

Department of Industry, Tourism and Trade

LIVEXchange Conference

November 2022



Practicalities, challenges and gaps in Biosecurity preparedness

Mr Luke Bowen, Deputy CEO Agriculture, Fisheries and Biosecurity



Outlook









China (ASF)

@孙大牛



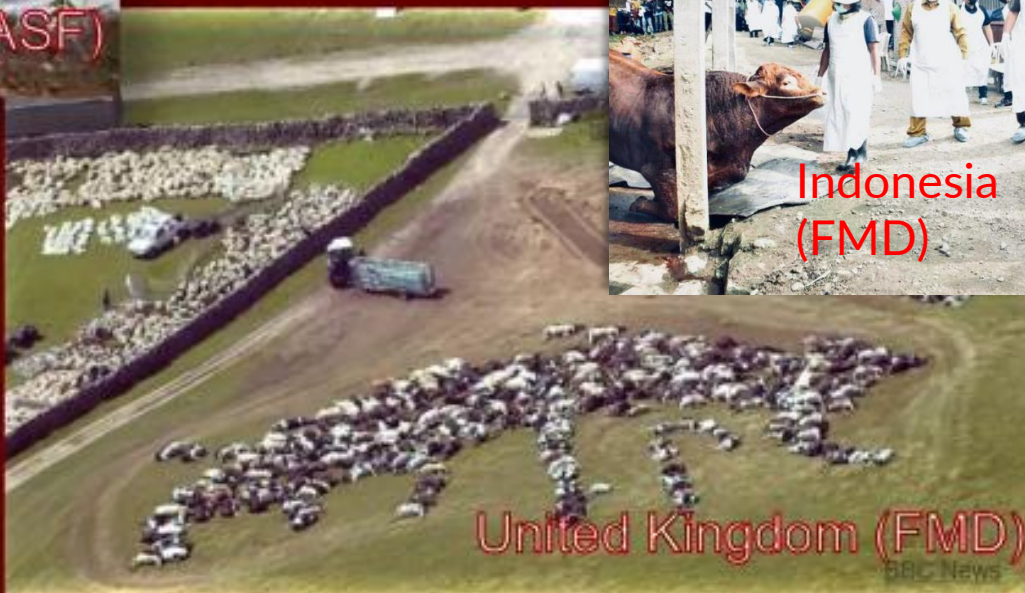
Brazil (FMD)



Vietnam (ASF)



Russia (ASF)



United Kingdom (FMD)

Foot and mouth disease 20 years on: 'We watched as sheep were taken off the hills to be killed'

Two decades later, those at the heart of the disaster tell Sarah Freeman about the crisis's lasting legacy



Acrid smoke billows from a 'funeral pyre' of burning cattle destroyed in the midst of a devastating outbreak of foot and mouth disease in 2001 (Photo: Getty)



By Sarah Freeman

February 17, 2021 2:58 pm (Updated 4:41 pm)



Indonesia (FMD)

Georgina Mills reflects on the 2001 foot-and-mouth outbreak and the lessons that have been learned since then.

... disease is an Ordo...
... dairy farmer it...
... seven months of



"This awful event had long-term impacts in all areas of livestock work"

19 February 2001 is a date that will stick in many





~~TRADE~~

Recovery ?

