

PANAFTOSA



VETERINARY PUBLIC HEALTH – PAHO/WHO



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AFTOSA IN LIVESTOCK

Dr. Victor Saraiva

Head, Vesicular Diseases Unit - PANAFTOSA/PAHO/WHO

BRIEF HISTORY OF FMD IN AMERICA

- XVI Century – Genetic stock from Europe brought to South American colonies.
- 1870 FMD enters Continent (USA, Argentina, Brazil).
- XX Century - first half, FMD spreads to almost every country in South America.
- 1929 USA; 1952 Canada; 1954 Mexico, eradicate FMD.
- 1951 - PANAFTOSA is created in Rio de Janeiro, Brazil (under OAS, later on, UN).
- FMD Programs: 60's Argentina; Brazil; Paraguay and Uruguay; 70's – other countries (many supported by international loans)

BRIEF HISTORY OF FMD IN AMERICA, Cont.

- PANAFTOSA/PAHO-WHO: since the 60's developments in diagnosis; 80's - development of oil adjuvant vaccines (transferred to countries)
- 1972 - COSALFA is created.
- 1973 - Continental Vesicular Diseases Info System Network became operational
- 1981 - Chile FMD Free
- 1987 - Hemispheric Plan (PHEFA) is created
- Late 90's/2000 - South America: several countries and zones declared free with and w/out vaccination
- 2000-2007 - outbreaks in So. Cone and Amazon regions, endemic zones persist in Andean Region, American Chaco and Amazon region

REAL HISTORY



What is FMD?

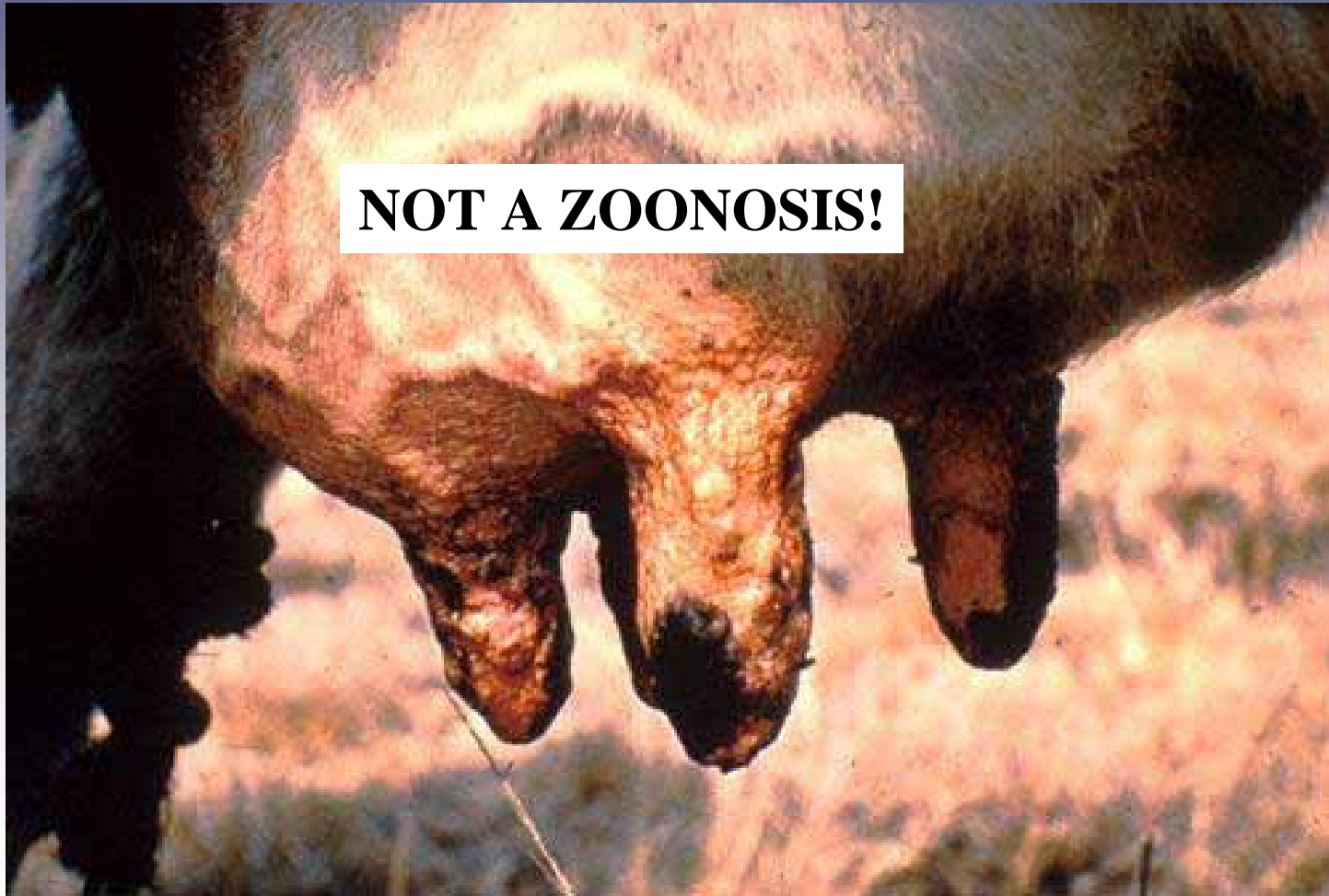
- Acute and very infectious viral disease.
- Affects cattle, sheep, goats, pigs, camelids and some wild species
- High direct and indirect losses



