



FAO/OIE  
**GF-TADs**

GLOBAL FRAMEWORK FOR THE  
PROGRESSIVE CONTROL OF  
TRANSBOUNDARY ANIMAL DISEASES

**OIE/FAO Global FMD Conference 2009**  
**June 26th 2009 - Paraguay**

**The global control of FMD  
challenges, opportunities and  
lessons learnt from the Global Rinderpest  
Eradication Campaign**

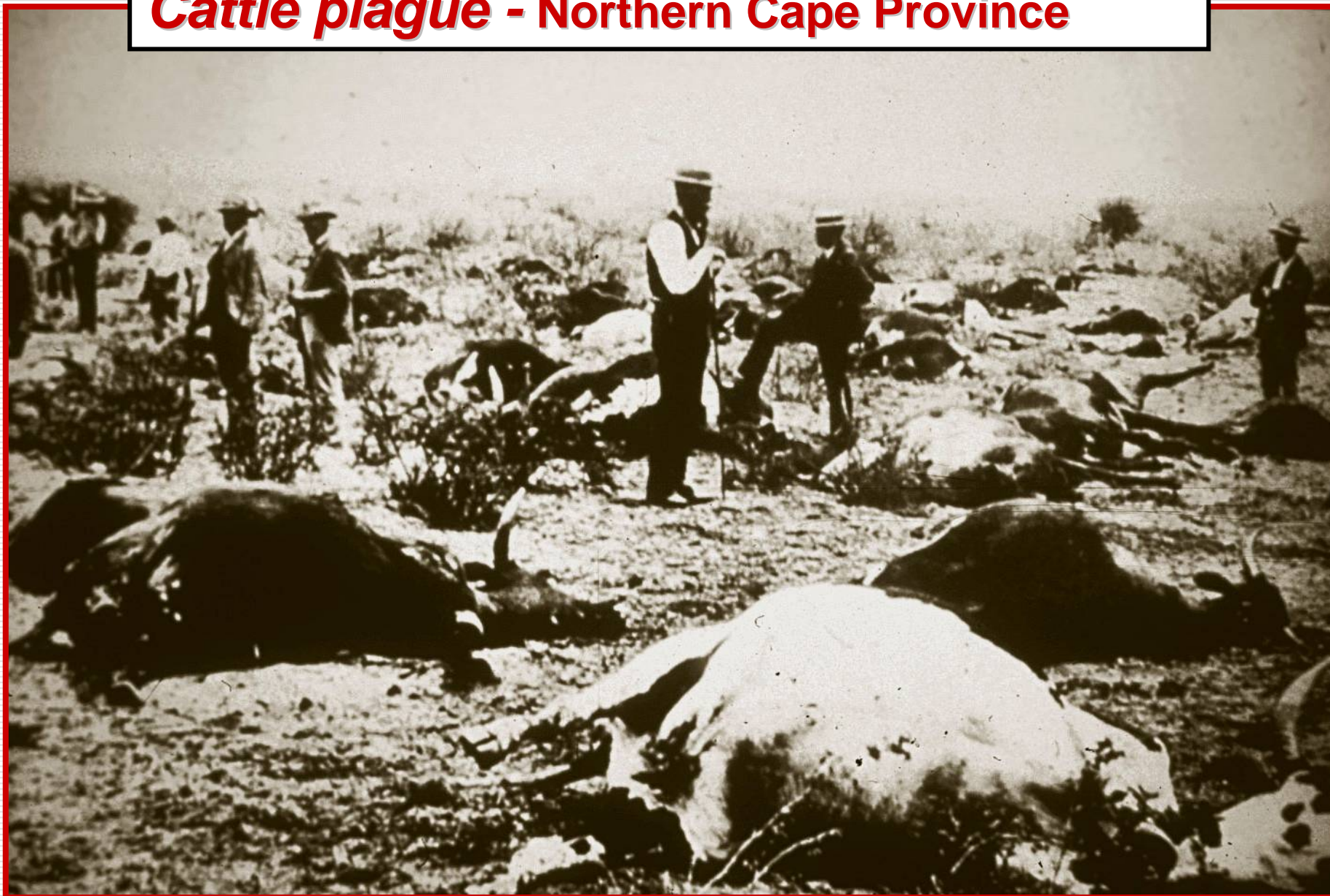
**Joseph Domenech, Keith Sumption, and Juan Lubroth**  
**Animal Health Service, FAO Rome**

# Importance of the disease

- Direct costs;  
Mortalities, reduction of productions...
- Indirect costs;  
Trade, movement limitations in  
extensive systems, ploughing and  
transport...
- Food insecurity



## ***Cattle plague - Northern Cape Province***



***Cape Colony - South Africa, 1897*** (Onderstepoort collection)



# Ensemble pour éliminer la peste bovine d'ici 2010

.....  
Programme mondial d'éradication de la peste bovine



Contacter le Secrétariat du GREP ■ ■ ■ ■ ■  
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fax: + 39 06 57053023 ■ ■ ■ email: [empres-livestock@fao.org](mailto:empres-livestock@fao.org)  
.....  
■ ■ ■ ■ ■ [www.fao.org/EMPRES/GREP](http://www.fao.org/EMPRES/GREP) ■ ■ ■ ■ ■