HOURS / DAYS

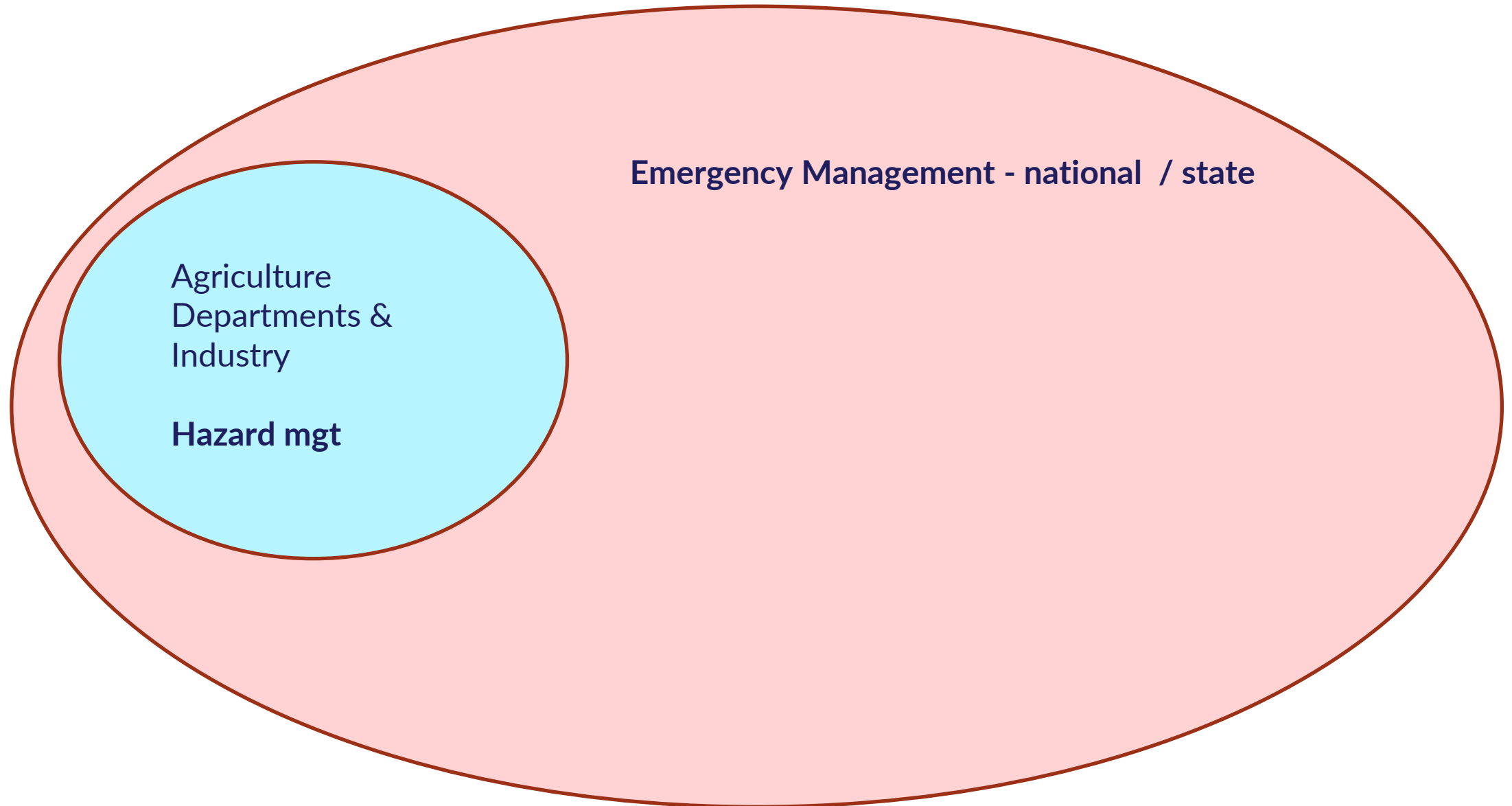
Animal Emergency

People emergency

Whole community emergency



Emergency management - EAD



AUSVETPLAN

1. Disease strategies
2. Disease action plan
3. State / territories plan

STOCK STANDSTILL



Indian Ocean

Coral Sea

Hypothetical



NORTHERN TERRITORY

QUEENSLAND

WESTERN AUSTRALIA

Hypothetical

SOUTH AUSTRALIA

Hypothetical

NEW SOUTH WALES

VICTORIA

AUSTRALIAN CAPITAL TERRITORY

Indian Ocean

An emergency – success?

Function of:

1. Speed of discovery and diagnosis
2. Decisions - time to action
3. Coordination - national – state – local – industry – community - EM
4. On ground response capacity (capability) industry & government
5. Recovery

Likelihood ?

PROBABILITY OF A SIGNIFICANT OUTBREAK ?

