Feral Ungulate Disease Surveillance and Modelling in NSW

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Surveillance	Response
Adaptive sampling strategy to detect exotic and emerging diseases **in the wild**	Develop **management** strategies based on models of disease transmission **in the wild**

Surveillance

People
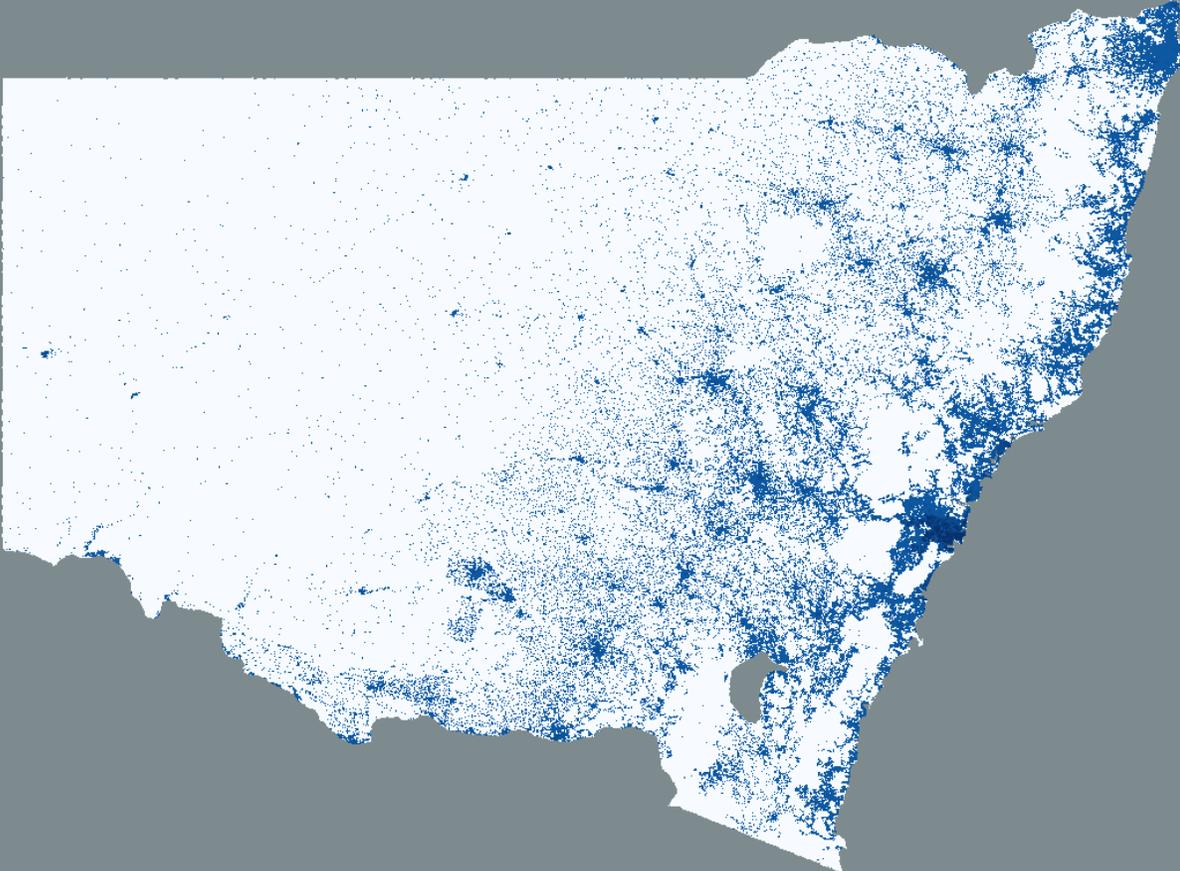
**Pigs**
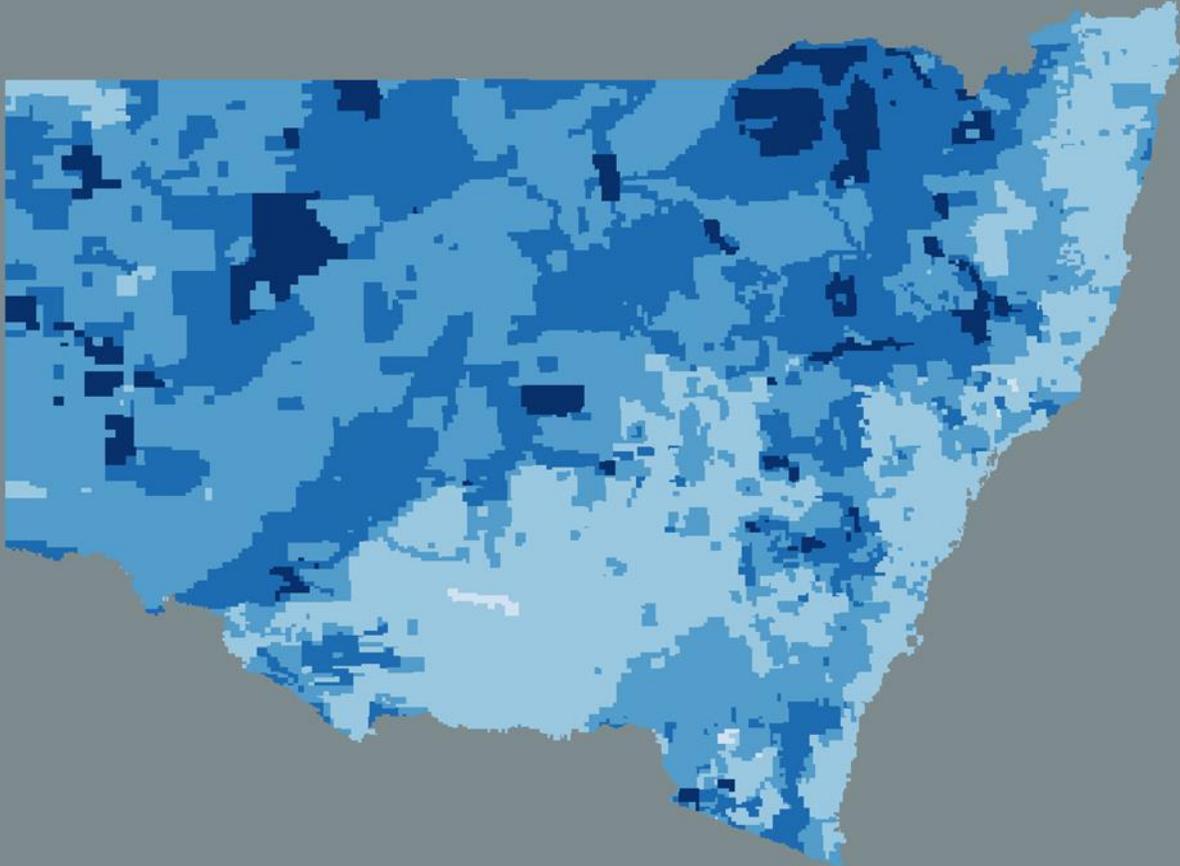
Surveillance

