



Fourth Global Steering Committee Meeting of the Global Framework for the progressive control of Transboundary Animal Diseases (GF-TADs GSC4)

18-19 October 2011
FAO Headquarters
Rome (Italy)





Links between wild and domestic animals - diseases and knowledge gaps

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Wildlife Defined

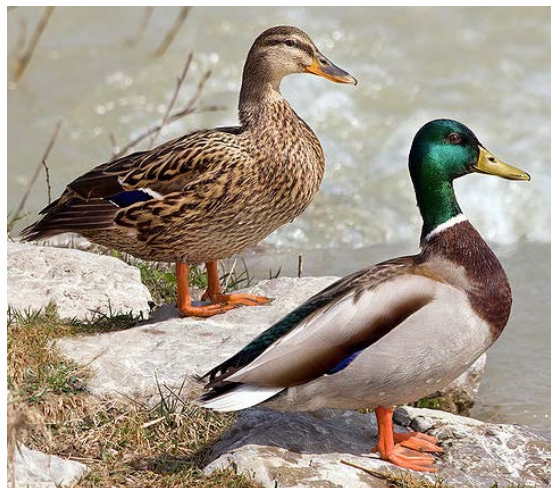
		PHENOTYPE SELECTED BY HUMANS	
		YES	NO
ANIMALS LIVE UNDER HUMAN SUPERVISION OR CONTROL	YES	Domestic Animals (a)	Captive Wild Animals (c)
	NO	Feral Domestic Animals (b)	Wild Animals (d)



Wild Animal \neq Wild Species

Domestic Animal \neq Domestic Species

- *Anas platyrhynchos*



Mallard



Rouen Domestic Duck



White Domestic Duck

- *Sus scrofa*



Eurasian Wild Pig



Domestic Pig

African Buffalo – *Syncerus caffer*

		PHENOTYPE SELECTED BY HUMANS	
		YES	NO
ANIMALS LIVE UNDER HUMAN SUPERVISIO N OR CONTROL	YES	Domestic Animals (a)	Captive Wild Animals (c)
	NO	Feral Domestic Animals (b)	Wild Animals (d)

Water Buffalo – *Bubalus bubalis*

		PHENOTYPE SELECTED BY HUMANS	
		YES	NO
ANIMALS LIVE UNDER HUMAN SUPERVISION OR CONTROL	YES	Domestic Animals (a)	Captive Wild Animals (c)
	NO	Feral Domestic Animals (b)	Wild Animals (d)

Asiatic Buffalo - Bubalus amee



American Buffalo – *Bison bison*

		PHENOTYPE SELECTED BY HUMANS	
		YES	NO
ANIMALS LIVE UNDER HUMAN SUPERVISION OR CONTROL			
	YES	Domestic Animals (a)	Captive Wild Animals (c)
	NO	Feral Domestic Animals (b)	Wild Animals (d)



African Swine Fever





African Swine Fever

- Endemic in wild suids in many parts of Africa
- Introduced to Eastern Europe (trade)
- Both feral pigs and Eurasian wild pig susceptible
- Did not become established in wild peccaries in South America (not suids)