Difficult to prevent, detect, control and to minimise impacts

African swine fever



21%

Range: 5 - 39%

Up to \$2.03 billion economic losses over 5 years

African horse sickness



13%

Range: 1 - 31%

Up to 95% mortality rate in horses

Foot-and-mouth disease

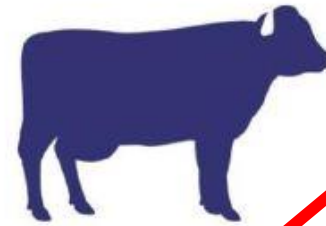


12%

Range: 1 - 19%

\$80 billion economic losses over 10 years

Lumpy skin disease



~~**28%**~~

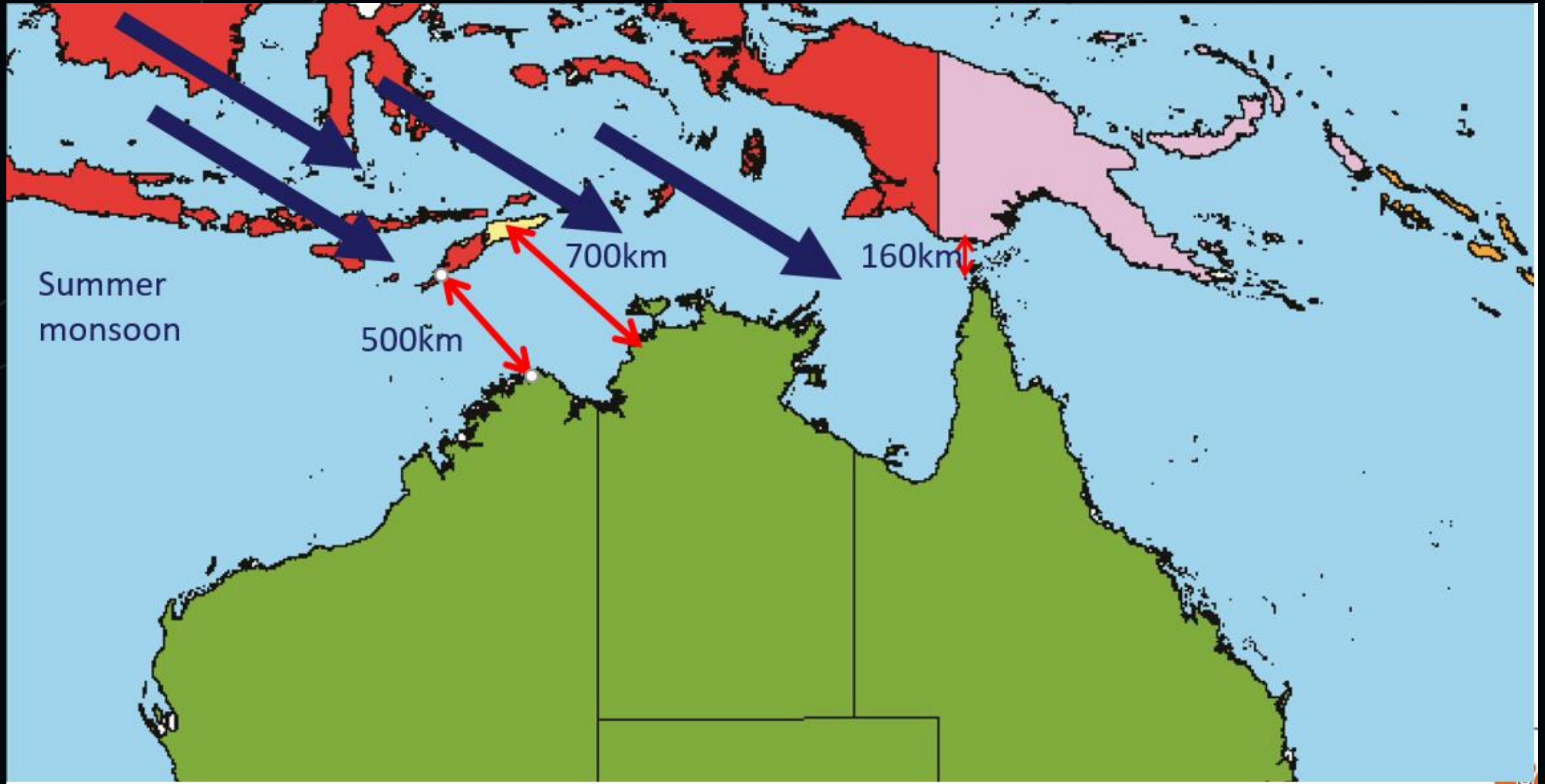