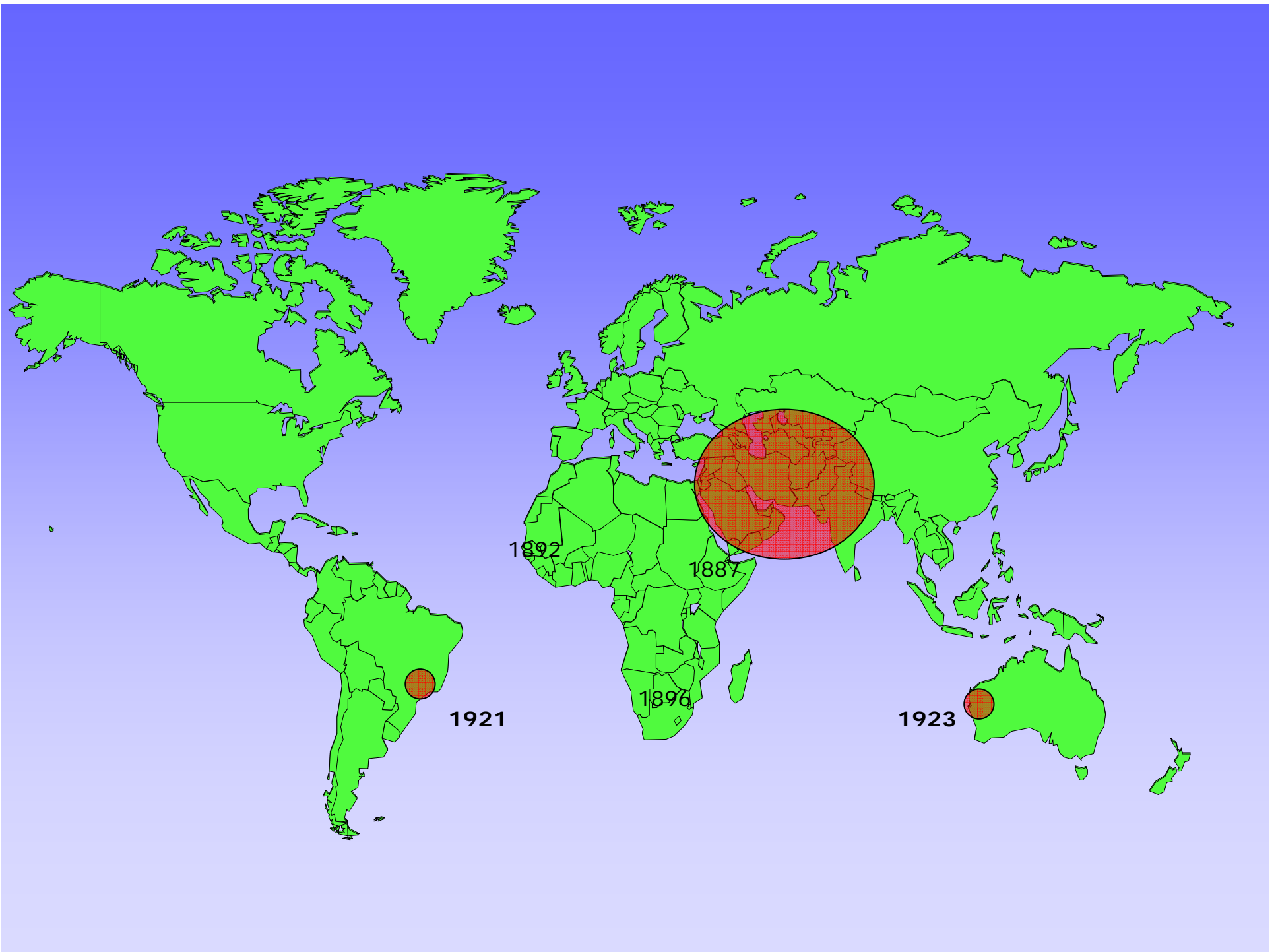


Organisation des Nations Unies  
pour  
l'alimentation et  
l'agriculture



Produit avec le soutien financier du Gouvernement irlandais

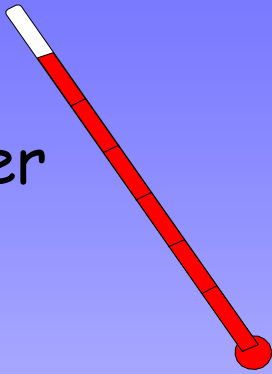




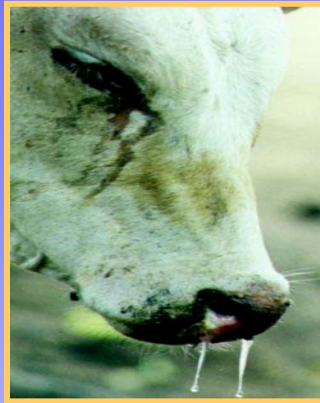


# What is rinderpest?

fever



*Ocular and nasal  
discharge*



discharges



erosions



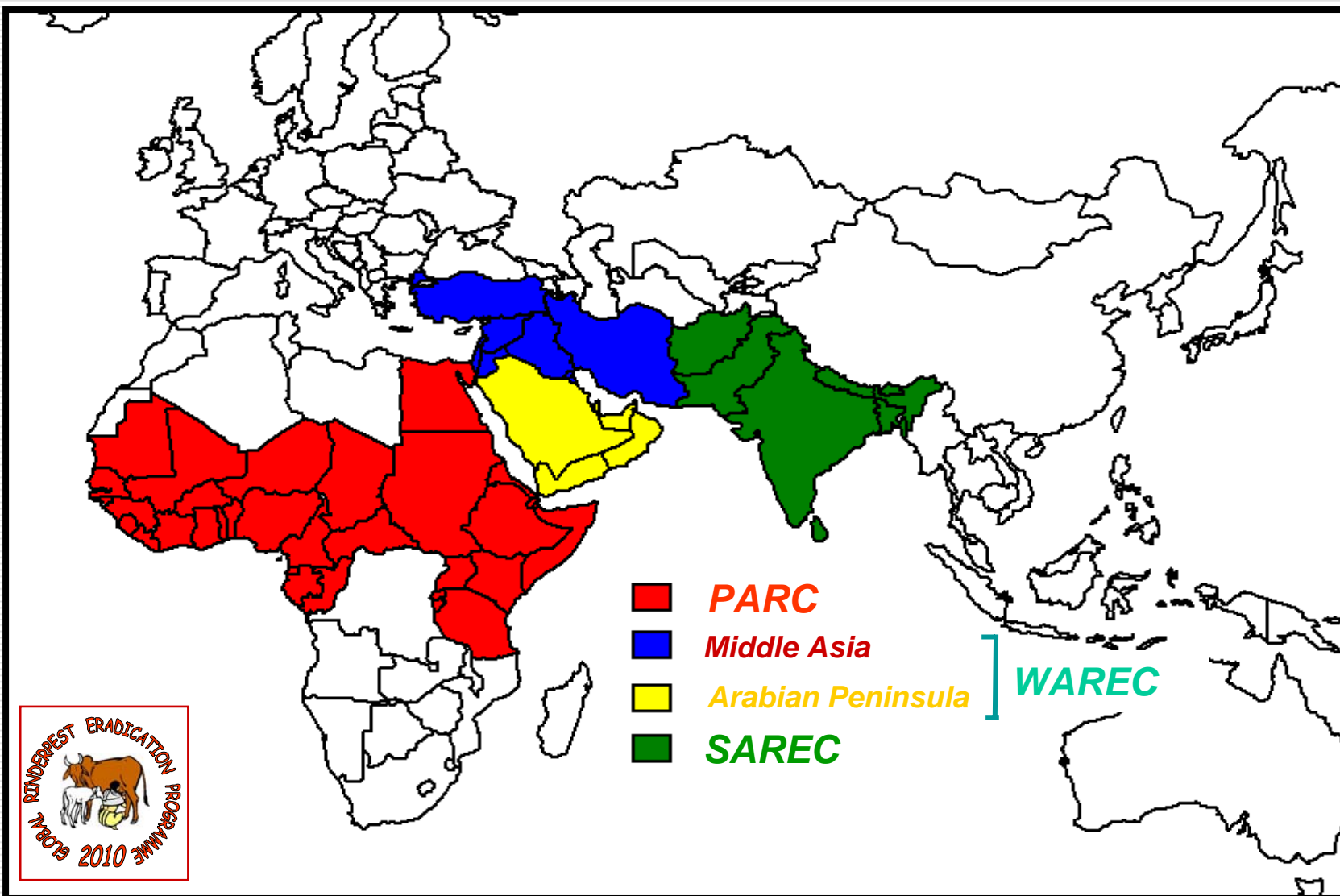
diarrhoea or  
dysentery



dehydration  
and death

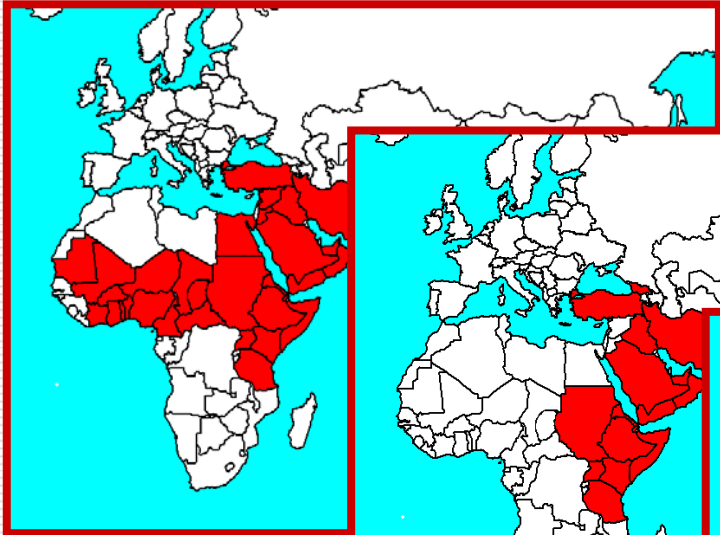
# GREP

## *Regional Rinderpest Eradication Campaigns*

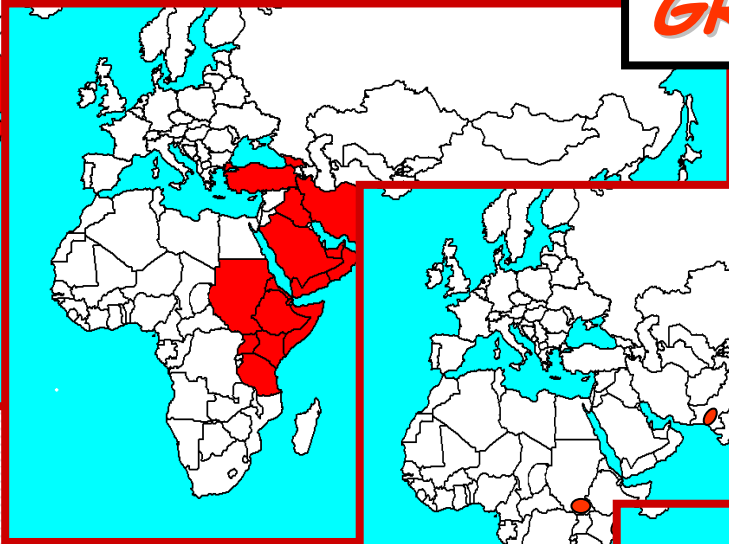




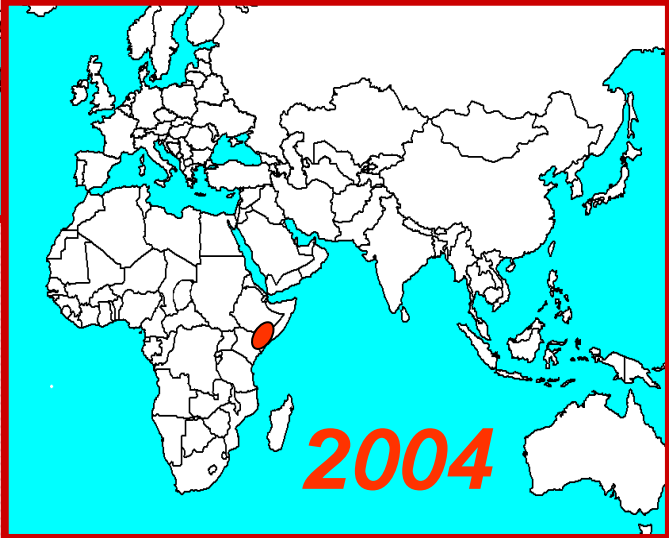
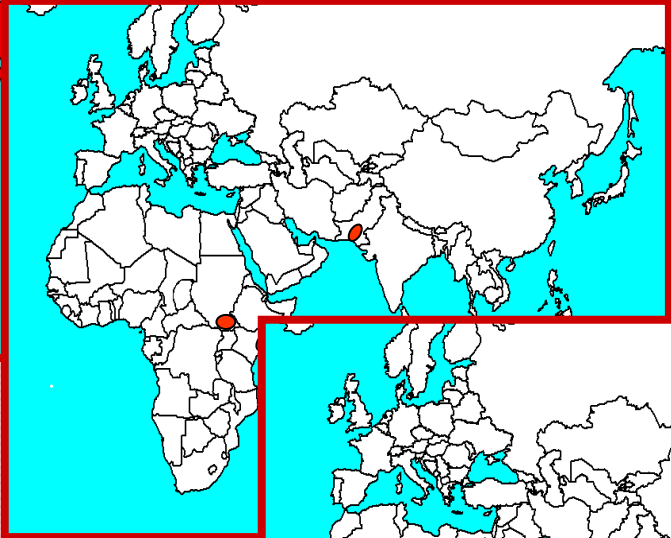
# ***GREP PROGRESS***



***Early 1980s***



***Early 1990s***

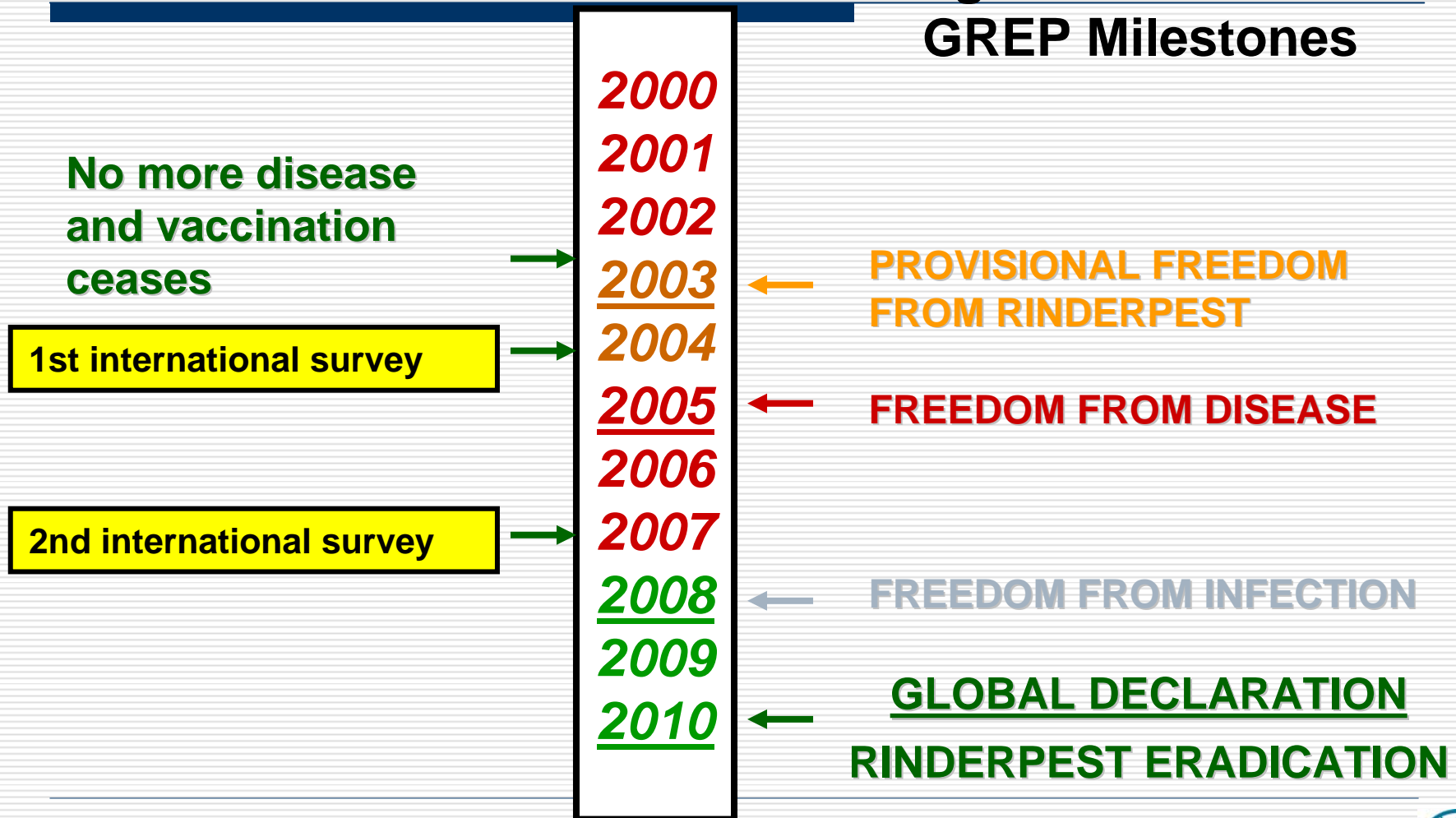






# THE PROPOSED OIE/GREP PATHWAY TO GLOBAL RINDERPEST FREEDOM

## Regional and Global GREP Milestones



# Vaccine issue

## Quality Control and Seromonitoring

Quality assurance of vaccination programmes are vital to ensure that herd immunity targets are attained.