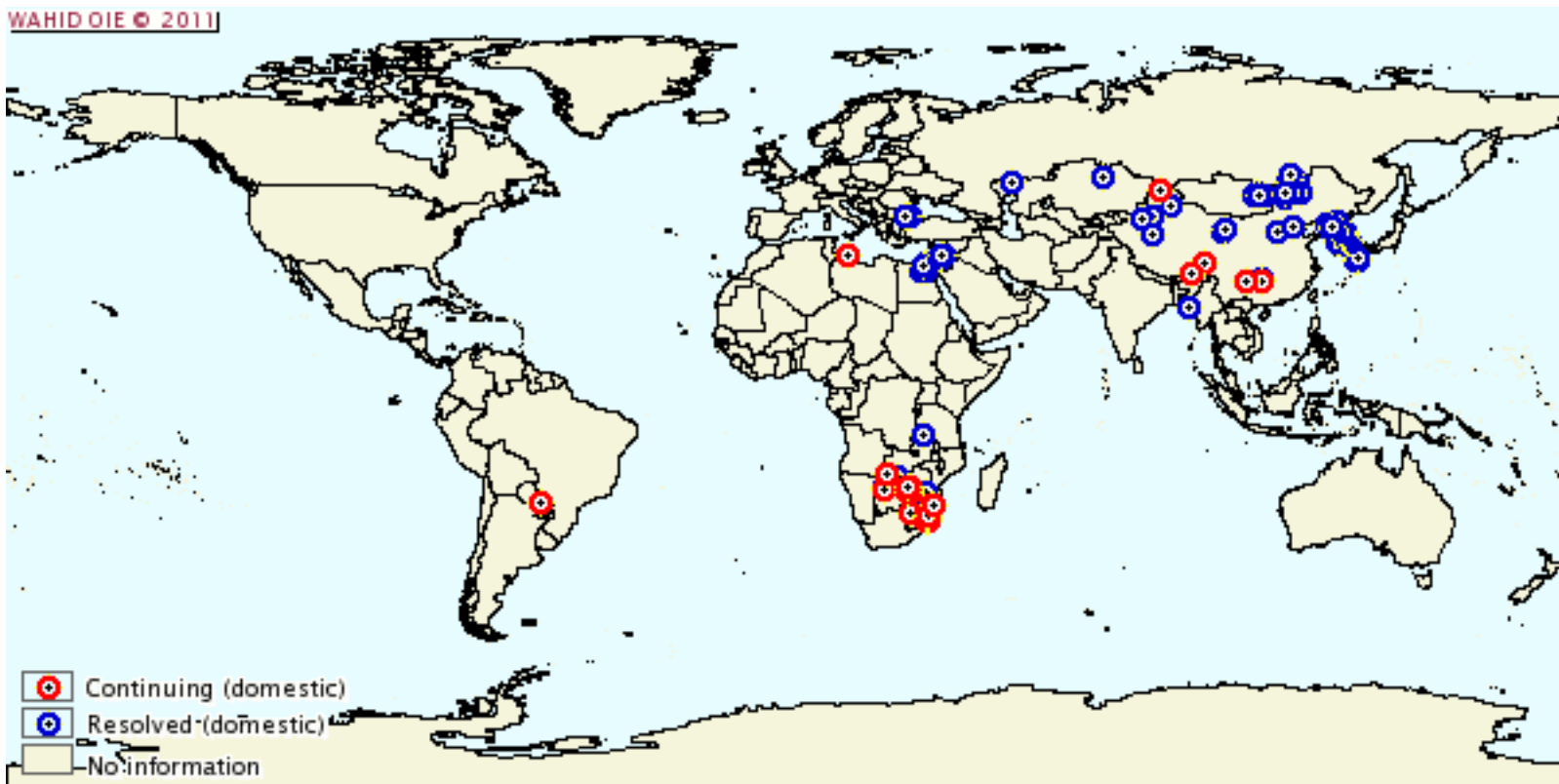
Foot and Mouth Disease





FMD Domestic animals