Range: 4 - 56%

~~\$7.4 billion year 1 Significant trade and industry impacts~~

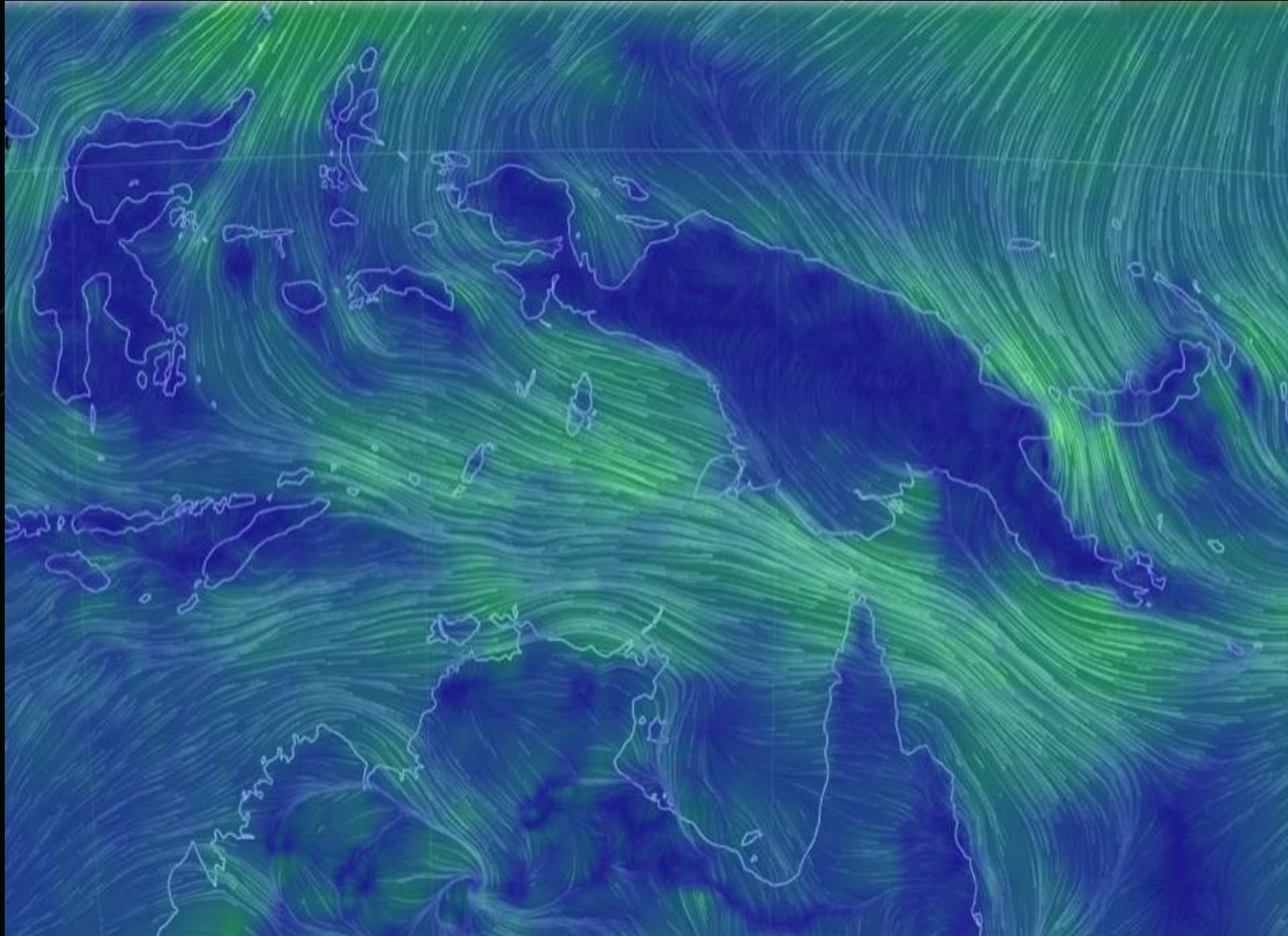
X %

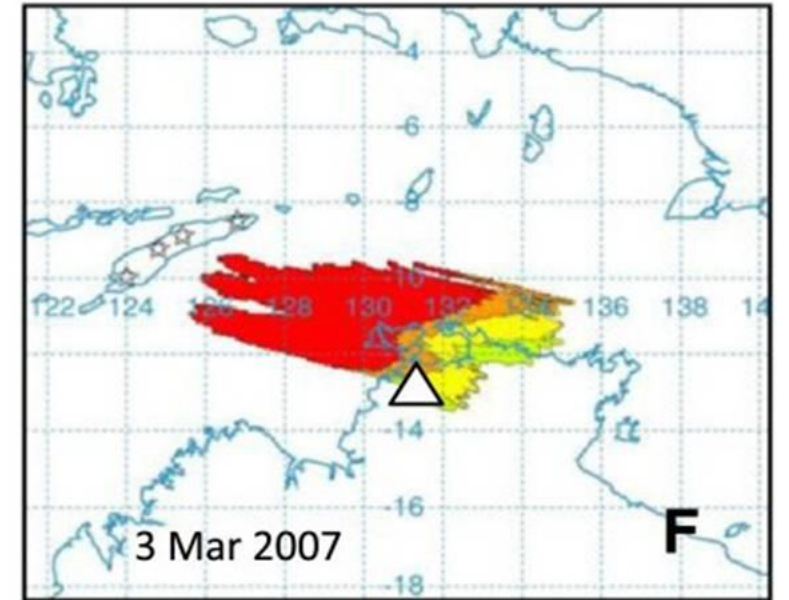
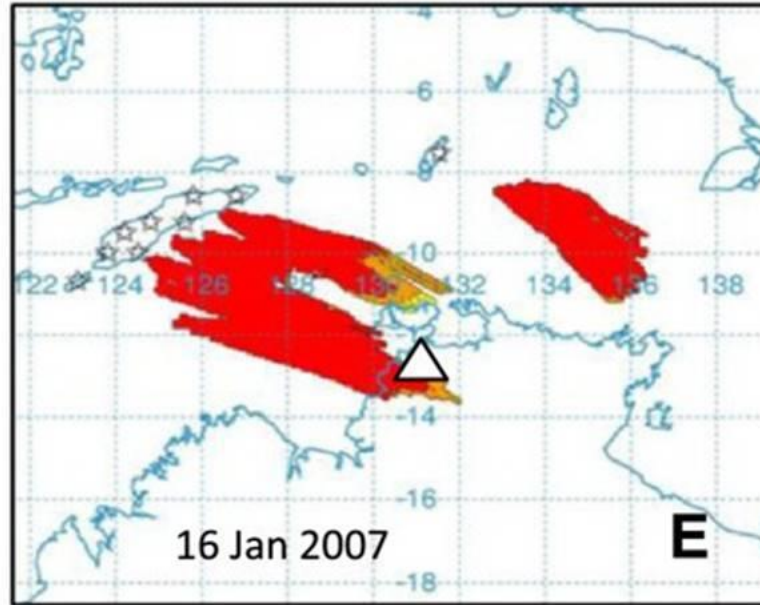
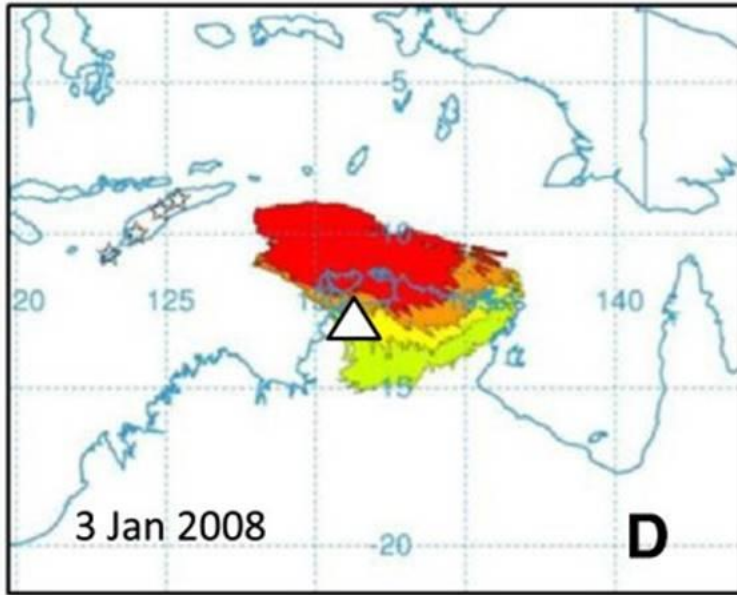
Estimates suggest that there could be a 45% probability of an internationally-notifiable incursion of any one of the above significant exotic diseases in Australia within the next 5 years

