



African Horse Sickness (AHS) in Thailand

On 9th June 2020



Outline



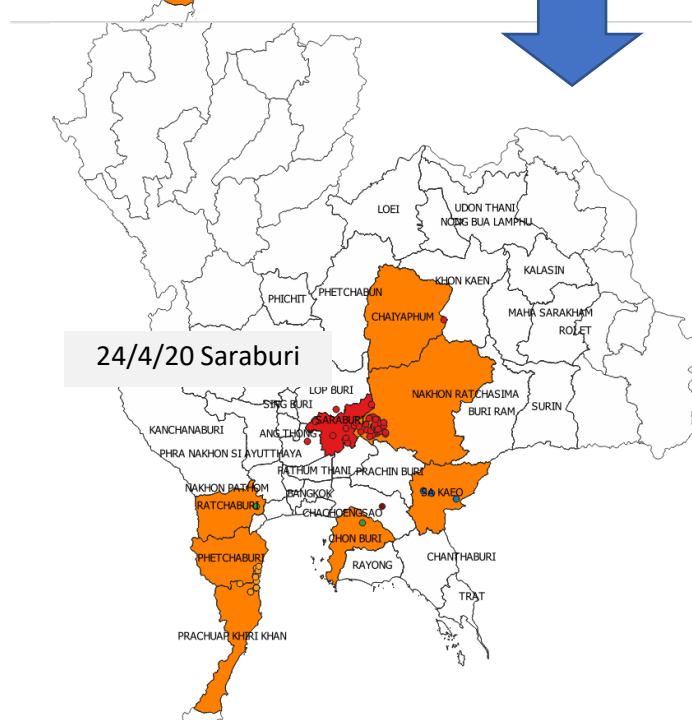
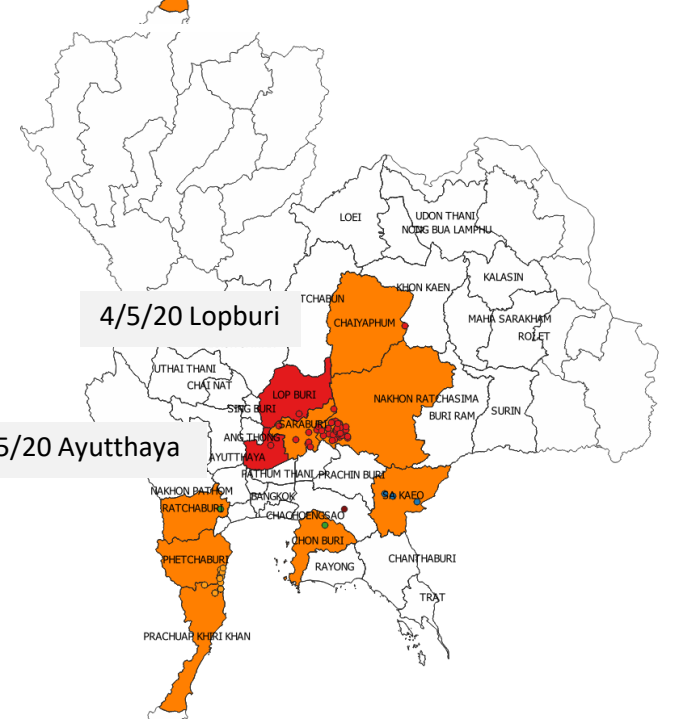
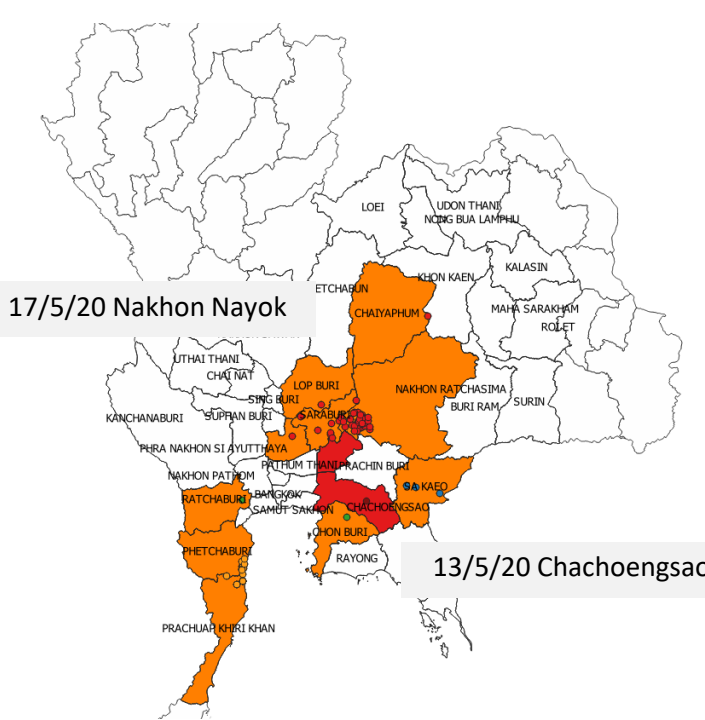
