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Self-Declaration of an Equine Disease Free Zone in Jakarta, Indonesia, for the purpose of facilitating the Equestrian competitions in the framework of the 18<sup>th</sup> Asian Games 2018

Self-declaration submitted to the OIE on O2 July 2018 by Dr I Ketut DIARMITA, Delegate of Indonesia to the OIE, Director General of Livestock and Animal Health Services, Ministry of Agriculture, Indonesia



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## **Abbreviations**

DGLAHS	Directorate General for Livestock and Animal Health Services
EDFZ	Equine Disease Free Zone
TAHC	OIE Terrestrial Animal Health Code
PHMS	Strategic Infectious Animal Disease (list)
RAQI	Registered Animal Quarantine Installation

#### I. INTRODUCTION

Indonesia will be hosting the 18<sup>th</sup> Asian Games Jakarta - Palembang from 18 August to 2 September 2018. One of the 40 sports featured at these Asian Games are equestrian competitions in the three Olympic disciplines of jumping, eventing and dressage. These disciplines will take place in Jakarta. In order to facilitate the participation of horses from different parts of the world, the Directorate General of Livestock and Animal Health Services (DGLAHS) has established a temporal Equine Disease Free Zone (EDFZ) in accordance with OIE Guidelines<sup>1</sup>, consisting of a disease free compartment: the venue (Jakarta Equestrian Park). This venue has been kept free of horses for over two years. The disease free status of this compartment is maintained through biosecurity measures, particularly (i) the full enclosure of the venue, (ii) a depopulated buffer zone of at least 1 km width surrounding the compartment and (iii) vector control and horse movement control measures.

The DGLAHS wishes to make a self-declaration of freedom of the following diseases in this compartment: equine infectious anaemia, glanders, equine influenza, surra, piroplasmosis and Japanese encephalitis.

In 2017 and 2018, surveillance was conducted around the EDFZ, in the Greater Jakarta Region. While infectious anaemia and glanders were not detected during this surveillance (see 3.4.2), antibodies for equine influenza, surra, piroplasmosis and Japanese encephalitis were found. The biosecurity measures applied to the compartment, the depopulated zone between the compartment and any horse establishment, vector and animal movement control will mitigate the risk of possible introduction of surra and Japanese encephalitis, while the vectors for piroplasmosis were not found in the venue (see 4.1) Since the venue has been empty for more than 2 years, it can be considered a compartment free of equine influenza (TAHC, 12.6.4) and this status will not be compromised by participating horses, which need to be vaccinated.

A biosecure highway passage from the venue to the International Airports of Jakarta (Soekarno-Hatta and Halim Perdana Kusuma) has also been established.

### 1.1 Objective of the declaration

The objective of this declaration is to inform the OIE Member Countries about the equine health status in and around the venue for the equestrian competitions of the 18<sup>th</sup> Asian Games Jakarta - Palembang and to share with OIE Member Countries information on the establishment of the EDFZ compartment for this purpose. This is the first time that a self-declaration of freedom from different equine diseases is made in Indonesia.

#### 1.2 Equine diseases

This self-declaration of freedom refers to the following diseases:

- Equine infectious anaemia according to Chapter 12.2. of the *Terrestrial Animal Health Code* (the *TAHC*)
- Glanders according to Article 12.10.2. of the TAHC
- Equine influenza according to the TAHC Article 12.6.4.
- Surra OIE listed disease
- Piroplasmosis according to the *TAHC* Chapter 12.7.
- Japanese encephalitis according to the TAHC Chapter 8.10.

<sup>&</sup>lt;sup>1</sup> http://www.oie.int/fileadmin/Home/eng/Our\_scientific\_expertise/docs/pdf/Chevaux/EDFZ3.pdf

It should also be mentioned that Indonesia never experienced an outbreak of African horse sickness and that during active sero-surveillance carried out in July 2017 no antibodies to African horse sickness virus were detected.

#### 1.3 Recognition of the EDFZ by European Commission

Indonesia's EDFZ is considered in a European decision related to veterinary certification conditions for the re-entry of registered horses for competition after temporary export<sup>2</sup>.

#### **II. ZONING**

#### 2.1 Establishment of the EDFZ compartment

The equine disease free zone consists of the compartment (the venue or CORE zone), which is surrounded by a 1 km depopulated buffer zone and the highway corridor to the Jakarta Airports.

The compartment was established on principles of biosecurity, management and spatial considerations as described in Chapter 4.3 and 4.4 of the *TAHC*. The venue, a former race-course, has been free of horses since its refurbishment into an equestrian competition venue which started in May 2016 (Figure 1). The venue features the horse stables, a veterinary clinic, an isolation unit, all training and competition areas and all amenities for the spectators, riders and other personnel. It is surrounded by a solid concrete wall of 3,20m height, elevated to 4,20m for the wall surrounding the stable area (along the front part of the stables, see point 21 and 22 in Figure 1. The wall keeps all possible animal intruders out.

The only entries are the main gate for spectators opposite the main tribune, one gate for entry of horses (near point 21 – Fig. 1) and one gate for entry of personnel and supplies (near point 17 – Fig. 1). All gates are secured, supervised and equipped with biosecurity devices like wheel washes and hand wash facilities. A buffer zone of 1 km width surrounding the CORE area was cleared of any livestock, particularly of any horse as of 15 February 2018. The highway corridor to the Jakarta Airports was also included in the EDFZ (Annex 10).

A Biosecurity Manual has been developed by the DGLAHS which describes a wide range of activities before the arrival and during the stay of the horses in the compartment (see Chapter IV). Control of access to the venue, procedures to clean the installations and stables; to disinfect the isolation stables, the clinic and vehicles; personnel hygiene; removal of manure; rodent and vector control; action to be taken in case of suspicion of an infectious disease and contingency planning are, amongst others, described in detail in the Manual. A full range of declaration forms have been developed to document that the activities have been carried out. A Biosecurity Manager, on behalf of the Organizing Committee, accompanied by dedicated staff of Indonesia Agriculture Quarantine Agency (IAQA) implement the Biosecurity measures, under the supervision of the Veterinary Services.

<sup>&</sup>lt;sup>2</sup>European Union. Official Journal of the European Union. Decision EU 2018/518 published 25 March 2018.

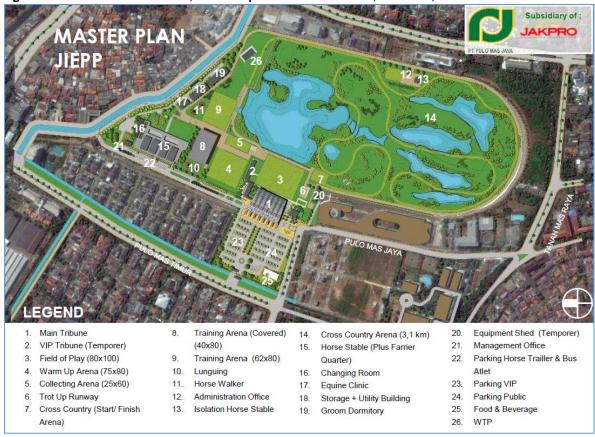


Figure 1. Master Plan of the venue, Jakarta Equestrian Park Pulomas, Indonesia, 2018

#### 2.2 Surveillance and protection zones around the EDFZ

In order to establish the equine disease status prevailing in the surrounding areas of the EDFZ, surveillance was carried out during the period July 2017 and March 2018 (see III.4.2). The zone selected for surveillance covered the administrative region of **Greater Jakarta** including the Metropolitan areas of Jakarta, Bogor, Depok, Tangerang and Bekasi cities, home to approx. 30 million people and 1370 horses and covering 6390 km².

After the end of the 3 serological surveys, for ease of close supervision and mitigation of risk of disease incursion into the EDFZ, the Greater Jakarta area was separated into a SURVEILLANCE zone and a PROTECTION zone.

**SURVEILLANCE zone**: covers the **5 Municipalities of Jakarta** and falls under the veterinary responsibility of the Food Security, Marine and Agricultural Services, DKI Jakarta. A census of equines carried out in May 2017 revealed that 334 horses live in this area. 90% are work horses that draw carts for transport of people and goods or work in the parks of Jakarta for pony rides. The zone covers about 661 km² and has a population of 10 million people. In this zone, each horse owner is regularly contacted (by phone or visit) since 15 February by the DKI Jakarta Veterinary personnel responsible for the different districts where horses are based. No horses are allowed to move from this area into the 1 km buffer zone surrounding the venue. A horse stable used by different horse owners, about 7 km distance from the venue, was cleared of horses (see also 3.4.2.1, and Chapter IV).