LSD / AHS / JEV – vectors pathways



Pathway for insects into northern Australia





Bluetongue virus (BTV) research (Berrimah Vet Lab & CSIRO)

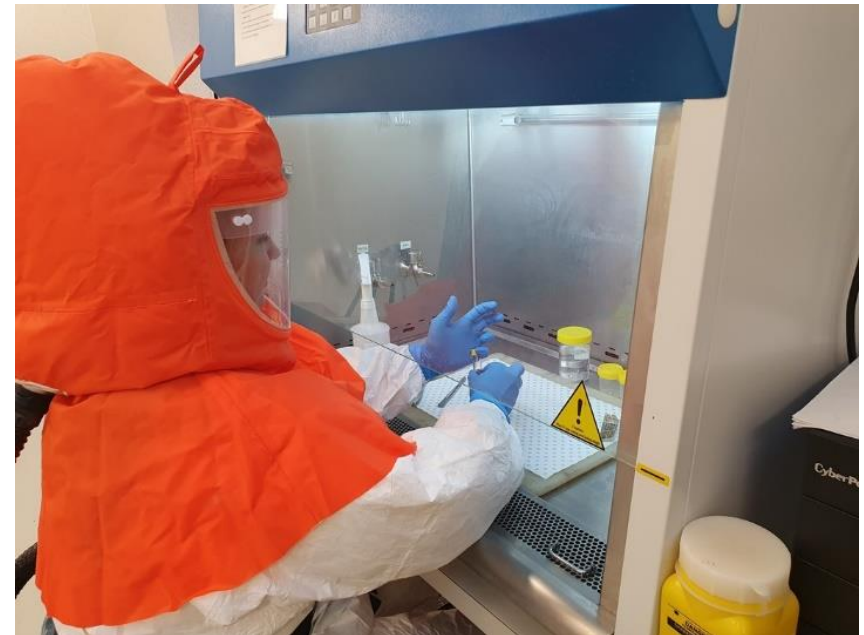
1. New strains of BTV enter Australia through long-distance aerial dispersal of BTV infected Culicoides midges – new incursions into Beatrice Hill (D, E, & F)
2. Exotic species of Culicoides midges enter Australia through long-distance aerial dispersal capable of transmitting **new strains and new diseases**

LSD is now in neighbouring countries.

Current research underway

1. Could these vectors carry **LSD** into **northern Australia** (as has been observed with BTV)
2. **LSD** virus was **imported into ACDP** (Geelong) to establish diagnostic testing capability & to understand vectors
3. *Australian entomologists in Thailand investigating the **300 Culicoides species in the Australasian region** (potential vectors) able to transmit and maintain LSD
4. Research allow us to fast-track knowledge to understand whether LSD can be **biologically transmitted** and what the true threat is to northern Australia / Australia