The advent of the C-ELISA and H-ELISA were paramount to provide timely, high *throughput* results

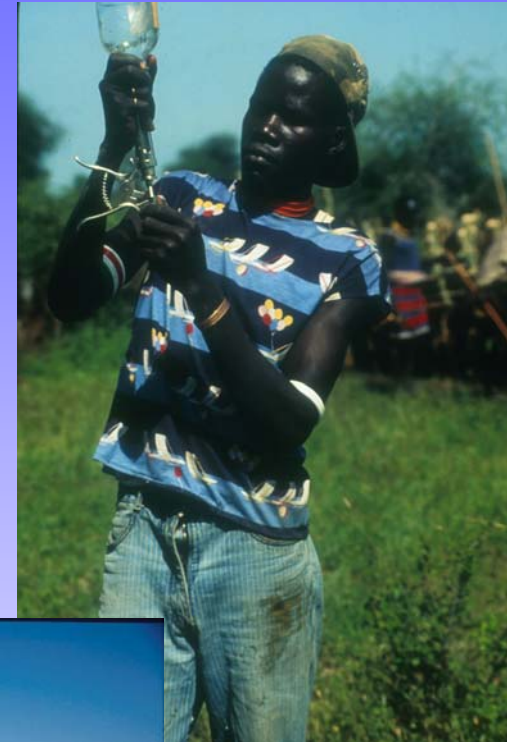
# Vaccine Failure

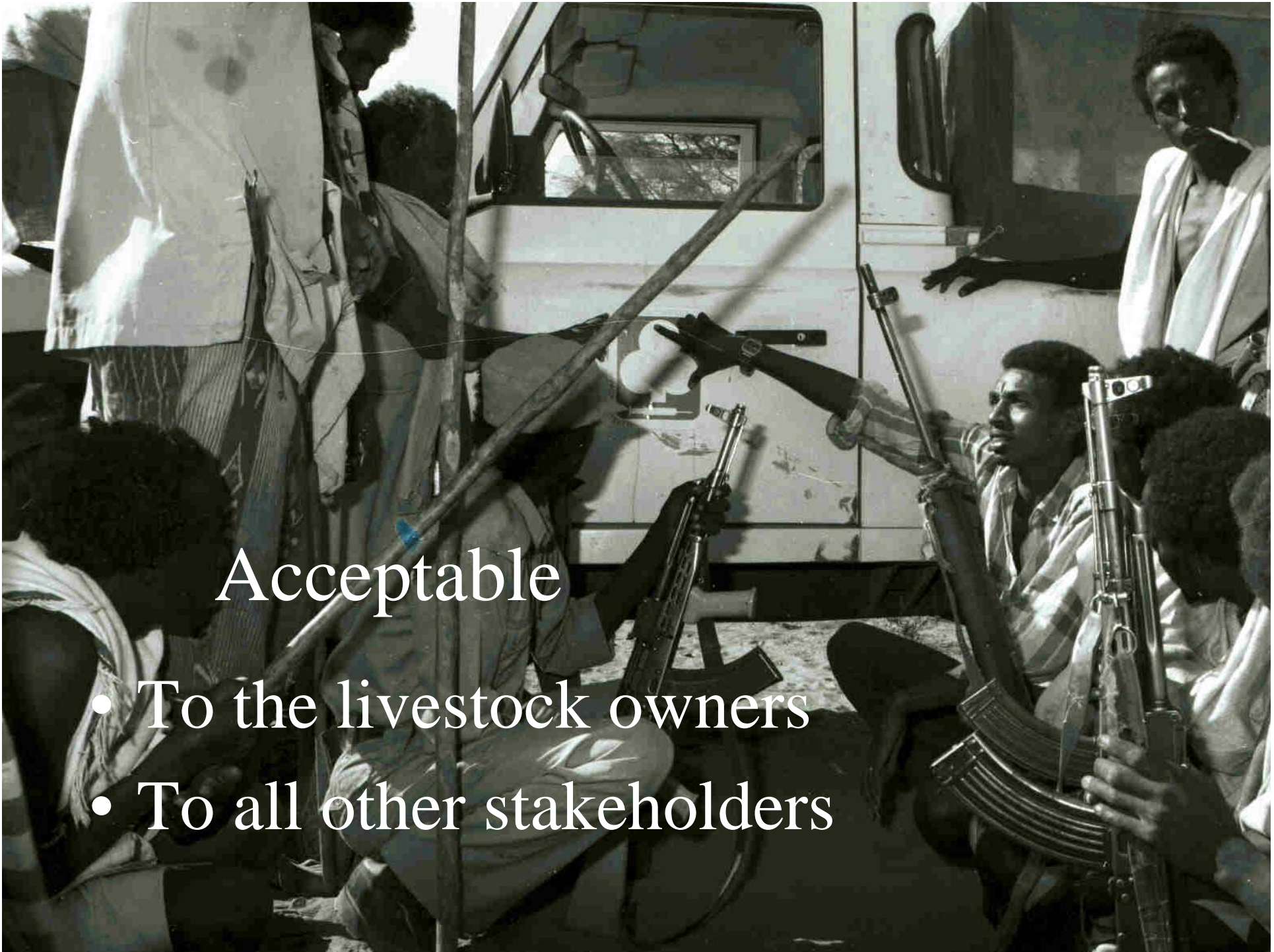
- **Maternal derived antibody in calves**
  - 10-11 month extinction point
  - Calves with high titers do not respond to vaccination
- **Thermostability**
  - Plowright/Mariner/Threalose
  - Vectored vaccines
- ***Vaccination* strategies and veterinary infrastructure**

# Differentiating Vaccines

- **Capripox vectored-rinderpest vaccine (LSD/RP and ....SP-GP/PPR)**
- **Vaccinia-vectored rinderpest vaccine, (HA and F genes)**
- **Differentiation between vaccination and infection**
- **Heterologous vaccine - PPR**

# Participatory Approaches





Acceptable

- To the livestock owners
- To all other stakeholders



# Participatory Disease Searching

- Targeted surveillance
- The use of participatory rural appraisal methods to search for disease outbreaks
- Highly sensitive
  - Traditional information networks
  - Extended time frame



# Next steps

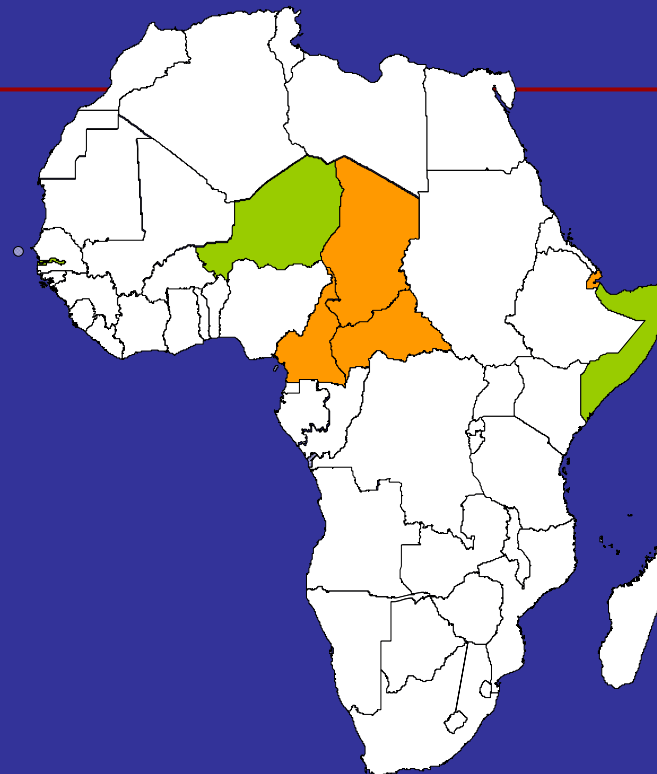
- **Countries dossiers presented to OIE for recognition of RP free status**
- **Joint FAO OIE Committee for global recognition**
- **Book on RP and eradication history**

# Next steps

- **Global Declaration of RP Eradication 2010**
- **International agreement for storage and confinement of virulent rinderpest viruses isolates and live vaccine stocks**

# Rinderpest

Activities	Countries
Assistance for Rinderpest dossier formulation	Bangladesh, Comoros, Kosovo, Liberia, Sao Tome e Principe.
Dossiers submitted to OIE with problem	Sierra Leone, Turkmenistan, Laos
Assistance for strategy development, kits and sampling	Cameroon, Central African Republic, Chad, Djibouti, Georgia, Israel, Kazakhstan, Nigeria, Niger, West Bank and Gaza, Russia, Saudi Arabia, Somalia, Sri Lanka, Syria, UAE and Yemen
Surveillance needs to be undertaken or no information	Israel*, Kazakhstan**, West Bank and Gaza**, Saudi Arabia, Sri Lanka and Russia
Ongoing surveillance	Azerbaijan, Djibouti***, Cameroon*, Central African Republic*, Chad*, Georgia*, United Arab Emirate, Syria*, Yemen*
Dossier ready or already been sent to OIE	Gambia, Kuwait, Qatar, Niger, Cambodia and Somalia,



\* ELISA kit already in country

\*\* Starting the field surveillance in June 2009

\*\*\* Samples to be tested in neighbouring laboratory country

Infection free: 137

Disease free: 3

Provisionally free: 12

NB. Commitment for 2010 deadline for the following: Saudi Arabia, Sri Lanka and Russia

# FMD – differences to rinderpest

- no single vaccine
- immunity to vaccination: short lived
- multi-species: ruminants and pigs (worldwide), wildlife

# Lessons learned

- Long term vision
- International public good
- Government commitment
- International community support
- Support from International and Regional Organizations

# Lessons learned

– Necessary tools in place:

Official pathway OIE

Vaccines and quality control (PANVAC),  
Laboratory diagnostic tools and quality control

Networks for surveillance, laboratory diagnosis, training...

- Community based approaches where appropriate

- Research: wildlife role, thermostable vaccines

# Lessons learned

## GREP model

### International Coordination

- A platform to engage global support and partnerships, evolve and adapt to challenges
- A Secretariat to support regional efforts, audit progress and communicate to all parties



# Foot and Mouth Global Disease Control

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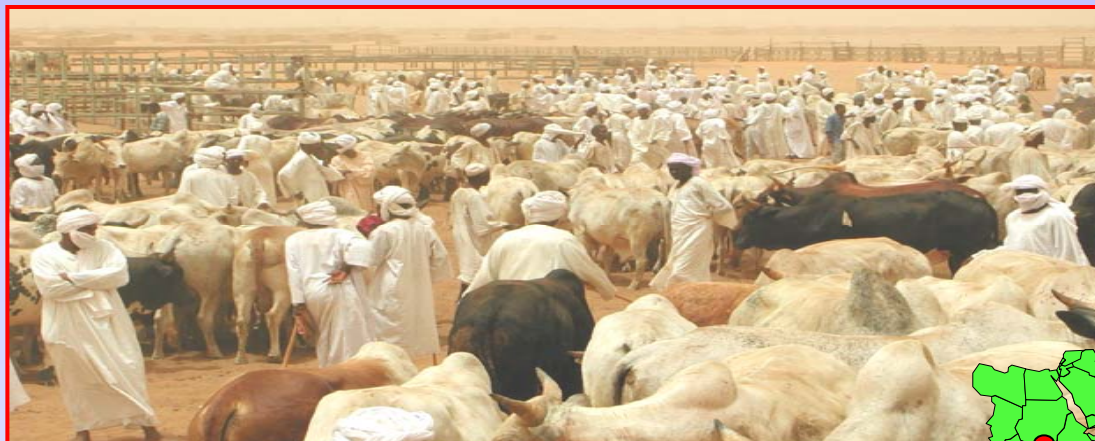