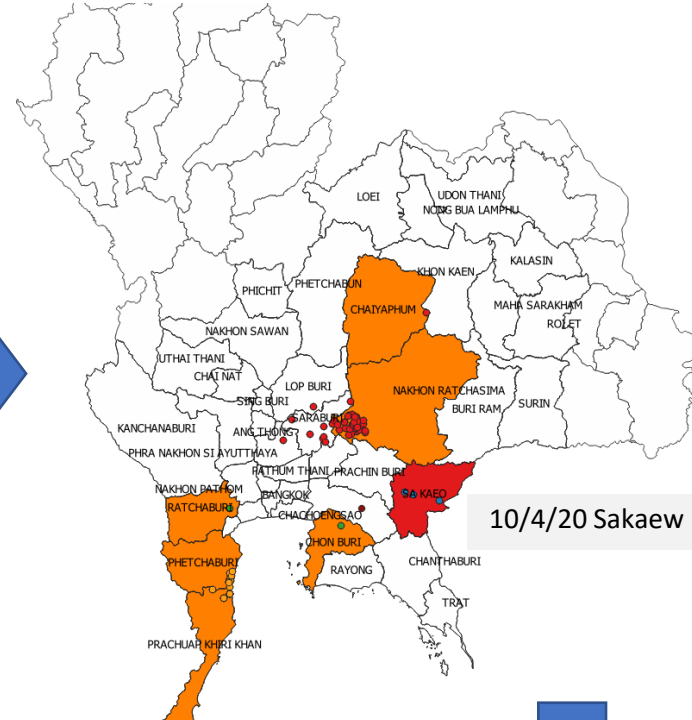
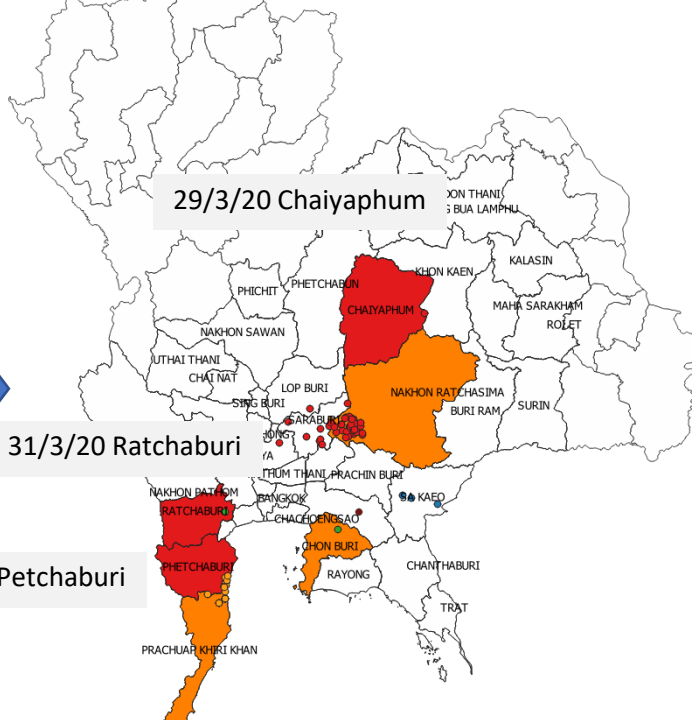
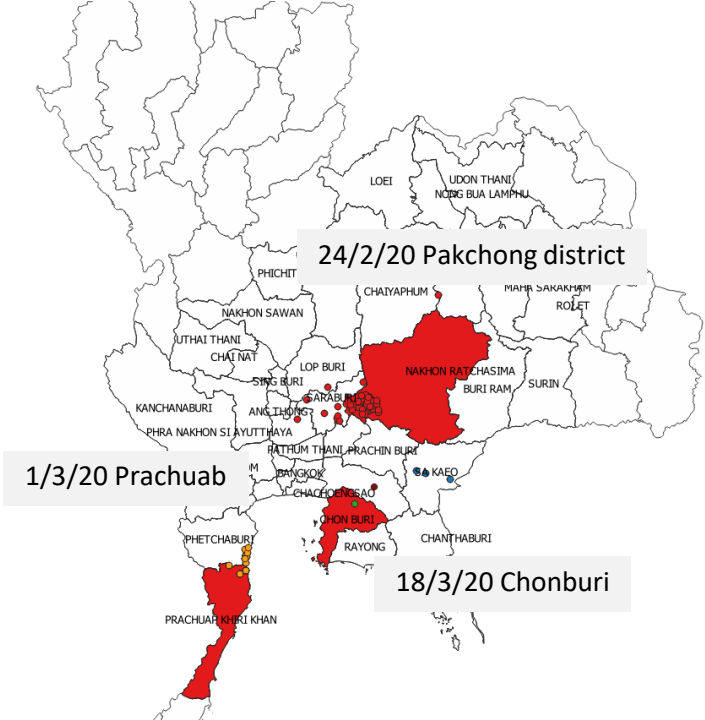
African Horse Sickness (AHS) Situation of Thailand

