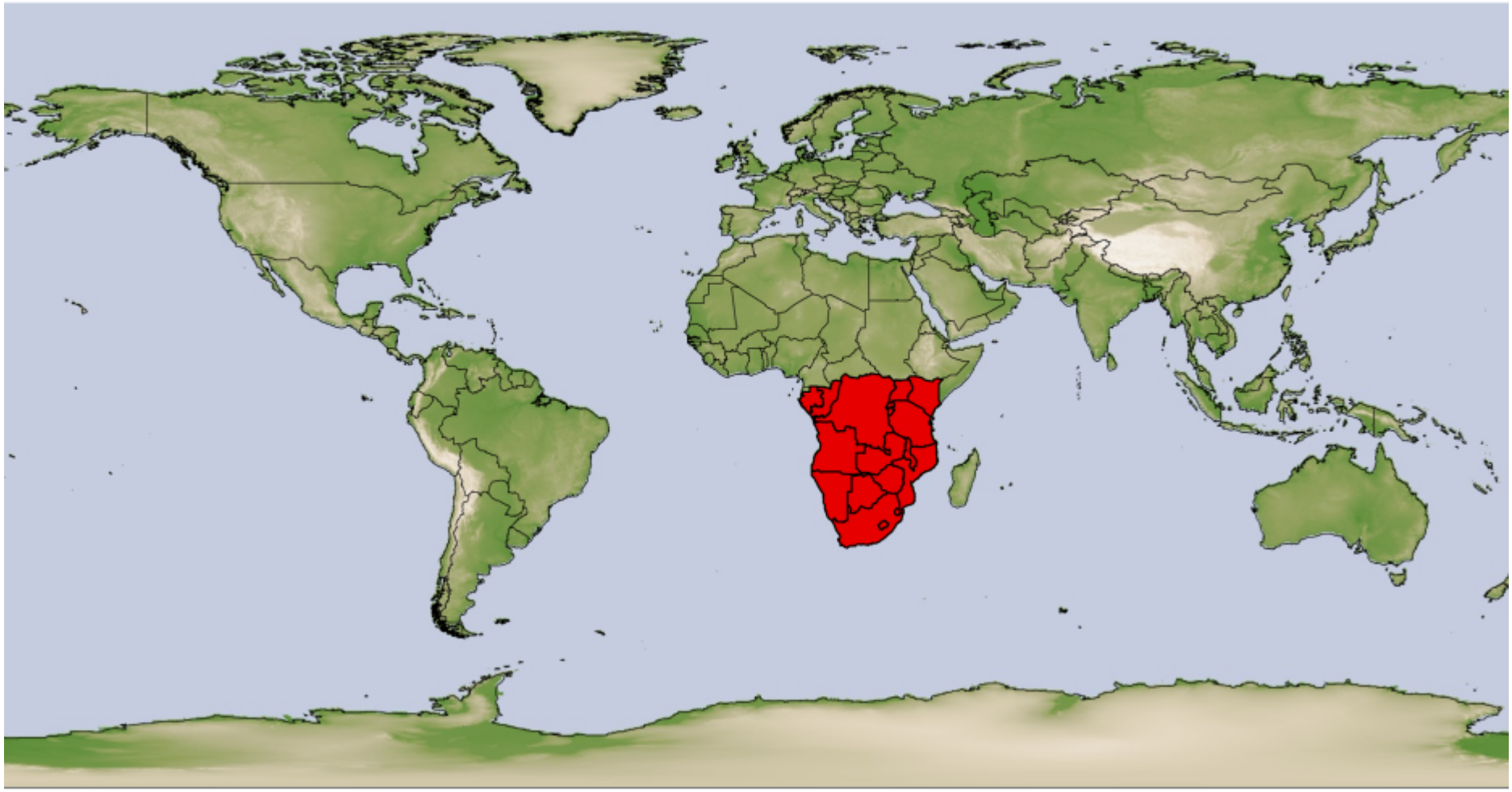
Three factors involved in transmission of infectious diseases



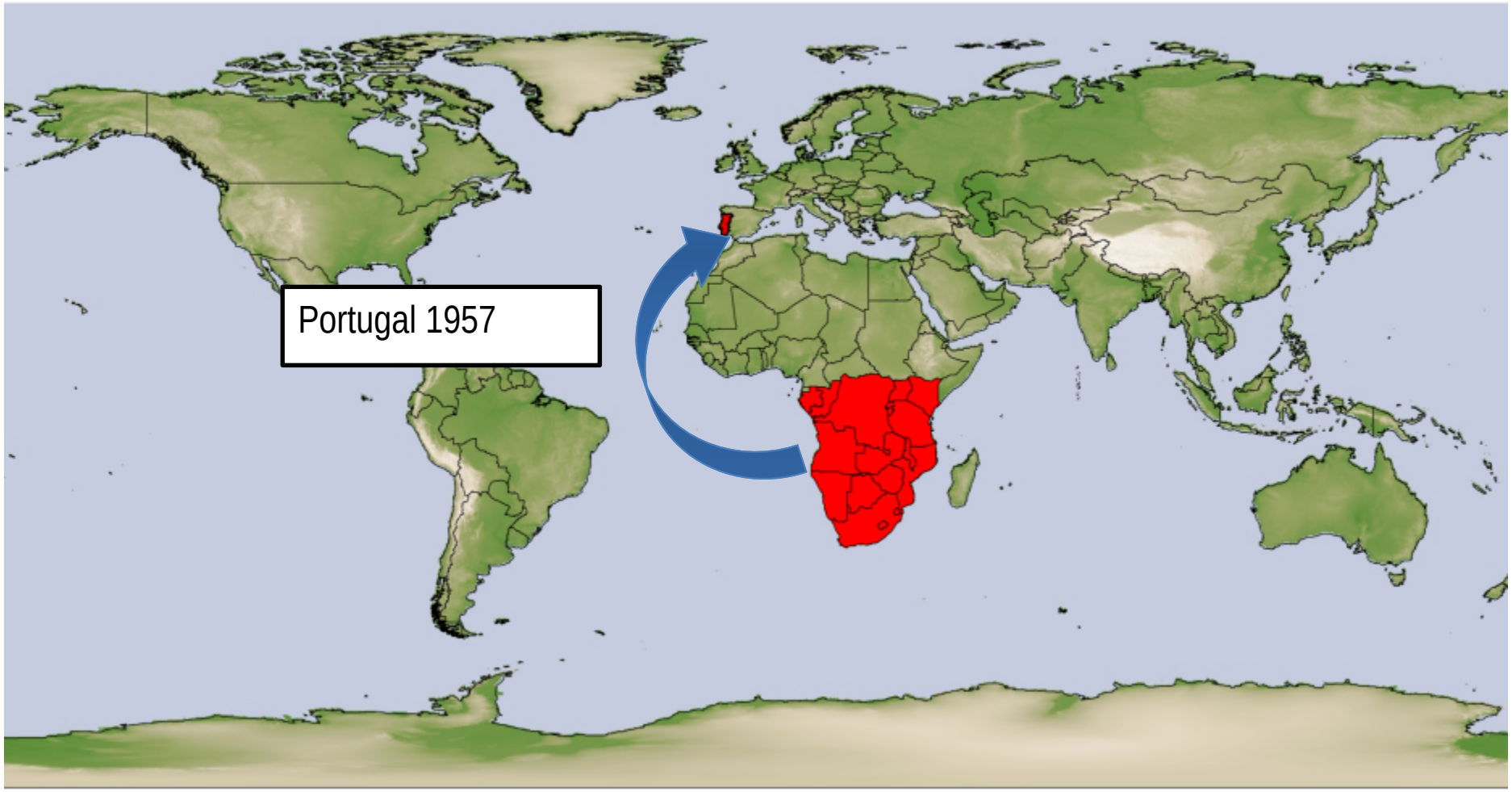
What is African Swine Fever

- A viral disease
- Pigs, warthogs, wild boars and ticks are infected
- Highly contagious
- High mortality in pigs
- Resistant pathogen
- No vaccine