## Challenges and opportunities



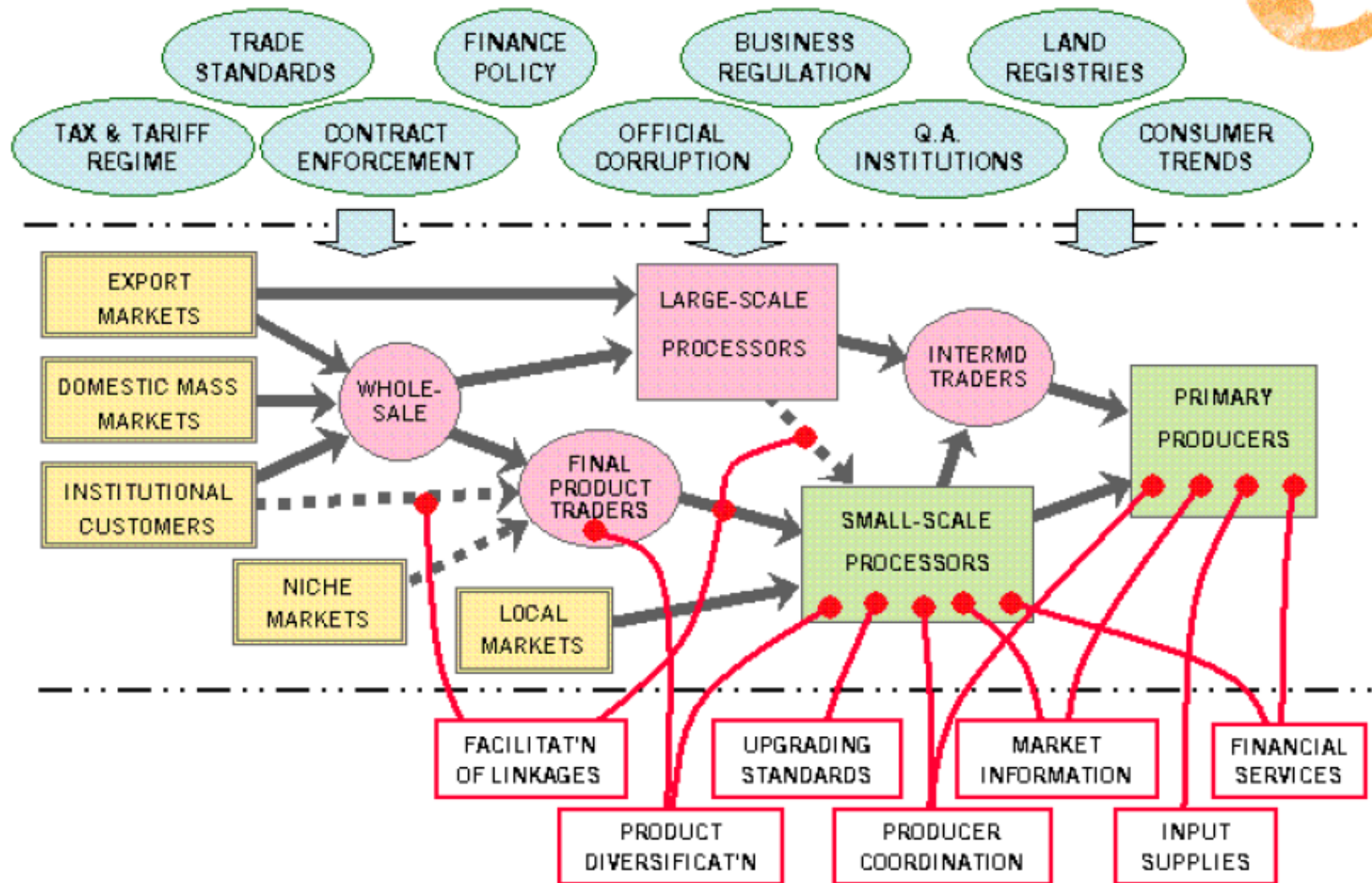
# Surveillance

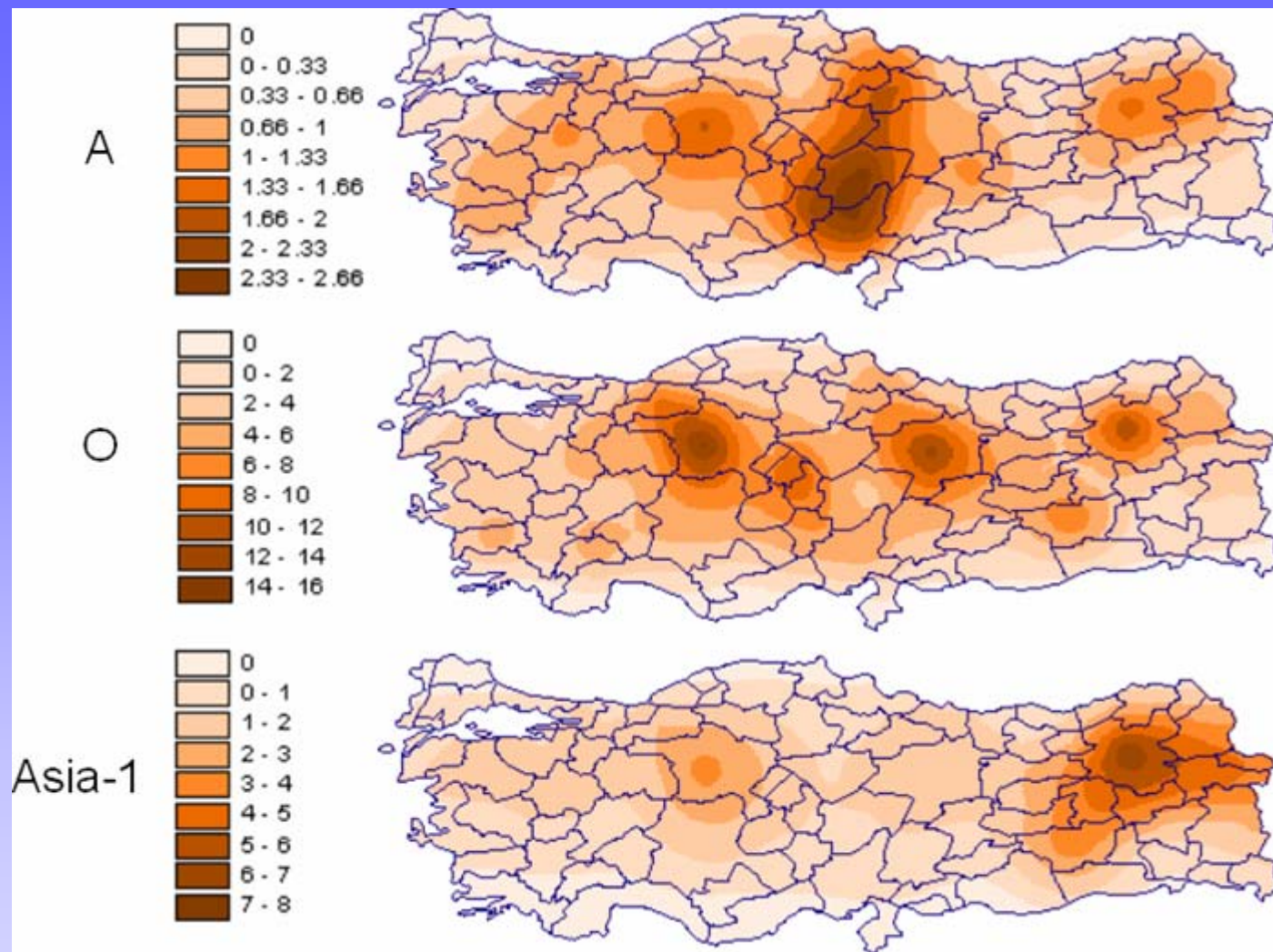
- methods: randomized, targeted
- risk identification: high risk situations, markets, borders, wildlife domestic interface...



# The Market Map complete

## PRACTICAL ACTION





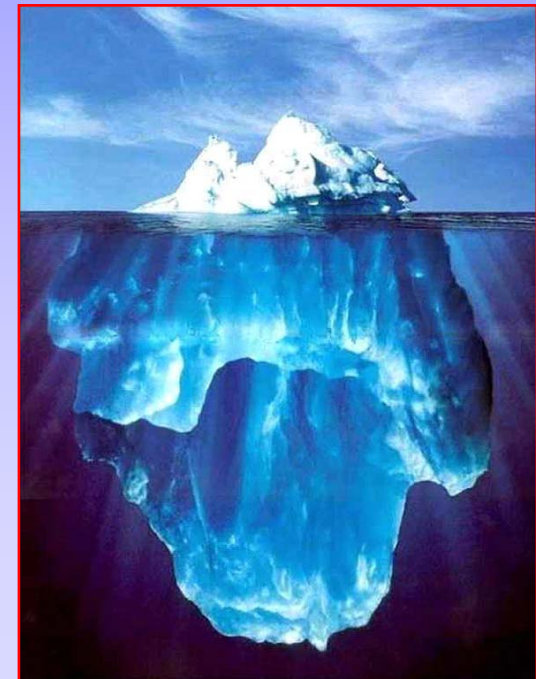
## FMD "Hotspots"

Gilbert, M., et al. (2003). Animal trade and serotype influence persistence of foot-and-mouth disease in Turkey



# Surveillance

- Networks:
  - back to back with laboratory networks
- International Reference Centers
- Rumor tracking systems
- Information systems: WAHIS
- Disease intelligence: GLEWS
- Sample shipment
- Research



# Participatory approaches

- People to find their solutions
- Ownership
- Active surveillance done by professionals and risk-targeted
- Closer partnership between veterinary technicians and livestock owners
- Better understanding of social context

# Public Private Partnership

Private producers, traders,  
industry, vaccine producers...

Are in the forefront for surveillance,  
detection, reporting, response

# **Diagnostic Veterinary Laboratories**

- OIE and FAO International Reference Laboratories and Centres**
- International OIE FAO Network**
- Sub Regional and Regional Networks of National Diagnostic Laboratories**
- Research to improve the diagnostic tools**

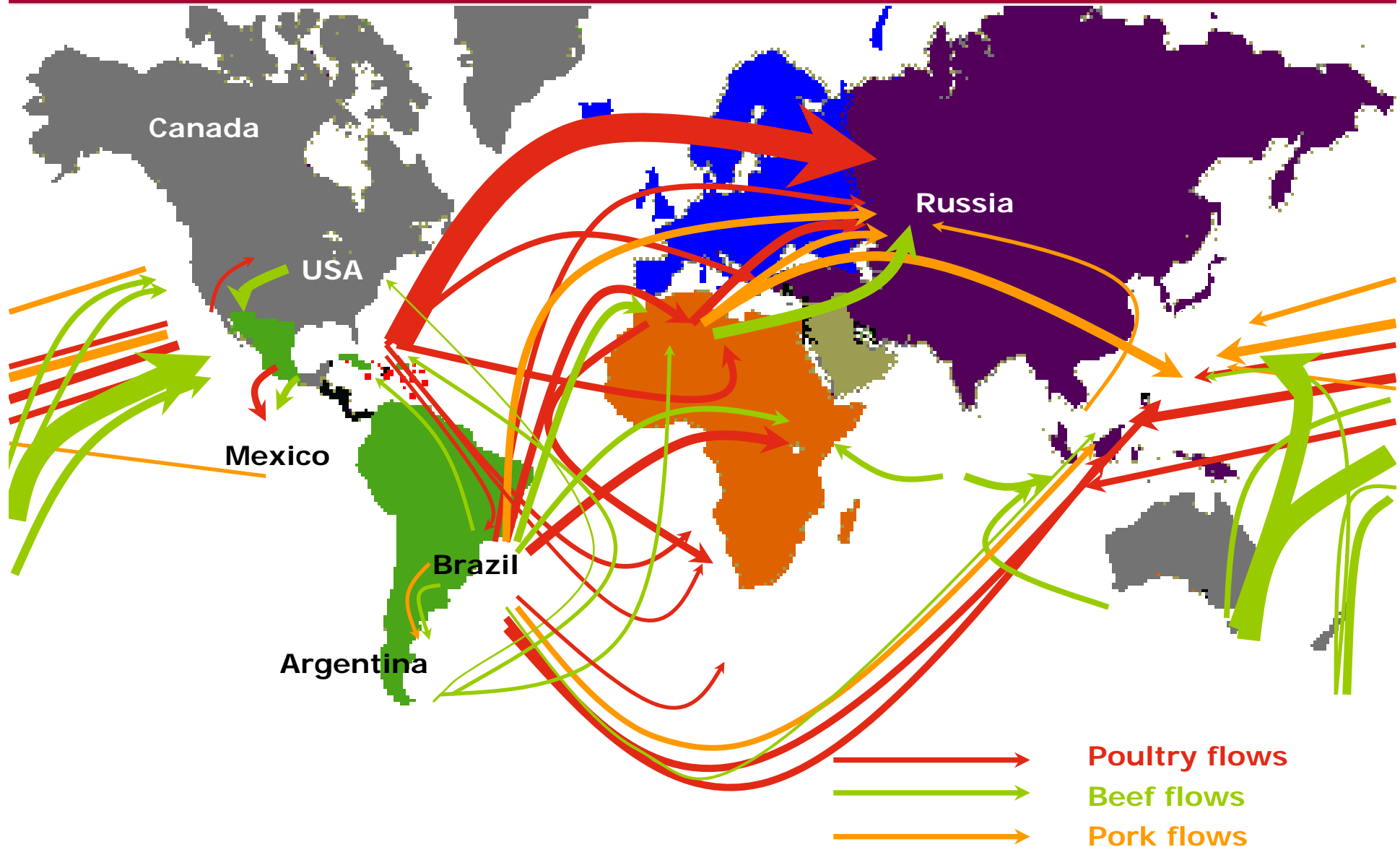


# **Movements of Animals and Products – Traceability**

**Globalization of trade and  
movements of people**



# Trade in animal products





# Important tool for many purposes

Traceability of products

Traceability of animals

Theft control

Management on farm

Health certificates



Agricultural policy

Animal Welfare

Herdbook

Application of certain medicaments

Disease control

**distribution of costs among all stakeholders**



# Vaccines

**Efficient tool**

**Several methods**

**Limitations**

**Research**

# Wildlife

- Cost of sampling
- Representativity of the surveys
- Preservation of samples
- Diagnostic tests