Equidae population in Thailand

AHS Eradication plan of Thailand



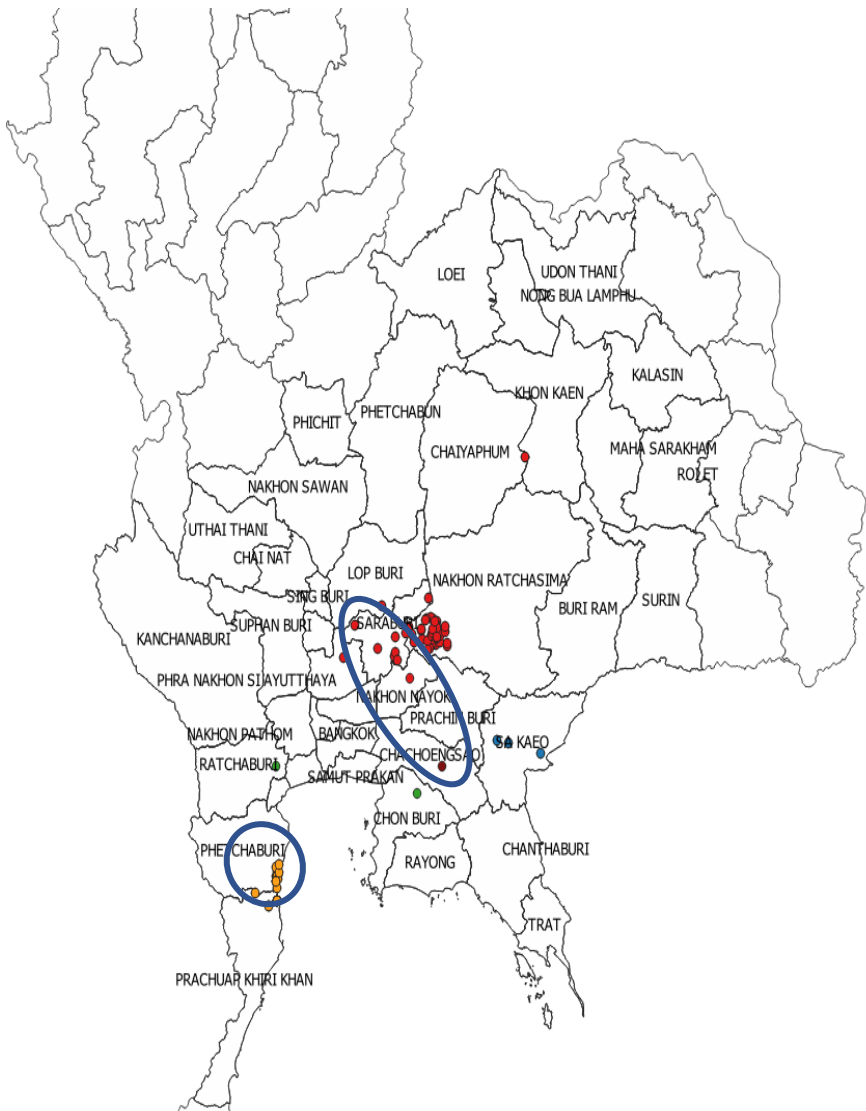
African Horse Sickness (AHS) Situation in Thailand



Disease occurs in
12 provinces; 27 districts in Thailand

AHS situation in Thailand

8th June 2020



	Province	#Farm	#Sick	#dead	Infected farms w/o new cases					farms w/ new cases
					≥ 4 wks	≥ 3 wks	≥ 2 wks	≥ 1 wks	> 3 days	
1	Nakhon Ratchasima	56	460	436	50	3	0	1	0	0
2	Phetchaburi	21	44	40	16	1	4	0	0	0
3	Saraburi	17	44	33	8	6	1	2	0	0
4	Prachuap.	12	19	19	12	0	0	0	0	0
5	Sakaew	3	3	3	3	0	0	0	0	0
6	Ayuttaya	3	3	3	1	1	1	0	0	0
7	Chachoengsao	3	7	7	0	0	0	0	1	2
8	Nakornnayok	2	2	2	0	0	2	0	0	0
9	Chonburi	1	6	5	1	0	0	0	0	0
10	Chaiyaphum	1	1	1	1	0	0	0	0	0
11	Ratchaburi	1	7	6	1	0	0	0	0	0
12	Lopburi	1	1	1	1	0	0	0	0	0
	Total	121	597	556	94	11	8	3	1	2