PROTECTION zone: covers the Greater Jakarta Area of the Metropolitan areas outside DKI Jakarta, that is Bogor, Depok, Tangerang and Bekasi cities, home to approx. 20 Mill people and 1036 horses, according to the June 2017 census, updated during the surveys. The Protection Zone covers 5729 km<sup>2</sup>. In this area passive surveillance has been enhanced since 15 February. Information material been distributed to all horse owners indicating that any sign of disease needs to be reported to the nearest Veterinary station and that

Figure 2. Surveillance and protection zones around the EDFZ, Indonesia, 2018



no horses are allowed to be moved into DKI Jakarta. If this is unavoidable, a specifically designed health certificate requiring testing for glanders, EIA, surra and piroplasmosis needs to be filled.

#### III. DOCUMENTED INFORMATION

#### 3.1 Evidence of notifiability

The basis for notifiability of infectious diseases in Indonesia is Law 18/2009, more specifically Article 45 "Anyone (including farmers/ producer, animal keeper, animal health worker, veterinary officers, government official) that have any knowledge on any infectious disease are required to report such case or event to the Government, Regional Government, and/or Local Authorised Veterinarians" (Annex 1).

#### 3.2 Regulatory System in Place

The Government of Indonesia, through the Minister of Agriculture, has established the list of *Strategic Infectious Animal Diseases* (PHMS) in accordance with the Decree of the Minister of Agriculture number 4026 / Kpts / OT.140 / 4/2013. The criteria for a disease to be categorized as PHMS are that it can cause economic losses, public unrest, and / or high animal mortality. In the decree of the Minister of Agriculture, 25 diseases have been defined as PHMS. Anthrax, rabies and surra are listed in PHMS as multi-species diseases which also affect horses.

Realizing that the PHMS did not include other important horse diseases, the Ministry of Agriculture, in the context of the establishment of the EDFZ, has established a decree in 2018 for the list of notifiable equine diseases, as listed in the OIE TAHC (Decree of the Minister of Agriculture number 235/Kpts/PK.320/3/2018, Annex 2):

- 1. African Horse Sickness
- 2. Contagious Equine Metritis
- 3. Dourine
- 4. Equine encephalomyelitis (Eastern and Western)
- 5. Equine Infectious Anemia
- 6. Equine Influenza

- 7. Equine Piroplasmosis
- 8. Equid Herpesvirus-1 (Equine Rhinopneumonitis)
- 9. Equine Arteritis Virus
- 10. Glanders Venezuelan equine encephalomyelitis
- 11. Strangles
- 12. Japanese Encephalitis
- 13. Surra
- 14. West Nile Fever
- 15. Vesicular Stomatitis

Out of these diseases, anthrax, surra and piroplasmosis have been reported in the past, while serological surveys carried out in the framework of research projects detected antibodies against Japanese Encephalitis in horses, but no clinical disease.

African horse sickness has never been reported and vaccination is prohibited.

While law 18/2009 stipulates notifiability of infectious diseases, no specific surveillance programmes for equine diseases are being carried out in Indonesia, reporting is based on passive surveillance reports, disease investigation and research studies. Disease investigations are carried out by the respective District Veterinary office and samples are taken to the nearest Disease Investigation Centre. In case that more specific testing is required the Research Centre at Bbalitvet or the Bogor Agricultural University get involved. In case of suspicion of disease or confirmation, the report is entered into the ISIKHNAS system (see below) on a mobile app.

#### 3.3 Population of equidae

In the year 2013 Indonesia has conducted a livestock census, which included equidae. During the national census, no differentiation between different species was made, e,g, between horses and donkeys. However, on Java Island where the equestrian competitions of the Asian Games 2018 will be held and where the EDFZ has been set up, there are no donkeys, mules or hinnies, just work horses and sport horses of different use (racing, equestrian, polo). There are no feral equidae in Indonesia. There are 48 zoos and conservation parks in Indonesia in which other equidae are kept. These animals were imported into Indonesia long time ago from other zoos in AHS free countries.

The equine population numbers for the years 2014 to 2017 are based on National Statistics Bureau figures and are given at Provincial level as shown in Annex 3. The total number across all Provinces estimated for 2017 is 442.602. The total number in DKI Jakarta is 334, while the number in Greater Jakarta was not known.

For the purpose of establishing the EDFZ, a specific census for horses only was carried out in June 2017. The total number of horses in Greater Jakarta Region (Jakarta, Bogor, Depok, Tangerang, and Bekasi cities and regencies) was then 1157. The population in Greater Jakarta Region was the targeted population to establish the equine health status. This population is composed of mainly work horses, few riding horses, police horses and polo horses, the distribution is shown in Figure 3. It is noteworthy that only horses live on Java Island, no donkeys or feral equidae.

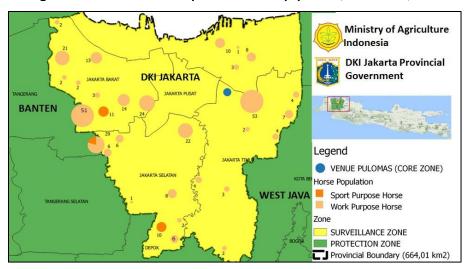


Figure 3. Distribution and composition of horse population, DKI Jakarta, 2018

#### 3.4 Establishing the equine health status in Greater Jakarta

#### 3.4.1 Animal identification

During the census all details of the owner (name, ID, Tel, location) and the horses (age, sex, name, color and silhouette) were recorded. This information was transferred to the epidemiological database in the Veterinary Services in the Ministry of Agriculture, the ISIKHNAS (Integrated Animal Health Information System). In the database the owner was allocated a unique identifier number and each registered animal is linked to a specific owner. A unique animal ID for the individual animal is also generated by the system.

The horse identification was improved by adding a description of the markings, e.g. brands, scars, cut ears etc to the silhouette. Owner's cards were developed which contain this information and they were issued to the owners in November 2017.

During the surveys the census figures were verified and an increase in numbers of horses to 1370 was noted.

#### 3.4.2 Surveillance

## 3.4.2.1 Surveillance in horses

Three surveys were carried out during the period July 2017 and March 2018 and samples were collected following a sampling frame set out to estimate prevalence for selected diseases (EIA, surra, piroplasmosis, Equine influenza and glanders) and proof of absence of African horse sickness in the surveillance and protection zones. Given the international level of the equestrian competition and the strict biosecurity measures that will be put in place and will not permit horses to be in direct contact and to breed, no breeding diseases (CEM, dourine, EVA) were included in the survey. The sampling frame is provided in Annex 4.

Additionally, in order to gain a better picture of the equine health status, some samples were also tested for diseases that are reported for the Southeast Asian region, such as Japanese encephalitis, West Nile fever, equine herpes virus and for strangles (non-notifiable, but considered an "event killer") during the

first and second survey. Samples were randomly taken during each survey, but trying to avoid taking always the same animals.

The samples were analysed by the Disease Investigation Centre BV Subang and the Veterinary Research Laboratory Bblitvet in Bogor. Since testing for horse diseases is not done frequently in these laboratories (tests for import and exports are carried out by the Indonesian Quarantine Agency laboratory), most tests had to be ordered and did not always arrive in time or right quantity. This led to some differences between sampling frame numbers and actual numbers of samples tested as shown in Annexes 5.1 - 5.3.

For the **first survey** a total of 631 samples were taken. This was more than required by the sampling frame and samples were stored in case of interesting findings that would need to be followed up with a larger sample size. 428 of those were tested for the following diseases according to availability of test kits (number of samples per disease given in brackets): African horse sickness (184), piroplasmosis (410 – B.c.; 428 - T.e.), surra (181), glanders (422), equine influenza (225). Depending on test kits availability some of the total samples were also tested for West Nile Fever, Japanese Encephalitis, equine herpes virus and strangles. Samples were collected in July and results became available in November 2017. Positive results were obtained for piroplasmosis (Babesia caballi 75/410; Theileria equi 227/428), surra (6/181) and equine influenza (7 /225). Detailed results are shown in Annex 5.1. Disease control measures to prevent entry of these vector borne diseases into the core zone are described in Chapter IV.

For comparative analysis, 600 aliquots of samples were sent to OIE Reference Laboratories for glanders (FLI, Germany) and 225 aliquots for equine influenza (Ireland).