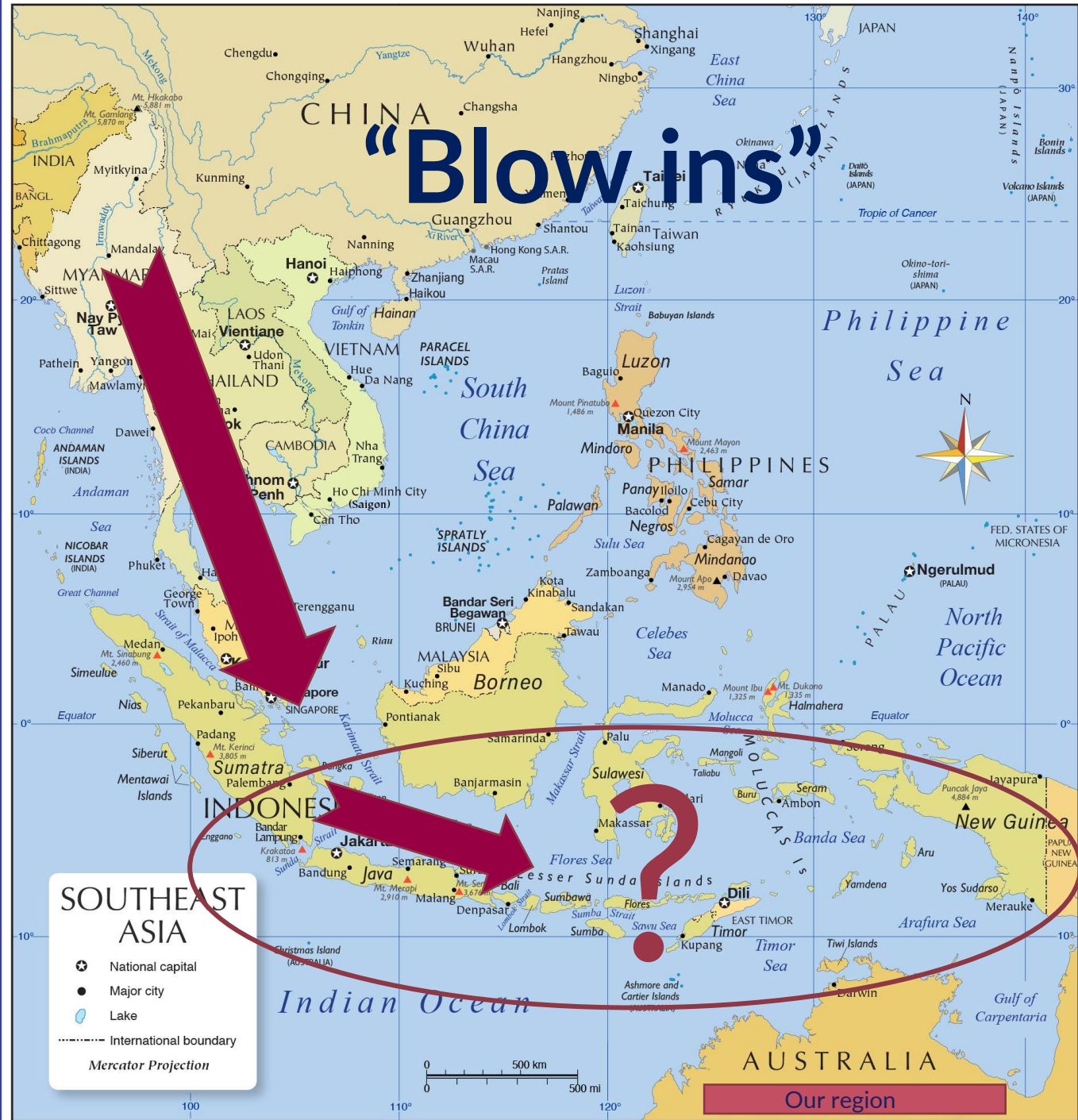
* *Dr Glenn Bellis*



Our Region



"Blow ins"



SOUTHEAST ASIA

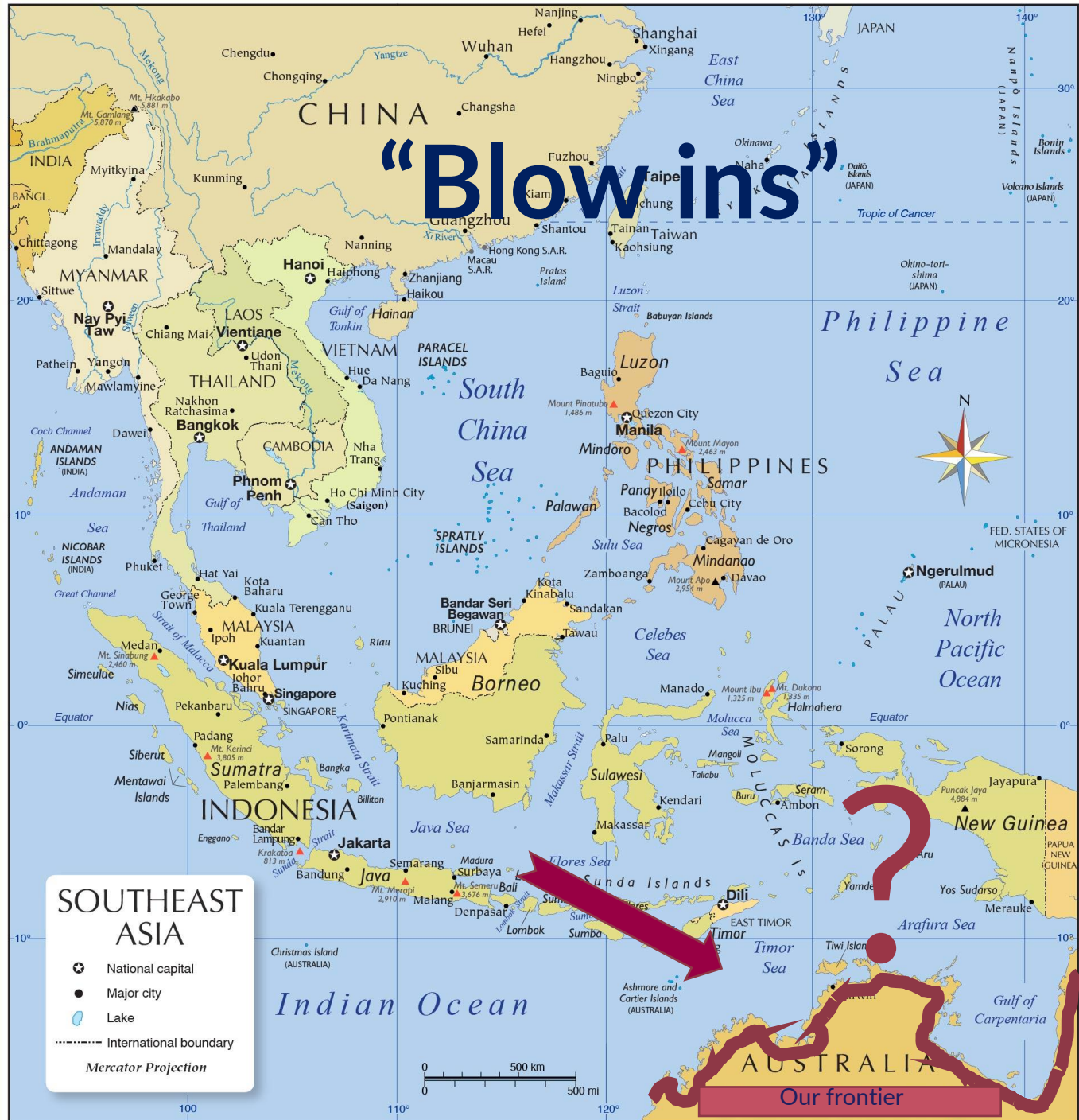
- ⊕ National capital
- Major city
- 🌊 Lake
- International boundary

Mercator Projection

Our region







"Blowins"

?

Our frontier

SOUTHEAST ASIA

- ⊕ National capital
- Major city
- Lake
- International boundary

Mercator Projection

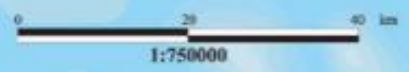


Key

..... Proposed sentinel herd site

..... Proposed insect vector trap site

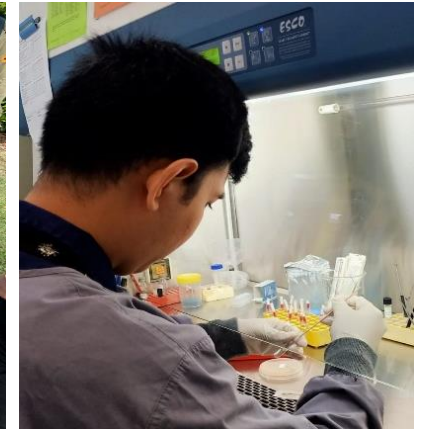
Timor-Leste



DISTRICTS

OECUSSI

Indonesia Northern Territory Biosecurity Program



Indonesia Northern Territory Biosecurity Program cont'd



SEPUTAR TERNAK

Tahukah Anda, Kapan Wabah LSD Masuk ke Indonesia?

