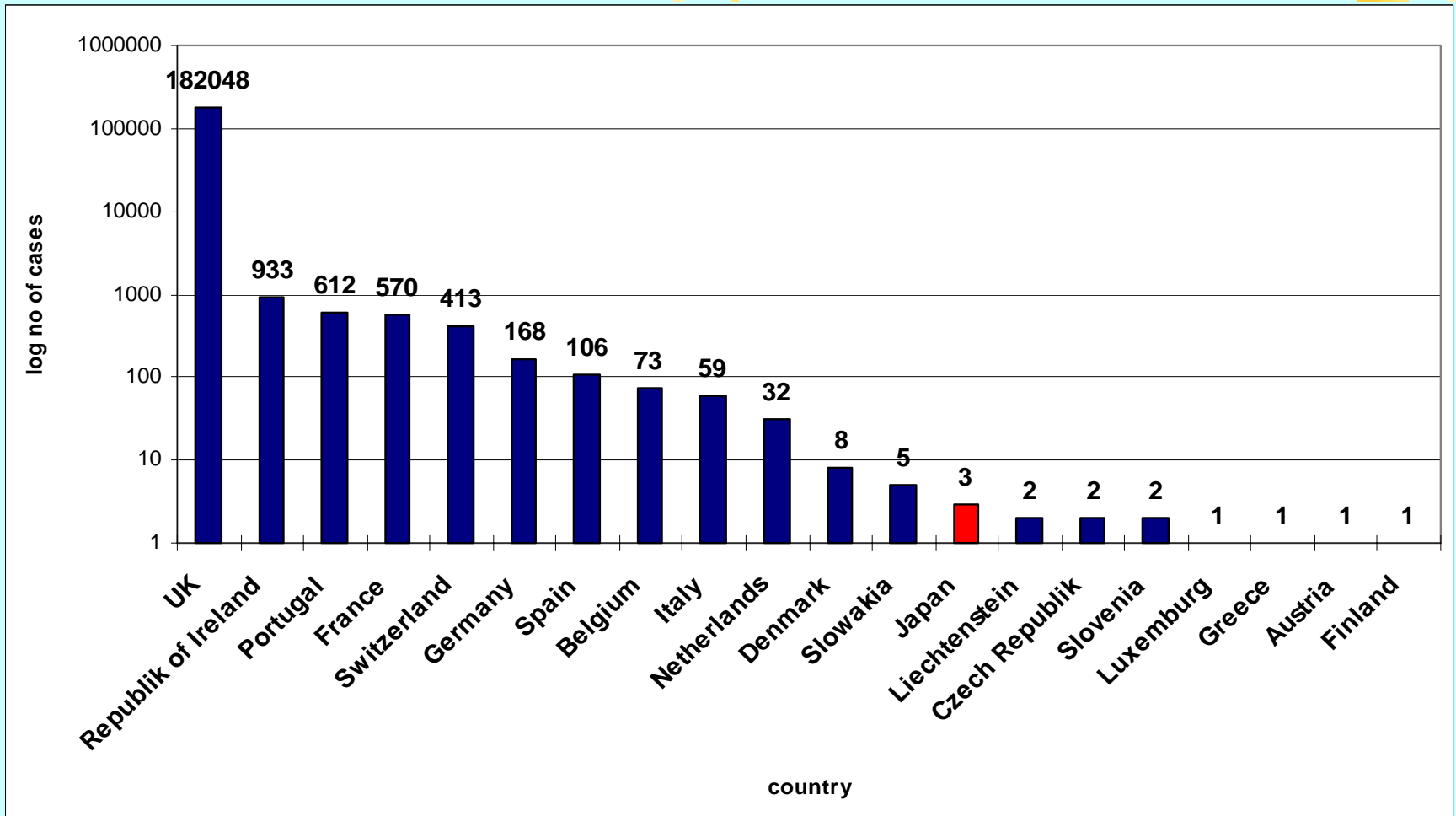


The Reservoir:




Bovine Spongiform Encephalopathy and what's been done about it

Number of BSE cases in the world

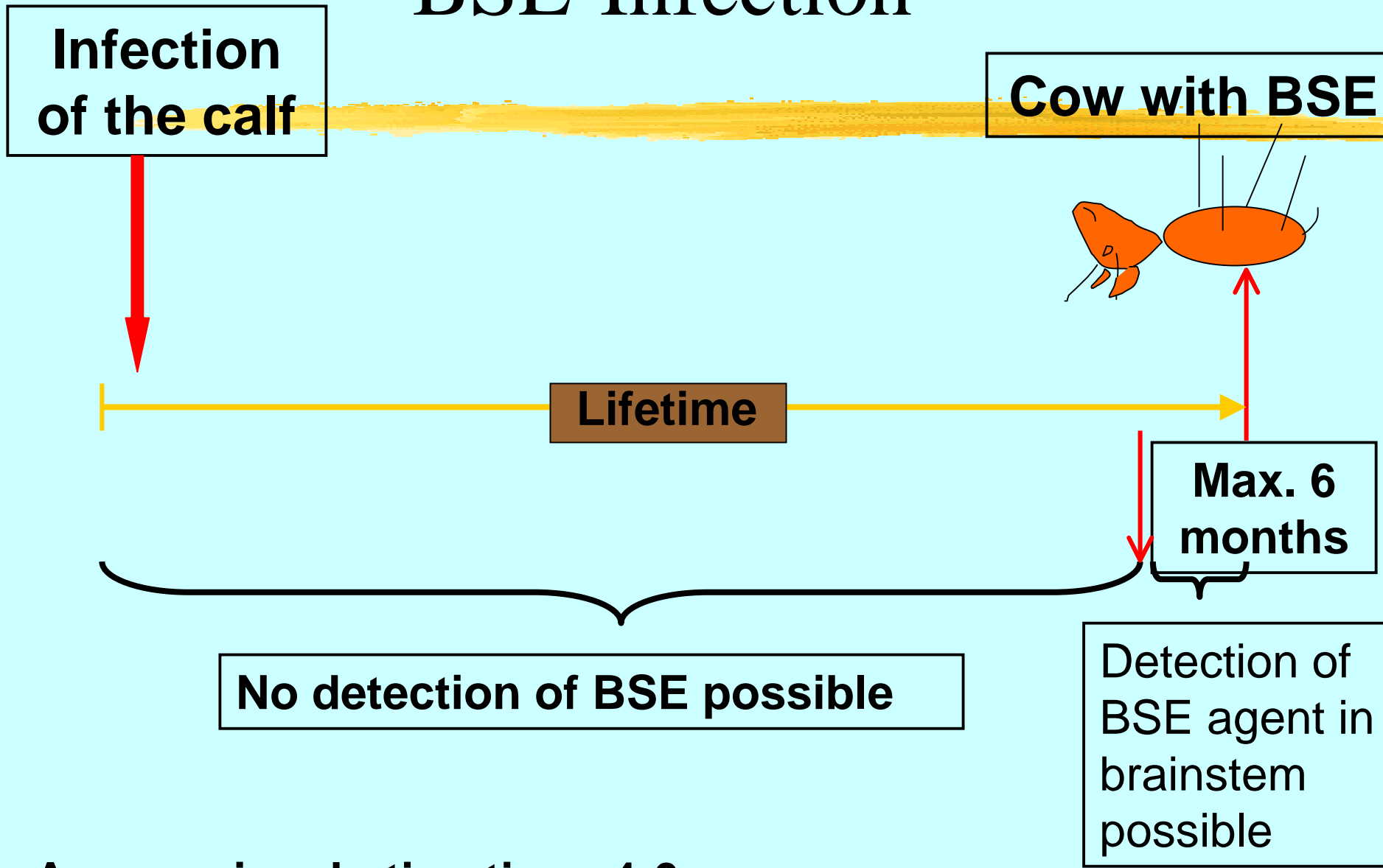


Factors influencing the number of reported clinical BSE cases



- Disease awareness
 - information, education
- Willingness to notify cases
 - measures
 - compensation
 - stigma
- Laboratory competence