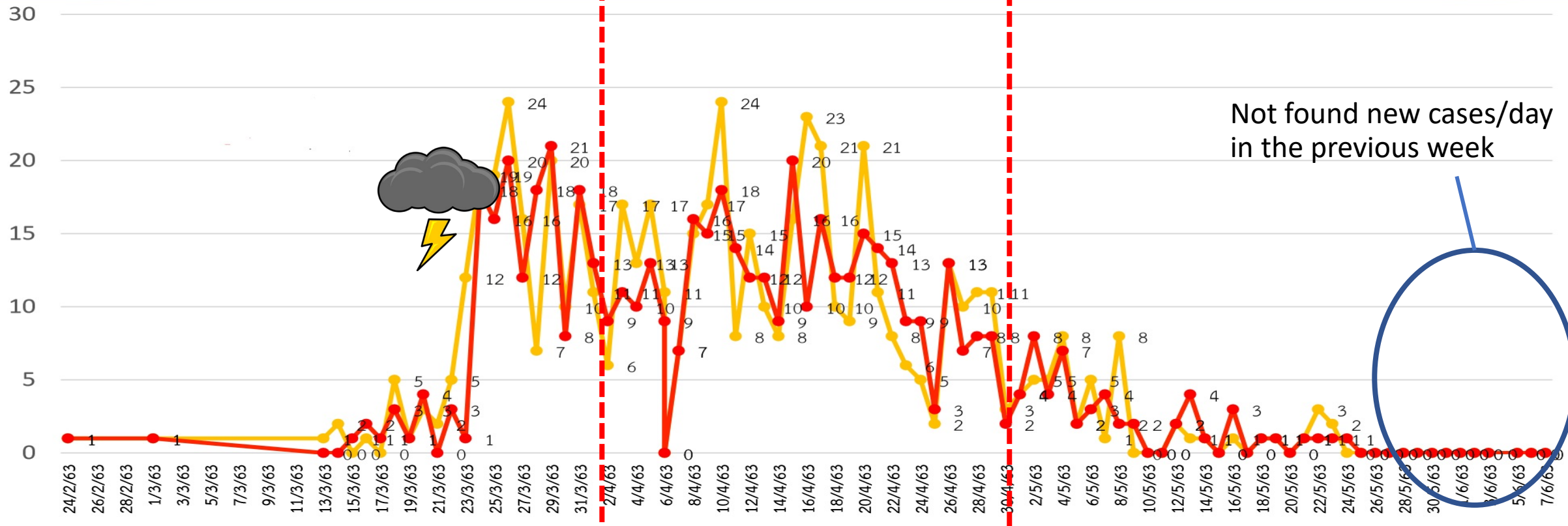
Number of new AHS cases (sick/dead)

Start AHS control measure

Start doing AHS Vaccination

Total number of sick horses: 597
Total number of dead horses: 556

Average 14 new cases/day





Equidae population in Thailand



Equidae population in Thailand



Rg	horse_owners	horses	donkey_owners	donkeys	mule_owners	mules	zebra_owners	zebras
1	285	2143	0	0	0	0	1	110
2	229	2249	1	3	0	0	5	304
3	356	2396	1	3	1	2	4	18
4	291	1422	0	0	0	0	3	10
5	374	1786	2	21	13	64	3	33
6	208	1205	0	0	0	0	1	13
7	792	4104	1	8	0	0	7	53
8	287	1123	0	0	0	0	0	0
9	165	462	0	0	0	0	0	0
รวม	2987	16890	5	35	14	66	24	541



National Eradication plan of AHS in Thailand



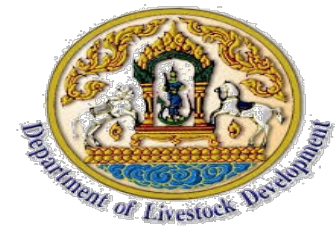
แผนปฏิบัติการกำจัด

โรคกาฬโรคแอฟริกาในม้า

(African Horse Sickness; AHS)