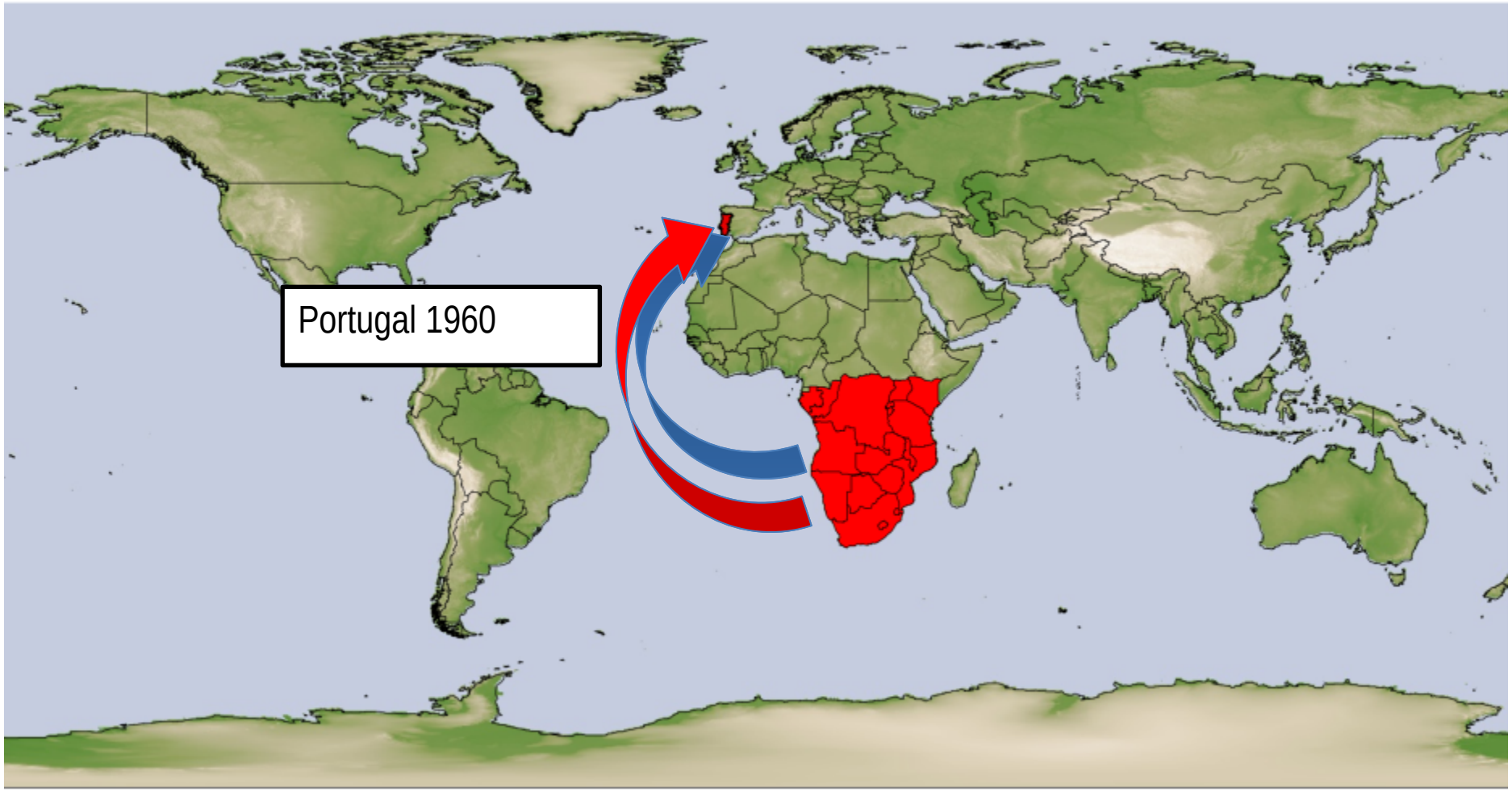
Historical evolution



Historical evolution

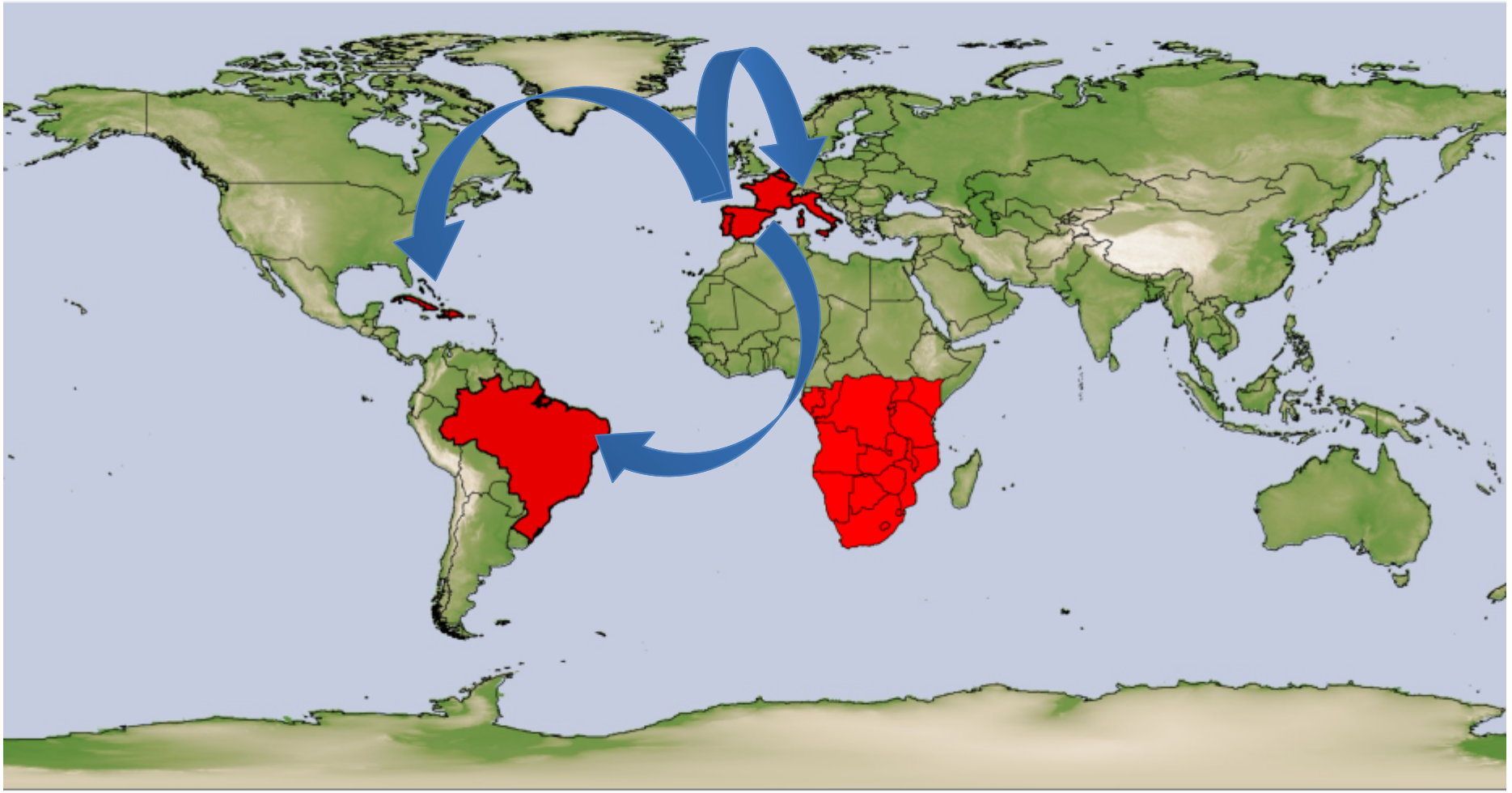


Historical evolution



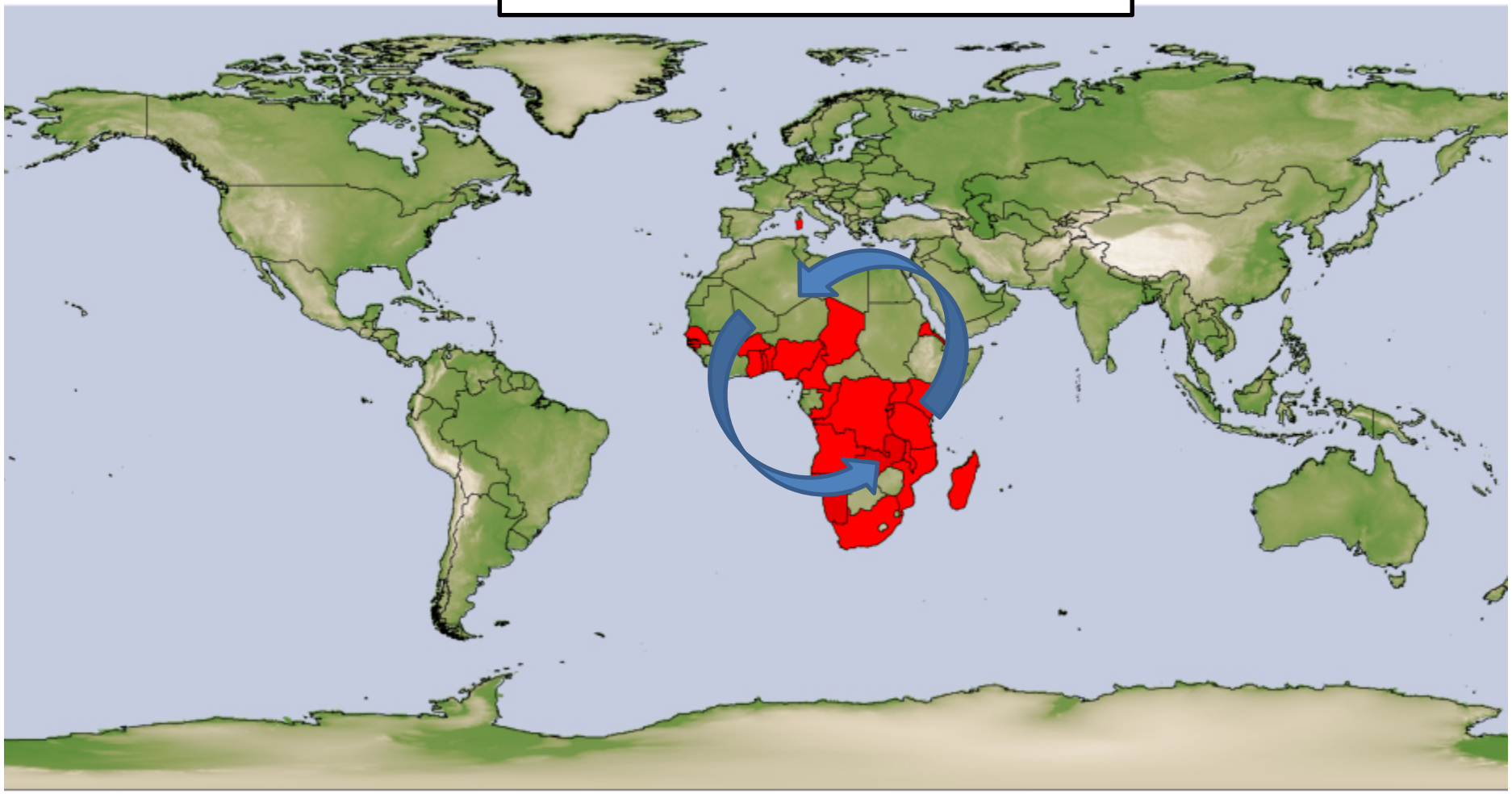