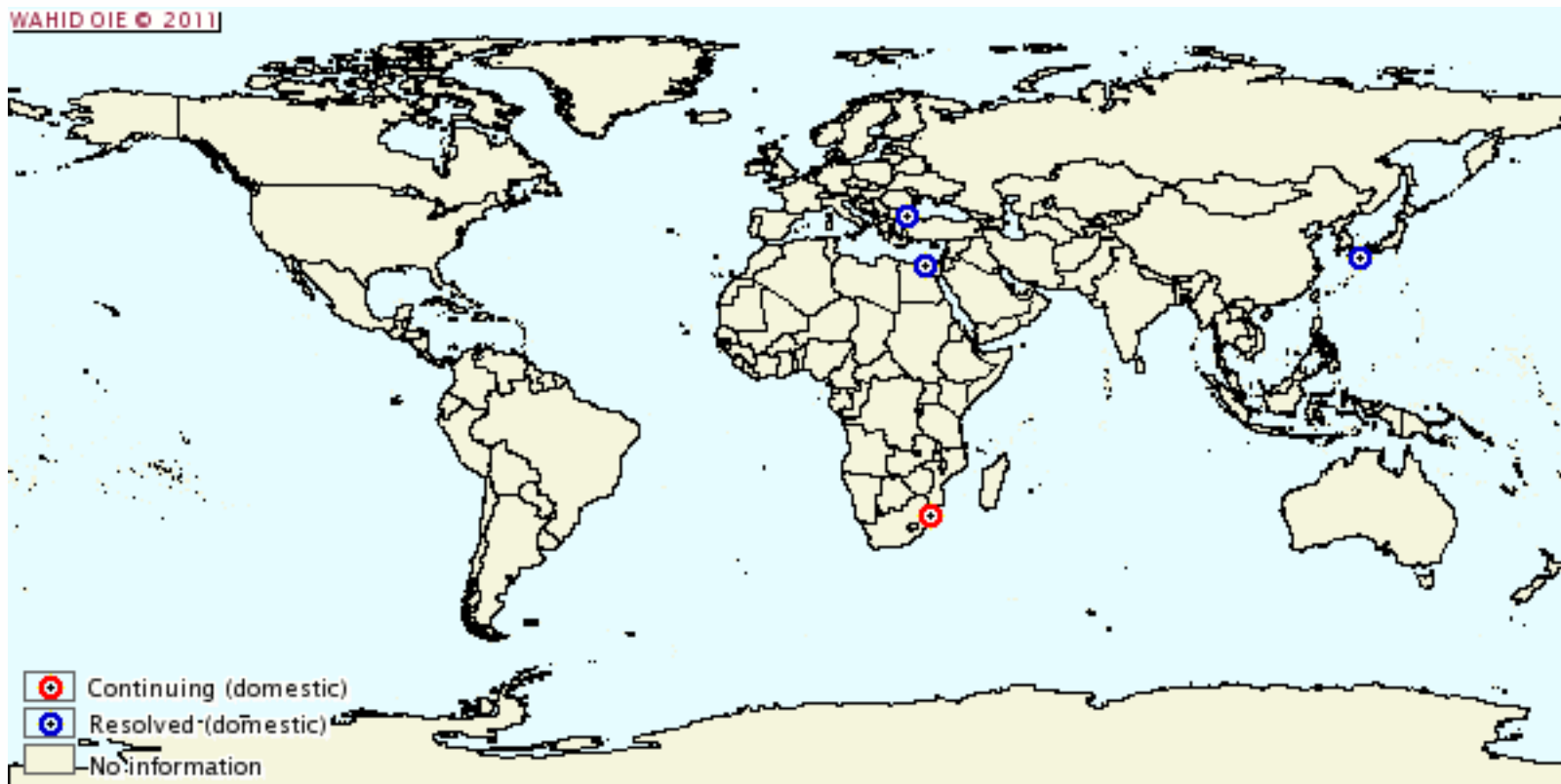
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FMD domestic buffalo