เพื่อคืนสถานภาพปลอดโรคจากองค์การโรค
ระบาดสัตว์ระหว่างประเทศของประเทศไทย

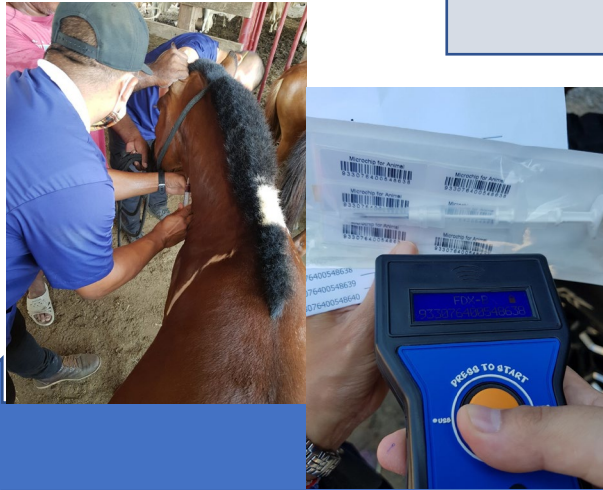
Timeframe of National Eradication plan of AHS in Thailand



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Phase 1 : Outbreak response phase

Apr – Sep 2020

Phase 2 : Surveillance and prevention phase

Oct 2020 – Sep 2022

Phase 3 : Reinstate AHS free status of Thailand

2022 – 2023

Phase 1 : Outbreak response phase : Apr – Sep 2020

1. Integrated collaboration
2. Risk animal management : movement control , disease control
3. Effectively disease surveillance and control measures in Equidae
4. Vector control
5. Risk communication
6. Stakeholders collaboration and educated
7. International collaboration



Phase 2 : Surveillance and prevention phase Oct 2020 – Sep 2022

1. Movement control : Animal Epidemics act 2015
2. Equidae registration
3. Vector control
4. Clinical surveillance , Serological surveillance
5. Vector surveillance
6. Good farming management system >> Good agriculture practice
7. Development of disease surveillance system



Phase 3 : Reinstate AHS free status of Thailand :2022 – 2023

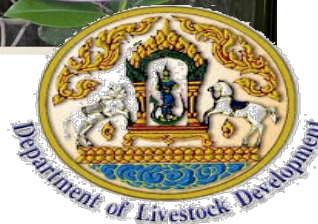


แผนปฏิบัติการกำจัด

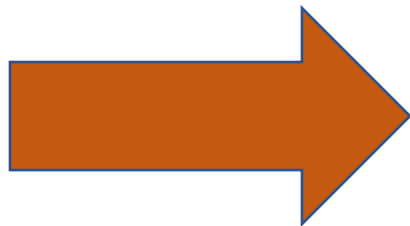
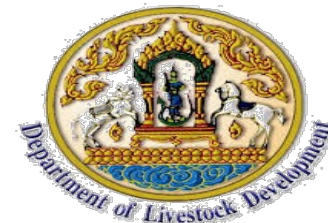
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Integrated collaboration



National Committee for AHS management

Approved by Ministry of Agriculture and Cooperatives

Technical Subcommittee

Vector control and research Subcommittee

AHS control in Zebra Subcommittee

Multisectoral collaboration :

University

Private sector :

➤ Thailand Equestrian Federation

➤ Thai Horse Racing Association

➤ Thailand Polo Association



Official sector:

Zoological park organization

Royal stable Unit

Department of National park, wildlife and plant Conservation



Risk animal management : movement control , disease control

Movement Control

Disease Control



<https://newemove.dld.go.th/req>

- 59 Animal Quarantine stations
- 31 International Animal Quarantine stations



Disease surveillance and control measures in Equidae

Case definition of AHS

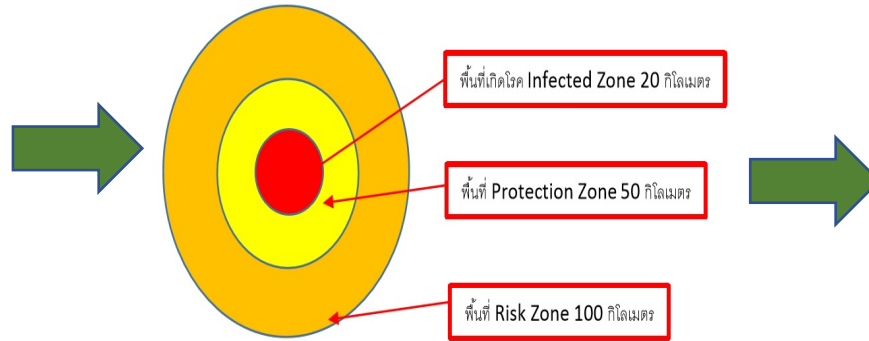


Body temp > 38.5
Depressed
Sudden death
Anorexia
Conjunctival Edema



Notify DLD for further investigation and sampling collect

Outbreak response area



Risk assessment / Public relations



Vector control



Disease surveillance

- Clinical surveillance
 - Vector surveillance
 - Active surveillance
- In risk animal : Camel , Zebras , other Equidae