Histological evolution

1960s, 1980s



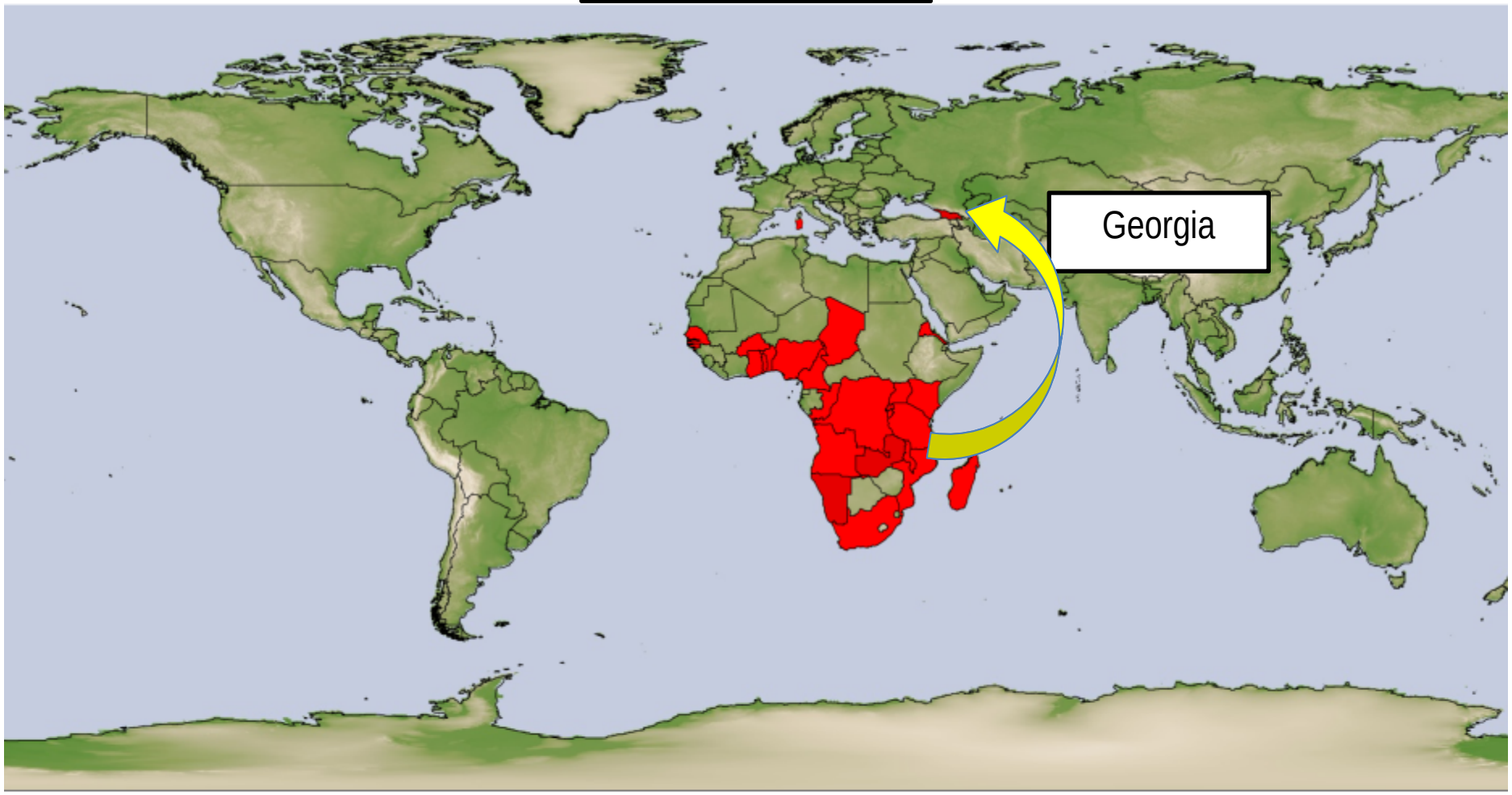
Histological evolution

1990s-2000s African spread

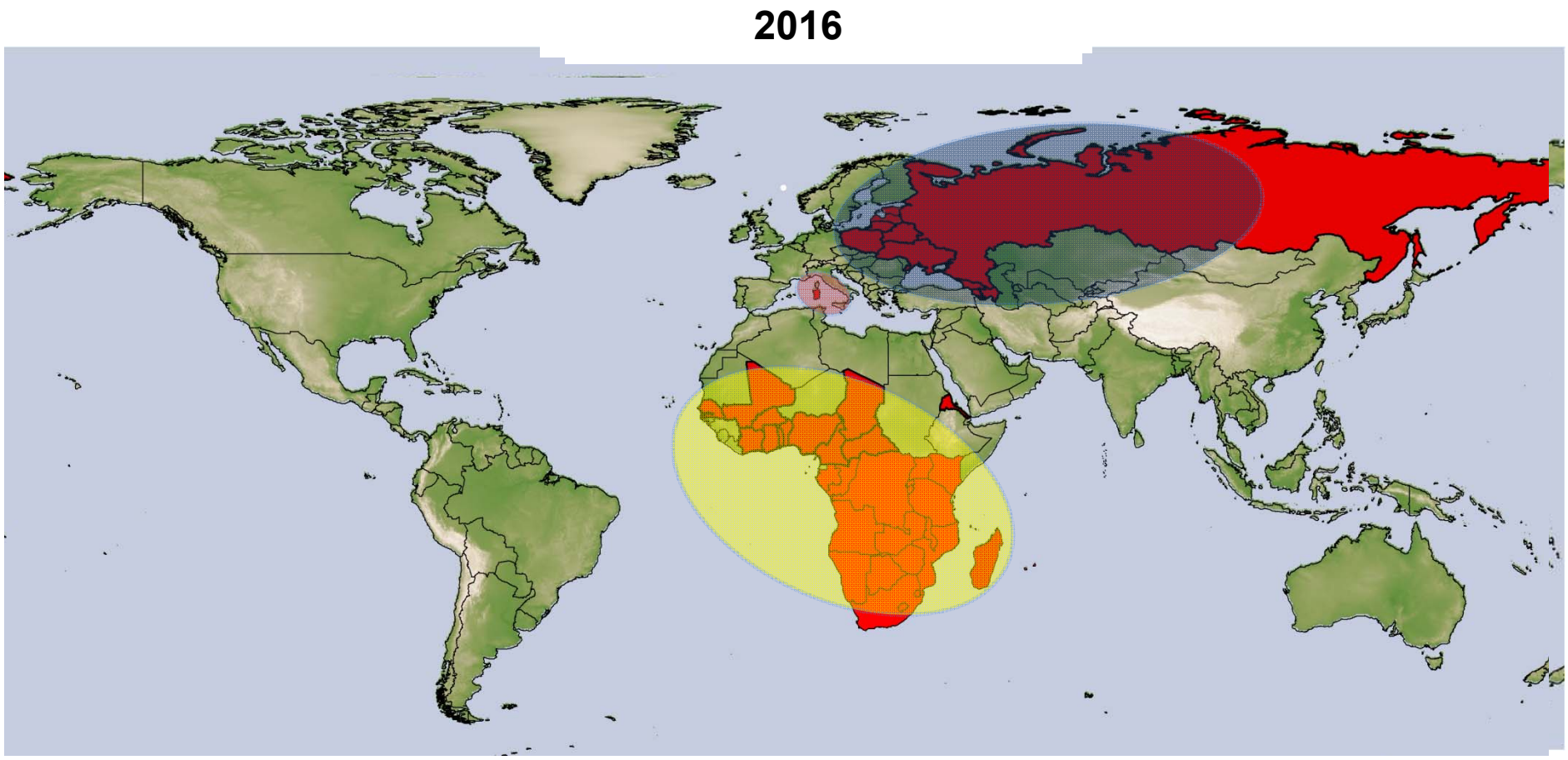


Histological evolution