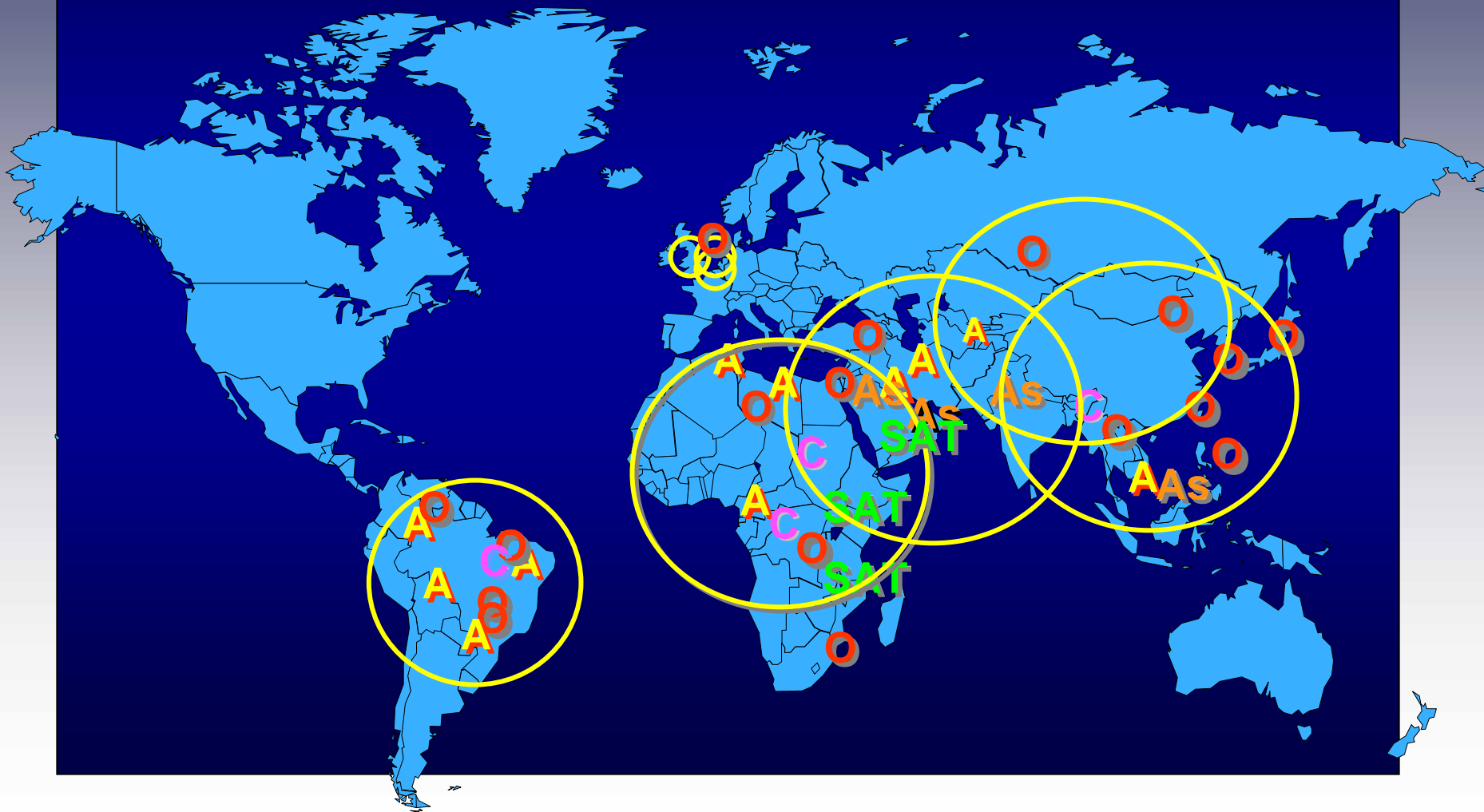
- 7 different types of virus,
O,A,C (South America, elsewhere)
SAT 1,2,3, Asia 1(Africa and Asia only)
- 60 sub types



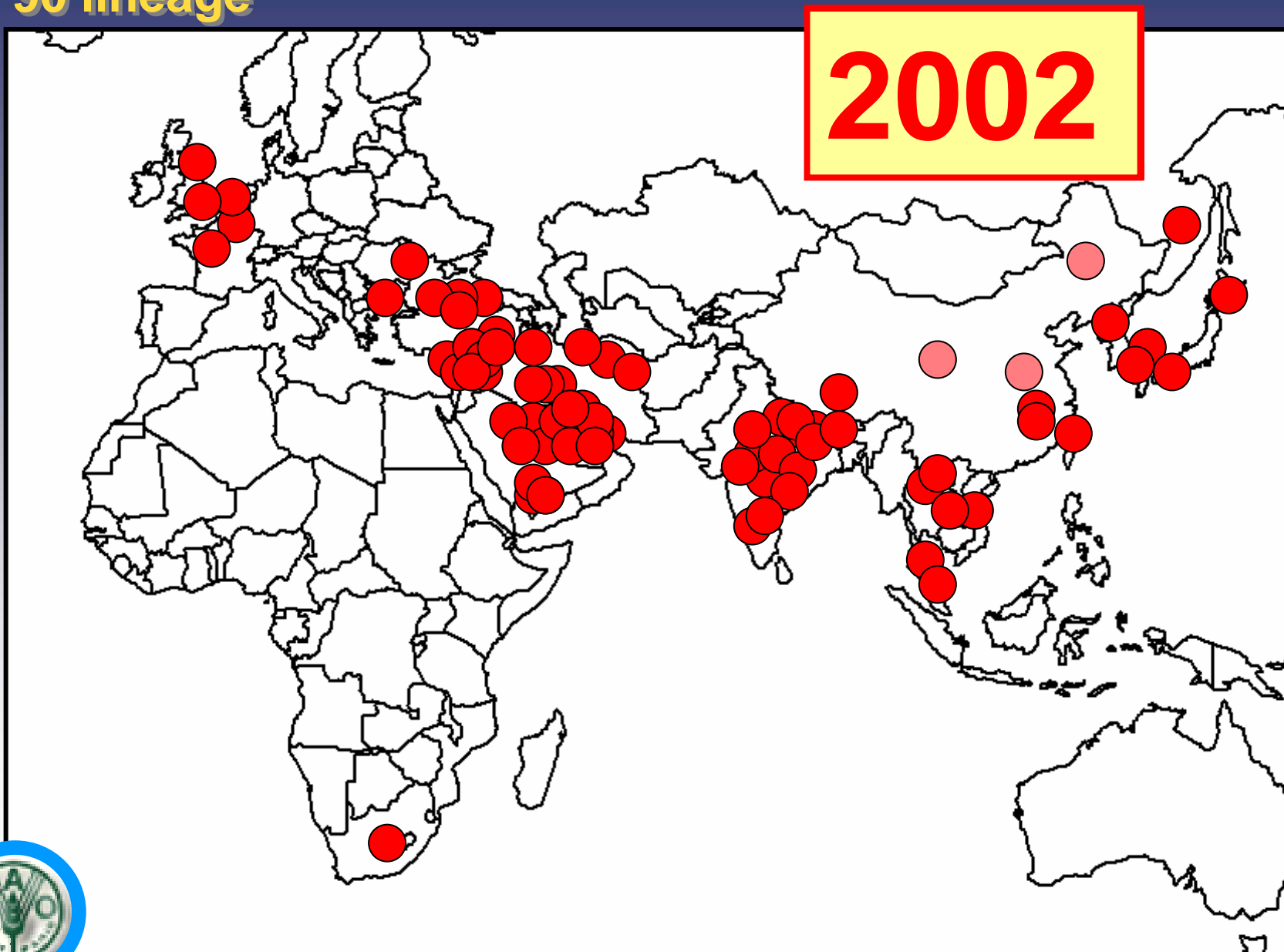
- **Trivalent Vaccines, twice a year**
- **Available vaccines may not cover all viral strains occurring in the field.**
- **Vaccine matching needed!**