# Interface Wildlife domestic animals

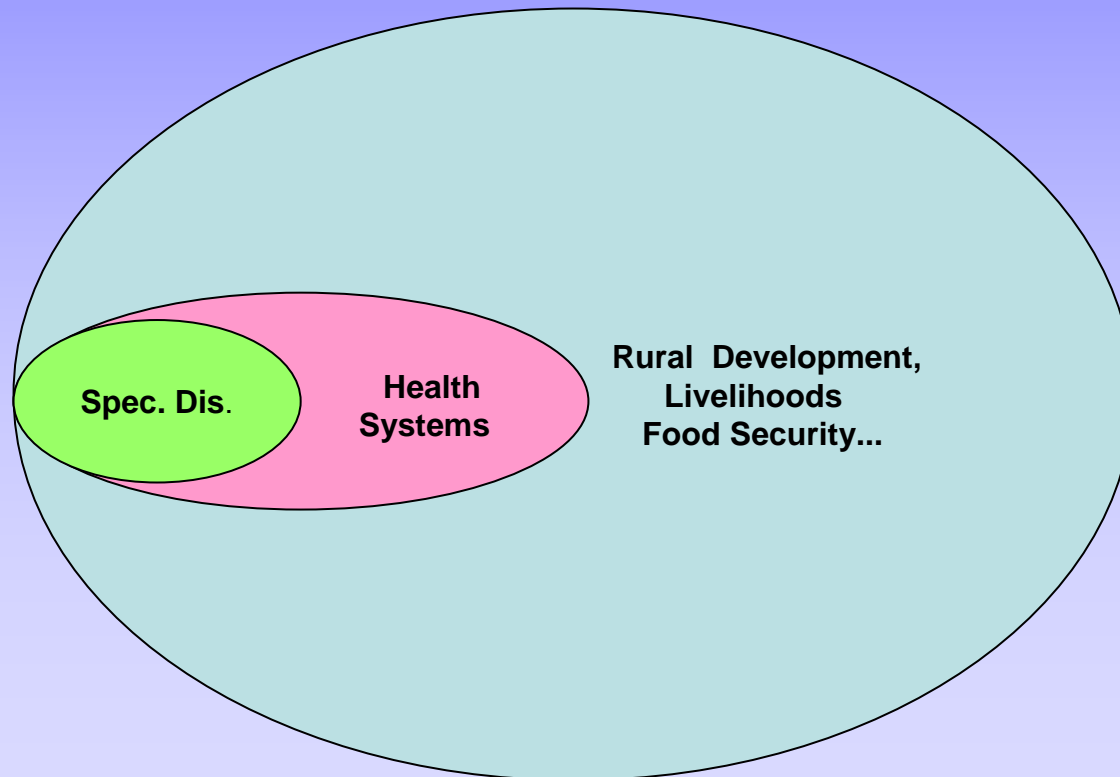
- Problems with fences
- Human and domestic herds introduction
- Transfrontalier Conservation Areas





# Holistic approaches

## Animal health in the wider rural development and health systems contexts



# **GLOBAL APPROACHES**

**Socio economic context**

**Cultural contexts**

**Farming systems**

**Good Governance and  
Veterinary Services**

**Public-Private partnership**

# **Very different situations**

- Different farming systems**
- Trade contexts**
- Economical situations**
- Legislations**
- Cultural contexts**

# **Very different situations**

- Eradication in the European Union**
- Eradication in parts on Southern America and Southern Africa**
- Good progress in parts of South East Asia**
- Poor results in Sub Saharan Africa and Central Asia**

# Global Vision

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- Long Term Vision
- Regional Approaches adapted to each context

**The Progressive Control  
Pathway (PCP)**



## Why Regional Roadmaps?

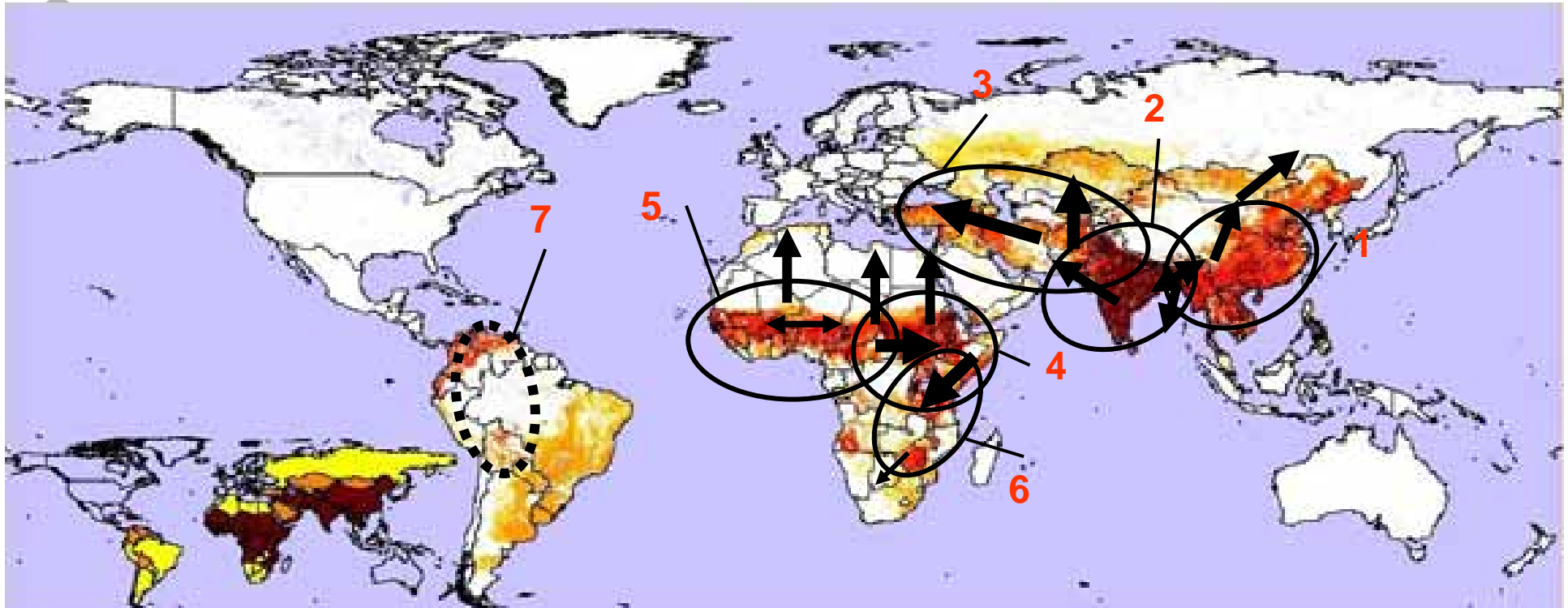
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- **successfully applied in Europe (1954-onwards: EuFMD)**
- **Regional programs - being applied in South-East Asia and South America**
- **FMD virus strains differ between regions –**
  - **7 major virus pools**
  - **vaccine recommendations differ**
- **distinct regional contexts for managing transboundary diseases**
- **regional political and economic characteristics**

# The Global Challenge - How to co-ordinate national efforts to achieve regional – and global progress?

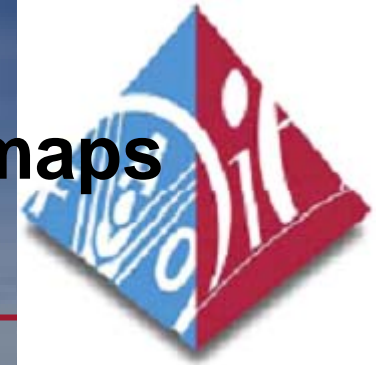


**Seven major FMD virus pools**  
**Continual virus circulation, evolution and emergence within regional pools**  
**Epidemic jumps between pools and to free regions (arrows)**



# Global Control through Regional Roadmaps for each of the seven virus pools

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*promoting national efforts in  
line with the Progressive  
Control Pathway (PCP)*

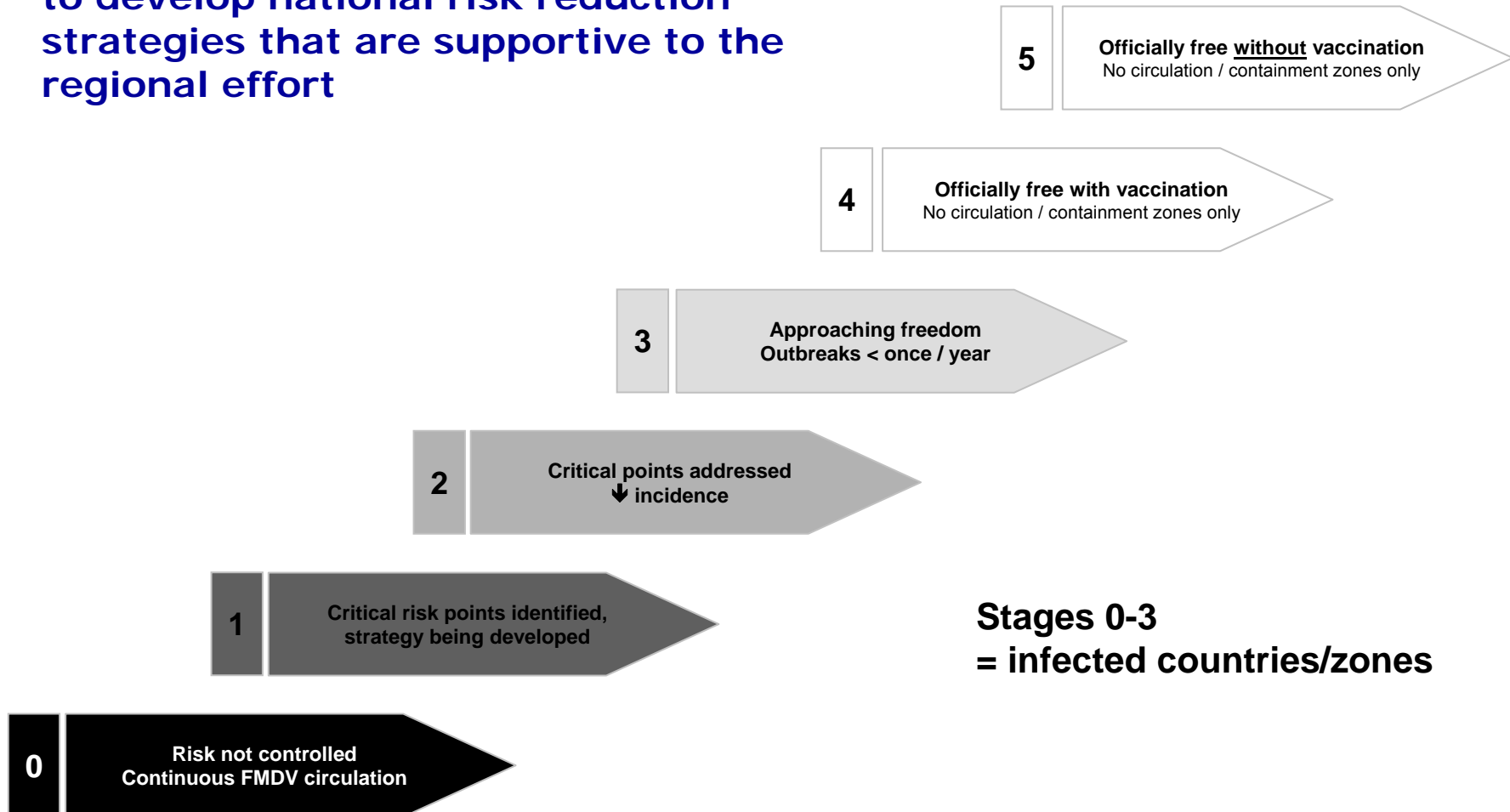
Recommendation of the Global  
(Open) Session of  
the EuFMD research group held in  
Erice, Sicily, October 2008