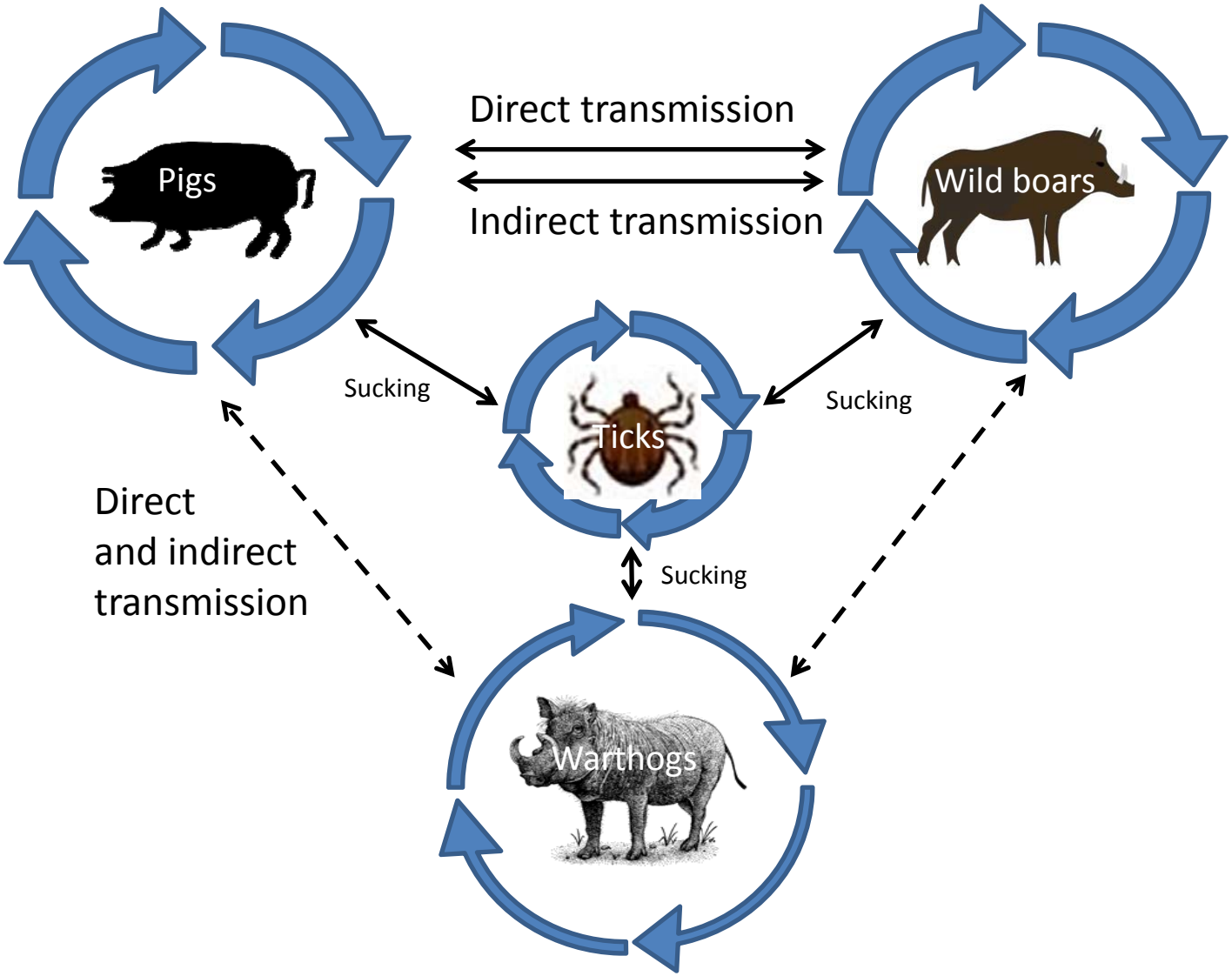
2007



Historical evolution



How is ASF transmitted



ASF is maintained in Africa

Sources of ASF infection from African continent into free areas

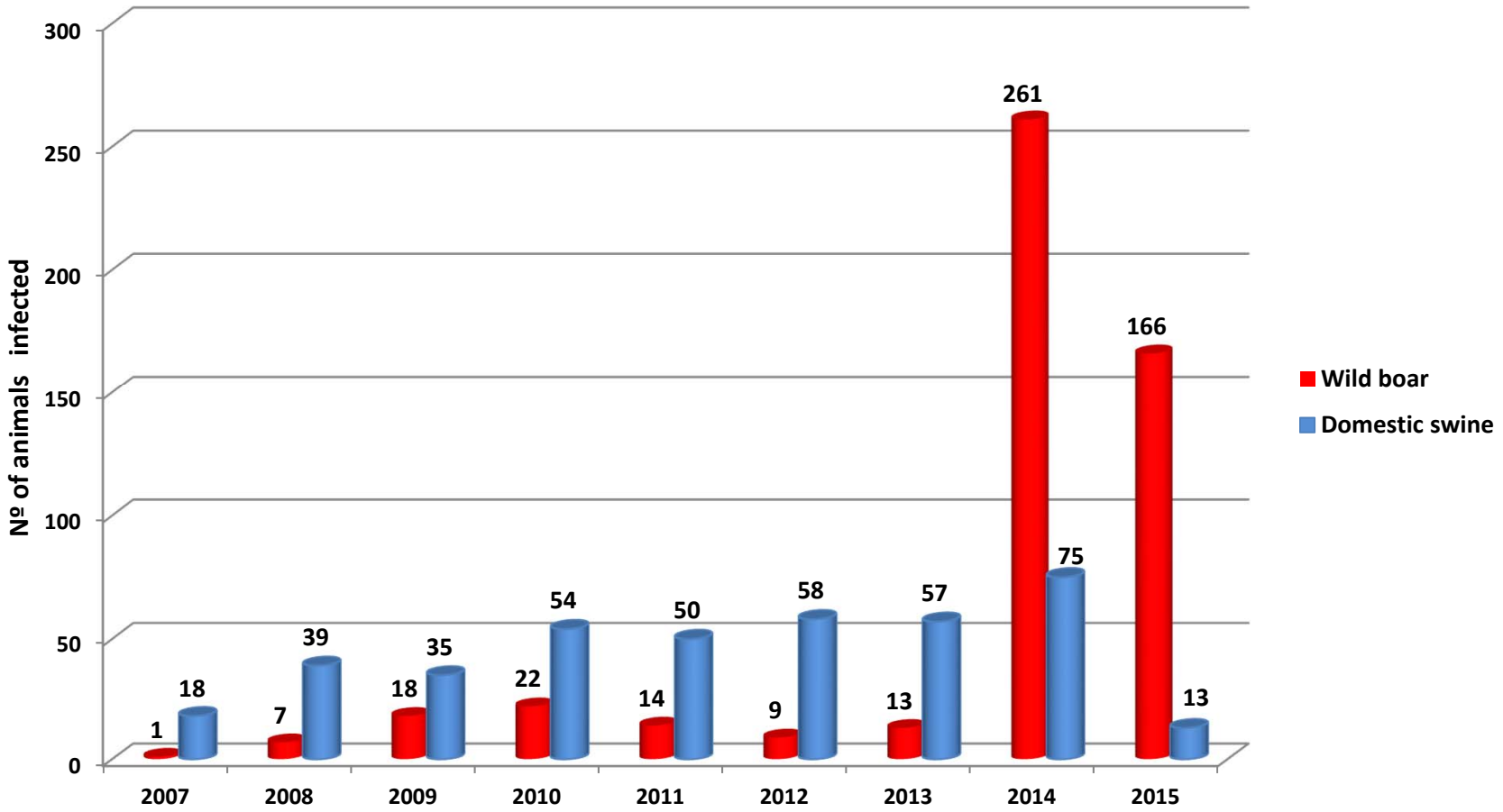
Transmission route	Location and date of occurrence
Raw pork waste at airport/port	Lisbon, 1957 Sao Tome, 1979 Madagascar, 1998 Georgia, 2007
Movement of pork or pig product	Portugal, 1960