FMD DISTRIBUTION BY TYPE OF VIRUS, 1992-2005



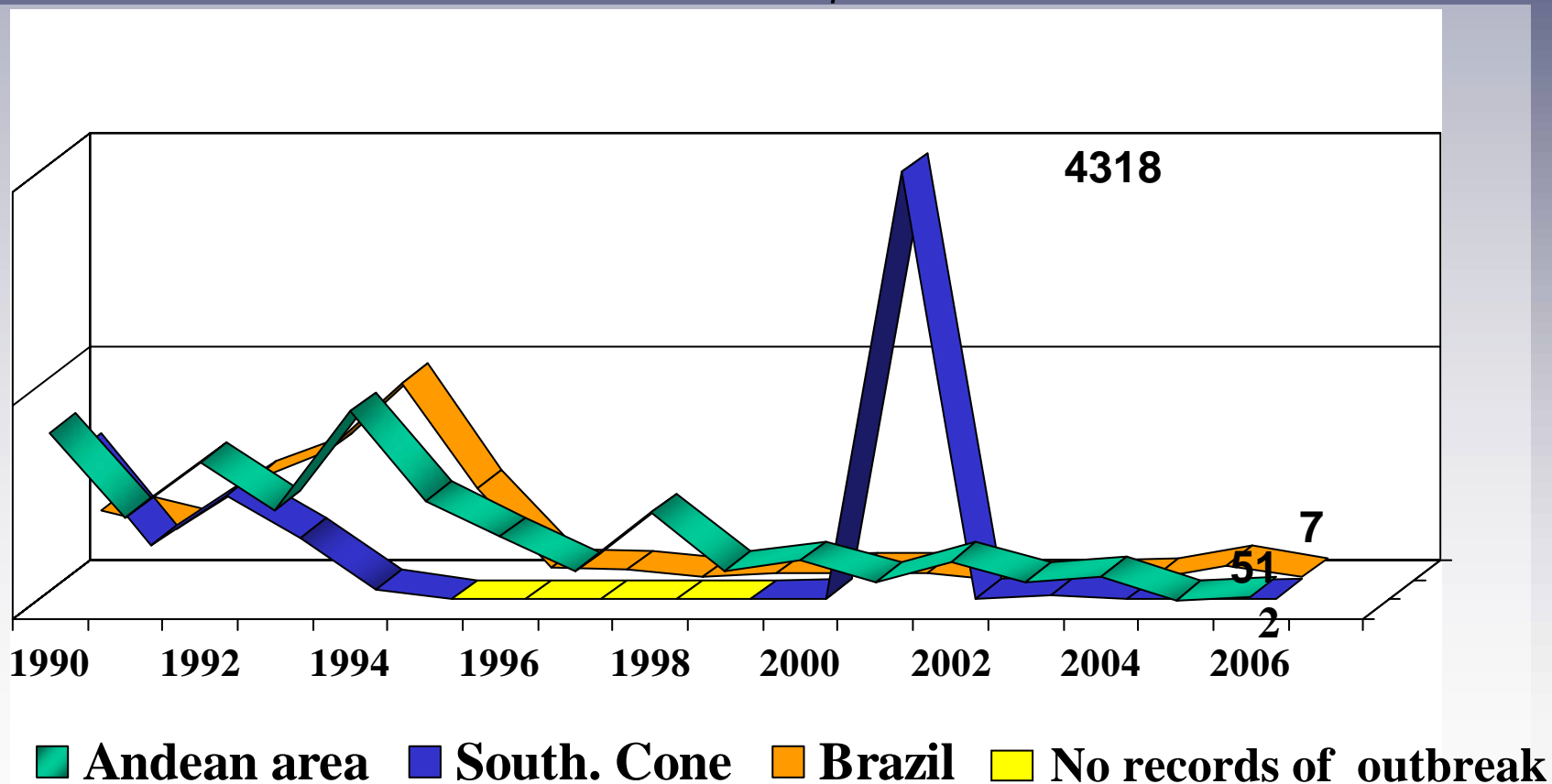
Historical Movement of South Asian topotype O India-90 lineage