From the 600 samples sent to FLI Germany for glanders testing, 11 samples were identified positive/suspicious in CFT and were tested with Immunoblot for confirmation. 1 out of the 11 samples reacted positive in Immunoblot. The result was communicated to the Veterinary Services in Jakarta and the horse was traced. The positive horse (Raja) and all in-contact horses were retested on 19 December 2017. Raja and one other horse (Belang) were positive on CFT, all other in-contact horses were negative.

A movement ban was issued for the premises of the horse owner.

A 2nd retest on 16 January 2018 of all in-contact horses showed all horses negative except for Raja. A decision was taken on 2nd February to sacrifice Raja and the suspicious horse (Belang) and both horses were taken to the Veterinary Research laboratory in Bogor where they were humanly euthanised and a post mortem was carried out on 6 February 2018. The post mortem did not reveal any signs of disease specific for glanders. Organ and tissue samples were taken and bacteriological investigation revealed no presence of Burkholderia mallei.

The notification made to the OIE on 23 January 2018 was withdrawn mid-March because the full epidemiological investigation that had been carried out could not confirm the presence of glanders.

From the 225 samples sent to the Irish Equine Centre for equine influenza testing, 7 samples from work horses without EI vaccination history were identified sero-positive (titer >8) in the Haemagglutination-Inhibition test. This finding indicates exposure to equine influenza virus by natural infection at some time.

This was considered an important finding as Indonesia claimed to be free of equine influenza and did not allow vaccination. Subsequently to this finding a new Regulation No 357 under Law No 18 (2009) was issued and equine influenza included into the list of diseases for which vaccines can be imported and horses can be vaccinated should this be required (for sport horses mainly).

For the **second survey** a total of 616 samples were collected. Those included also samples from investigations carried out by other regions on Java Island that had received passive surveillance reports of suspected equine diseases. Samples were tested for the following diseases (number of tested samples in brackets): piroplasmosis (540 – B.c.; 428 – T.e.), surra (408), equine influenza (606), glanders (472), Japanese encephalitis (419), West Nile fever (419), equine infectious anaemia (304) and strangles (489). Samples were taken during 20.11. and 8.12.2017 and results became available in February 2018. Results are presented in Annex 5.2. and and maps in Annex 6. These maps give a good overview of serological findings and show that there was a "hotspot" of horses that showed antibodies to several diseases. This place (Jatinengara), only 7 km away from the venue, was home to 49 cart horses belonging to 26 different owners operating their businesses from the same place. Owners were convinced by the Veterinary Services DKI Jakarta to remove their horses by beginning of May 2018 until after the Games to outside the Protection Zone. Note that the population data were monitored during the survey and an increase in number of horses from 1157 to 1370 was recorded in the ISIKHNAS data base.

During 2016 the Veterinary Services had received reports on suspicious cases of Japanese encephalitis, Equine rhinopneumonitis (EHV) and strangles (horse distemper) from other districts in Java island. These reports were traced back to their location and the respective District Veterinary Offices in charge carried out an investigation and, if possible, collected blood samples for testing for these diseases at the nearest Disease Investigation Centre (DIC). During the time of the 2<sup>nd</sup> survey result presentation these reports were also presented to DGLAHS. Table 1 shows these investigations, strangles results have been integrated in Annex 5.2 which provides the detailed results.

Table 1. Investigations on suspected cases of horse diseases, Indonesia, 2016

DIC	Report in 2016	Investigation	Method	Test results
Denpasar	Surra; strangles	Samples taken in August 17	300 serum samples from local horses	52 positive for strangles; Neg for surra in blood smear, serology still awaited
Wates	EHV	Samples taken in October 17	21 serum samples around the reported location	14 positive for EHV;
Maros	Strangles	3 Farmers in the location of the report were visited	No samples taken as horses were no longer available	inconclusive

For the **third survey** 446 samples were collected. Samples were collected on 23 January to 9 February 2018 and results became available in March 2018. Samples were tested for the following diseases (number of tested samples in brackets): equine influenza (367), glanders (404), surra (431), EIA (415) and piroplasmosis (435 – B.c; 446 – T.e.). Out of the 404 **glanders** samples, 5 sport and 6 workhorses showed a suspicious result in CFT. Learning from the experience during the  $1^{st}$  survey, a movement ban for the two locations of the horses was effected, the horses were isolated within the premises and were retested two times in intervals of 4 weeks and all became negative on the  $1^{st}$  or  $2^{nd}$  resampling (Annex 8). No clinical signs of disease were noted in all 11 horses during any of the three visits (See Annex 5.3.).

The results of the three surveys are given in Annex 5. Positive serological findings for piroplasmosis, equine influenza, West Nile fever, equine herpes virus, Japanese encephalitis, strangles and surra from these three surveys were communicated to the Veterinary Officers in the respective districts for follow-up. Horse owners were contacted and inquiries were made on possible signs of disease related to the serological results.

As most of those diseases had not been reported to the OIE in 6-monthly reports prior to these surveys, the OIE was also informed and requested to change the status, where appropriate, from "never reported" to "infection/infestation limited to one or more zones".

#### During the three survey periods no clinical case for any of the serological findings was found.

The visits by the respective Veterinary Authority for the purpose of these disease surveys were entered into the Owner's card and into ISIKHNAS.

#### 3.4.2.2 Vector surveillance

The presence of competent vectors for equine and zoonotic diseases such as surra, Japanese encephalitis, West Nile fever, anasplasmosis, babesiosis and theileriosis in Indonesia, has been described in literature. In order to assess their presence at the venue, the Department of Parasitology and Medical Entomology of the Veterinary Faculty, Bogor Agricultural University, carried out a vector survey in October 2017 which included also some of the locations of work horses in DKI Jakarta. Another longitudinal study was carried out during January to April 2018 with catching operations twice monthly.

Some literature references and the findings of the 2 surveys are summarized in Annex 7. The key findings revealed that there were **no ticks and no bats present on the venue** during both surveys. Flies, mosquitos and biting insects were found mainly in areas at the time occupied by workers and in stagnant water and flower pots. Few insects were found in the (empty) stable area.

As first measure the stagnant water sources were cleaned and dried. When construction work ended beginning of May and most workers had left and their canteen was closed, those facilities were thoroughly cleaned and disinfected so that they were no longer an attraction of insects.

Based on the findings of the survey a vector control programme was elaborated, using insecticides known to be effective against the identified insects and that are registered in Indonesia. The control programme also includes a rodent control programme and regular inspection of the stable areas for bats.

#### IV. MEASURES TO MAINTAIN FREEDOM IN THE EDFZ COMPARTMENT AND QUARANTINE

During the period of validity of this self-declaration, strict movement control is being imposed for the period 15 February 2018 to after the Games. By Directive of the Director, Veterinary Service DKI Jakarta, to all Veterinary Officers in the 5 districts of Jakarta, a sensibilisation campaign with the horse owners (now all registered with ISIKHNAS) was carried out to inform them that no new horses should be brought into the Surveillance Zone during this period. If unavoidable, those horses should be tested for glanders, EIA, surra and piroplasmosis. Spot visits and contact by phone with horse owners are being carried out to check on numbers and identity of horses.

Additional Certificates for the purpose to (i) enter the Surveillance zone from Indonesian territory; (ii) to move from the Registered Animal Quarantine Facility (RAQI) to the Core zone; (iii) to move from the RAQI or the Core zone to the Equine hospital; have been developed and put in place.

A 1 km zone around the venue was cleared of all horses and other livestock during the same period to create a buffer zone around the animal-free compartment.

A Biosecurity Manual was developed which details all measures to be taken from the moment of arrival of the horses to their departure at the different places where horses will be held, including the RAQI, the Veterinary Clinic at the venue, the Equine Hospital at the Bogor Agricultural University and the Isolation Unit at the venue.

#### 4.1 Vector control

In view of the fact that several of the diseases for which freedom is declared are vector borne diseases (EIA, surra, Japanese encephalitis, piroplasmosis), a vector control programme has been put in place.

Ultra-low volume (ULV) fogging equipment has been purchased to treat large open space areas with insecticide applied as fogging of tiny droplets which are nearly imperceptible and remain in the air until they evaporate. Synthetic pyrethroids registered formulations (Alpha-Cypermethrin, Permetrin, Deltametrin) will be used. The areas that will be treated are as follows:

- Main tribune area: 2 days before arrival of the horses and thereafter every 6 days during times of no spectators
- Office and meeting rooms' area: 2 days before arrival of horses. Thereafter "One push" applicator installed in each room, to be used once a day
- Stable area: 1 day before arrival of horses, thereafter every 6 days around the stable area. In washbays "Vape One Push" insecticide will be used once a day in the morning.
- Clinic and Isolation stables: 1 day before arrival of horses, thereafter every 6 days around the buildings

In addition, there are UV electric light traps installed in stables, clinic and isolation stables.