Sources of ASF infection into other countries

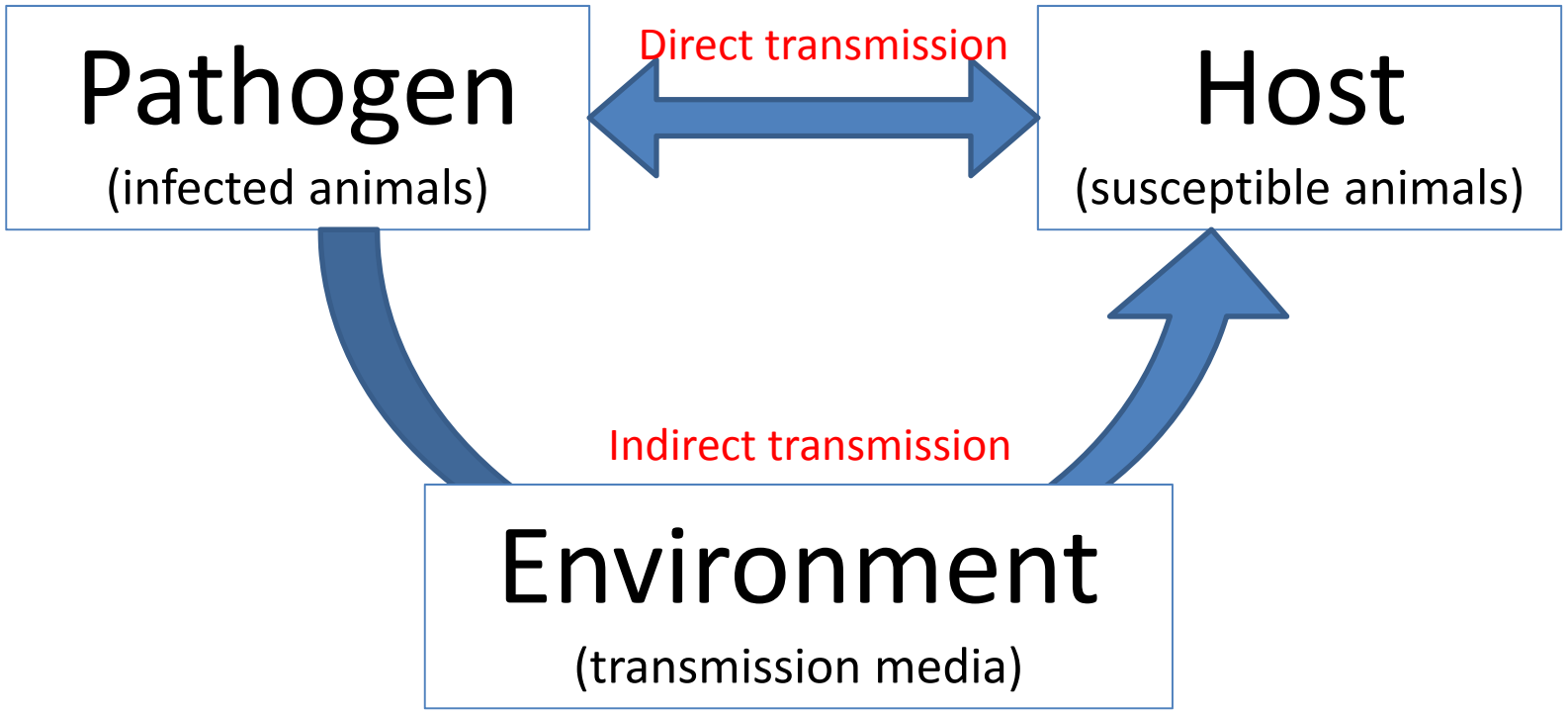
Transmission route	Location and date of occurrence
Raw pork waste at airport/port	Malta, 1978 Sardinia, 1978 Dominican Rep., 1978 Cuba, 1980
Movement of pork product	Spain, 1960* France, 1964* Italy, 1983 Belgium, 1985*
Natural ranging of infected wild boar	Russia, 2007 Lithuania, 2014 Poland, 2014 Latvia, 2014 Estonia, 2014
Movement of pigs	Haiti, 1978

*Smuggling of pig products

European situation



Three factors involved in transmission of infectious diseases



Infected pork products
Ticks
Contaminated people and trucks

Questions

- Why is ASF a threat to pig industry in Asia?
- What interventions would you take to protect your country from the introduction of ASF?

NEWS

Launching of a project for African swine fever preparedness in China

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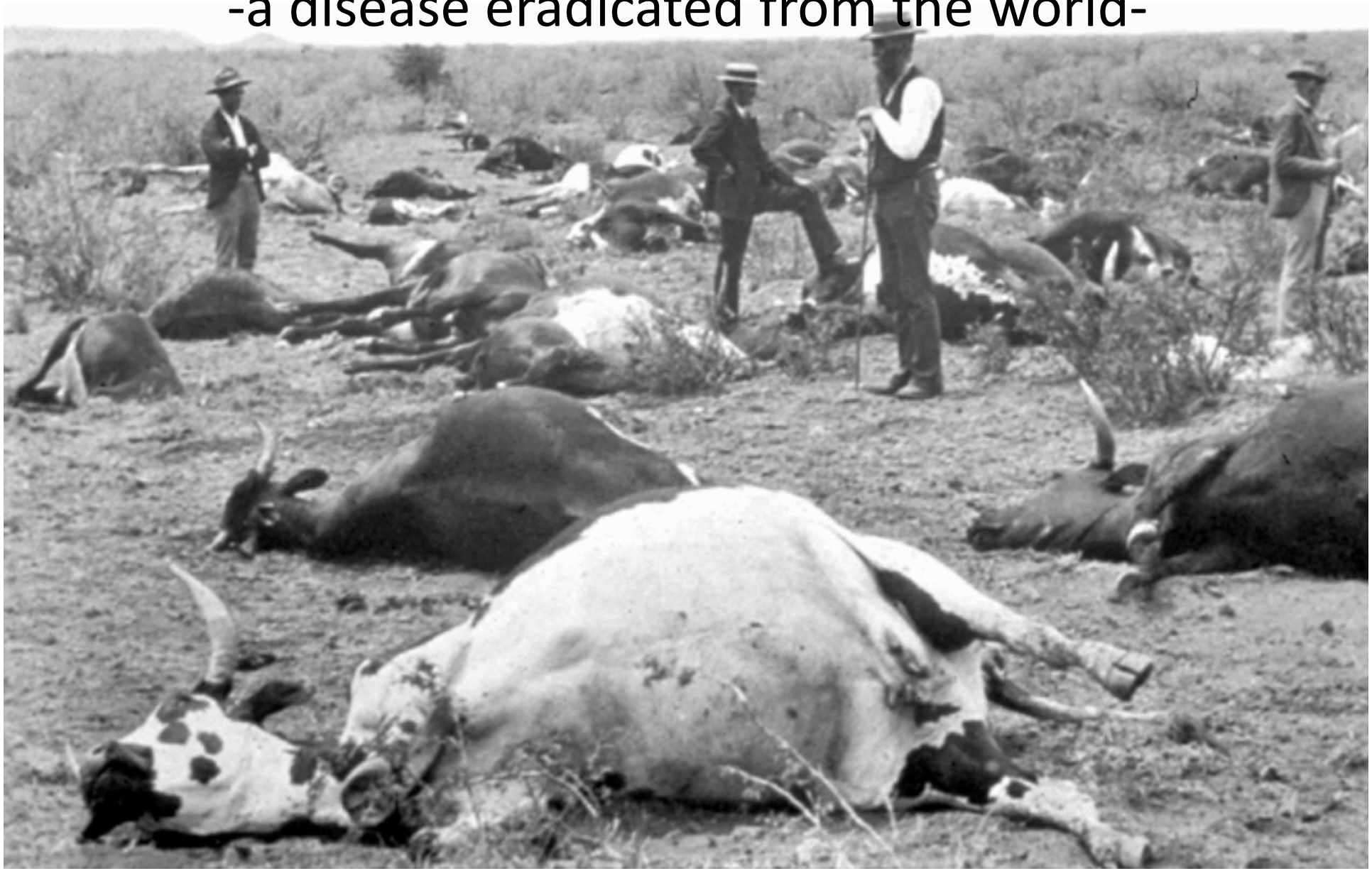
On 4 July 2014, a Technical Cooperation Programme (TCP)