# FAO Progressive control Pathway - risk reduction approach



- not a top down prescribed approach: but each MS encouraged to develop national risk reduction strategies that are supportive to the regional effort



## Regional Roadmaps

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➤ **workshops to draft Roadmaps for:**

- **West EurAsia (Shiraz 11/08)**
- **sub-Saharan Africa (Nairobi 1/09)**
- **North Africa (Algiers, 2/09) and Middle-east (Beirut, 4/09)**

➤ **each Roadmap:**

- **has a vision - up to 2020**
- **uses the regional support structure**
  - ▣ **Regional Animal Health Centers of FAO/OIE/regional partners**
  - ▣ **reference centers (outside of region if required)**

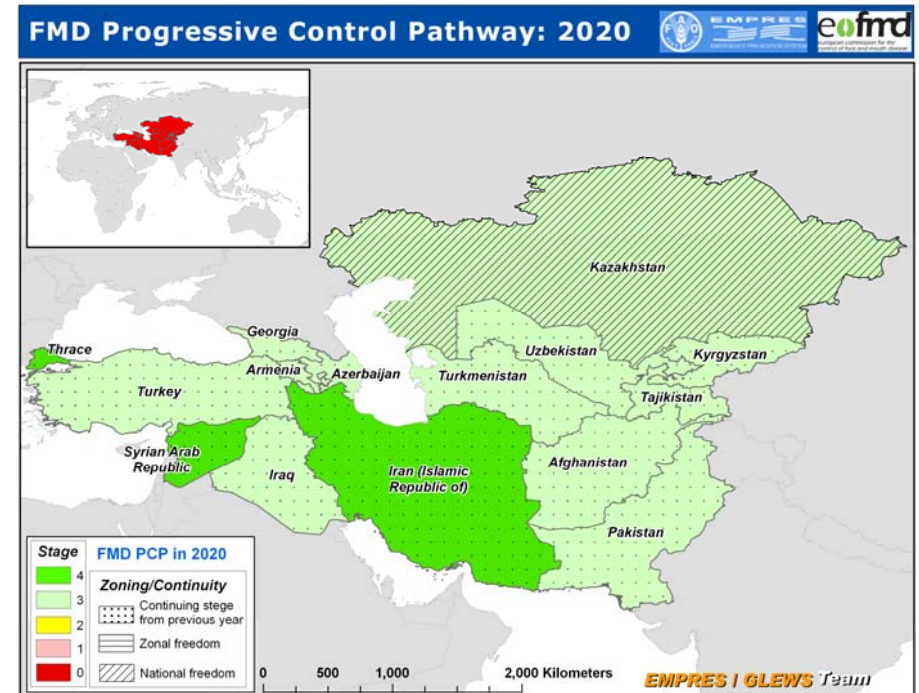
# Vision for the West EurAsia Roadmap for FMD Control: Shiraz, Iran - 11/08



Regional cooperation among Eurasian countries .....

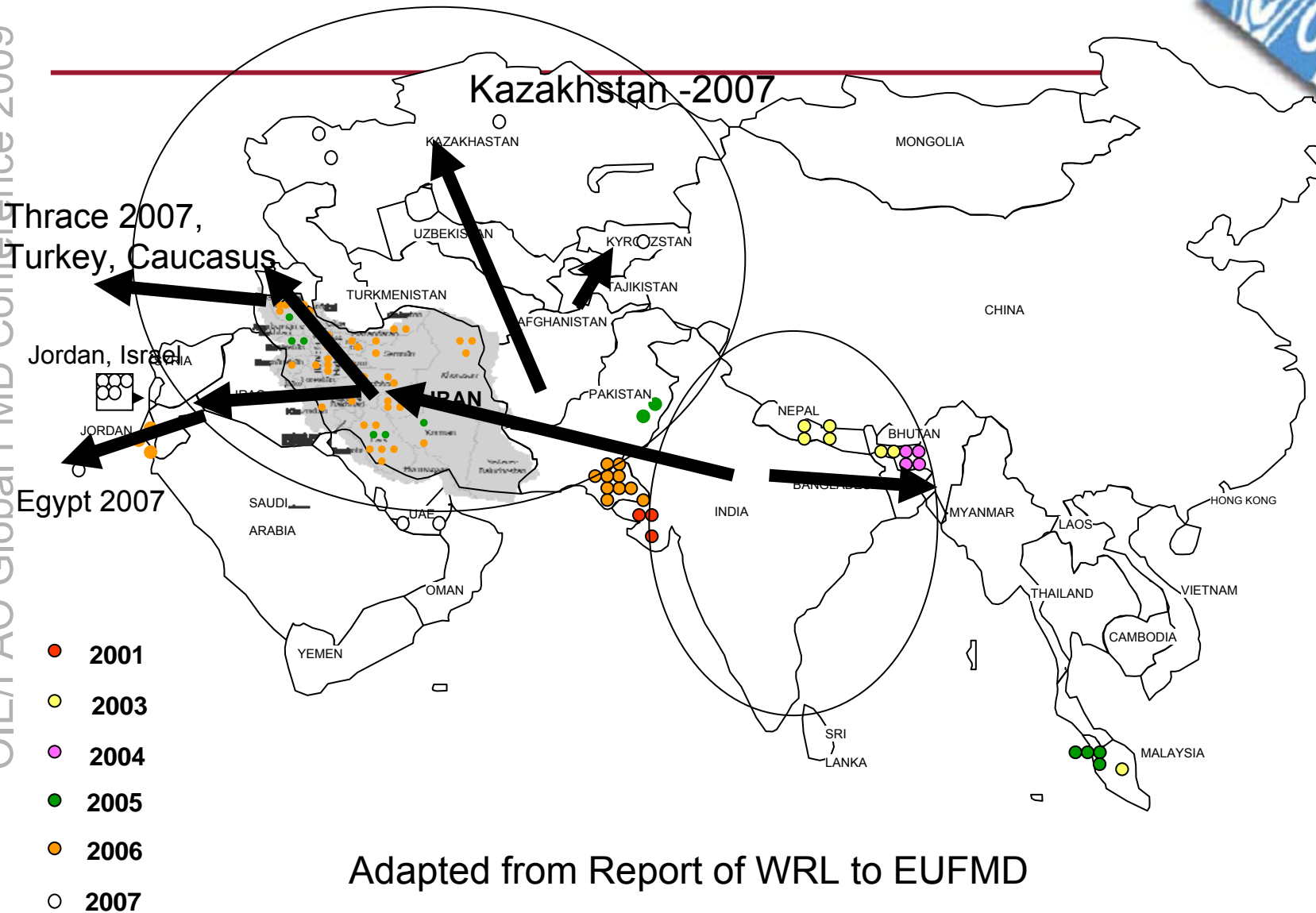
for the progressive control of FMD through public and private partnerships

leading towards freedom of clinical disease by 2020 for regional economic development, food security, and poverty alleviation.





OIE/FAO Global FMD Conference 2009



# Roadmap

## West EurAsia – Roadmap to 2020 - expected country progression (Shiraz Meeting Report, 2008)



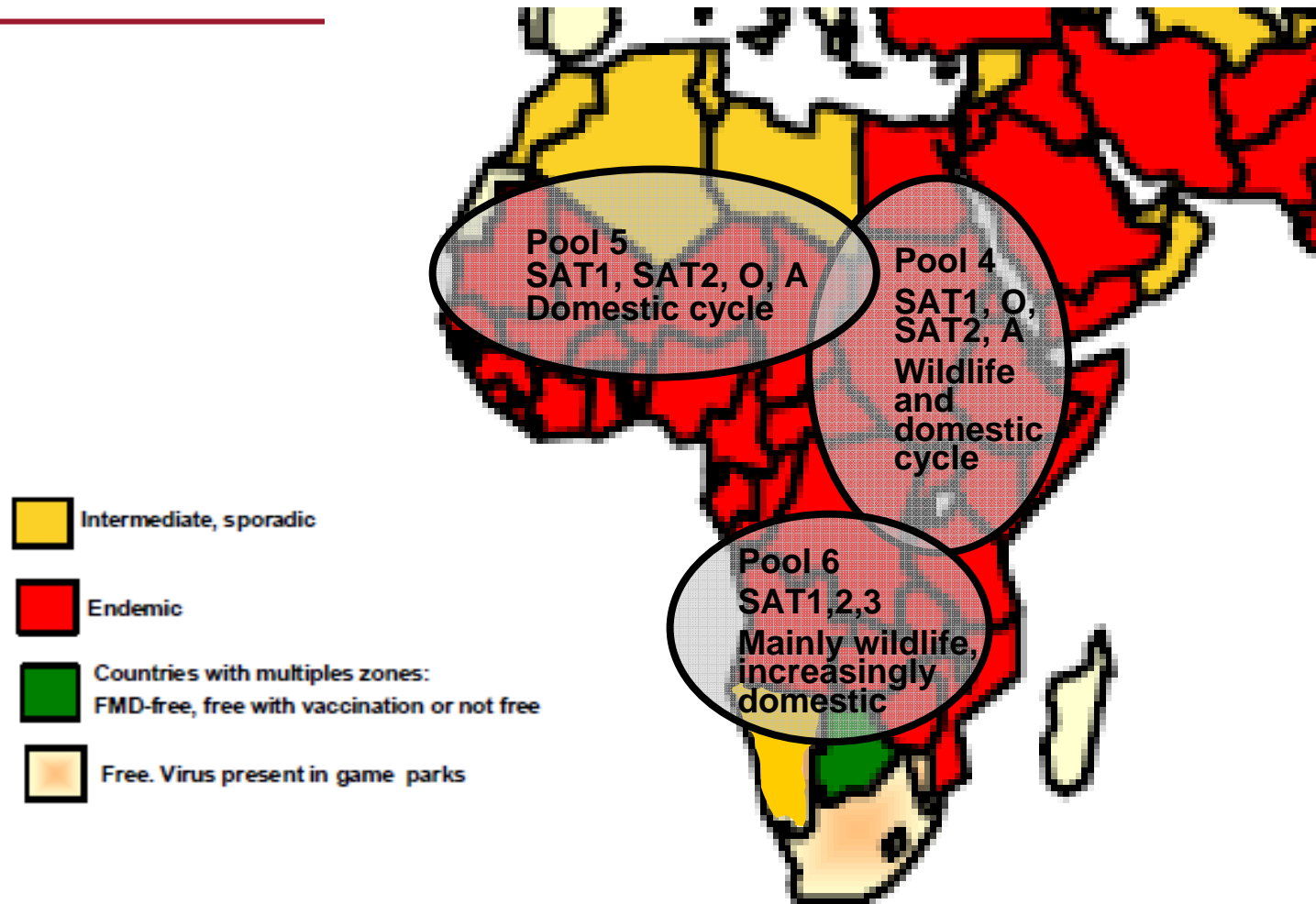
West EurAsia	Countries	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
		Kazakh	Level 1	Level 2	Level 3	Level 3	Level 3	Level 3	Level 3	Level 3	Level 3	Level 3	Level 3
Kyrgyz	Level 1	Level 2	Level 3	Level 3	Level 3	Level 3	Level 3	Level 3	Level 3	Level 3	Level 3	Level 3	Level 3
Tajik	Level 0	Level 0	Level 1	Level 1	Level 1	Level 2	Level 2	Level 2	Level 2	Level 2	Level 2	Level 2	Level 2
Turkmen	Level 0	Level 0	Level 1	Level 1	Level 1	Level 2	Level 2	Level 2	Level 2	Level 2	Level 2	Level 2	Level 2
Uzbek	Level 0	Level 1	Level 2	Level 2	Level 2	Level 2	Level 2	Level 2	Level 2	Level 2	Level 2	Level 2	Level 2
AFG	Level 0	Level 1	Level 1	Level 1	Level 1	Level 2	Level 2	Level 2	Level 2	Level 2	Level 2	Level 2	Level 2
IRN	Level 2	Level 2	Level 3	Level 3	Level 3	Level 3	Level 3	Level 3	Level 3	Level 3	Level 3	Level 3	Level 3
PAK	Level 0	Level 1	Level 1	Level 1	Level 1	Level 2	Level 2	Level 2	Level 2	Level 2	Level 2	Level 2	Level 2
TURK	Level 1	Level 2	Level 2	Level 2	Level 2	Level 2	Level 2	Level 2	Level 2	Level 2	Level 2	Level 2	Level 2
Thrace	Level 3	Level 3	Level 3	Level 3	Level 3	Level 3	Level 3	Level 3	Level 3	Level 3	Level 3	Level 3	Level 3
added zones	Level 3	Level 3	Level 3	Level 3	Level 3	Level 3	Level 3	Level 3	Level 3	Level 3	Level 3	Level 3	Level 3
Syria	Level 4	Level 4	Level 4	Level 4	Level 4	Level 4	Level 4	Level 4	Level 4	Level 4	Level 4	Level 4	Level 4
Iraq	Level 1	Level 1	Level 2	Level 2	Level 2	Level 2	Level 2	Level 2	Level 2	Level 2	Level 2	Level 2	Level 2
Armenia	Level 2	Level 3	Level 3	Level 3	Level 3	Level 3	Level 3	Level 3	Level 3	Level 3	Level 3	Level 3	Level 3
Azerbaijan	Level 2	Level 3	Level 3	Level 3	Level 3	Level 3	Level 3	Level 3	Level 3	Level 3	Level 3	Level 3	Level 3
Georgia	Level 2	Level 3	Level 3	Level 3	Level 3	Level 3	Level 3	Level 3	Level 3	Level 3	Level 3	Level 3	Level 3