BSE-Infection

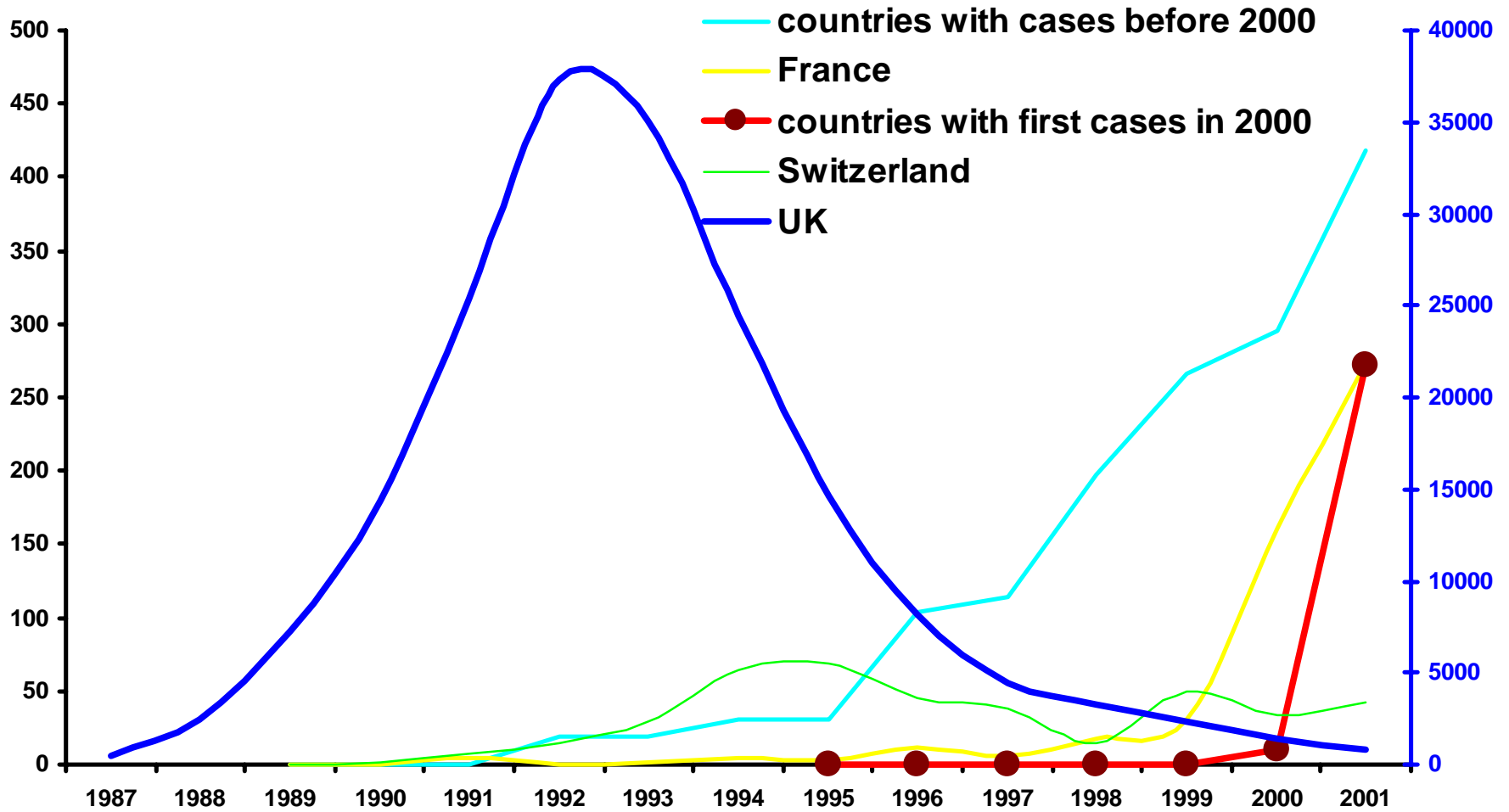


Average incubation time: 4-6 years

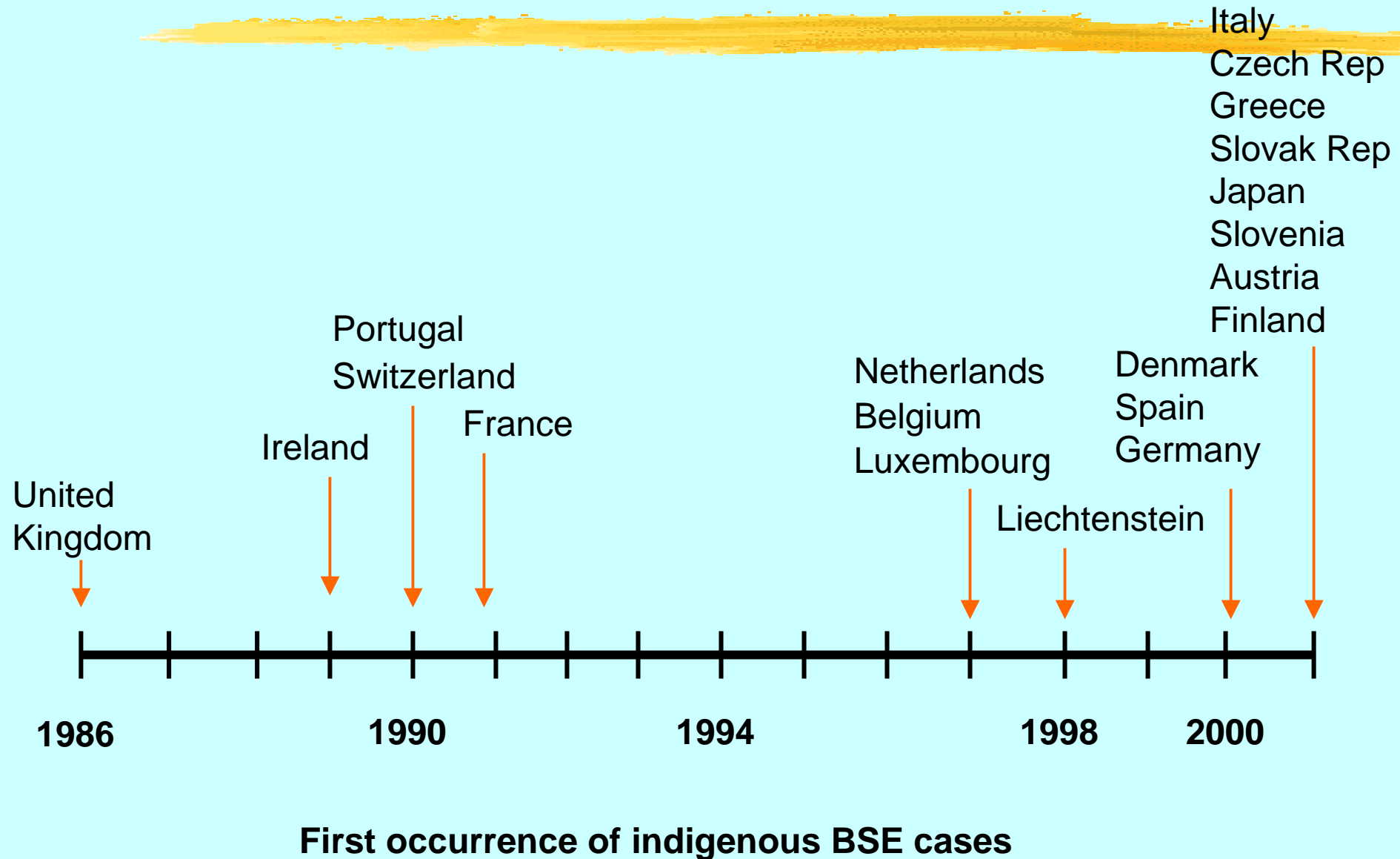
Introduction of targeted surveillance

- January 1999: Switzerland all fallen stock and emergency slaughter and 5% normal slaughter
- Spring 2000: North-West-France: fallen stock and emergency slaughter
- January 2001: begin of testing in the EU (fallen stock, emergency slaughter, normal slaughter)

Development of BSE



First cases of BSE



Geographical BSE risk („GBR“)

Categories


„likelihood of the presence of cattle being infected with BSE“

GBR level	Risk
I	Highly unlikely
II	Unlikely but not excluded
III	Likely but not confirmed or confirmed at a lower level
IV	Confirmed at a higher level

Country categories (GBR)

GBR level	Countries
I	Argentina, Australia, Botswana, Brazil, Chile, Namibia, New Zealand, Nicaragua, Norway, Paraguay, Singapore, Swaziland, Uruguay, El Salvador, Panama, Costa Rica
II	Colombia, India, Kenya, Mauritius, Nigeria, Pakistan, Sweden, Canada, USA
III	Albania, Belgium, Denmark, Cyprus, Czech Republic, Estonia, France, Germany, Hungary, Ireland, Italy, Lithuania, Luxembourg, Poland, The Netherlands, Romania, Slovak Republic, Spain, Switzerland, Austria, Slovenia, Finland,
IV	United Kingdom, Portugal