Lumpy Skin Disease (LSD) merupakan penyakit kulit berbenjol pada hewan yang berasal dari Zambia, Afrika.

Kasus pertama yang terjadi di Indonesia dilaporkan pada Februari 2022 di Provinsi Riau, di mana gejala penyakit LSD terdeteksi pada ternak sapi.

Tercatat hingga April 2022 ditemukan total 1.181 kasus LSD yang tersebar di beberapa provinsi di pulau Sumatera seperti Riau, Aceh, Jambi, Sumatra Barat hingga Sumatra Utara.

*Data diambil dari Dinas Pertanian dan Ketahanan Pangan Kabupaten Demak per 27 April 2022



Didukung oleh

— Apa Itu Biosekuriti ?

biosekuriti merupakan upaya **prevenasi virus** penyakit masuk ke peternakan.

Dalam penerapan biosekuriti, area peternakan dibagi menjadi 3, yaitu



Pembagian zona ini bertujuan **mengatur masuknya orang dan benda ke peternakan** karena keduanya merupakan perantara yang memungkinkan **virus** masuk ke peternakan.



Didukung oleh

APA ITU PMK?

Penyakit Mulut dan Kuku (PMK) adalah penyakit menular yang menyerang hewan dengan kuku terbelah seperti kerbau, babi, domba, kambing, dan **sapi sebagai hewan yang paling rentan terpapar virus.**

Virus ini menyebar dengan sangat cepat bahkan dalam waktu 48 jam melalui kontak dekat antara hewan oleh udara dan dapat dibawa pada produk hewani.

Didukung oleh

Diorganisasi oleh

Ketahuiilah Sumber Penularan Penyakit Lumpy Skin Disease (LSD)

#BersamaSadariLSD

- 1** Kontak dengan lesi kulit.
- 2** Diekskresikan melalui darah.
- 3** Leleran hidung dan mata, air liur, semen serta susu.
- 4** Penularan juga dapat terjadi dalam rahim (intrauterine).
- 5** Penularan terjadi melalui peralatan dan perlengkapan yang terkontaminasi virus LSD seperti pakaian kandang, peralatan kandang, dan jarum suntik.
- 6** Penularan secara mekanis terjadi melalui vektor yaitu nyamuk, lalat, migas penggigit dan caplak.

Sumber: Kementerian Pertanian RI, Australia Indonesia Health Security Partnership (AIHSP)

Sumber: Kementerian Pertanian RI, Australia Indonesia Health Security Partnership (AIHSP)



Our People

Peace time

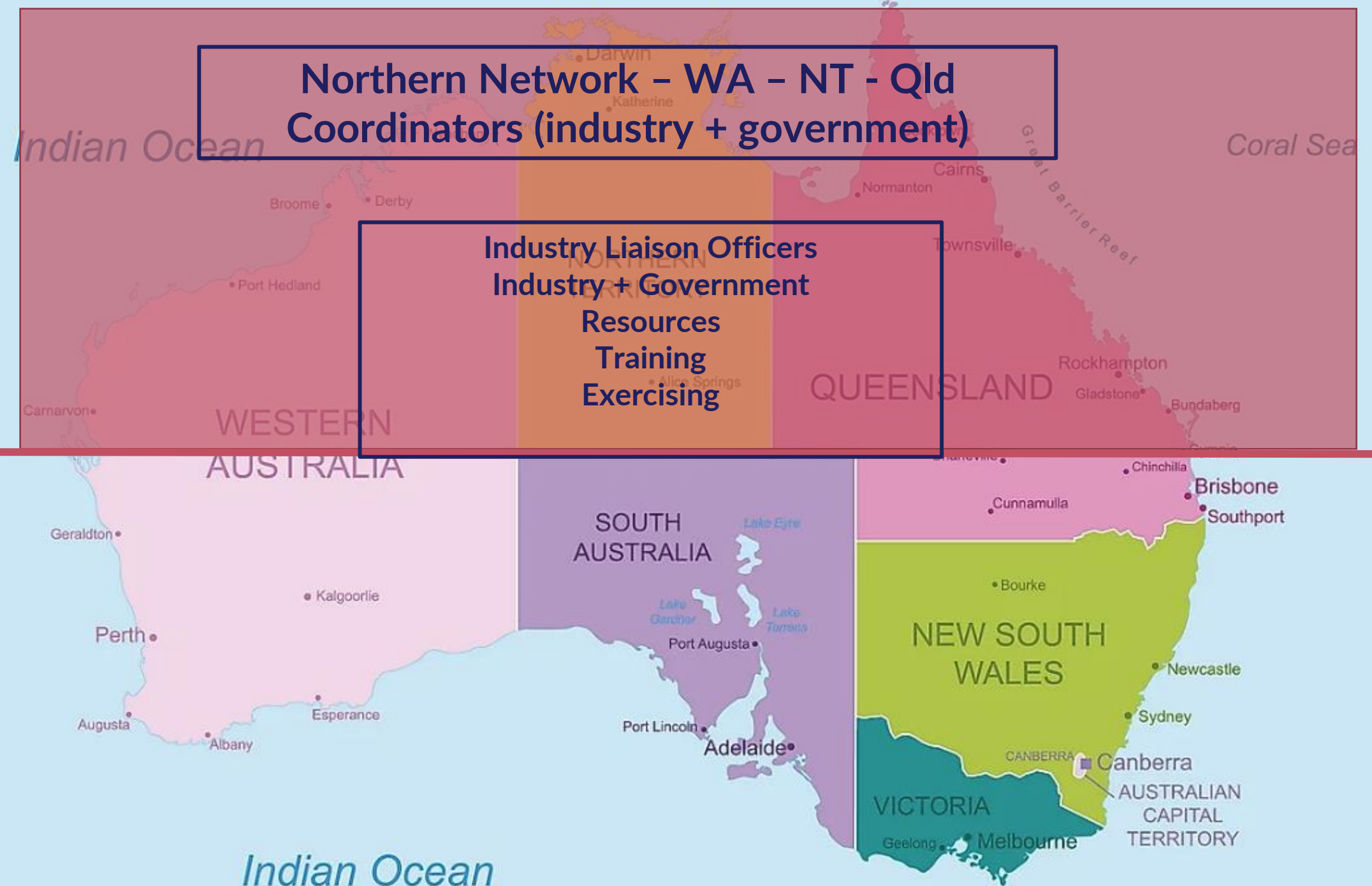
War

People – capacity & capability - success

1. **Low population, isolation, vast areas, logistics, equipment, critical supplies & services, feral animals, northern landscape**
2. **Surveillance, diagnostics, response**
3. **EM / EAD trained and connected people**
4. Industry / government awareness and capacity
5. Building a Northern Network WA – NT - Qld