Mosquito larvicides such as Temephos 1% (organophospate) will be used to treat the open waterbodies in the cross-country area to reduce possible breeding sites of mosquitos. Horse fly traps will also be installed around the stable area and in the large open spaces of the cross country area.

Other mitigating measures are the use of fans installed in each individual stable. The construction of the roof and the open frame building plan of the stables also allows for air to circulate freely and to create airflow. Proper cleaning of the horse boxes and common areas such as washbays and alleys between rows of horse stables will be strictly applied.

Rodent control will be applied in selected areas which were identified by the team that carried out the vector surveillance. A map with locations where rodent traps will be located 4 weeks before the arrival of the horses, has been produced and traps will be regularly controlled.

In addition, the Public Health Services of DKI Jakarta Province in collaboration with Centre for Environment Health of Jakarta will reinforce their routine insect control programme in the neighboring residential area by spraying insecticides regularly and attending to stagnant water pools.

#### 4.2 Quarantine Provision

For horses entering Jakarta and requiring a post-arrival quarantine according to the "Veterinary Certificate for the Temporary Importation of horses into Indonesia to compete in the equestrian events of the 18<sup>th</sup> Asian Games", a RAQI has been set up at a private equestrian club (Arthayasa), situated in the Protection Zone, about 42 km from the venue. The quarantine area is a completely separate section of the property, separated from the main equestrian centre by a road and a small river. Separate units of temporary stable blocks as well as isolation stables and all biosecurity installations have been set up, ready to receive horses from different nations. A masterplan of the installations is shown in Annex 9.

#### V. CONTINGENCY PLANS

Should clinical signs of an infectious or contagious disease be observed during the quarantine period or during the period of the event, the following precautions have been developed.

#### 5.1. At the RAQI

If a horse develops a fever or any other clinical signs suggestive of an infectious or contagious disease, it will be put under intense supervision in the isolation stables and if deemed necessary, blood and/or other biological samples will be taken. Samples will be examined at the designated Quarantine Agency laboratory and, if deemed necessary, also sent to the Research Laboratory in Bogor for further evaluation and confirmation of the clinical signs.

If a horse develops an injury or a colic which cannot be treated on-site, it will be transferred to the Equine hospital at the Veterinary Faculty of the Bogor Agricultural University which is equipped to deal with any necessary surgical intervention.

#### 5.2. At the venue

If a horse develops a fever or any other clinical signs suggestive of an infectious or contagious disease, it will be transferred to the isolation unit on-site and put under intensive supervision. If deemed necessary, blood and/or other biological samples will be taken and examined at the clinic on-site and, if deemed necessary, samples will be sent to the designated laboratories for further evaluation and confirmation of the clinical signs.

If a horse has a minor injury, it will be transferred to the clinic on-site at the venue for treatment. If the injury is major or the horse needs colic surgery, it will be transferred to the Equine hospital at the Veterinary Faculty of the Bogor Agricultural University.

Two horse ambulances are available in case transfers from either the Quarantine Station or the venue to the Equine Hospital are required.

In the event of an injury in the arena, screens are available to block the injured horse from sight by the spectators. The horse will then be transported in the ambulance to the on-site clinic for inspection, treatment and if the injury is fatal, to be humanely euthanized.

#### **VI. CONCLUSIONS**

The Delegate of Indonesia self-declares, for the period 15 February to 30 September 2018, an EDFZ consisting of a disease free compartment, the venue (Jakarta Equestrian Park). This venue has been kept free of horses for over two years. The disease free status of this compartment is managed through biosecurity measures, particularly (i) the full enclosure of the venue, (ii) a depopulated buffer zone of at least 1 km width surrounding the compartment and (iii) vector control and horse movement control measures.

The DGLAHS wishes to make a self-declaration of freedom of the following diseases in this compartment: equine infectious anaemia, glanders, equine influenza, surra, piroplasmosis and Japanese encephalitis. The self-declaration also clearly defines the mitigating biosecurity and management measures put in place to maintain this freedom.

The	Delegate	declares	that	the	requirements	of	the	Terrestrial	Code	have	been	met,	including	the t
princ	iples of b	iosecurity	, mar	nagei	ment and spa	tial	cons	iderations a	as desc	cribed	in Cha	apter	4.3 and 4	.4 of
the 7	ΓΑΗC													

For more information, please contact the Delegate of Indonesia, Dr I Ketut DIARMITA.

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**AUTHORIZED TRANSLATION** 



## PRESIDENT OF THE REPUBLIC OF INDONESIA

## LAW OF THE REPUBLIC OF INDONESIA

#### **NUMBER 18 YEAR 2009**

#### REGARDING

## LIVESTOCK PRODUCTION AND ANIMAL HEALTH

## BY THE MERCY OF GOD ALMIGHTY

## PRESIDENT OF THE REPUBLIC OF INDONESIA

#### Article 45

- (1) Any person including farmer, animal owner, and livestock company managing livestock who knows the occurrence of contagious animal disease shall report the event to the Government, Local Government and/or local related veterinarian.
- (2) Minister shall stipulate regional status as infected area, suspect area, and area free of contagious animal disease and shall specify guidelines on its eradication.
- (3) Provincial government shall supervise application guidelines on eradication on animal disease as referred to in paragraph (2).
- (4) Local government of district/city shall implement guidelines on eradication of animal disease as referred to in paragraph (3).

#### Annex 2 Ministerial Decree 320/3/2018 on notifiable disease of horses

# MINISTRY OF AGRICULTURE REPUBLIC OF INDONESIA

## DECREE OF THE MINISTER OF AGRICULTURE NUMBER:

235/Kpts/PK.320/3/2018

REGARDING

### NOTIFIABLE ANIMAL DISEASES ON HORSES

#### WITH THE GRACE OF GOD THE ALMIGHTY MINISTER OF

#### AGRICULTURE OF REPUBLIC INDONESIA,

Considering: that based on *Terrestrial Animal Health Code* year 2017, *World Organisation for Animal Health* (OIE), and in order to implement the provisions of article 40 paragraph

(2) of Law Number 18 Year 2009 on Animal Husbandry and Animal Health, it is necessary to establish the Notifiable Disease on the Horse;

In view of

- : 1. Law Number 18 Year 2009 on Animal Husbandy and Animal Health (State Gazette Year 2009 Number 84, Additional State Gazette Number 5015) as amended by Law Number 41 Year 2014 on Amendment to Law Number 18 Year 2009 on Animal Husbandry and Animal Health (State Gazette Number 338, Additional State Gazette Number 5619);
  - 2. Law Number 36 Year 2009 on Public Health (State Gazette Year 2009 Number 144, Additional State Gazette Number 5063;
  - 3. Law Number 23 Year 2014 on Regional Government (State Gazette Number 244, Additional to the State Gazette Number 5587) as already amended the latest by Law Number 9 Year 2015 on the Second Amendment to Law Number 23 of 2014 on Regional Government (State Gazette Number 58, Additional to the State Gazette Number 5679);
  - **4.** Government Regulation Number 82 Year 2000 on Animal Quarantine (State Gazette Year 2000 Number 161, Additional State Gazette Number 4002);
  - 5. Government Regulation No. 38/2007 concerning Division of Governmental Affairs between the Central Government, Provincial Governments and District / Municipal Governments (State Gazette Number 82, Additional to State Gazette No. 3747);
  - 6. Government Regulation Number 95 Year 2012 on Veterinary Public Health

- and Animal Welfare (State Gazette Year 2012 Number 214, Additional State Gazette Number 5356);
- 7. Government Regulation No. 47 Year 2014 on the Control of Animal Diseases (State Gazette No. 130, Additional to State Gazette No. 5543);
- 8. Government Regulation Number 18 Year 2016 on Regional Work Unit (State Gazette Number 114, Additional to State Gazette Number 5887);
- Government Regulation Number 3 Year 2017 on Veterinary Authority (State Gazette Number 20, Additional to State Gazette of the Republic of Indonesia Number 6019);
- 10. Presidential Regulation No. 121 / P of 2014 on the Establishment of Ministries and the Appointment of Ministers of the Working Cabinet for the Periods of 2014-2019;
- **11.** Presidential Regulation No. 24/2010 concerning Status, Duties and Functions of Echelon I of State Ministries;
- **12.** Presidential Regulation Number 45 Year 2015 on the Ministry of Agriculture (State Gazette Number 90);
- 13. Presidential Regulation of the Republic of Indonesia Number 48 Year 2017 on the Implementation of Asian Games XVIII Year 2018 (State Gazette Number 8);
- 14. Minister of Agriculture Regulation No. 43 / Permentan / OT.140 / 08/2015 on Organization and Working Procedure of the Ministry of Agriculture (State Gazette Number 1234);
- 15. Minister of Agriculture Regulation No. 61 / Permentan / PK.320 / 12/2015 on Eradication of Animal Diseases (State Number 1866);

To Observe

- : 1. Terrestrial Animal Health Code Year 2017, World

  Organisation for Animal Health (OIE);
  - 2. Presidential Instruction No. Year 2016 on Support of the Asian Games XVIII Year 2018;
  - Recommendation of Director General of Livestock and Animal Health Services as National Veterinary Authority number 08158 / PK320 / F / 03/2018;

DECIDED:

To Stipulate

o supulate .