PHEFA

FMD BY SUBREGIONAL PROJECTS

South America, 1990-2006

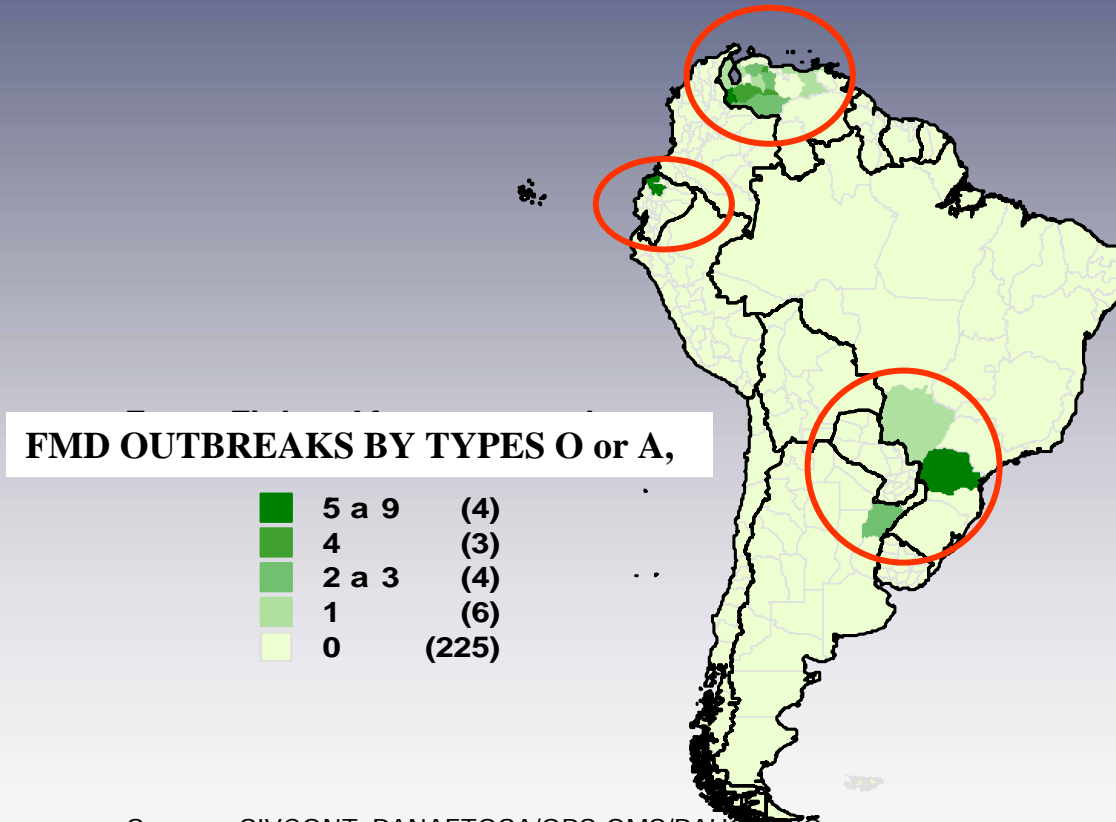


FOOT-AND-MOUTH DISEASE OUTBREAKS 2002-2007*



*week # 29

FMD GEOGRAPHICAL DISTRIBUTION SOUTH AMERICA, 2006



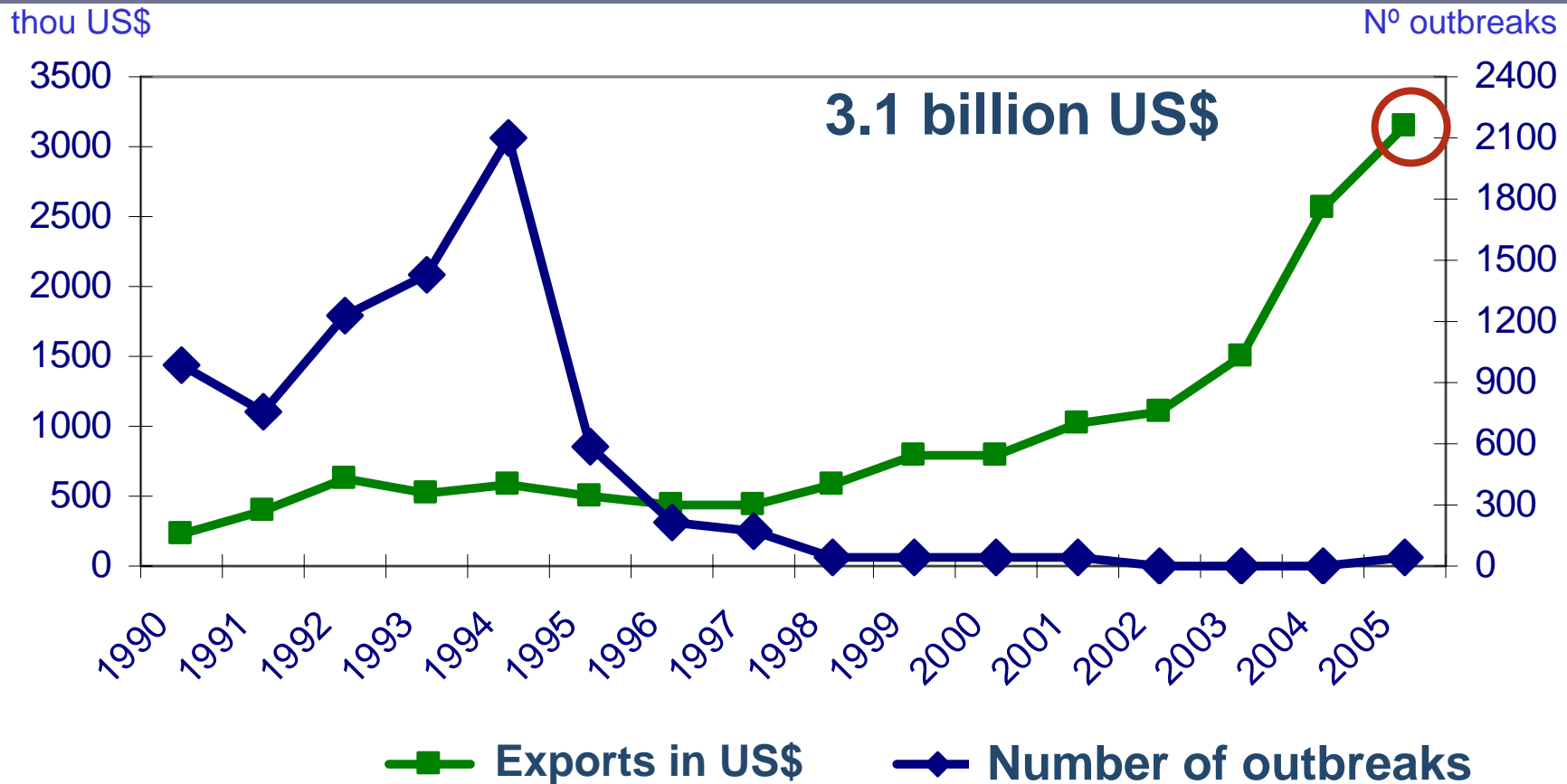
Source: : SIVCONT, PANAFTOSA/OPS-OMS/PAHO-WHO.

FMD PROGRAM COSTS SOUTH AMERICA 2005*

- PUBLIC SECTOR
US\$278,131.830
- PRIVATE SECTOR
US\$300,879.240
- Why countries expend so much?