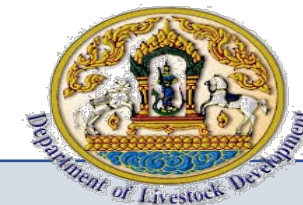
movement control



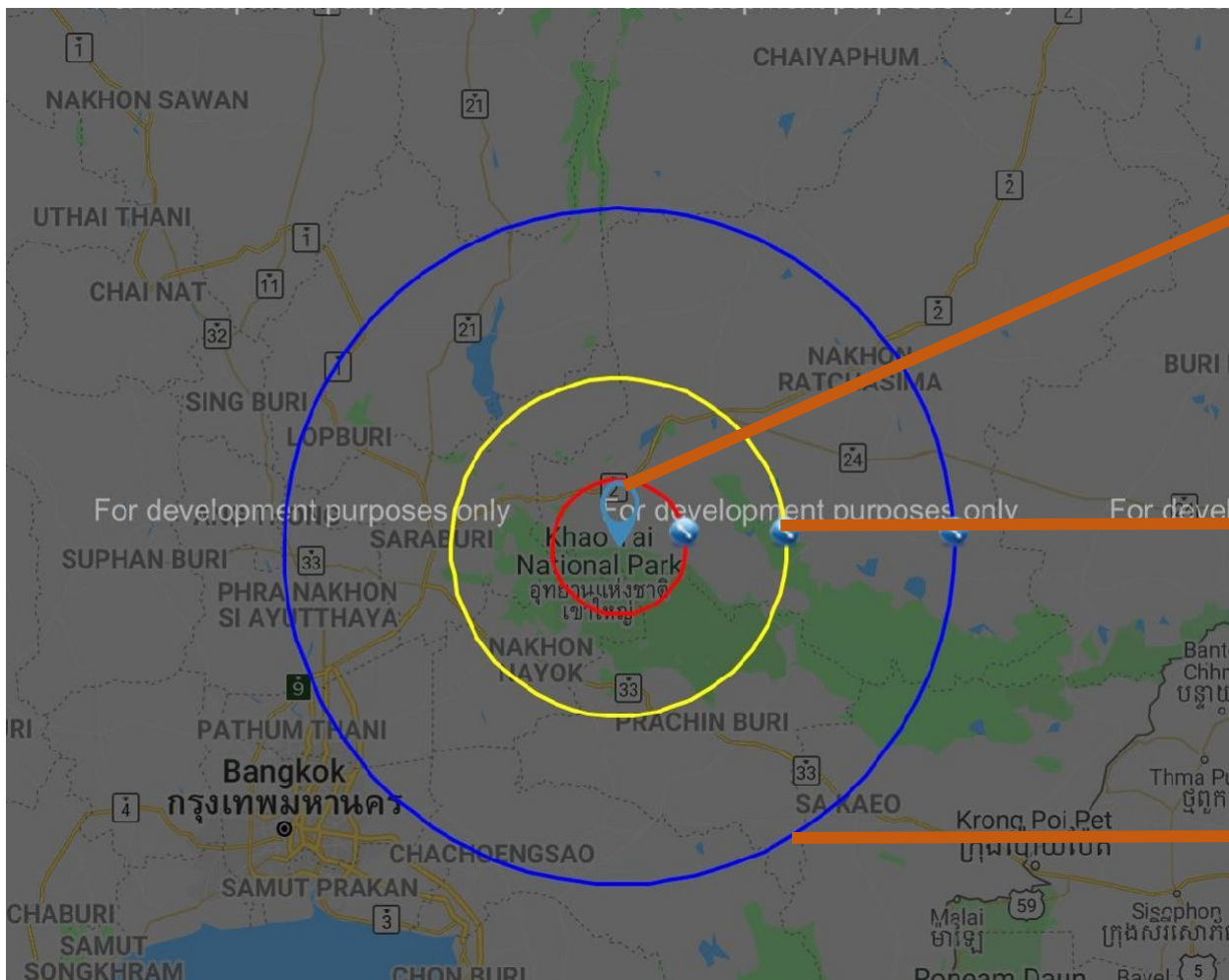
Vaccination campaign



National Eradication plan of AHS in Thailand



Outbreak response area planning for disease control purposes



1. Infected Zone : 20 Km. radius from index point

2. Protection Zone : 50 Km. radius from index point

3. Risk Zone : 100 Km. radius from index point

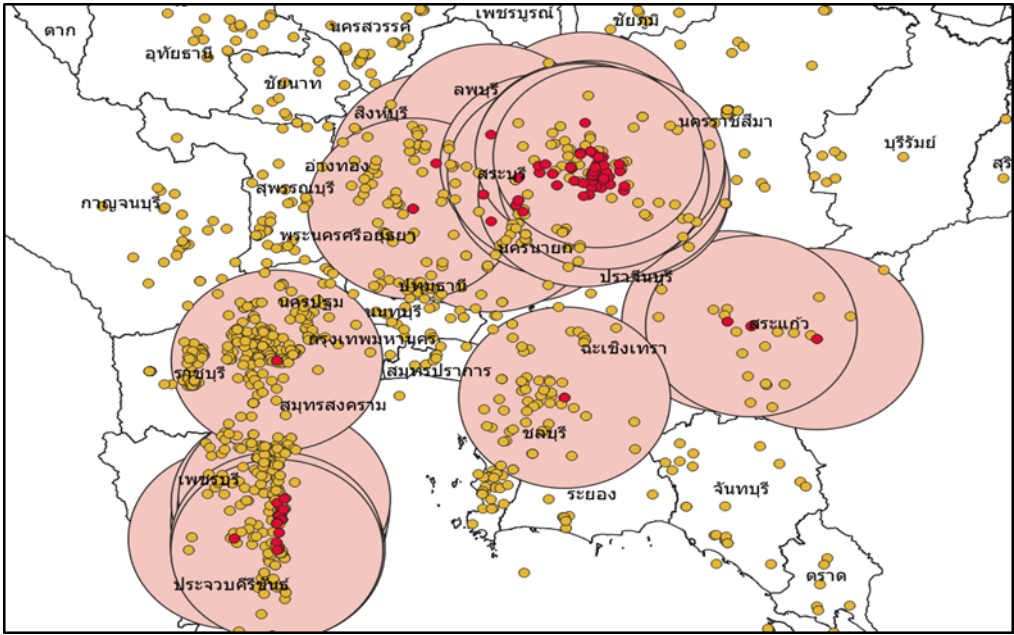
Targeted province for AHS vaccination campaign
19 Provinces

- ❖ Nakhon Ratchasima
 - ❖ Prachub kirichun
 - ❖ Chonburi
 - ❖ Phetchaburi