	N	Z	
Level 0	Level 0	hatched	0 درجة
Level 1	Level 1		1 درجة
Level 2	Level 2		2 درجة
Level 3	Level 3		3 درجة
Level 4	Level 4		4 درجة
Level 5	Level 5		5 درجة

# Summary of FMD status in Africa

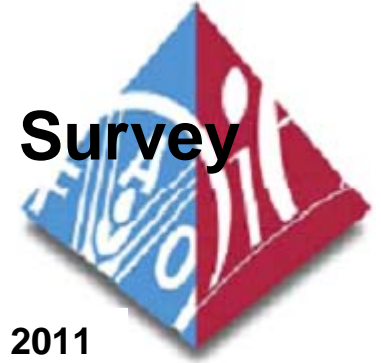


OIE/FAO Global FMD Conference 2009

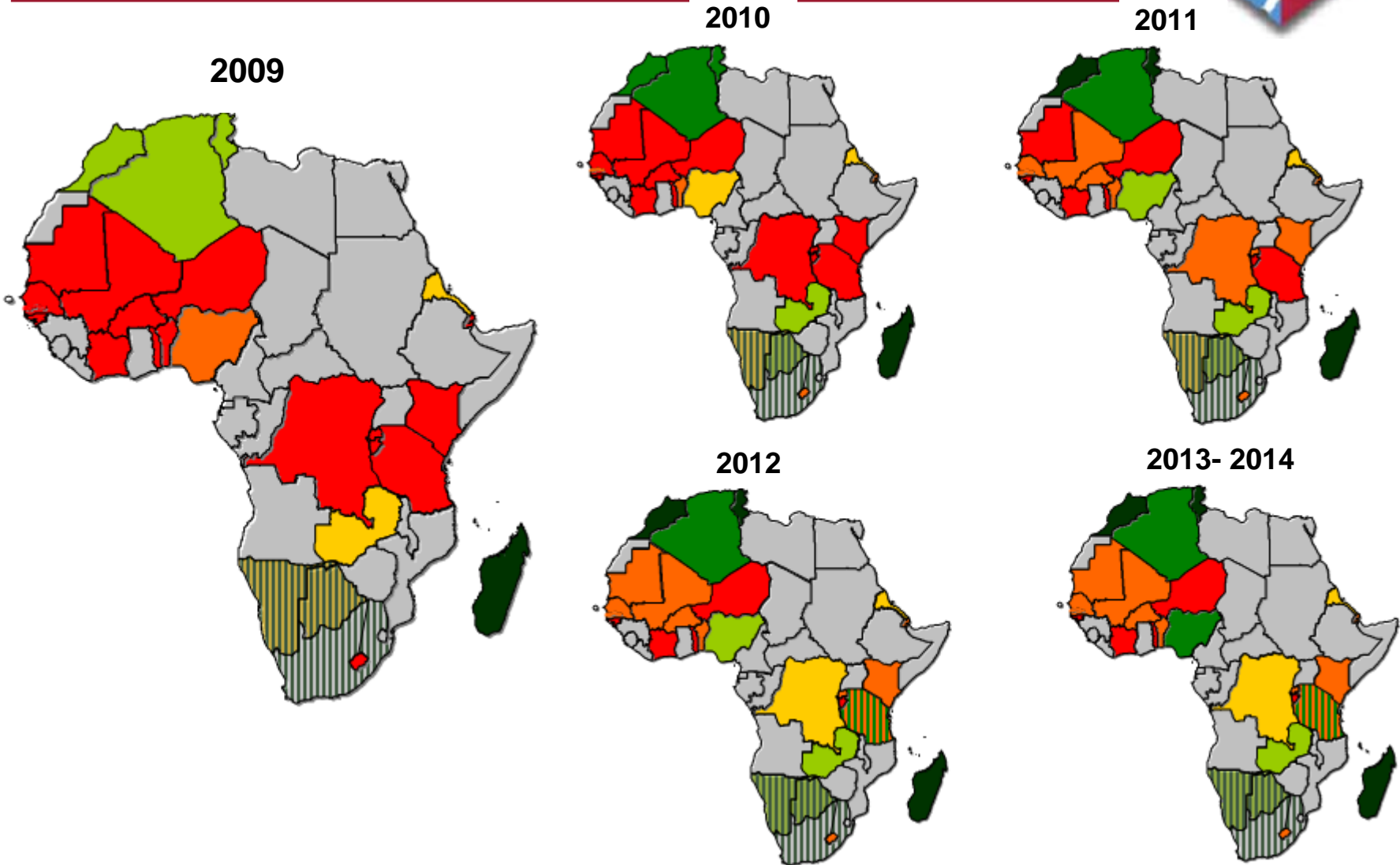


Adapted from WRL website

# FAO/OIE/AU-IBAR Workshop to review PCP Survey results – Nairobi Jan 09

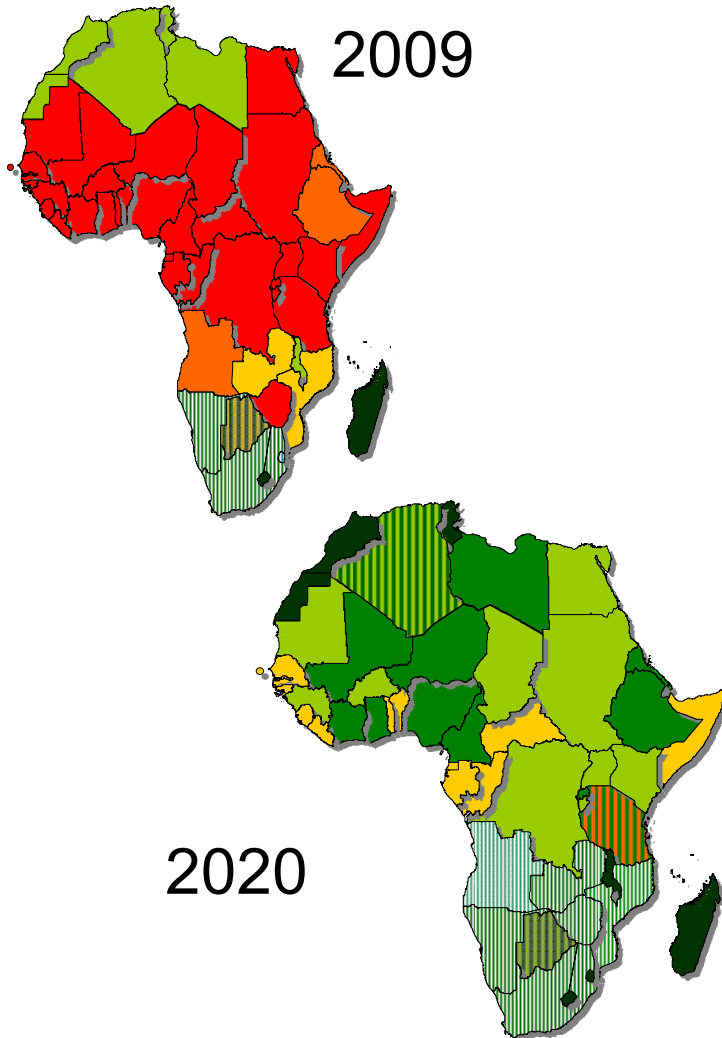


OIE/FAO Global FMD Conference 2009



# PCP – Expected progression in Africa

## Nairobi Workshop, Jan 09+ Algiers WS for North Africa

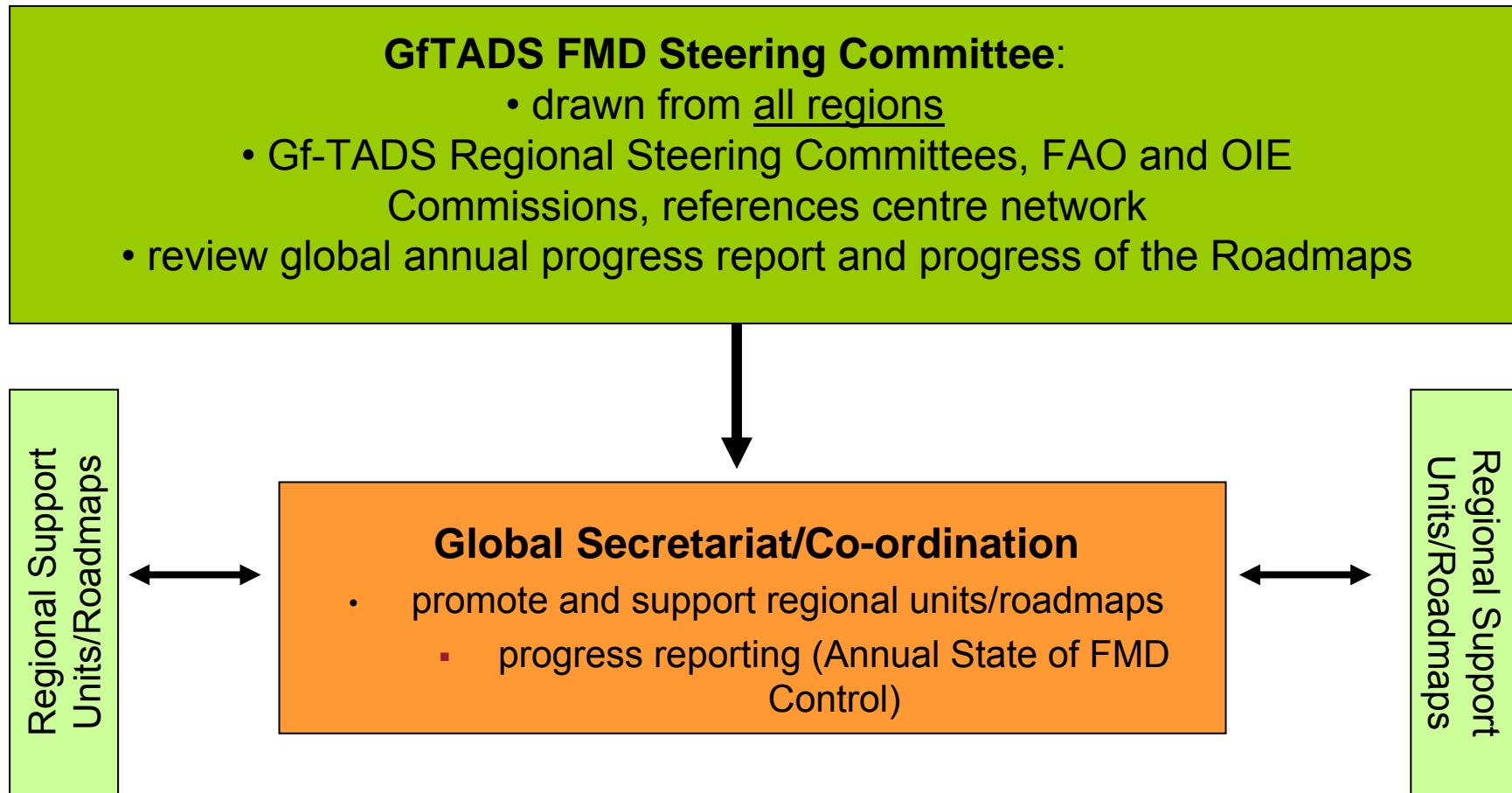


Countries	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>North</b>												
Algeria												
Egypt												
Libya												
Mauritania												
Morocco												
Tunisia												
Western Sahara												
<b>Western</b>												
Benin	0	0	0	0	1	1	2	2	2	2	2	2
Burkina Faso	0	0	0	0	1	1	2	2	2	2	2	3
Cote D'Ivoire	0	0	0	1	1	2	2	2	3	3	3	4
Gambia	0	0	0	0	1	1	1	2	2	2	2	2
Ghana	0	0	0	1	1	2	2	2	3	3	3	4
Guinea	0	0	0	0	1	1	2	2	2	2	2	3
Guinea-Bissau	0	0	0	0	0	1	1	2	2	2	2	2
Liberia	0	0	0	0	0	1	1	2	2	2	2	2
Mali	0	0	0	1	1	2	2	2	3	3	3	4
Niger	0	0	0	1	1	2	2	2	3	3	3	4
Nigeria	7	7	0	1	1	2	2	2	3	3	3	4
Senegal	0	0	0	1	1	2	2	2	2	2	2	2
Sierra Leone	0	0	0	0	0	1	1	2	2	2	2	2
Togo	0	0	0	0	0	1	1	2	2	2	2	2
<b>Central</b>												
Cameroon	0	0	0	1	1	2	2	2	3	3	3	4
Cape Verde	0	0	0	0	0	1	1	2	2	2	2	2
Central African Republic	0	0	0	0	0	1	1	2	2	2	2	2
Chad	0	0	0	0	1	1	2	2	2	2	2	3
Congo (Dem. Rep. of the)	0	0	0	0	1	1	2	2	2	2	2	3
Congo (Rep. of the)	0	0	0	0	0	1	1	2	2	2	2	2
Equatorial Guinea	0	0	0	0	0	1	1	2	2	2	2	2
Gabon	0	0	0	0	0	1	1	2	2	2	2	2
Sao Tome and Principe	0	0	0	0	0	1	1	2	2	2	2	2
<b>East</b>												
Djibouti	1	2	2	2	2	2	3	3	3	3	3	4
Eritrea	1	1	1	1	2	2	2	3	3	3	3	4
Ethiopia	1	1	1	1	2	2	2	3	3	3	3	4
Kenya	0	0	0	1	1	1	1	2	2	2	2	3
Somalia	0	0	0	1	1	1	1	2	2	2	2	3
Sudan	0	0	0	1	1	2	2	2	2	2	2	3
Tanzania	0	0	0	1	1	1	1	2	2	2	2	3
Burundi	0	0	0	1	1	1	1	2	2	2	2	3
Rwanda	0	0	1	1	1	2	2	2	2	2	2	3
Uganda	0	0	0	1	1	1	1	2	2	2	2	3
<b>South</b>												
Angola	172	1	1	2	2	2	2	3	3	3	4	5
Botswana	32/5	32/5	32/5	4/5	4/5	4/5	4/5	4/5	4/5	4/5	4/5	4/5
Comoros	0	0	0	1	1	1	1	2	2	2	2	3
Lesotho	5	5	5	5	5	5	5	5	5	5	5	5
Madagascar	5	5	5	5	5	5	5	5	5	5	5	5
Malawi	3	3	3	3	3	3	3	3	3	3	3	3
Mauritius	5	5	5	5	5	5	5	5	5	5	5	5
Mayotte (France)	5	5	5	5	5	5	5	5	5	5	5	5
Mozambique	2	2	2	3	3	3	3	3	3	3	3	3
Namibia	4/5	4/5	4/5	4/5	4/5	4/5	4/5	4/5	4/5	4/5	4/5	4/5
Reunion (France)	5	5	5	5	5	5	5	5	5	5	5	5
Seychelles	5	5	5	5	5	5	5	5	5	5	5	5
South Africa	4/5	4/5	4/5	4/5	4/5	4/5	4/5	4/5	4/5	4/5	4/5	4/5
Swaziland	4/5	5	5	5	5	5	5	5	5	5	5	5
Zambia	2	2	2	3	3	3	3	3	3	3	3	3
Zimbabwe	0	0	1	1	1	1	3	3	3	3	3	3

	N	Z
Level 0		
Level 1		
Level 2		
Level 3		
Level 4		
Level 5		



# Global Co-ordination



# The value of a Progressive Control Pathway

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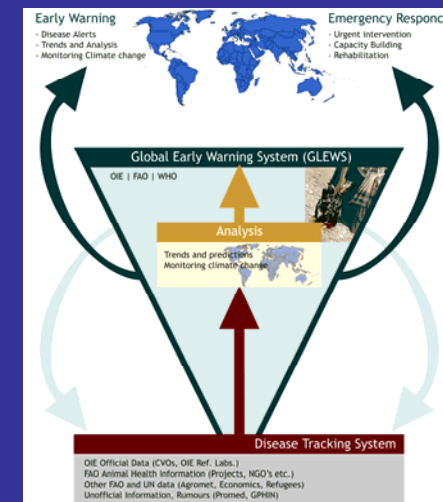