*source: COSALFA XXXIII

Exports of Beef (US\$ million) and number of FMD outbreaks, Brazil 1990-2005



FMD Barriers

Brazil case

Exports of beef (<i>in natura</i>), 2005		
Countries	US\$ billions	share
176	2.4	100%
56 countries imposed restrictions due to FMD	2.1	88%

Source: Agriculture, Brazil

Socio-economic Impacts

- Improvement of exports (new markets) and increase in aggregated value of products (industrialization)
- Improvement of sanitary quality of products of animal origin

Socio-economic Impacts

- FMD Free zones in the Highlands of Peru and Bolivia: more than 4 million heads of camelids, source of income and nutrition to indigenous populations
- Creation of community-based FMD organizations (370 in Argentina, 95 in Colombia), local development based on FMD control extended to other diseases

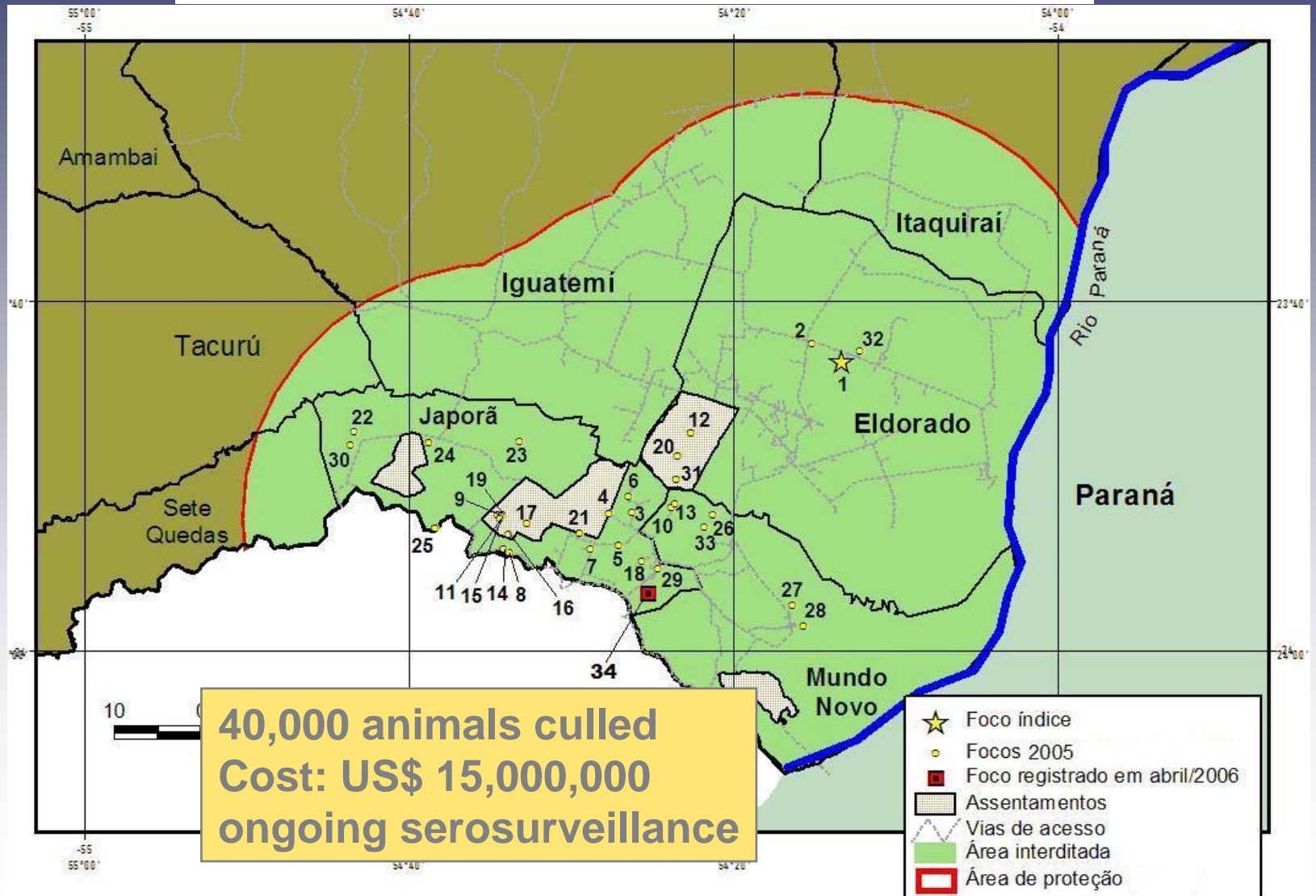


SOUTHERN CONE

Outbreak 2006

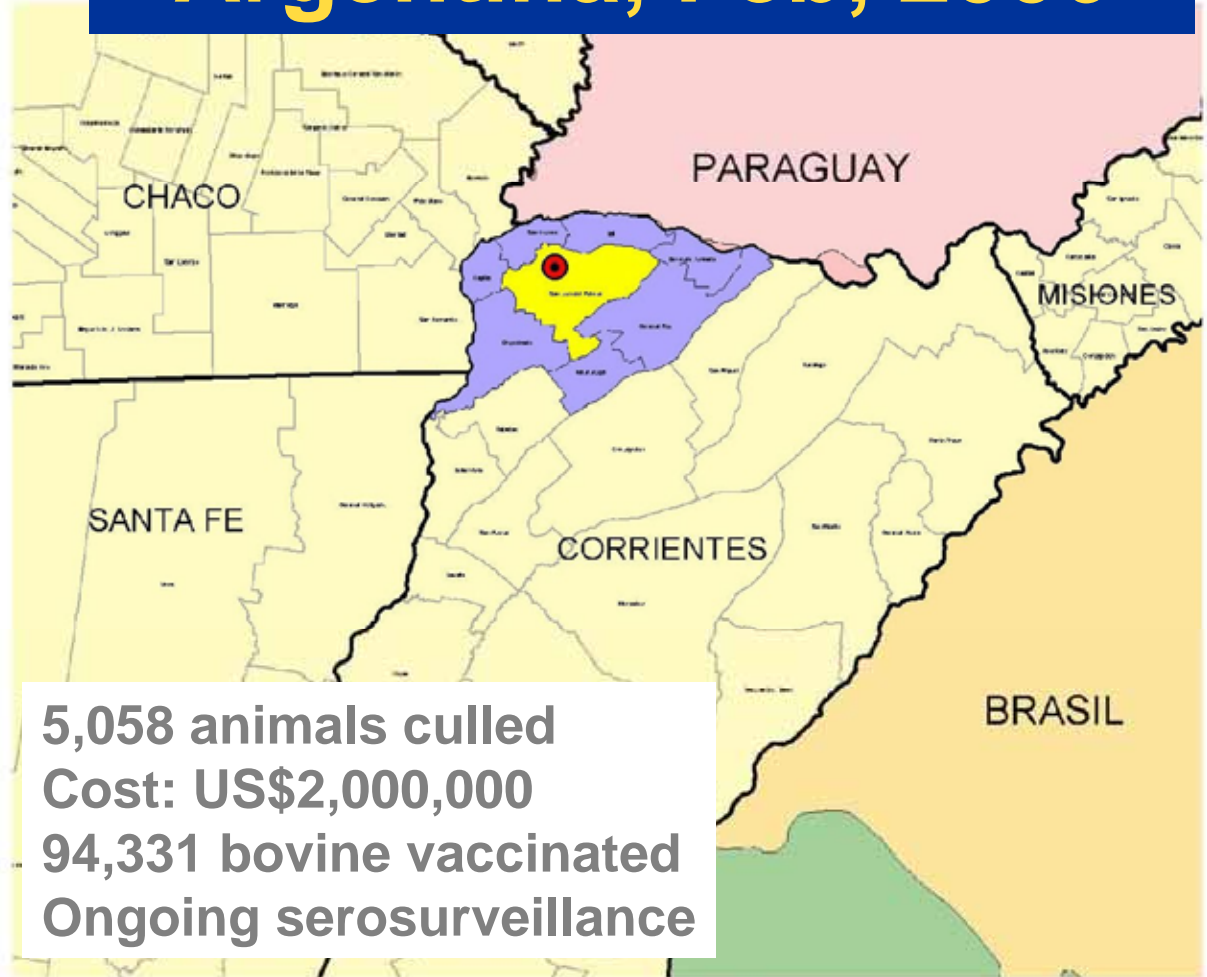
FMD TYPE O OUTBREAKS, SOUTHERN CONE, 1998 -2006

FMD OUTBREAKS IN MATO GROSSO DO SUL STATE, BRAZIL, 2005/2006



República ARGENTINA
Provincia: CORRIENTES
Departamento: SAN LUIS DEL PALMAR

Outbreak in Corrientes Argentina, Feb, 2006



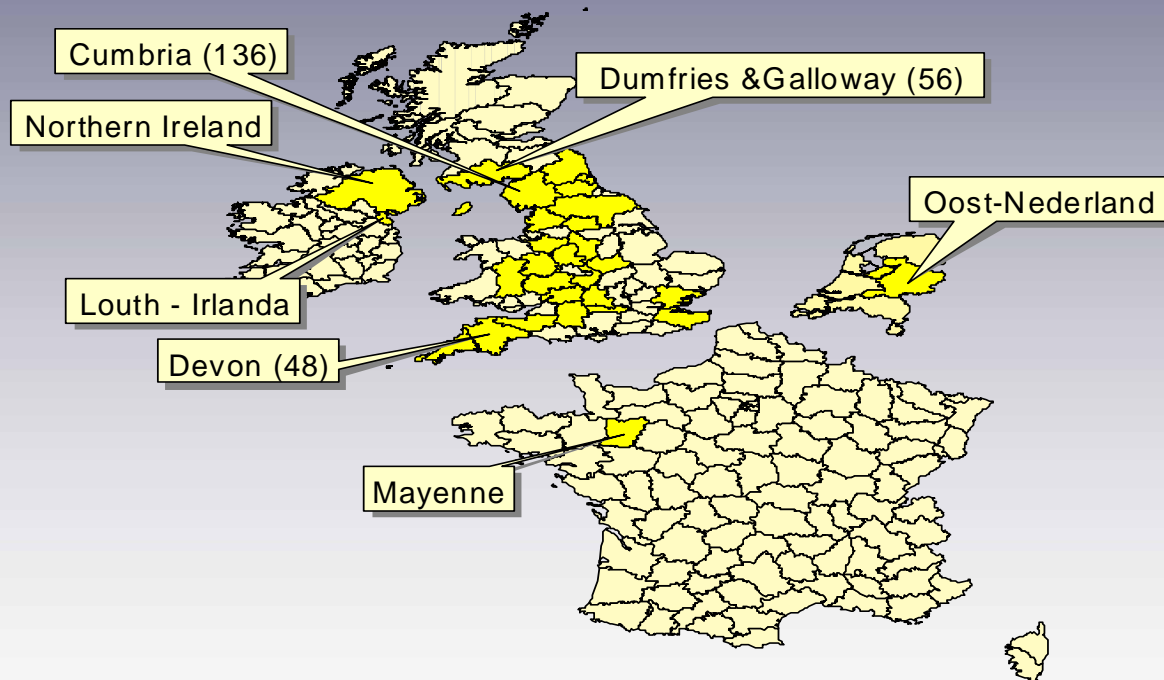
5,058 animals culled
Cost: US\$2,000,000
94,331 bovine vaccinated
Ongoing serosurveillance

Referencias:

- Departamentos Interdictados (Prohibición de Movimientos)
- Foco FIEBRE AFTOSA



**MARCH, 21, 2001 (ONE MONTH
AFTER)
410 OUTBREAKS IN THE UK
SPREAD TO IRELAND, FRANCE
AND NETHERLANDS**



FMD IN THE UK, 2001



FMD IN THE UK, 2001 IMPACT IN ANIMAL GENETICS



FMD IN THE UK, 2001



ENVIRONMENTAL IMPACT

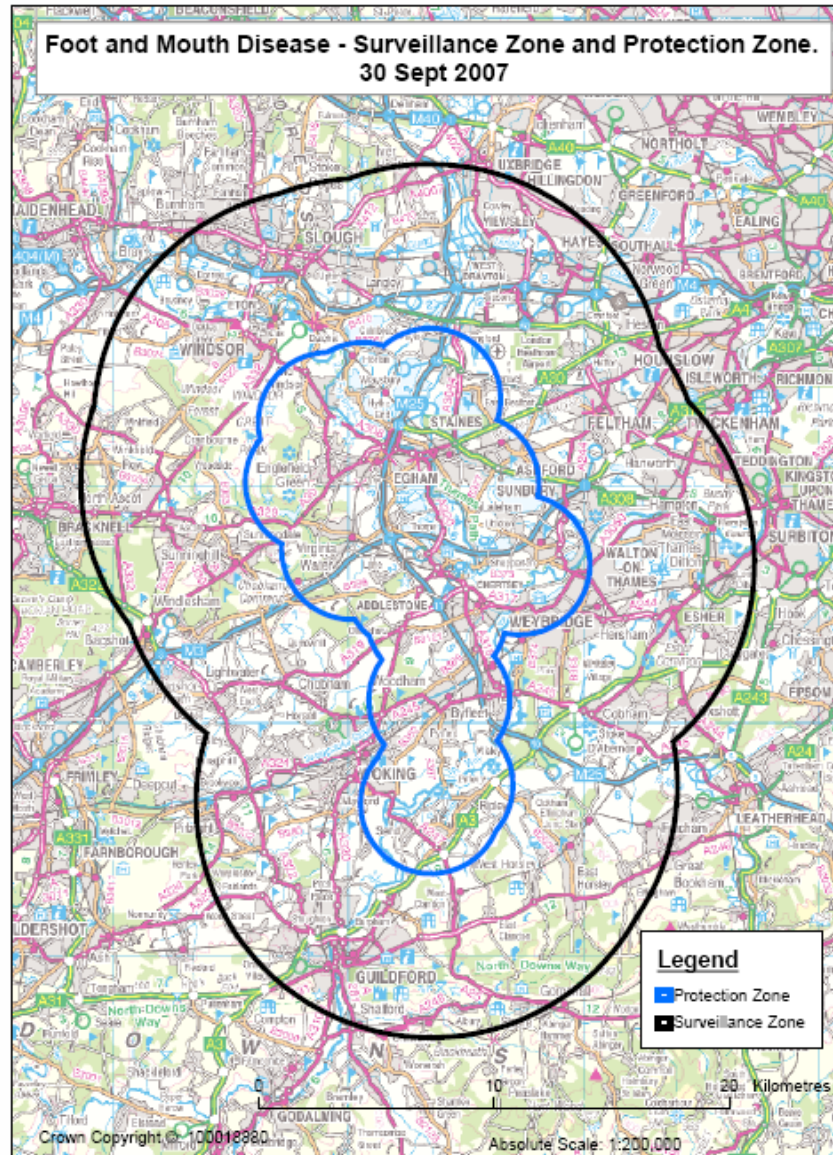


CENTRO PANAMERICANO DE FIEBRE AFTOSA

SOCIO ECONOMIC IMPACT



**Foot and Mouth Disease - Surveillance Zone and Protection Zone.
30 Sept 2007**



CREATOR: RADAR Team, Defra

Date Created: 30 September 2007

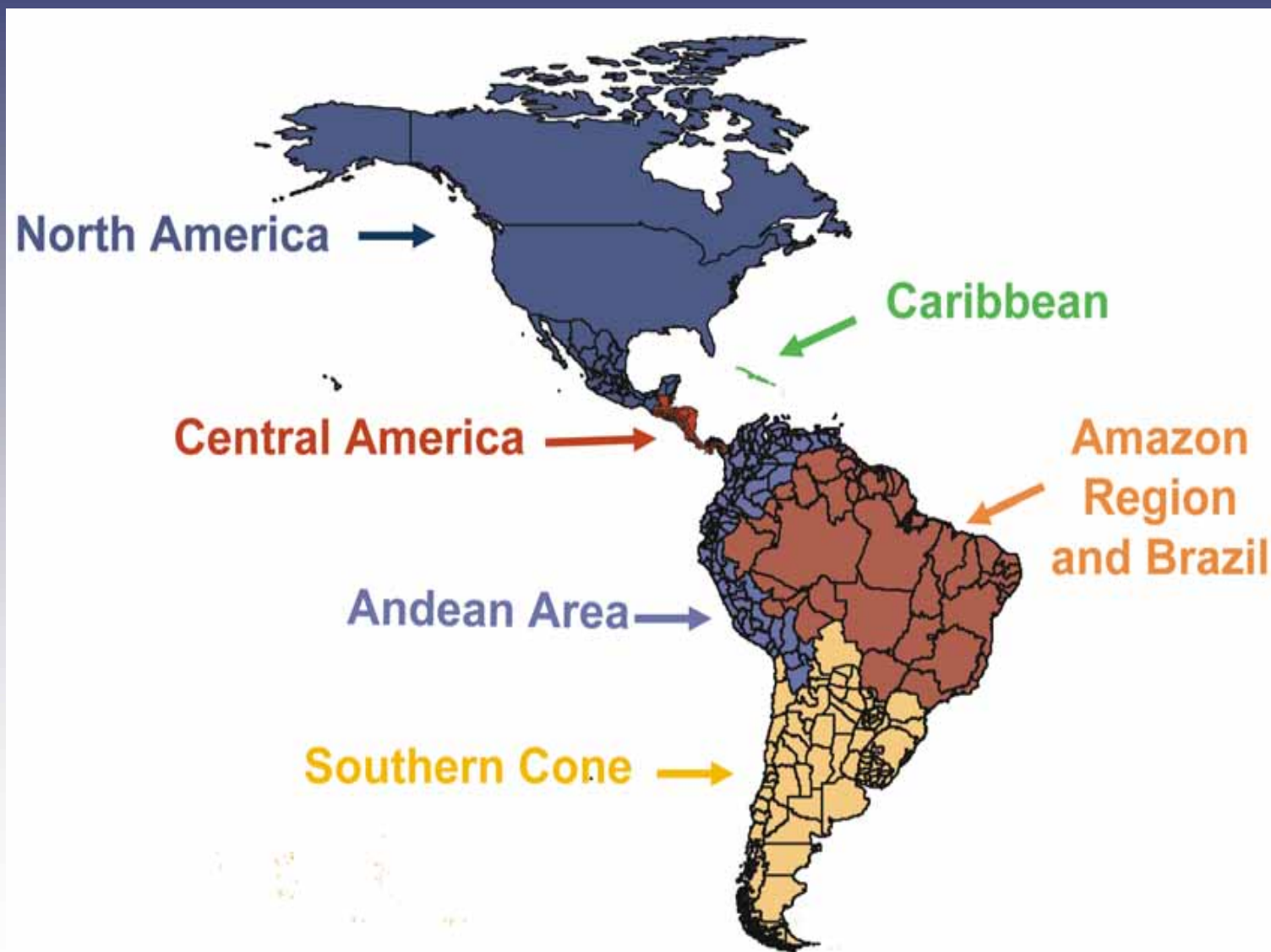


FMD IN NUMBERS, UK

- 2001 - 2030 Outbreaks
 - Source: illegal importation of food
 - 6-10 million animals culled
 - £ 6 billion spent (approx.)