for food security. The lack of an effective vaccine makes ASF control very costly

The possibility of ASF transmission into China is a great concern. The disease is

Rinderpest

-a disease eradicated from the world-



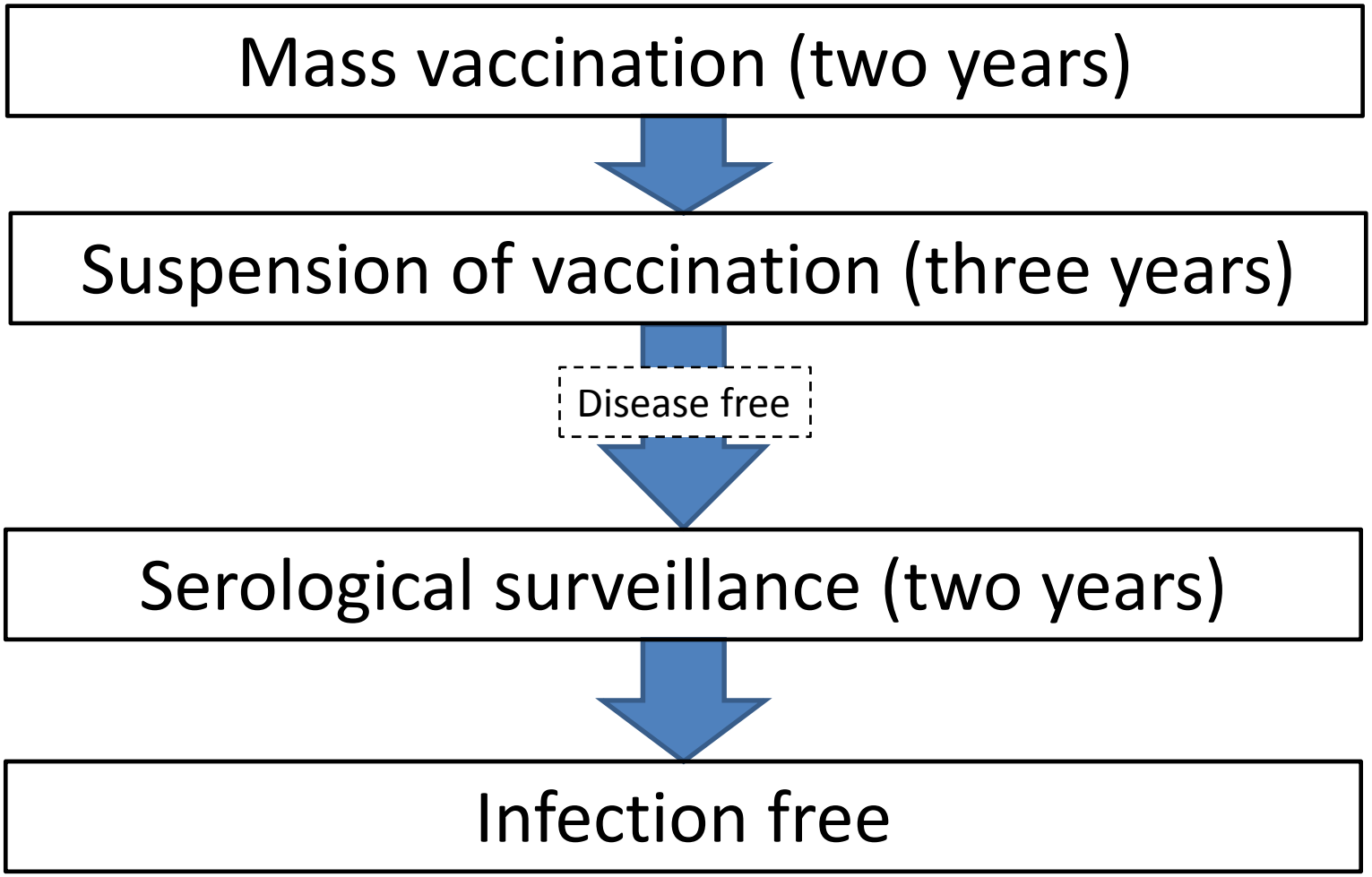
What is Rinderpest

- A viral disease
- Cattle, sheep, goats and other ruminants are affected (no vectors involved)
- Highly contagious
- High mortality
- Effective vaccine