Key components:
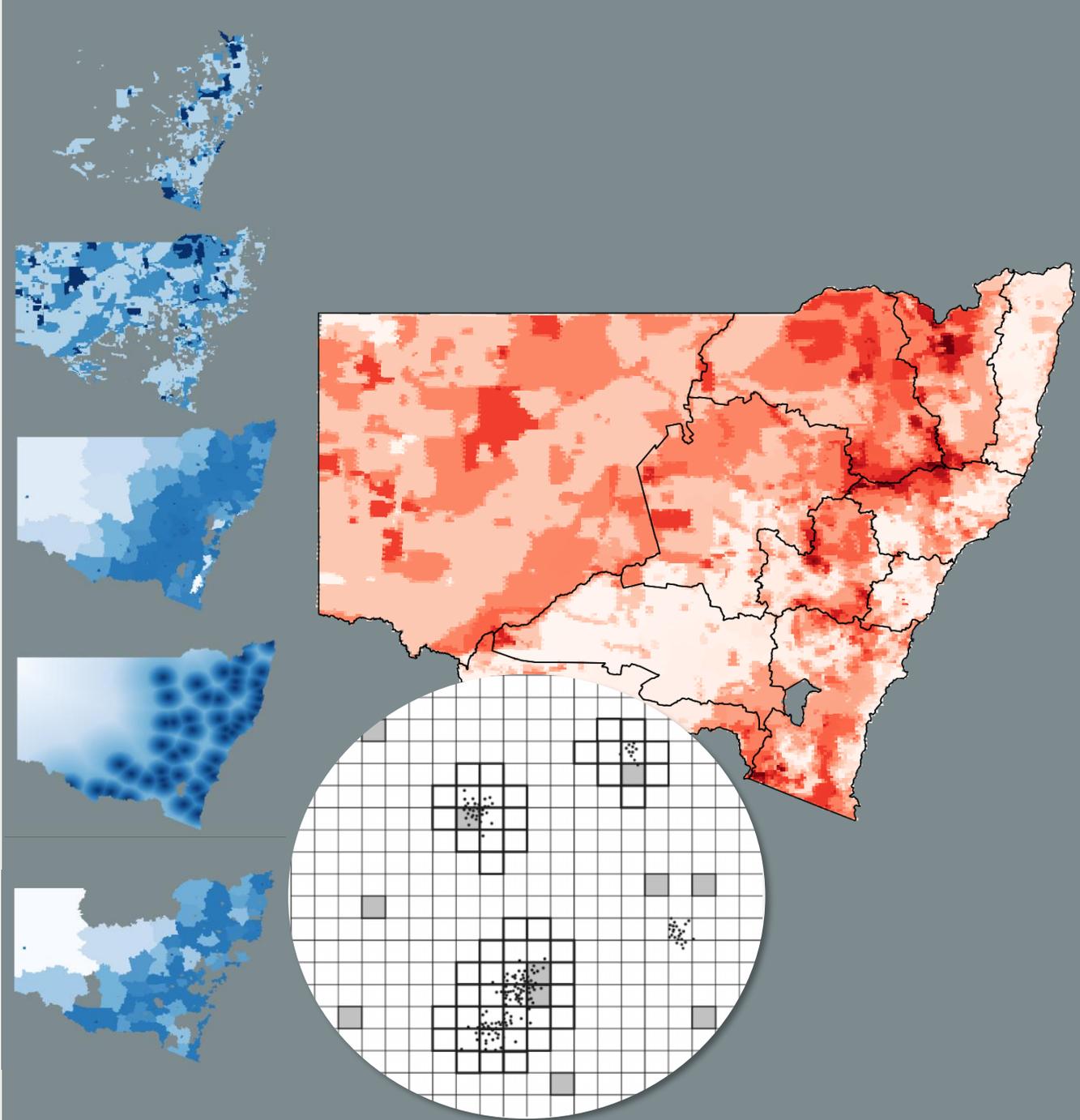
- Risk-based

- Adaptive sampling

- Emerging & sporadic disease

Surveillance

Key components:

- Risk-based

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- Emerging & sporadic disease

- Tie in with Biosecurity ops

Surveillance

Key components:

- Risk-based

- Adaptive sampling

- Emerging & sporadic disease

- Tie in with Biosecurity ops

- Alternative sampling tech

So far...
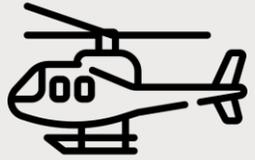
7 ops

4 Sites

429 samples,
835 tests

221 Pigs
and deer

Flavivirus
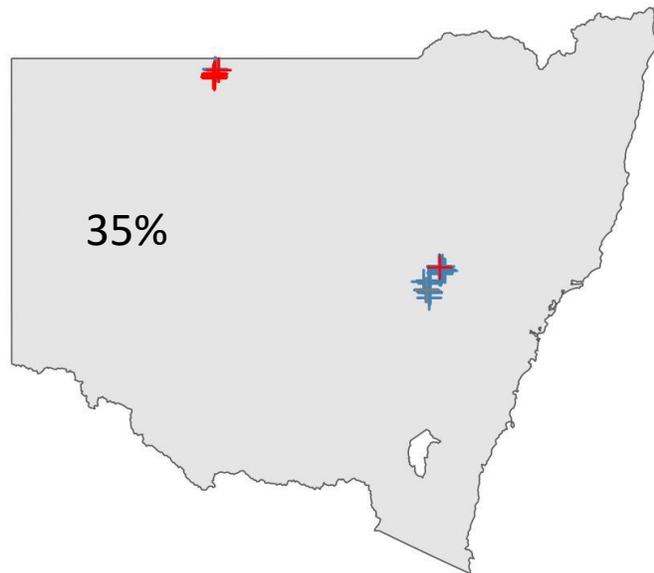
Brucella suis
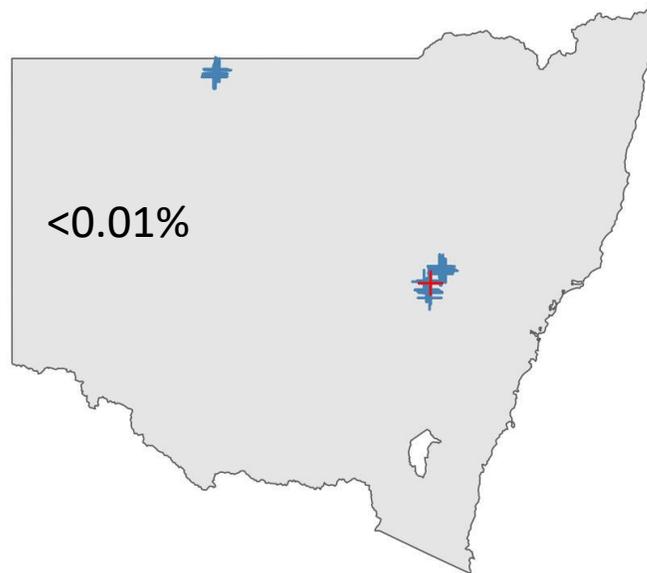
Leptospirosis (pomona)

35%

<0.01%

74%
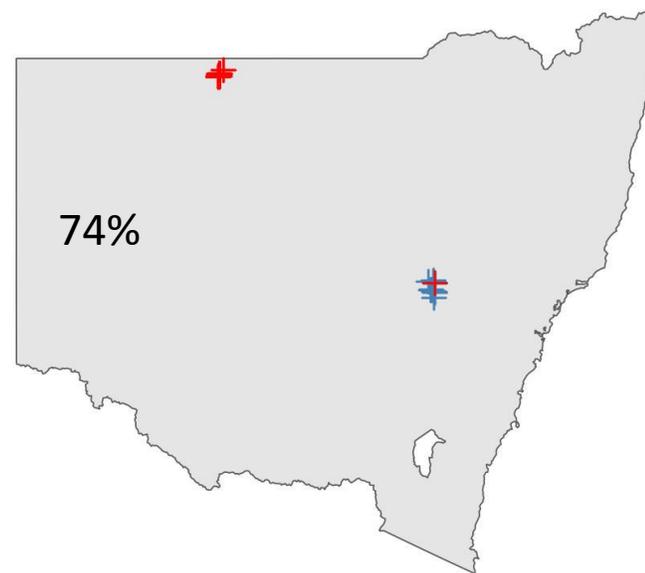
Leptospirosis (tarassovi)
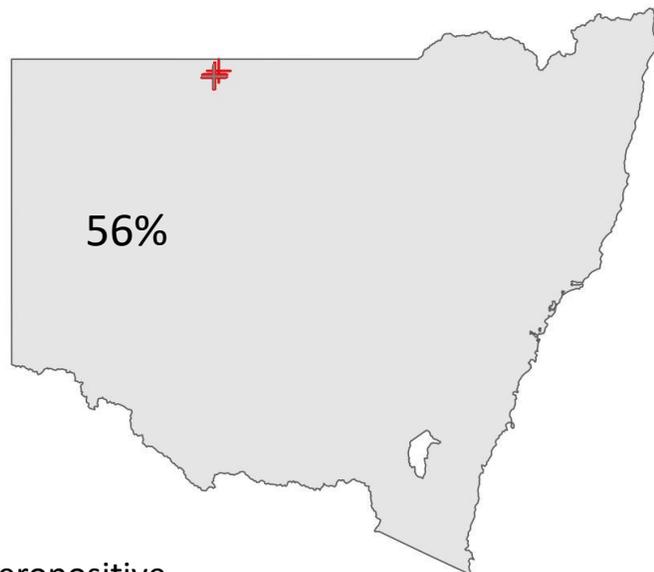
Q fever

Sarcosporidiosis

56%

0%

Per cent seropositive

So far…

25 eDNA samples

Now what?