- 2007 – 8 Outbreaks (Aug/Oct)
 - Source: breach in lab safety
 - £ 250 million spent (£2 M/day)

Hemispheric Plan for FMD Eradication 1988-2009



PRIORITY ZONES

- Territories of Venezuela and Ecuador
- Northern Bolivia NE Paraguay, bordering Brazil
- Chaco (Arg./Bol./Par)
- Unknown risk zones in northern Brazil (Amazon/Guianas).

WHAT IS PHEFA DOING? ONGOING PLANS

- Inter country missions to evaluate disease situation and programs´ structural flaws
- Quality control interlaboratory tests
- Border programs between Brazil/Paraguay, Arg/Bol/Par
- CVP intervention and CMA support to special plan (last quarter plan)
- Support brazil in redesigning plan
- Support countries to adhere to Sivcont.

WHAT IS PHEFA DOING?

ONGOING PLANS

FMD FREE AREA

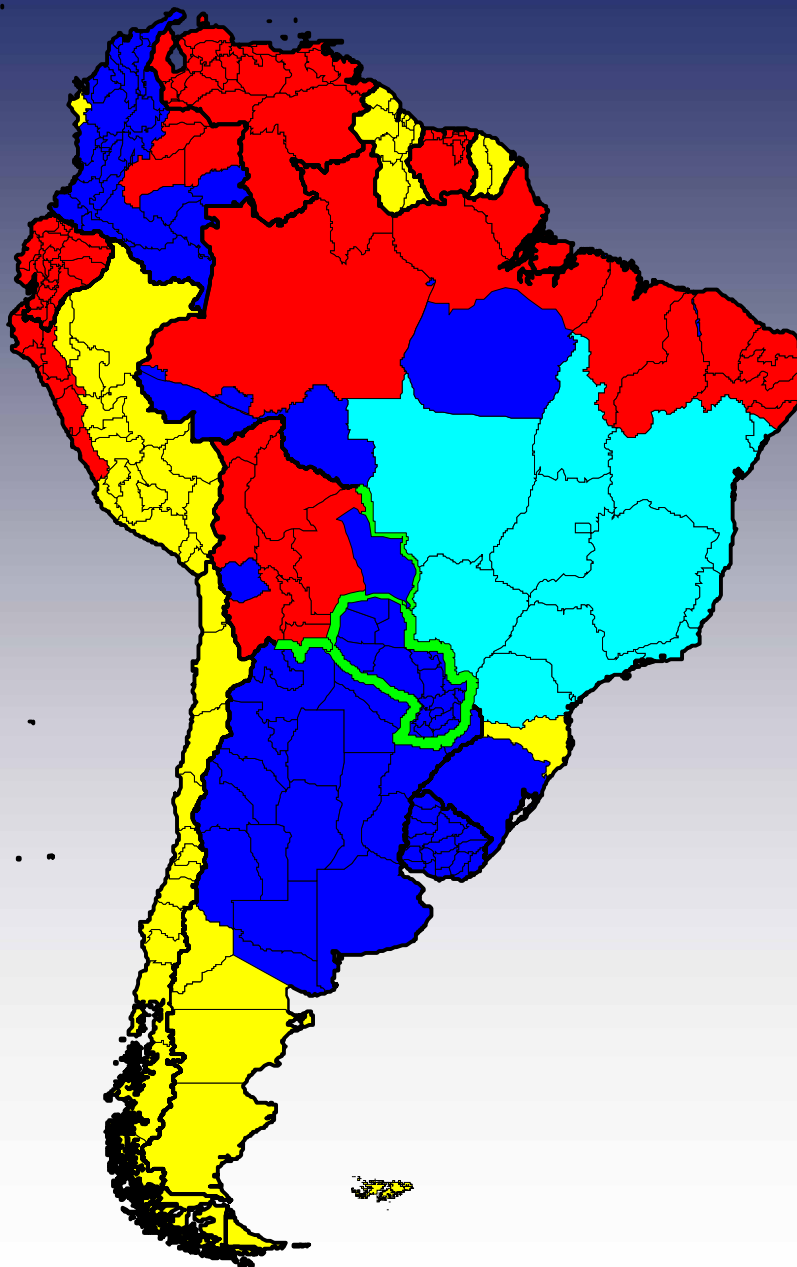
- Support development of contingency plans to central american countries.
- Train personnel in emergency attention.
- Develop Amazon Prevention Project (Brazil, Guyana and Venezuela) to protect disease free area.

SURFACE, HERDS AND BOVINES (BUFFALOES INCLUDED), BY FMD EPIDEMIOLOGICAL ZONE ACCORDING TO OIE South America, May, 2007

		Free w/out vaccination	Free With vaccination	Not Free	Suspended status	Total
Surface (Km2)	Nro.	2.739.520	4.856.135	6.125.514	3.594.422	17.315.591
	%	15,8	28	35.4	20,8	100
Herds w/ Bovines/ Buffaloes	Nro.	916.748	1.413.363	1.940.451	1.348.544	5.619.106
	%	16,3	25,2	34.5	24,0	100
Total Bovines/ Buffaloes	Nro	10.604.822	137.284.697	50.163.000	138.922.177	336.974.696
	%	3,1	40.7	15,0	41,2	100

FMD OIE STATUS MAY 2007

- Free w/out vaccination
- Free with vaccination
- Not free
- Status suspended
- High surveillance zone





www.panaftosa.org.br