FIRST : Establish the list of notifiable diseases on horses

SECOND : The list of notifiable diseases on horse as mentioned on DICTUM FIRST as follows:

- 1. African Horse Sickness (AHS)
- 2. Contagious Equine Metritis
- 3. Dourine
- *4.* Equine encephalomyelitis (Eastern and Western)
- 5. Equine Infectious Anemia
- 6. Equine Influenza
- 7. Equine Piroplasmosis
- 8. Equid Herpesvirus-1 (Equine Rhinopneumonitis)
- 9. Equine Arteritis Virus
- 10. Glanders
- 11. Venezuelan equine encephalomyelitis
- 12. Strangles
- 13. Japanese Encephalitis
- 14. Surra
- 15. West Nile Fever
- 16. Vesicular stomatitis

THIRD

: The Establishment of list of notifiable diseases on horses as mentioned on  ${\bf dictum SECOND conducted for the}$ 

establishment of Equine Disease Free Zone in DKI Jakarta Province, Bogor District, Bogor City, Depok City, Tangerang District, Tangerang City, Tangerang Selatan City, Bekasi District and Bekasi City.

**FORTH** 

: In order to establish the Equine Disease Free Zone / EDFZ as mentioned on dictum THIRD, Farmer, owner or responsible person, keeper and animal health worker whose ever know the occurrence or suspicious of the disease as referred to the list in the dictum SECOND must report it to the District Veterinary Authority, Provincial Veterinary Authority and/or National Veterinary Authority

**FIFTH** 

: District Veterinary Authority, Provincial Veterinary Authority and/or National Veterinary Authority upon receiving the reports as mentioned it on dictum FORTH must conduct an investigation in accordance to the provisions of legislation.

SIXTH

: This decree is effective of the date of enactment.

Legalized in Jakarta

dated 16 March 2018

## Minister of Agriculture of The Republic of Indonesia

## A copy of this Ministerial Decree is submitted to:

- 1. Head of Indonesian Supreme Audit Institution;
- 2. Minister of Coordinating Ministry for Economic Affairs;
- 3. Minister of Finance;
- 4. Minister of Youth and Sports Affairs;
- 5. Head of Financial and Development Supervisory Agency;
- 6. Governor of DKI Jakarta;
- 7. Regent of Bofor;
- 8. Regent of Tangerang;
- 9. Regent of Bekasi;
- 10. Mayor of Bogor;
- 11. Mayor of Depok;
- 12. Mayor of Tangerang;
- 13. Mayor of South Tangerang;
- 14. Mayor of Bekasi;
- 15. The echelon I officials of the Ministry of Agriculture.

Annex 3 Horse population in Indonesia

Horse Population in Indonesia 2013 (census data) to 2017 (statistical data)

No	Province	2013	2014	2015	2016	2017	No	Province	2013	2014	2015	2016	2017
1	Aceh	1.744	2340	2532	2741	2933	18	West Nusa Tenggara	75.293	65708	62451	60540	65391
2	North Sumatera	2.133	2038	1917	1657	1686	19	East Nusa Tenggara	111.047	1129481	114879	112557	114537
3	West Sumatera	1.947	2005	2057	1904	1924	20	West Borneo	22	30	34	30	31
4	Riau	4	26	34	56	57	21	Central Borneo	32	30	31	33	33
5	Jambi	221	236	236	204	217	22	South Borneo	99	105	139	135	203
6	South Sumatera	178	309	253	280	294	23	East Borneo	68	57	107	101	104
7	Bengkulu	31	33	41	41	42	24	North Borneo	0	13	12	10	10
8	Lampung	236	254	259	240	250	25	North Sulawesi	7.098	5394	4752	4570	4368
9	Bangka Belitung Island	25	23	29	28	32	26	Central Sulawesi	3.318	3007	2636	1911	1933
10	Riau Island	0	0	8	0	0	27	South Sulawesi	163.646	815	765	722	712
11	DKI Jakarta	184	107	68	290	334	28	Southeast Sulawesi	2.305	815	765	722	712
12	West Java	14.193	13750	13447	13597	14902	29	Gorontalo	2.522	2212	2201	2097	2081
13	Central Java	15.559	13462	12550	12075	12143	30	West Sulawesi	4.894	4517	4545	2835	2873
14	DI Yogyakarta	1.776	1971	2165	2182	2282	31	Maluku	2.297	1991	1575	1103	1171
15	East Java	10.581	10536	10368	10416	10417	32	East Maluku	56	73	77	72	72
16	Banten	106	170	89	82	82	33	West Papua	12	0	0	0	0
17	Bali	208	203	252	256	258	34	Papua	1.559	1611	1772	1975	2195
					Total				434.208	428.051	430.403	424.268	442.602

Annex 4 Sampling frame

Districts								
			Glanders	EIA	piroplasmosis	Surra	EI	AHS
district Jakarta Barat	N. horses	Samples collected 1 <sup>st</sup> survey	Estimate prevalence (Prev 5% precision 5%)	Estimate prevalence (Prev 5% precision 5%)	Estimate prevalence (Prev 5% precision 5%)	Estimate prevalence (Prev 5% precision 5%)	Absence, 5%prev perfect test	Absence, 10%prev perfect test
Jakarta Selatan	81	67	39	39	39	39	43	25
Jakarta Timur	62	47	34	34	34	34	39	24
Jakarta Utara	16	18	14	14	14	14	16	13
Kota Tangerang	13		13	13	13	13	13	13
Kab Tangerang	100	79	40	40	40	40	45	30
Tangerang Selatan	87	41	34	34	34	34	38	26
Bekasi	115	16	45	45	45	45	45	25
Bogor	404	120	62	62	62	62	55	28
Kota Bekasi	23	19	18	18	18	18	22	18
Kota Bogor	82	38	39	39	39	39	43	25
Depok	190	82	53	53	53	53	49	27
Total	1157	631	435	435	435	435	450	280

Annex 5.1 Results of 1<sup>st</sup> survey (samples taken in July 2017; results available in November 2017)

			Glanders				EIA				B. caballi				
			Sport	horses	Work	horses	Sport	horses	Work	horses	Sport	horses	Work	horses	
District	No of horses	No of locations	No of positive	Total no samples	No of positive	Total no samples	No of positive	Total no samples	No of positive	Total no samples	No of positive	Total no samples	No of positive	Total no samples	
Jakarta Barat	110	5	0	0	<mark>0</mark> *	76	0	0	0	24	0	0	4	56	
Jakarta Selatan	81	6	0	0	0	15	0	8	0	27	0	0	2	40	
Jakarta Timur	62	1	0	0	0	34	0	0	0	45	0	0	0	30	
Jakarta Utara	16	3	0	0	0	14	0	0	0	18	0	0	0	6	
Kota Tangerang	13	2	0	0	0	6	0	0	0	13	5	27	5	8	
Kab Tangerang	100	12	0	37	0	0	0	49	0	0	28	33	9	13	
Tangerang Selatan	87	4	0	37	0	4	0	37	0	4	0	0	0	0	
Bekasi	115	6	0	0	0	0	0	0	0	16	0	0	0	40	
Bogor	404	2	0	60	0	22	0	12	0	59	14	44	7	25	
Kota Bekasi	23	2	0	0	0	0	0	0	0	6	0	0	0	13	
Kota Bogor	82	6	0	0	0	35	0	0	0	12	0	0	0	38	
Depok	190	7	0	41	0	41	0	20	0	0	1	27	0	10	
Total	1157	e and one su	0	175	0	247	0	126	0	224	48	131	27	279	

<sup>\*</sup> One positive and one suspicious case were identified in December17/January 18. A full disease investigation was carried out which did not confirm the serological positive finding.