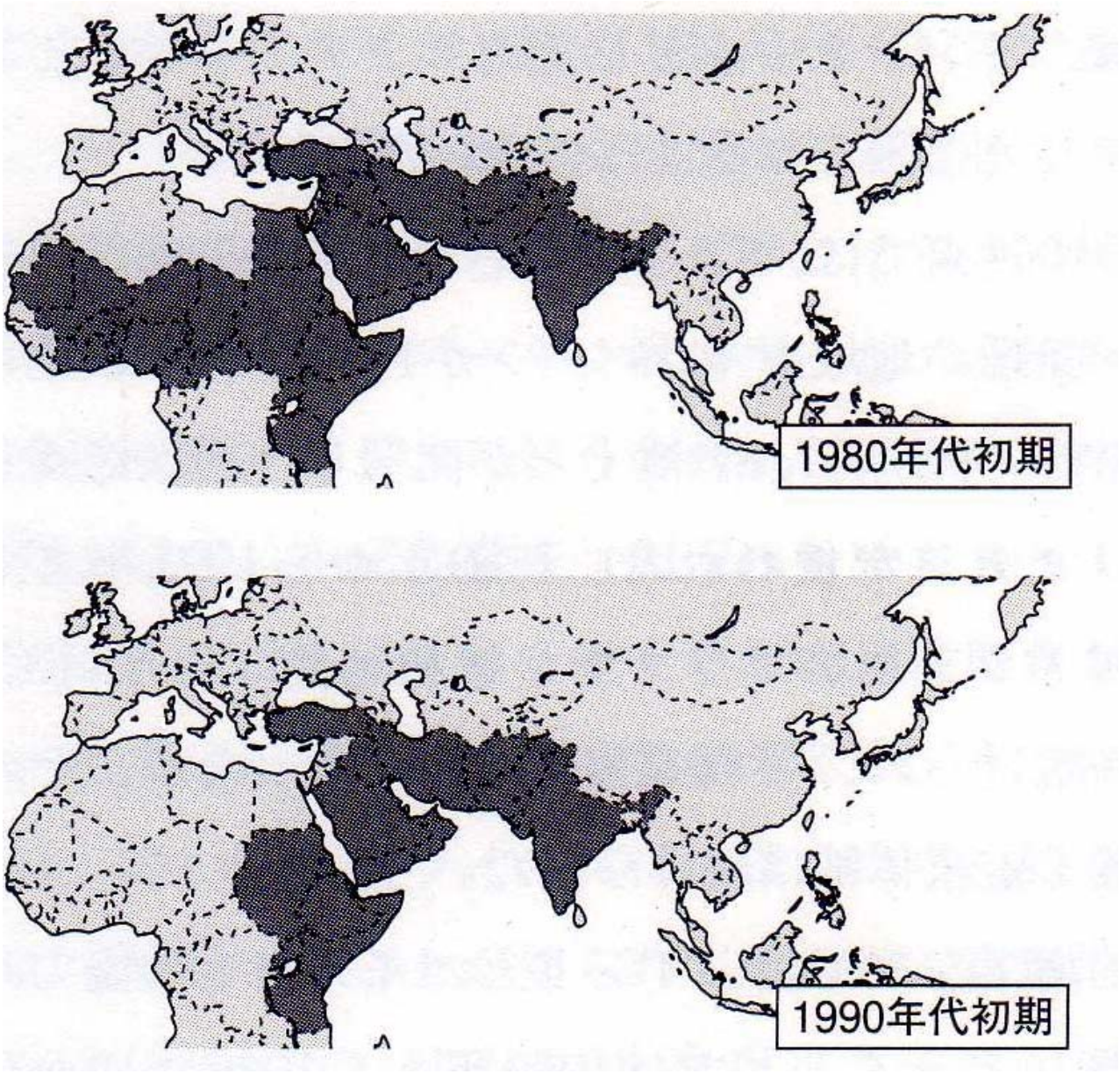
Sources of Rinderpest infection

Transmission route	Location and date of occurrence
Movement of cattle from Korea	Japan, 1873
Movement of cattle from India to Brazil	Belgium, 1920
Movement of cattle from Asia and Africa	Middle East Asia, 1990s

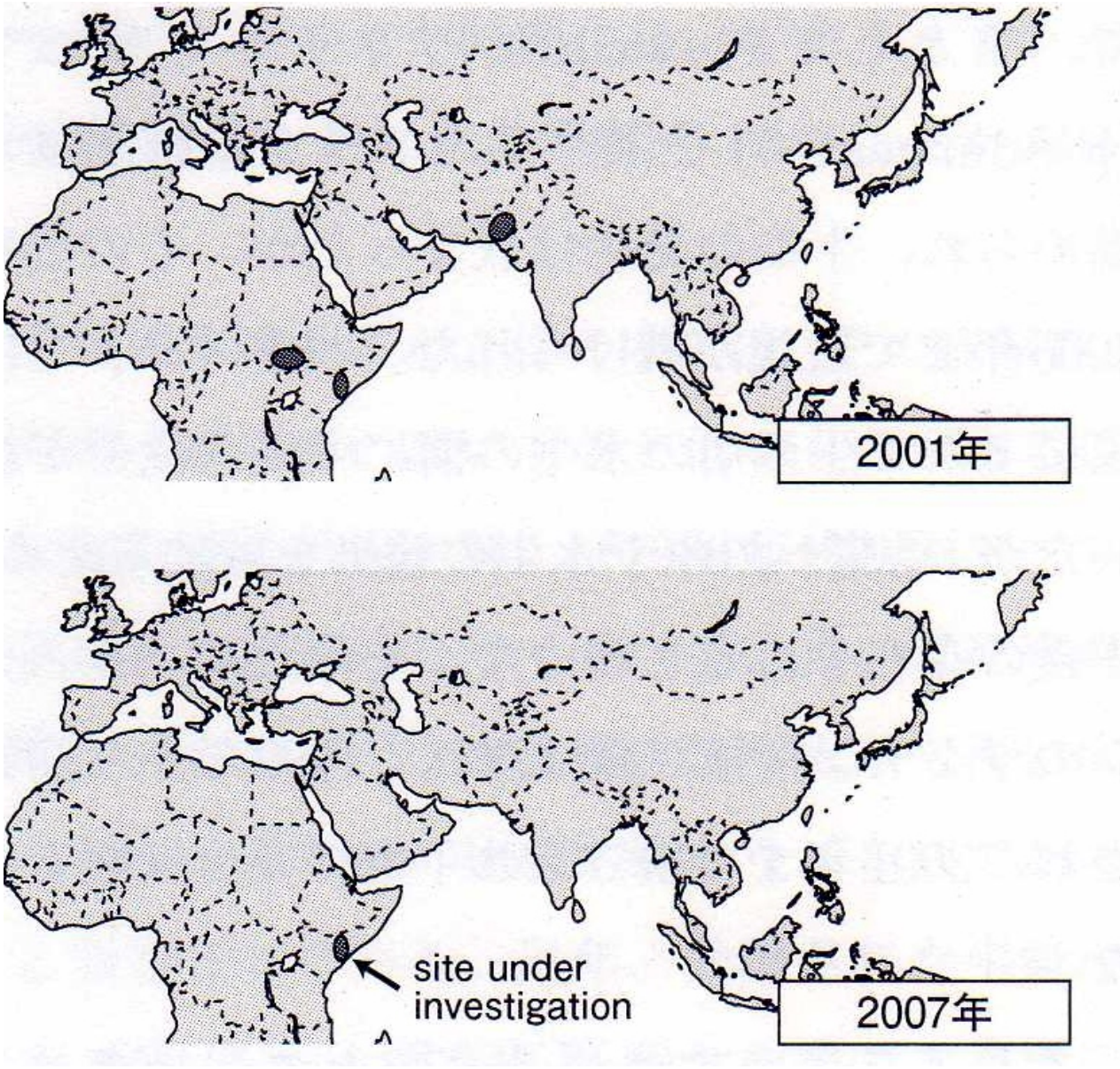
Rinderpest eradication protocol



Rinderpest evolution (1980～90s)



Rinderpest evolution (2001～2007)

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Questions

- Why is ASF a threat to pig industry in Asia?
- What interventions would you take to protect your country from the introduction of ASF?
- Can ASF be eradicated from the world?