**Northern Network - WA - NT - Qld
Coordinators (industry + government)**

**Industry Liaison Officers
Industry + Government
Resources
Training
Exercising**

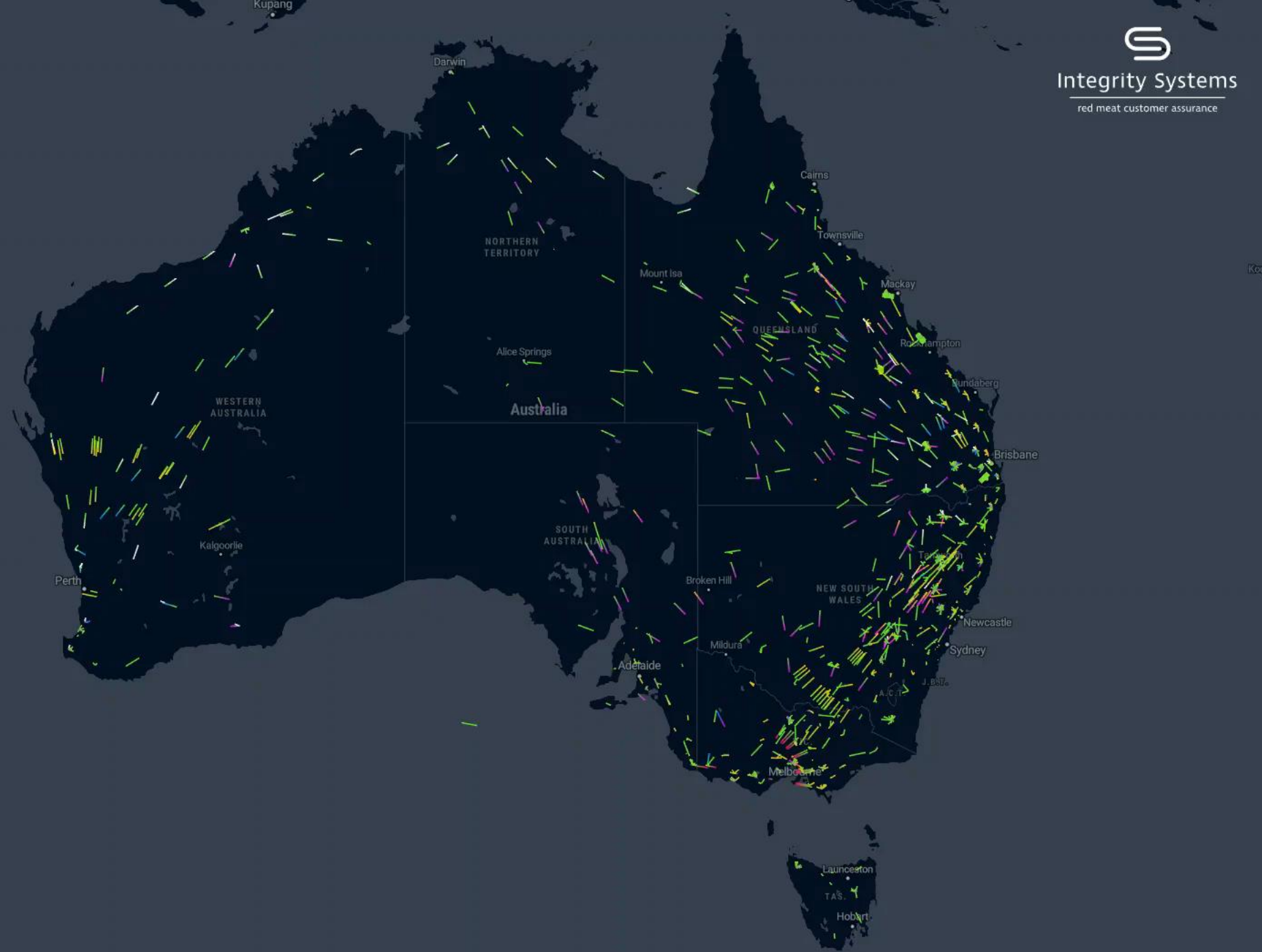


Our Systems

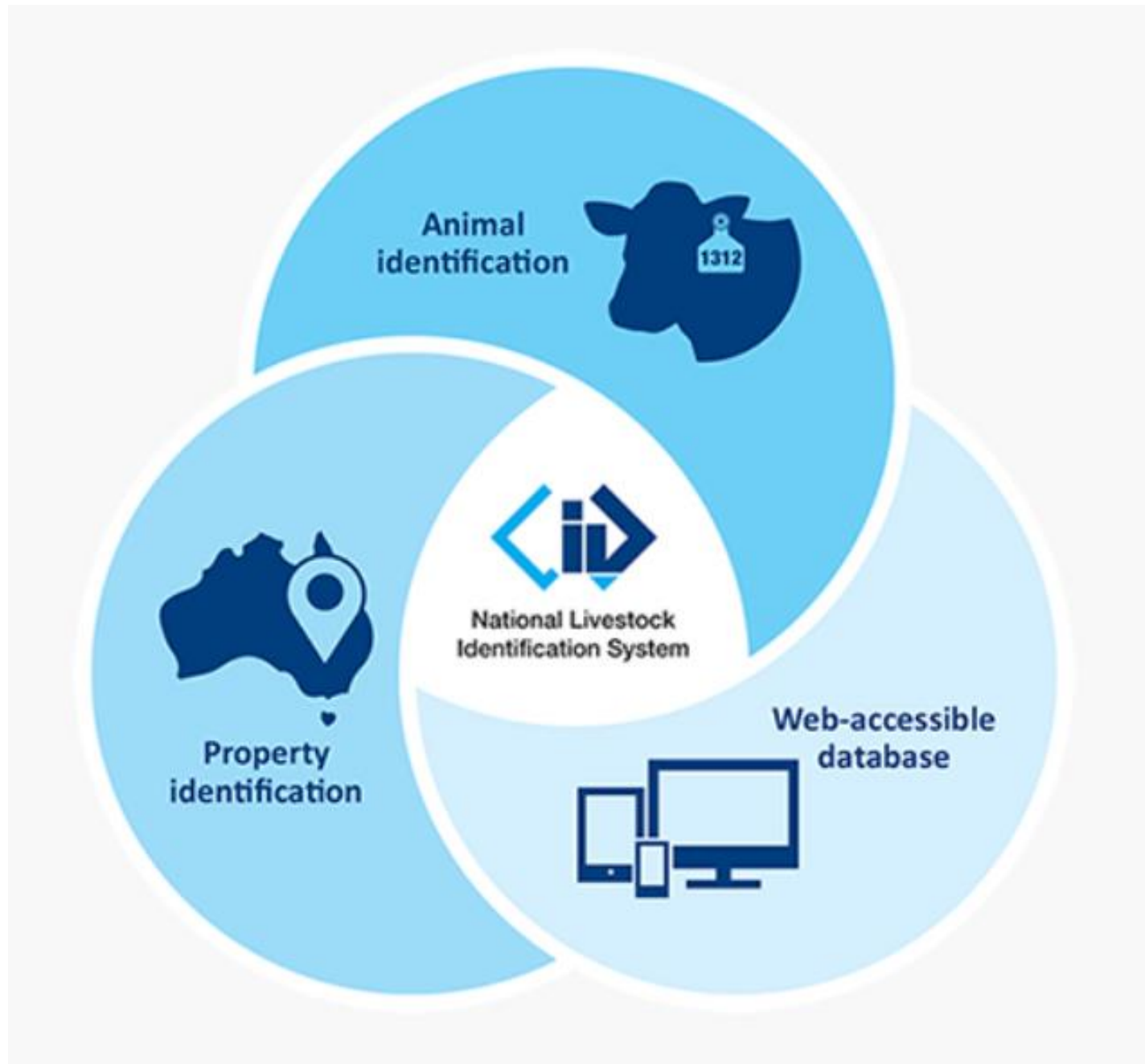
Movement of Cattle & Sheep



14 JUL 2017



Integrity Systems
red meat customer assurance



Trace and track - success



1. EAD response relies on an **effective tracing** system for (all) livestock
2. NLIS is part of **Australia's critical infrastructure** (should be valued accordingly) - foundation of market access (\$300m / week)
3. Effective and efficient eID saves people and time – **during war**
4. System must be **nationally consistent** and apply to all FMD + species.
5. Must be underpinned by robust, accountable, and transparent governance and administrative arrangements and **modern, fit for purpose database**
6. **Our collective future depends on it!**

Trace and track – the opportunity



1. Commonwealth has committed to **\$26.6 million** to upgrade the NLIS
2. Follows an additional **\$20.1 million** allocated for special purpose payments to co-invest with states and territories to support industry traceability improvements
3. How do we create a **fit for purpose** traceability and integrity system that can **meet the challenges** posed by increased biosecurity threat, increasing volatility and competitiveness in our international trading environment?
4. Mandatory sheep and goat eID has been agreed to by governments
5. **Don't lose sight of the opportunity for broader reform**
6. Will this require a new governance model for Australia's integrity system?
7. Do we take this opportunity now?

**TROPICAL BEEF PRODUCTION AND HUSBANDRY
OF
AUSTRALIAN CATTLE AND BUFFALO IN SE ASIA**

TECHNICAL SERVICES NOTEBOOK



David Ffoulkes



Indian Ocean

Coral Sea



WESTERN AUSTRALIA

NORTHERN TERRITORY

QUEENSLAND

SOUTH AUSTRALIA

NEW SOUTH WALES

VICTORIA

TASMANIA

Indian Ocean

Tasman Sea

Great Barrier Reef

AUSTRALIAN CAPITAL TERRITORY

Advertising and Social Media

Protect the Northern Territory cattle industry and our regional economies

Foot-and-mouth disease is in Asia



REPORT any unusual signs in cattle, buffalo, sheep, goats, pigs and camels to the **Emergency Animal Disease (EAD) Hotline** 1800 675 888

Biosecurity NT
biosecurity.nt.gov.au



Biosecurity
Northern Territory

Don't bring back
Foot-and-mouth disease

Foot-and-mouth disease is in Asia



Toss your thongs

Biosecurity NT
biosecurity.nt.gov.au



Biosecurity
Northern Territory



Lumpy Skin Disease
has never been detected in
Australia but is spreading
rapidly internationally.



Know the signs.



Report it.

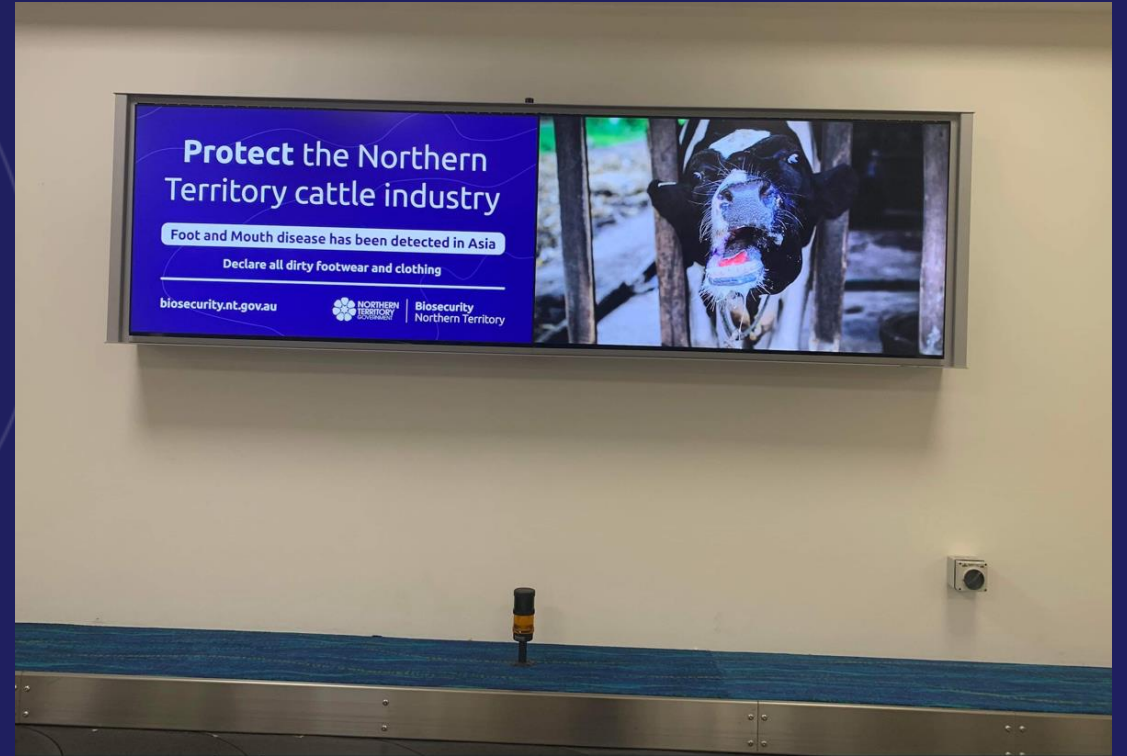


Test it.

Airport Signage – Departure & Arrivals



Darwin Airport Check-in



Darwin Airport Baggage claim