	Theiler	ia equi			Sui	ra			Equine ii	nfluenza			African hor	se sickness	5
Sport	horses	Work	horses	Sport	horses	Work	horses	Sport	horses	Work	horses	Sport	horses	Work	horses
			Total				Total				Total				Total
No of	Total no	No of	no	No of	Total no	No of	no	No of	Total no	No of	no	No of	Total no	No of	no
positive	samples	positive	samples	positive	samples	positive	samples	positive	samples	positive	samples	positive	samples	positive	samples
0	0	42	56	0	0	0	20	0	0	5	26	0	0	0	20
0	0	26	40	0	0	0	15	0	0	0	22	0	0	0	15
0	0	29	30	0	0	3	15	0	0	1	16	0	0	0	15
0	0	1	6	0	0	0	6	0	0	0	4	0	0	0	10
0	0	24	35	0	0	0	13	0	14	0	3	0	0	0	13
0	0	27	46	0	13	2	0	11	24	0	0	0	17	0	0
0	0	0	0	0	21	0	0	0	0	0	0	0	20	0	0
0	0	25	40	0	0	1	10	0	0	1	22	0	0	0	10
0	18	12	60	0	14	0	16	10	32	0	9	0	0	0	15
0	0	10	13	0	0	0	6	0	0	0	7	0	0	0	10
0	0	15	38	0	0	0	12	0	0	0	20	0	0	0	15
12	22	4	24	0	20	0	0	9	26	0	0	0	24	0	0
12	40	215	388	0	68	6	113	30 <sup>1</sup>	96	7	129	0	61	0	123

<sup>&</sup>lt;sup>1</sup> all positive horses had received an EI vaccination at some point in life, as most were sport horses imported from EU countries

**Note:** Tests for West Nile fever, Japanese encephalitis, Equine herpes virus and strangles were done on some of the samples as there were not sufficient test kits.

Results:

West Nile fever: 31 serological positive findings

**Equine herpes virus:** 120 serological positive findings

Japanese Encephalitis: 17 serological positive findings

**Strangles:** 65 serological positive findings

Annex 5.2 Second survey (samples taken 20.11. and 8.12.2017, results February 2018)

								_			Babesia caballi				
				Glan	ders			<u> </u>	IA			Babesia	a caballi		
			Sporthors	ses	Workhor	ses	Sporthors	ses	Workhor	ses	Sporthors	ses	Workhorses		
District	No of horses	No. Of Location	No of positive	Total no samples	No of positive	Total no samples	No of positive	Total no samples							
Jakarta Barat	143	5	0	0	0	74	0	0	0	15	0	0	13	74	
Jakarta Selatan	91	6	0	0	0	57	0	0	0	12	0	0	10	47	
Jakarta Timur	76	1	0	0	0	0	0	0	0	0	0	0	0	4	
Jakarta Utara	22	3	0	0	0	21	0	0	0	21	0	0	1	21	
Kota Tangerang	13	2	0	0	0	13	0	0	0	13	0	0	4	13	
Kab Tangerang	100	12	0	0	0	34	0	0	0	34	5	51	3	26	
Tangerang Selatan	87	4	0	0	0	49	0	0	0	49	0	0	27	27	
Bekasi	118	6	0	0	0	40	0	0	0	40	0	0	38	40	
Bogor	426	2	0	0	0	0	0	0	0	0	0	0	0	65	
Kota Bekasi	23	2	0	0	0	22	0	0	0	22	0	0	3	22	
Kota Bogor	82	6	0	0	0	37	0	0	0	37	0	0	5	37	
Depok	189	7	0	64	0	61	0	7	0	54	25	59	20	54	
Total	1370		0	64	0	408	0	7	0	297	30	110	124	430	

	Babes	ia equi			Su	rra			Equine i	nfluenza	
Sport	horses	Work	horses	Sport	horses	Work	horses	Sport	horses	Work	horses
No of positive	Total no samples	No of positive	Total no samples	No of positive	Total no samples						
0	0	1	74	0	0	0	74	0	0	1	74
0	0	0	57	0	0	0	57	0	0	5	57
0	0	0	4	0	0	0	0	0	0	1	4
0	0	0	21	0	0	0	21	0	0	0	21
0	0	0	13	0	0	0	13	0	0	0	13
3	51	1	23	0	0	0	34	24	59	3	26
0	0	0	26	0	0	0	49	0	0	0	49
0	0	2	40	0	0	0	40	0	0	2	40
0	0	4	73	0	0	0	0	0	0	37	65
0	0	0	22	0	0	0	22	0	0	4	18
0	0	1	37	0	0	0	37	0	0	0	37
16	58	2	54	0	7	0	54	0	69	15	74
19	109	11	444	0	7	0	401	24 <sup>1</sup>	128	68	478

<sup>&</sup>lt;sup>1</sup> these horses had a vaccination history as they were all imported horses

	WN	<b>v</b>				JE		Strangles		
Sport	horses	Work ho	orses	Sport	horses	Work	horses	Work	horses	
No of	Total no	No of	Total no	No of	Total no	No of	Total no	No of	Total no	
positive	samples	positive	samples	positive	samples	positive	samples	positive	samples	
0	0	0	74	0	0	9	74	12	74	
0	0	0	57	0	0	10	57	5	57	
0	0	0	0	0	0	0	0	1	4	
0	0	0	21	0	0	5	21	5	21	
0	0	0	13	0	0	0	13	3	13	
0	0	0	34	0	0	14	34	10	49	
0	0	0	49	0	0	14	49	10	39	
0	0	0	40	0	0	0	40	20	40	
0	0	0	0	0	0	0	0	40	66	
0	0	0	22	0	0	0	22	11	22	
0	0	2	50	0	0	7	50	23	36	
0	7	0	52	0	7	0	52	13	68	
0	7	2	412	0	7	59	412	153	489	

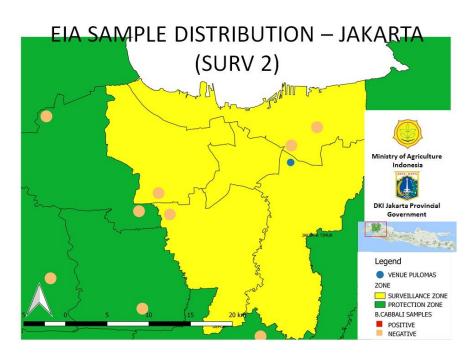
Annex 5.3 Third survey (samples taken 23.1. – 9.2.18, results available in March)

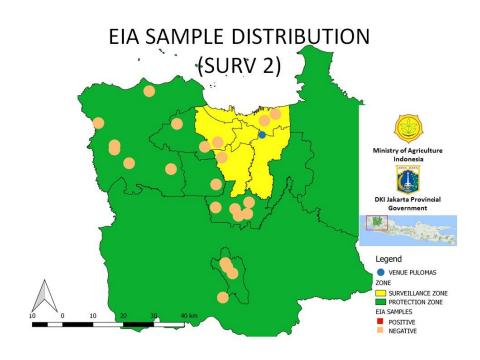
			Glanders				EIA				Piroplasmosis			
												Bab	esia caballi	
			Sporth	orses	Work h	orses	Sport	horses	Work	horses	Sporthorses		Work horses	
District	No of	No. of	No of	Total no	No of	Total no	No of	Total no	No of	Total no	No of	Total no	No of	Total no
	horses	Location	suspicious	samples	suspicious	samples	positive	samples	positive	samples	positive	samples	positive	samples
Jakarta Barat	143	5	0	0	0	53	0	0	0	26	0	0	1	38
Jakarta Selatan	91	6	0	3	0	0	0	3	0	46	0	0	0	43
Jakarta Timur	76	1	0	0	0	32	0	0	0	42	0	0	0	37
Jakarta Utara	22	3	0	0	0	20	0	0	0	13	0	0	3	18
Kota Tangerang	13	2	0	0	0	0	0	0	0	0	0	0	0	12
Kab Tangerang	100	12	0	49	2	31	0	49	0	31	1	49	0	10
Tangerang Selatan	87	4	0	0	0	20	0	0	0	20	0	0	0	27
Bekasi	118	6	0	0	0	20	0	0	0	20	0	0	0	28
Bogor	426	2	0	50	0	0	0	50	0	0	0	44	0	0
Kota Bekasi	23	2	0	0	0	20	0	0	0	20	0	0	0	18
Kota Bogor	82	6	0	0	0	49	0	0	0	63	0	0	0	57
Depok	189	7	5	24	4	33	0	2	0	30	0	17	0	37
Total	1370		5*	126	6*	278	0	104	0	311	1	110	4	325

