
Wildlife Health - Singapore

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***Sub-regional Virtual Meeting on Wildlife Health and Networking
for OIE Members in Southeast Asia***

Thursday 28th October 2021

Outline

- Introduction
- Legislations
- Activities
- Priority areas

Animal Health Landscape in Singapore

Pet owners, AWGs, breeders



Animal exhibits & attractions

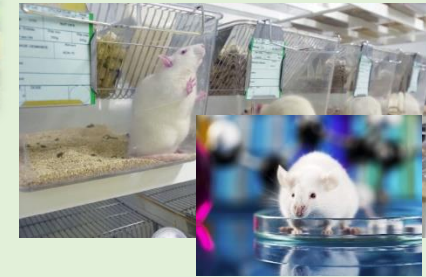


Wildlife

Public health & zoonoses



Laboratory & research



Traders in animals and animal products (NParks and SFA)



Horse racing/riding industry

Local food animal production (SFA)



Animals and Birds Act

- Enacted in 1965, last amended in 2014
- Legal framework for animal health and welfare in Singapore
 - Provides levers for regulating trade of animals and animal products
 - Disease control measures
 - Measures pertaining to animal welfare and prevention of animal cruelty
 - Licensing of animal and veterinary-related individuals/businesses
 - Regulation of keeping, breeding and feeding of animals
 - Provides for enforcement powers

Wildlife Act (Chapter 351)

- Protection, preservation and management of wildlife for the purposes of maintaining a healthy ecosystem and safeguarding public safety and health, and for related matters
- Administered by National Parks Board – Ministry of National Development
- Amended June 2020
- Regulates import, export, sale of wildlife
- Regulates keeping, killing, taking, trapping, feeding and releasing of wildlife
- Regulate what wildlife can be kept as a pet and what can be sold in pet shops

City in Nature: Caring for our animal inhabitants

- Enhancing veterinary capabilities in wildlife treatment and rescue



City in Nature: Caring for our animal inhabitants

- Rehabilitation of wildlife for release back to the wild
- Wildlife population management through sterilisation
- Explore non-invasive, fast recovery techniques e.g. chemical sterilisation



Biosurveillance Plan

Biosurveillance spans across a spectrum – before, during and after the incursion and/or outbreak of animal disease in the population(s) of interest.

Early warning – Monitoring of trends, indicators, notifications.

Early detection – Pre-emptive detection and diagnosis of disease events.

Situation awareness – Understanding of the disease spread and verify the effectiveness of control measures.

Consequence management – Putting in the necessary or appropriate mitigation to reduce the impact.

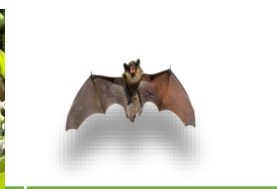
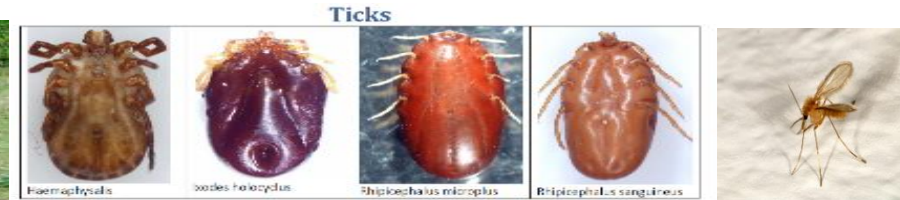
Biosurveillance Programmes

Scope

- **Domestic**
 - Companion animals – e.g. pets, ornamental fish
 - Livestock – e.g. poultry, ruminants, pigs, food fish
- **Zoological**
 - Public parks – e.g. swans at Istana and SBG
 - Sentosa – e.g. peafowl
 - WRS – e.g. exhibit animals
- **Wildlife**
 - Terrestrial – e.g. wild boar
 - Avian – e.g. migratory birds
 - Non-Terrestrial – e.g. bats