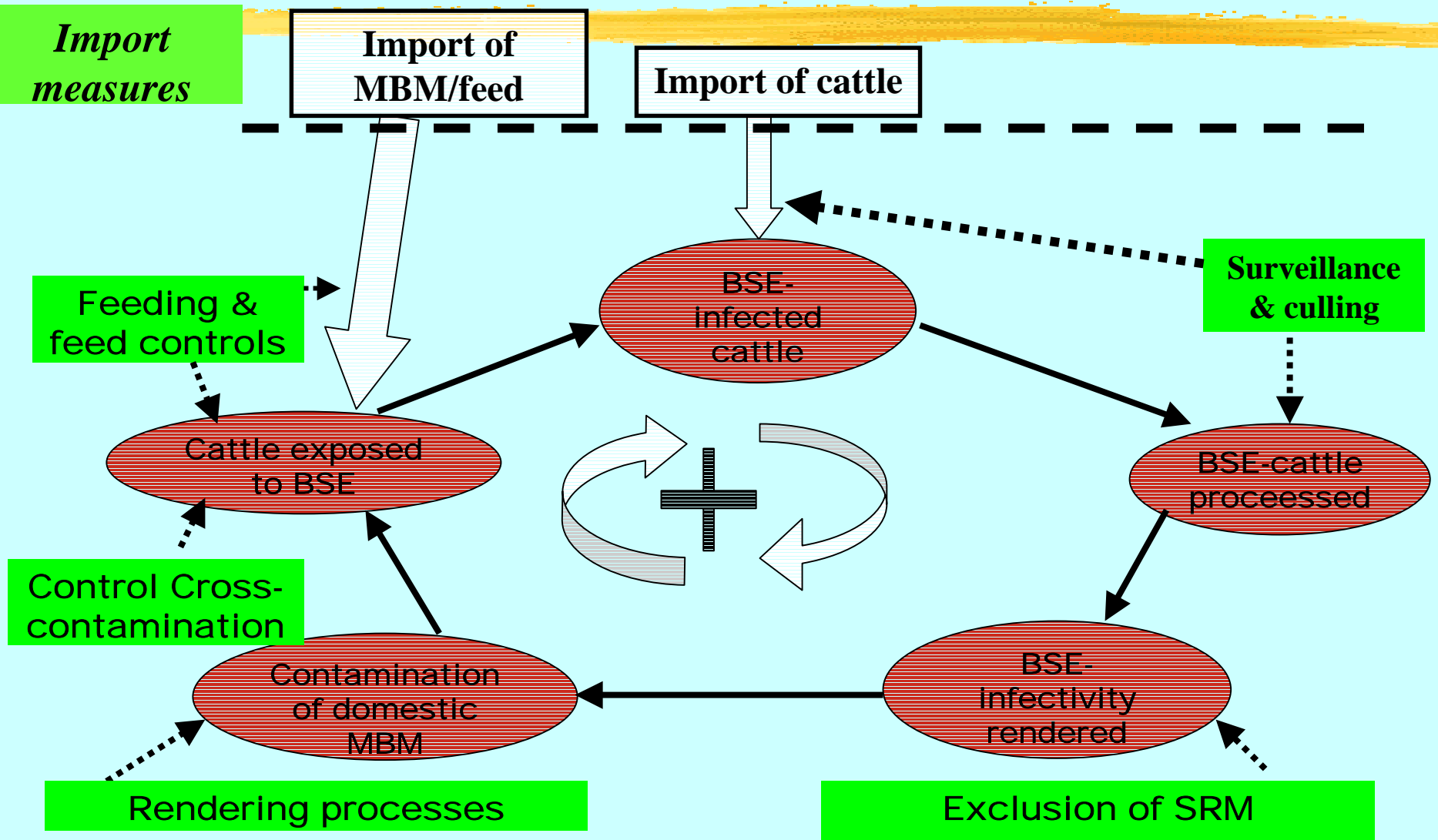
Greece: not assessed, Japan not published




What's been
done about it

-animals-

Most important measures concerning feed



Most important measures concerning feed



	UK	CH	EU
• Feed ban for ruminants	1988	1990	1994
• SRM ban for feed	1990	1996	2000
• Total feed ban	1996	2001	2001



What's been done about it

-humans-

Most important measures concerning food (I)



- Incineration of BSE-cases
- ante mortem inspection
- ban on specified risk material
- ban on mechanically recovered meat

Specified risk material

	EU	UK and Portugal	Switzerland
cattle			
scull inclusive brain and eyes	>12 mths	>6 mths	>6 mths
tonsils	>12 mths	>6 mths	>6 mths
spinal cord	>12 mths	>6 mths	>6 mths
vertebral column(spinal ganglia)	>12 mths	>12 mths	cows
intestines (ileum)	every age	every age	>6 mths
spleen	no	>6 mths	>6 mths
thymus	no	>6 mths	>6 mths
visible lymph and nerv.tissue	no	no	every age

Most important measures concerning food(II)


- Testing of normal slaughter cattle over 30 months???
- „a measure to enhance consumer confidence“
- depending on
 - magnitude and stage of epidemic
 - implementation of measures
 - detection capacity before slaughter (disease awareness)

Effectiveness of measures



**Intensive control of the
implementation !!!**

Lesson to be learned „what was wrong in Europe?“



- no sufficient surveillance
- risk assessment and subsequently risk management inappropriate
- no risk communication

„Surprise“

→ **consumer confidence destroyed**

Summary

- Objective risk assessment needed
- Detection of the real incidence only possible by targeted surveillance in risk populations
- Strict controls of the implementation of all measures
- Preventive measures already before the first case should be considered
- Learn from the mistakes of the others and do not repeat them