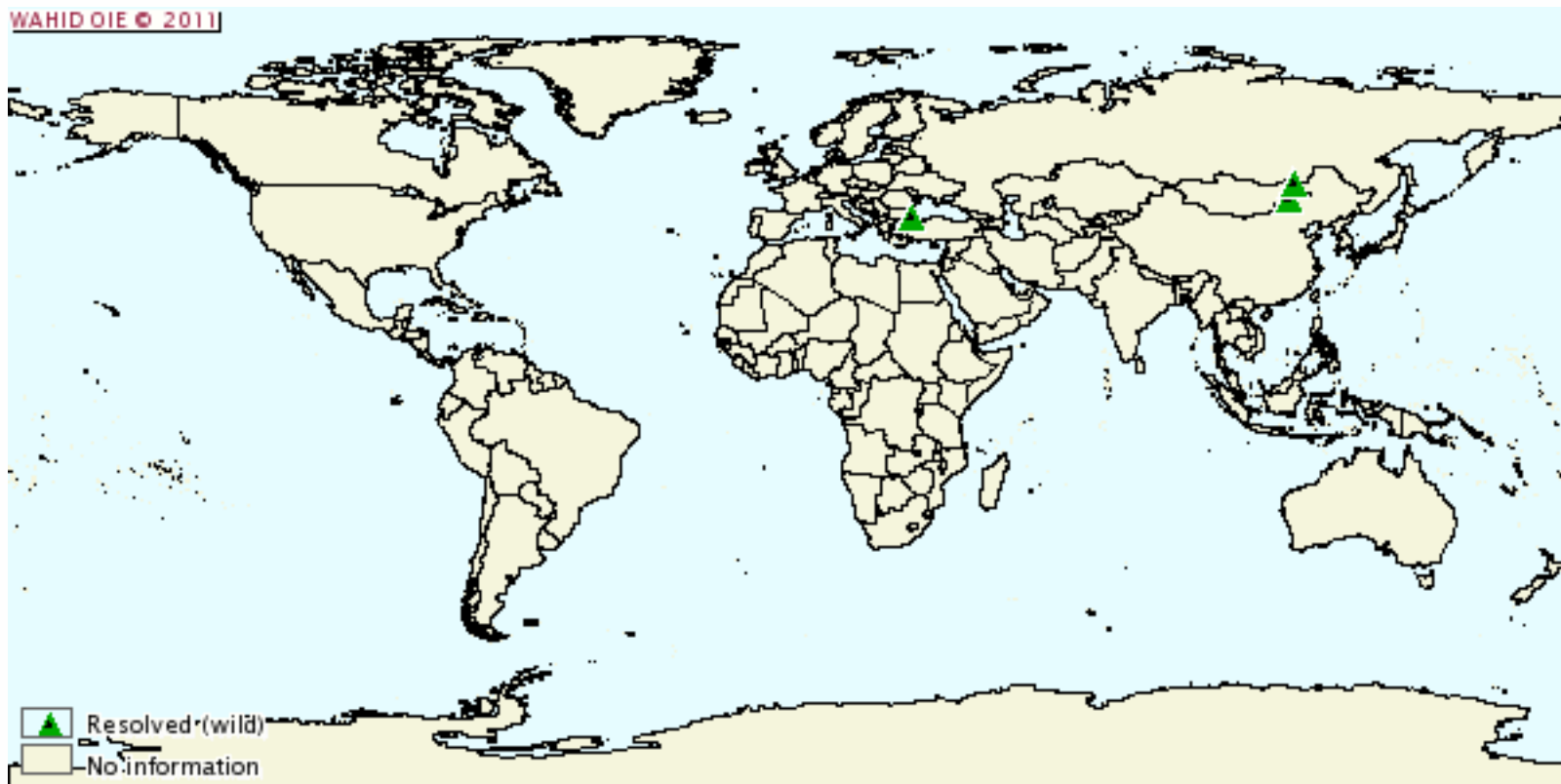
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FMD wild animals

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Foot and Mouth Disease

- Endemic in African buffalo in many parts of Africa (SAT only)
- Wide species host range – but has not been shown to persist in New World camelids, antelope/gazelle.
- Persistent infections in cervids after experimental infection.