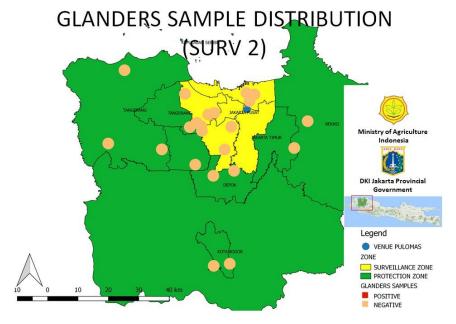
 $<sup>\</sup>ensuremath{^*}$  details of investigations of these suspicious findings see Annex 8

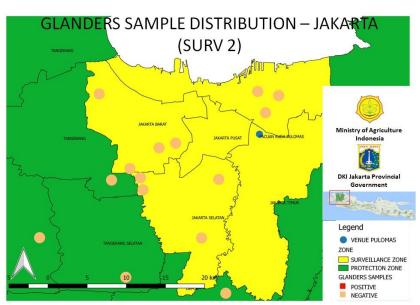
		Piroplasmosis				Surra				Equine Influenza				
				Theile	ria Equi									
			Sport	horse	Workhorse		Sport horse		Workhorse		Sport horse		Workhorse	
District	No of horses	No. of Location	No of positive	Total no samples										
Jakarta Barat	143	5	0	0	0	38	0	0	0	24	0	0	1	43
Jakarta Selatan	91	6	0	0	1	49	0	3	0	46	0	0	3	49
Jakarta Timur	76	1	0	0	0	42	0	0	0	42	0	0	5	42
Jakarta Utara	22	3	0	0	0	18	0	0	0	20	0	0	0	20
Kota Tangerang	13	2	0	0	12	12	0	0	0	0	0	0	0	14
Kab Tangerang	100	12	18	49	5	10	0	49	0	31	0	0	10	17
Tangerang Selatan	87	4	0	0	1	27	0	0	0	20	0	0	0	30
Bekasi	118	6	0	0	9	28	0	0	0	20	0	0	2	31
Bogor	426	2	0	44	0	0	0	50	0	0	0	0	0	0
Kota Bekasi	23	2	0	0	17	18	0	0	0	20	0	0	4	20
Kota Bogor	82	6	0	0	3	57	0	0	0	54	0	0	2	64
Depok	189	7	6	17	0	37	0	24	0	28	0	0	6	37
Total	1370		24	110	48	336	0	126	0	305	0	0	33	367

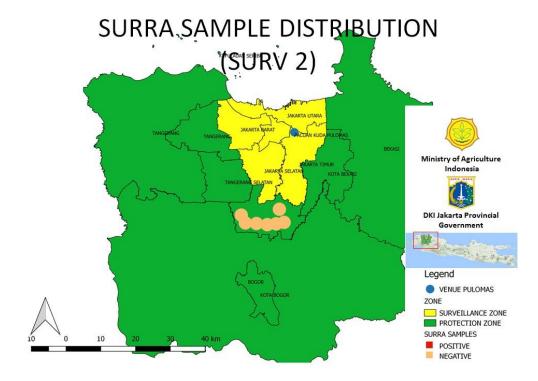
## Geographical distribution maps for 2<sup>nd</sup> survey