 - ❖ Ratchaburi
- ❖ Sakaew
 - ❖ Saraburi
 - ❖ Lopburi
 - ❖ Ayutthaya
 - ❖ Nakornnayok

- ❖ Nonthaburi
- ❖ Ang-thong
- ❖ Singburi
- ❖ Chachoengsao
- ❖ Prachinburi
- ❖ Nakornprathom



Following control measure of vaccination campaign :
Infected zone (20 km)
and Protection zone (50 km)



Multi-Criteria Decision Analysis (MCDA) Procedure : Risk area analysis



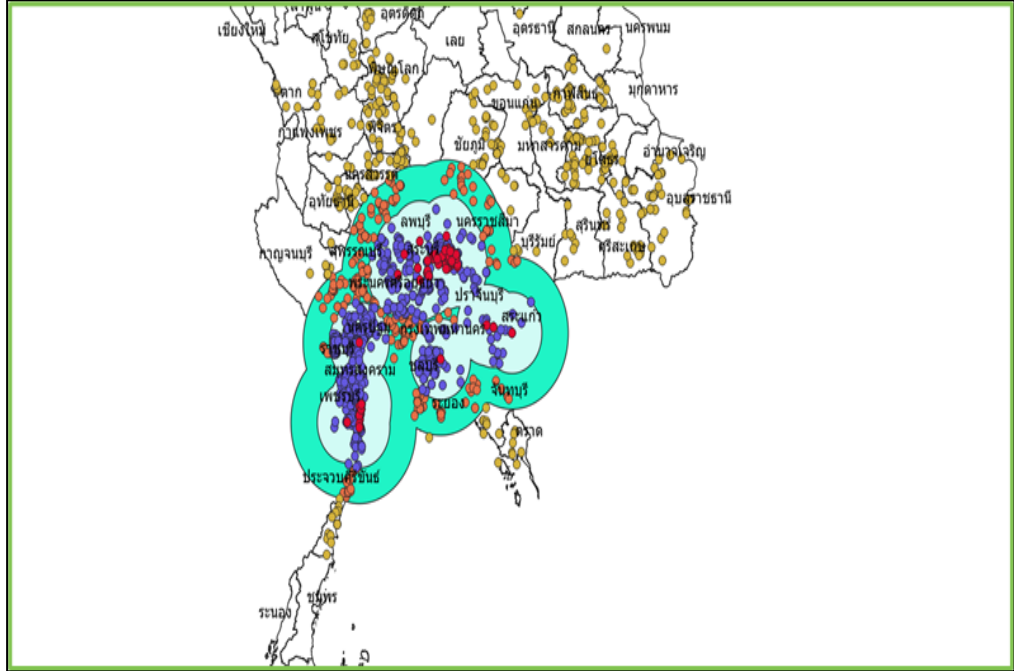
Purpose : To limit outbreak area



- Nakornratchasima : 101 stables
- Ayutthaya : 19 stables
- Phathumtani and Bangkok : 37 stables
- Kanchanaburi : 1 stable