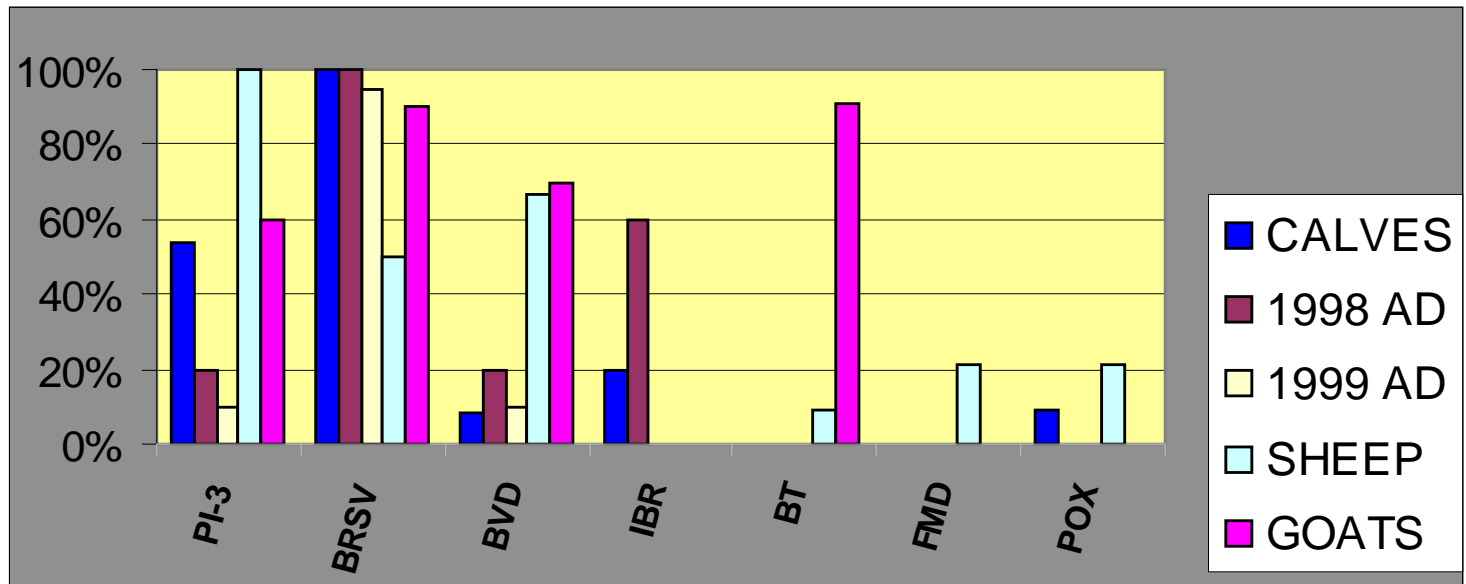
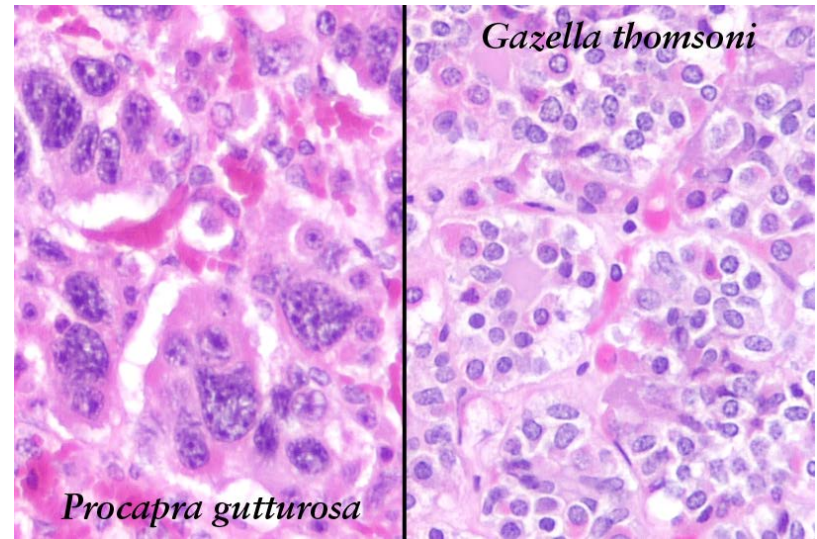