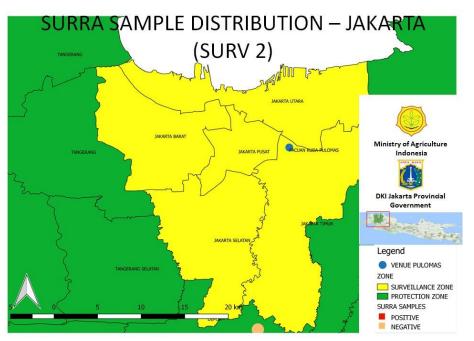


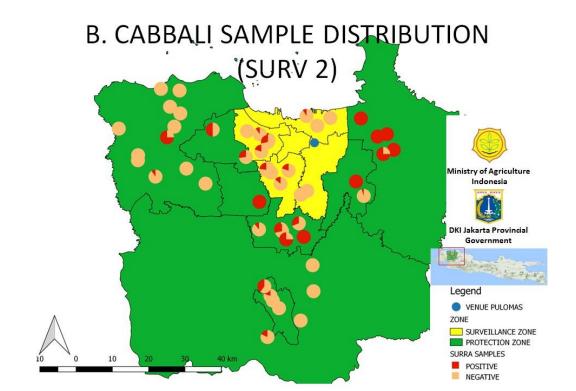


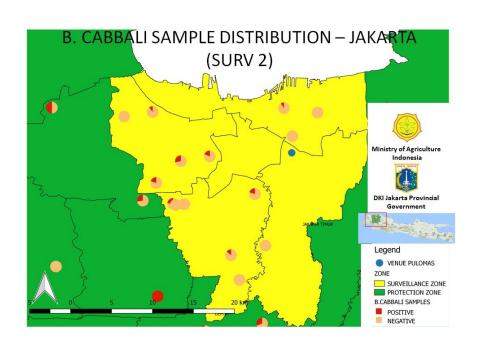


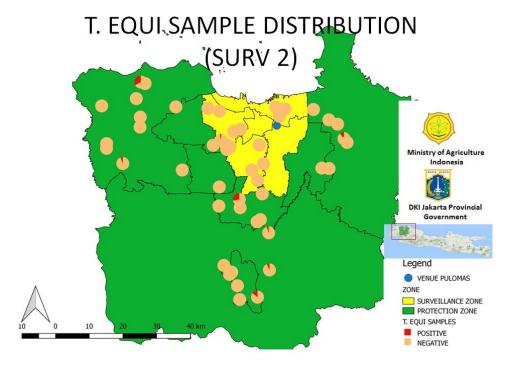


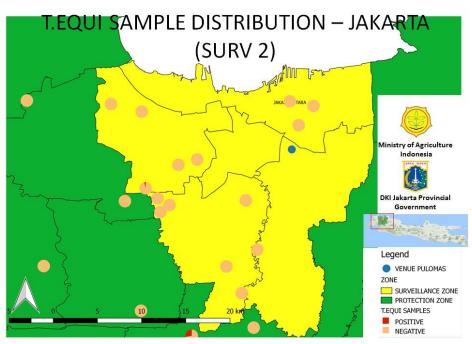


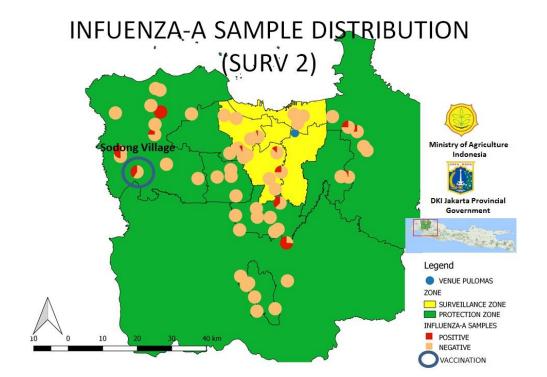


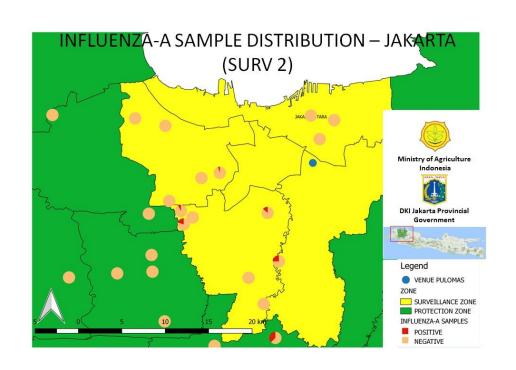


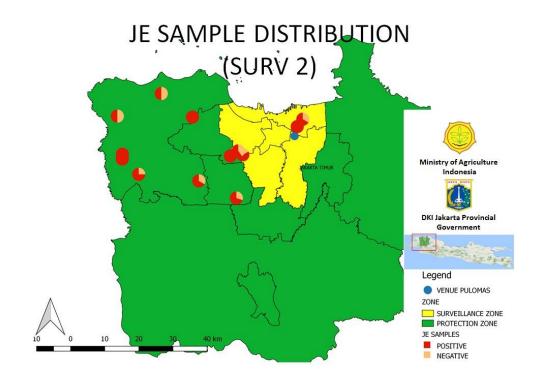


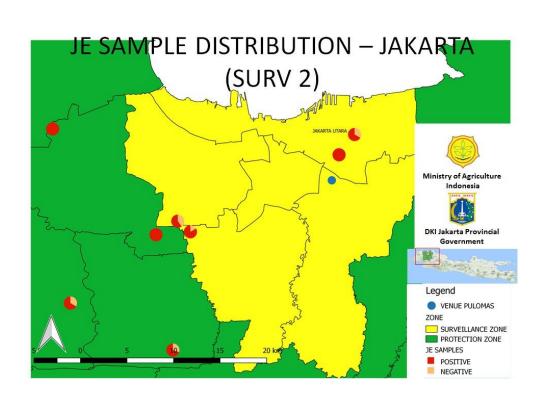


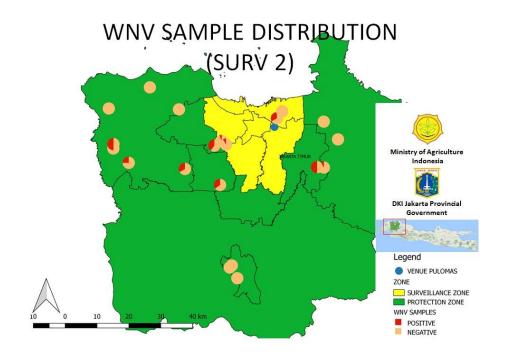


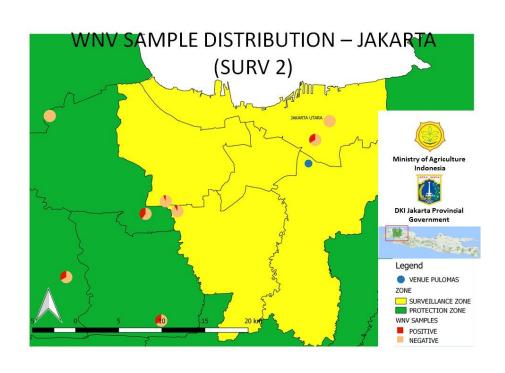


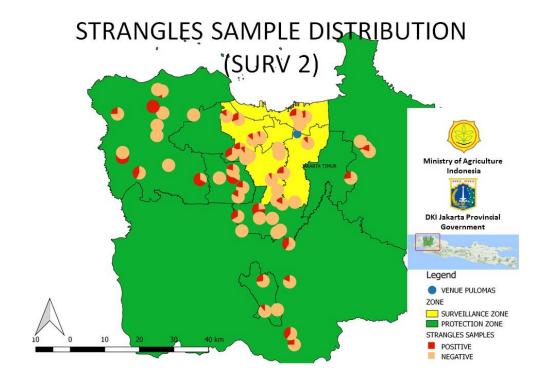


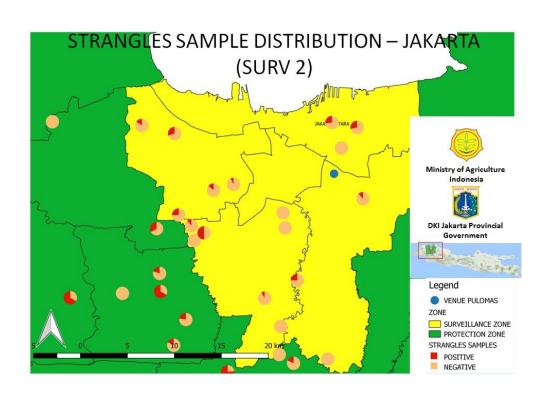












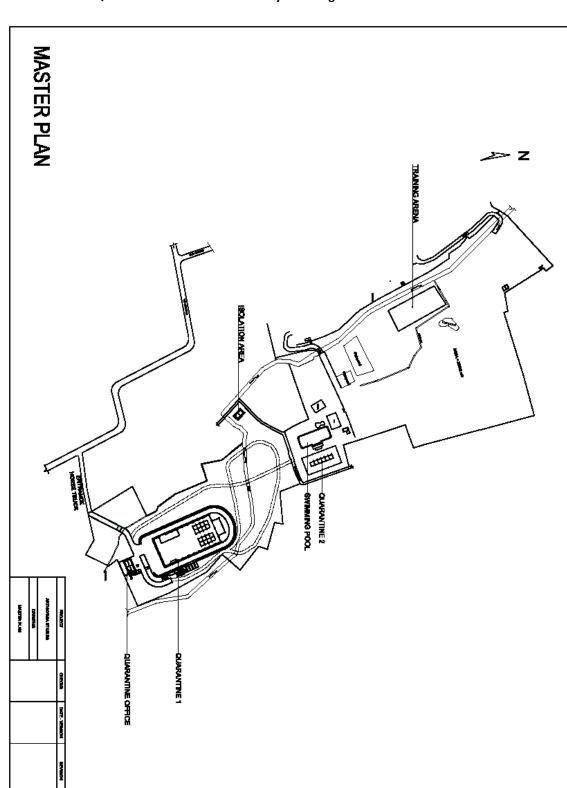
## Annex 7 Vector survey and vector studies

Vector	Literature Reference						
Bats (P.	I. Sendow et al, 2013; PLOS ONE Vol 8 (7)						
vampyrus)							
	I. Sendow et al, 2006; EID, Vol 12, No 4						
Fruit Bats	M. Saepullo et al., 2016;						
(Pteropus sp)	http://medpub.litbang.pertanian.go.id/index.php/pro						
(reservoir)	ceedings/article/view/1471						
Culex	Vector survey, October 2017 and Jan-Apr 2018,						
tritaenirochynus	Entomology Dept, IBP Bogor						
(primary vector)							
Culex	Hadi et al, 2011 ; J.Vet . 12 : 326-334						
quinquefasciatus;							
Culex	I. Sendow et al, 2003. JITV Vol 8(1):64-70						
Fuscocephalus							
(potential vectors)							
Culicoides (49	P. Sukarsih et al., Arbovirus Research in Australia;						
species)	Proceedings 6th Symposium, 1993.						
Aedes aegypti	Vector survey, October 2017 and Jan-Apr 2018,						
3.1	Entomology Dept, IBP Bogor						
Stomoxys	Vector survey, October 2017 and Jan-Apr 2018,						
-	Entomology Dept, IBP Bogor						
	Bats (P. vampyrus)  Fruit Bats (Pteropus sp) (reservoir)  Culex tritaenirochynus (primary vector)  Culex quinquefasciatus;  Culex Fuscocephalus (potential vectors)  Culicoides (49 species)  Aedes aegypti						

## Annex 8

	Glanders in	vestigation		3 <sup>rd</sup> survey		1 <sup>st</sup> retest		2 <sup>nd</sup> retest	
NO	Horse	Horse	Category horse						
	ID	Location	S/W	[Date]	result	[Date]	result	[Date]	result
1	TKA258	Kab. Tangerang	Work	01.02.18	Suspect	28.02.18	Suspect	04.04.18	Negative
2	TKA260	Kab. Tangerang	Work	01.02.18	Suspect	28.02.18	Suspect	04.04.18	Negative
3	DP 214	Kota Depok	Work	25.01.18	Suspect	28.02.18	Negative	05.04.18	Negative
4	DP 221	Kota Depok	Work	25.01.18	Suspect	28.02.18	Suspect	05.04.18	Negative
5	DP 227	Kota Depok	Work	25.01.18	Suspect	28.02.18	Suspect	05.04.18	Negative
6	DP 235	Kota Depok	Work	26.01.18	Suspect	28.02.18	Suspect	05.04.18	Negative
7	DP 238	Kota Depok	Sport	26.01.18	Suspect	28.02.18	Suspect	05.04.18	Negative
8	DP 243	Kota Depok	Sport	26.01.18	Suspect	28.02.18	Suspect	05.04.18	Negative
9	DP 245	Kota Depok	Sport	26.01.18	Suspect	28.02.18	Negative	05.04.18	Negative
10	DP 246	Kota Depok	Sport	26.01.18	Suspect	28.02.18	Suspect	05.04.18	Negative
11	DP 248	Kota Depok	Sport	26.01.18	Suspect	28.02.18	Suspect	05.04.18	Negative

2 E



Annex 10: Core and buffer zones of the EDFZ and secure highway passage to Airports