Outer protection
Zone (50 km)



How to Vaccinate? : DLD Procedures

Netted before vaccination



disinfectant program and insecticide control



Horse in netted urban



Horse identification by microchip Registration in National identification database of DLD



Ready for vaccination



Health check



Sampling , AHS testing

negative



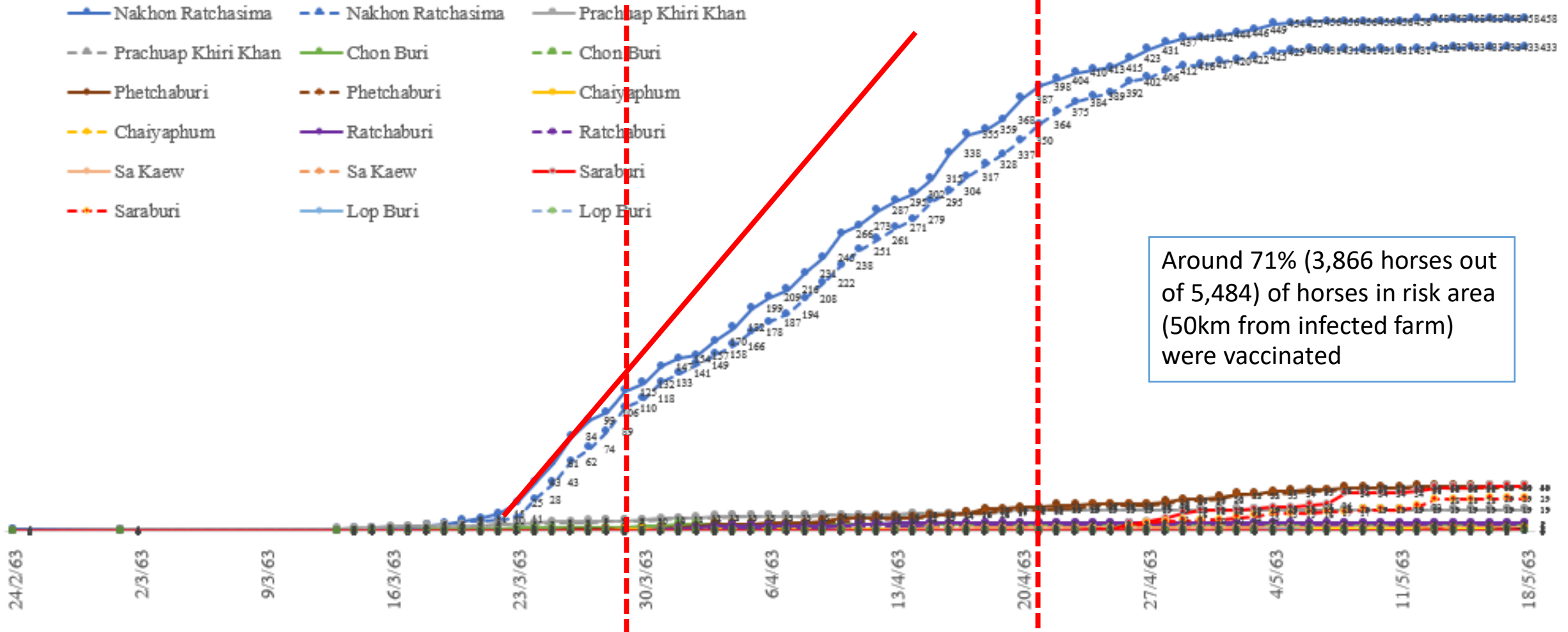
Conclusion

Control Measures	Infected Zone (20 km)	Protection Zone (50 km)	Risk Zone (100 km)
Health Monitoring (Daily)	monitor body temperature twice a day. If any abnormal symptoms has been detected , immediately notify DLD for further investigation.		
Vector control	Owners will be advised to protect equidae against vectors to reduce the likelihood of a susceptible animal becoming infected. Use an appropriate insecticides recommended by DLD on equidae or insect repellents. Additional vector control such as net / hood /fly sheet can also be used.		
Movement control	All movement of Equidae is prohibited until there is no case of AHS for at least 90 days		
Vaccination Campaign	Strategic vaccination , controlled by DLD authorities		Vaccination only in very high risk area such as high density of horse population area that (considered from DLD authorities)
Movement control (After vaccination)	All vaccinated equid are prohibited to move and stabling in an insect control housing for 30 days		
Establishment of a containment zone	No reported case of AHS in Equidae for at least 90 days.		

Cumulative number of AHS cases/dead in Thailand by provinces

Start AHS control measure

Start doing AHS Vaccination



Around 71% (3,866 horses out of 5,484) of horses in risk area (50km from infected farm) were vaccinated