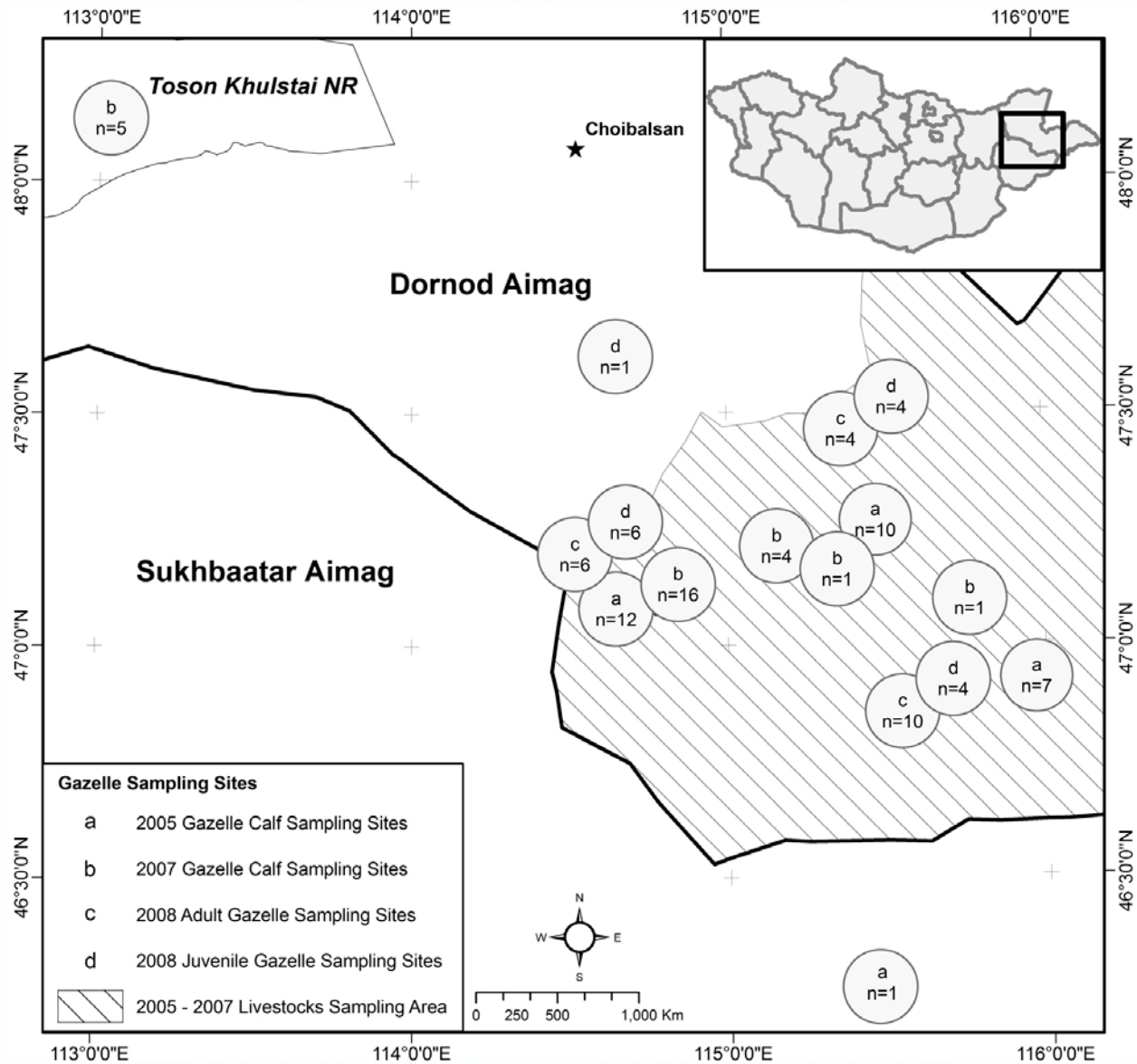
Foot and Mouth Disease

- A, O, C, Asia 1 and SAT(3)
- SAT strains appear to be the only group adapted to wild animals: African buffalo
- A, O, C, and Asia 1 appear to be domestic cattle adapted strains