Biosurveillance Programmes



Civet	Otter	Wild Boar	Bat	Macaque	Sambar deer	Wild animals	Domestic animals
Parvovirus, Rabies virus , Influenza virus , Coronavirus *AMR	Parvovirus, Distemper virus, Influenza virus , Rabies virus *AMR	African swine fever virus, Classical swine fever virus, Influenza virus , Foot and mouth disease virus *AMR	Rabies virus , Henipavirus , Coronavirus , Influenza virus , *AMR	<i>Plasmodium knowlesi</i> *AMR	*AMR	Tick-borne diseases e.g. Borrelia sp , <i>Rickettsia sp</i>	Tick-borne diseases e.g. <i>Ehrlichia sp</i> , <i>Babesia sp</i> , <i>Anaplasma sp</i> .
						Sandfly-borne diseases e.g. Leishmania sp .	Sandfly-borne diseases e.g. Leishmania sp
*Antimicrobial resistance (AMR) Zoonotic diseases							

Population Management of Domestic Animals and Wildlife

- **Animal populations (both urban and wildlife) are being monitored**
 - Wild birds
 - Urban pest birds
 - Wild boars
 - Macaques
 - Stray dogs and cats

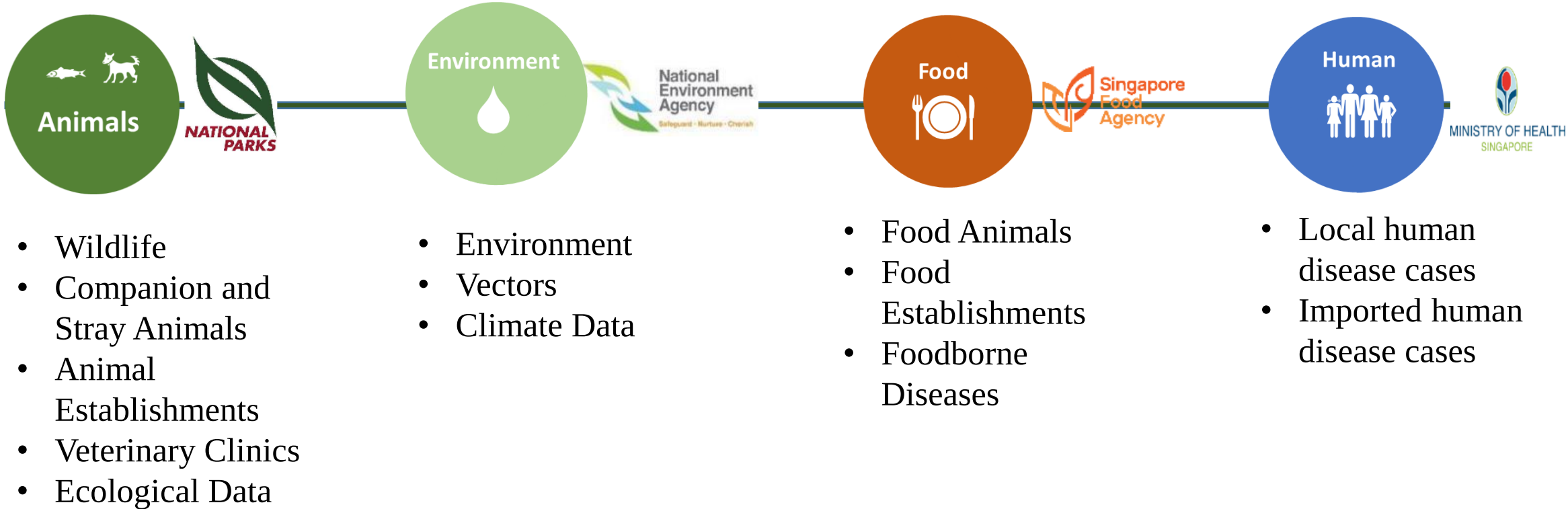


Disease reporting

OIE-listed diseases reported in wild for 2020:

OIE-listed diseases	Animal category	Number of samples tested	Susceptible	Number of cases	Deaths	Killed and disposed of	Slaughtered/ killed for commercial use	Vaccinated in response to the outbreak (s)
Old world screwworm (Chrysomya bezziana)	Wild	10	68	10	2	4	0	0
Avian chlamydiosis	Wild	361	910	24	15	5	0	0
Leishmaniosis	Wild	60	...	3	0	0	0	0

WOG Biosurveillance Landscape



Future activities

- Scanning for exotic and emerging threats – early detection for possible incursions
- Enhancing vector surveillance
- Developing portable biosurveillance detection systems to be used in the field
- Enhancing international network and bilateral cooperation

Thank You