- **applicable in ALL affected regions**
- **starts simple – surveillance and strategy**
- **promotes and builds FMD control – starting from a low base**
- **action indicators and outcomes measurable**
- **enables comparison across countries**
- **complimentary to PVS approach**
- **principle is risk based, optimises use of limited resources**
  - **target critical control points for maximum impact**

# **Global Framework and Tools already exist**

**The FAO OIE Global Framework for  
the progressive control of  
Transboundary Animal Diseases  
GF TADs**

# FAO–OIE Collaboration in Animal Diseases Prevention and Control

- Collaborative framework
- Common Activities
- Common Tools



**GLEWS**

## FAO–OIE Collaboration in Animal Diseases Prevention and Control

- Collaborative framework
- Common Activities
- Common Tools



### ALIVE

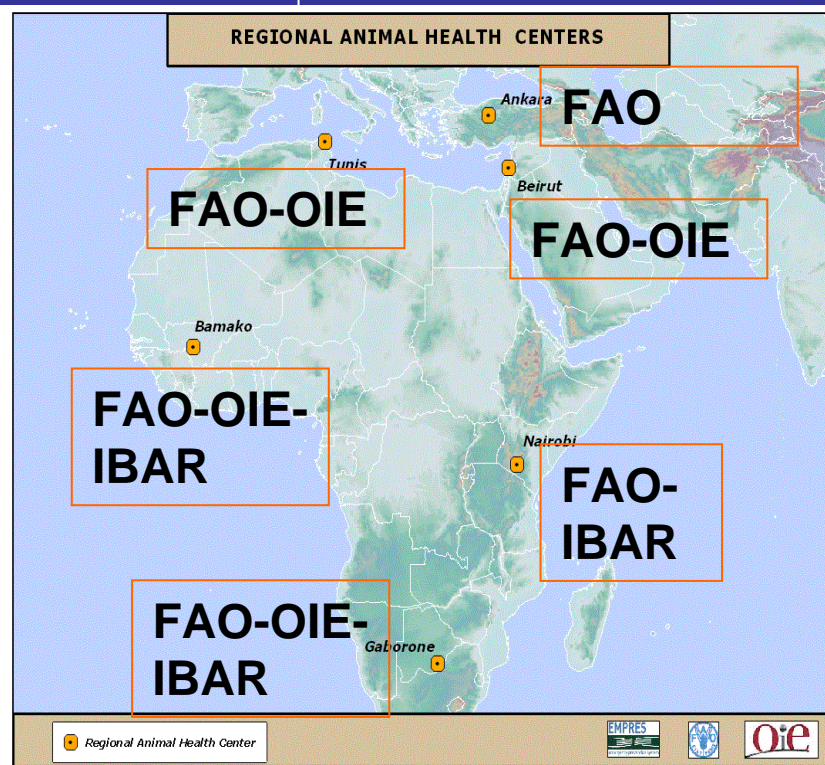
A multi stakeholders platform  
on livestock in Africa



Regional Organizations, EISMV, FARA, CIRAD, IAH, Donors...

# FAO–OIE Collaboration in Animal Diseases Prevention and Control

- Collaborative framework
- Common Activities
- **Common Tools**



Unité Régionale FAO ECTAD  
Afrique de l'Ouest et du Centre  
CENTRE REGIONAL DE SANTE ANIMALE - BAMAKO

English Version  
RESOLAB (en)  
Presentation  
Activities

**WELCOME**

Welcome to the official Site of the FAO-ECTAD regional unit at the RAHC in Bamako! For more than two years we have been fighting together to prevent, detect and control the Highly Pathogenic Avian Influenza and to improve the conditions of poultry production. Within the last few months our team and structure have been reinforced and are now almost at full capacity. Many dossiers concerning other priority animal diseases will be treated. In view of the increasing volume of activity, new (...) suite

**THE MOST RECENT ARTICLES**  
Euthanasie animale

- Agreement FAO-OIE signed in Feb 2009 (Tunis, Gabarone, Bamako) and in May 2006 (Beirut)
- Agreements with IBAR to be signed shortly
- RECs to join shortly

-Decentralized ECTAD Units based in the RAHCs

### Other tools

- Collaborative framework
- Common Activities
- **Common Tools**

- **Networks:**  
Epidemiology, Laboratories,  
Socio Ecoeconomy, Communication...
- PVS tools
- Norms, standards, guidelines

# **Conclusions**

**Progressive Control of FMD is  
possible**

**Good examples and models exist**



# Conclusions

**It needs several conditions**

- **Political commitment**
- **International support and**
- **Good governance with legislation, chain on command...**
- **Animal Health Systems with Public Private Partnership**

# Conclusions

- Holistic approaches
- Socio economic contexts
- Emergency responses capabilities
- More research

**FMD control to be considered as an  
International Public Good  
and to be included in the new  
One World-One Health approach**

**Thank you for  
your attention**