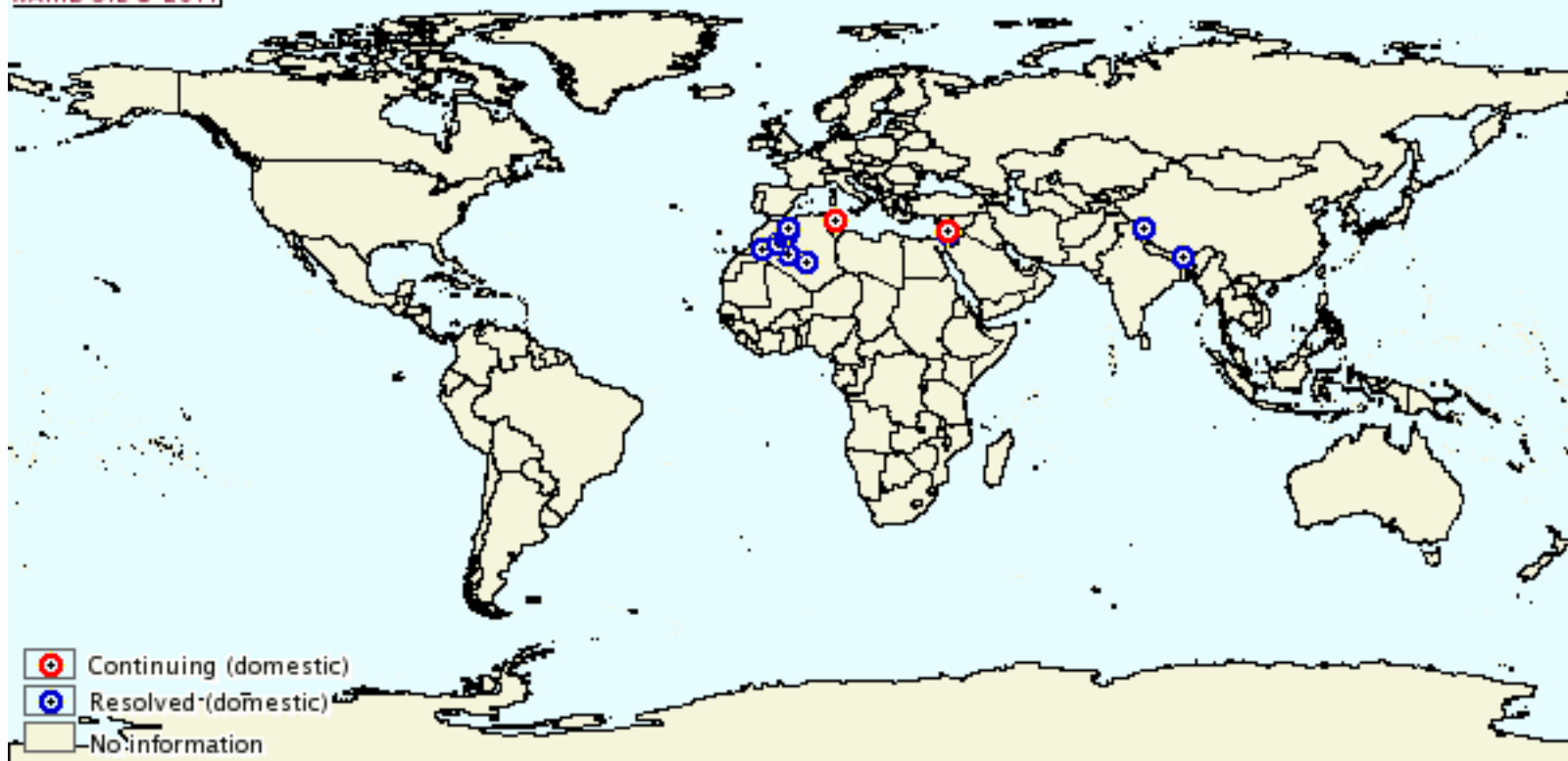






PPR domestic animals

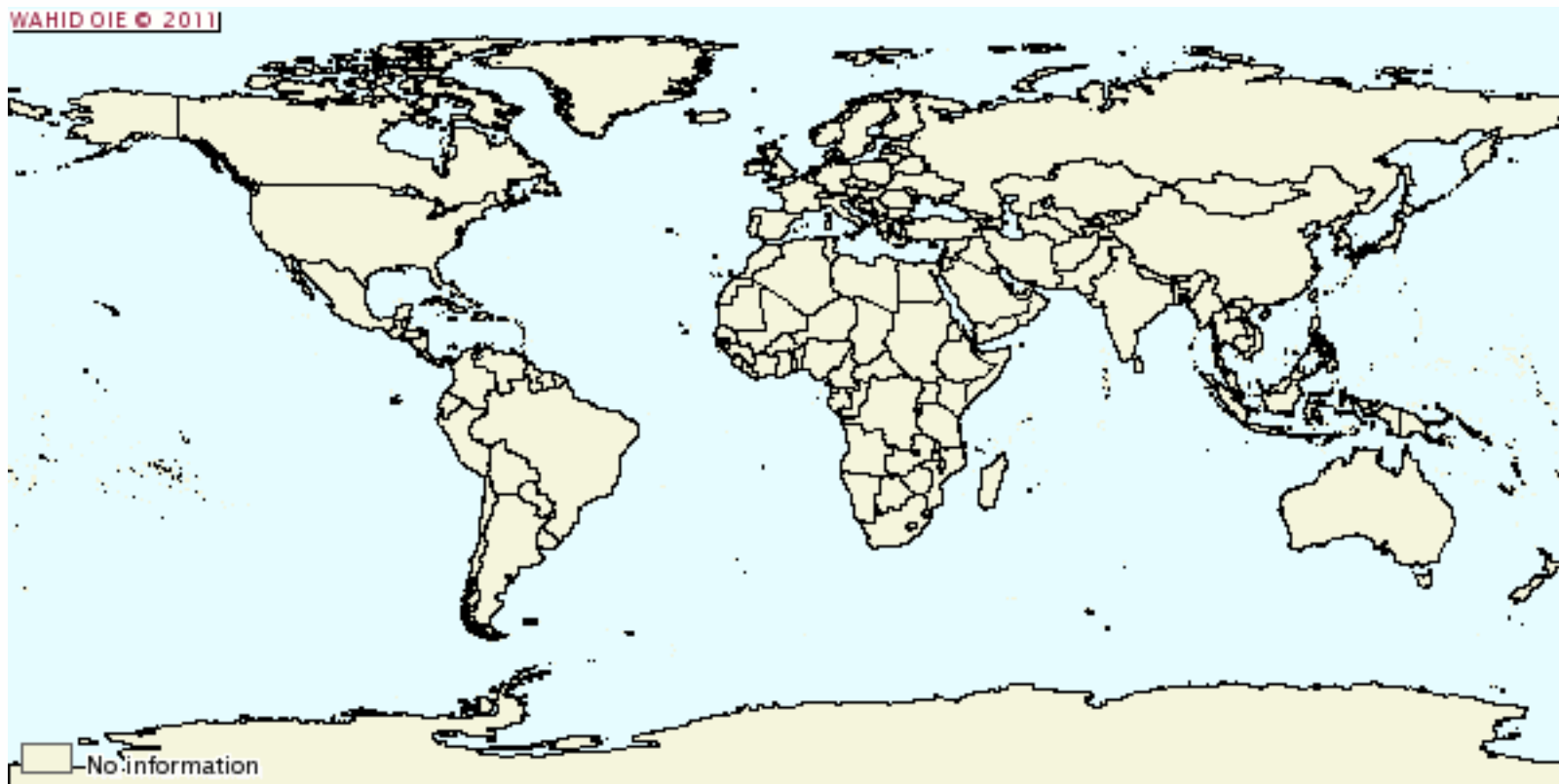
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PPR wild animals

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Peste des Petit Ruminants

- In wildlife, a number of wild animals have been identified as susceptible: Laristan sheep, Dorcas-type gazelles, gemsbok and the Nubian ibex
- As with Rinderpest – no wild animal reservoir been found

Rabies Hosts

- **Over 132 host mammal species**
 - Domestic, human and wildlife
- **Of global concern, with diverse local threats**



“Because few tools are available to control infections of wildlife, measures to control diseases associated with wildlife have often resulted in harm to wildlife (e.g. culling...)”
(Cleaveland et al., 2007)

Rabies Hosts

Total Host Mammals	>132
Domestic	16
Wild and Human	116

Current as of August 2011





Common Ground

- Rabies
- FMD
- Tuberculosis
- Brucellosis
- Animal Influenzas
- Bluetongue/EHD - Orbiviruses



Common Ground

- Systems / integrated approaches
- Disease emergence
- Climate change
- Natural resource allocation
- Anti-microbial resistance
- Global animal movement/trade