- eDNA evaluation

- Filling in the gaps
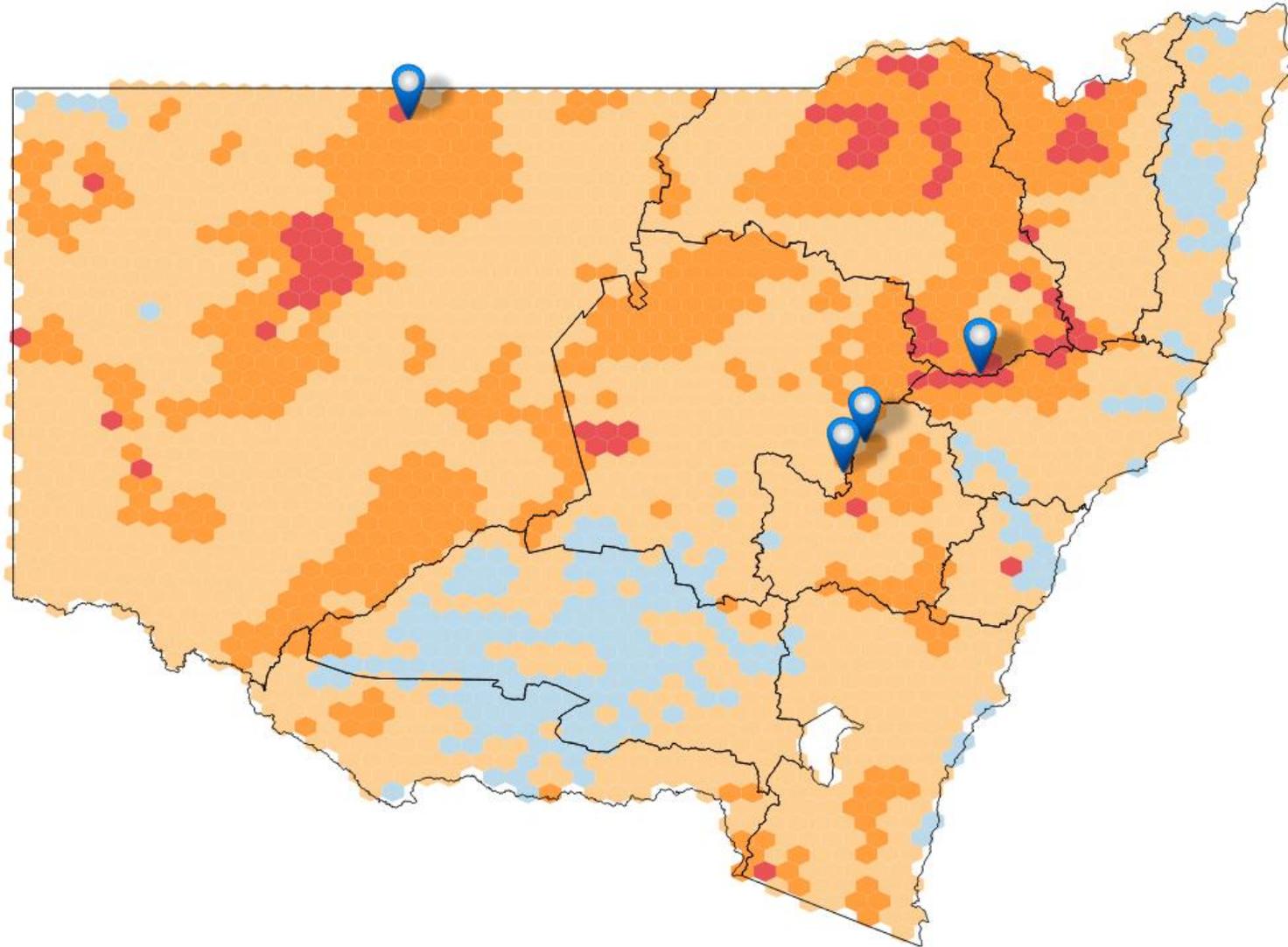
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Conclusion

- Risk of wild incursion has been neglected (recently)

- We aim to reduce:
  - risk of long sleeper incursions
  - uncertainty in response

Intensity, severity and impacts of EAD incursion in wild populations

Response

- Better representation of pig behaviour in epi models
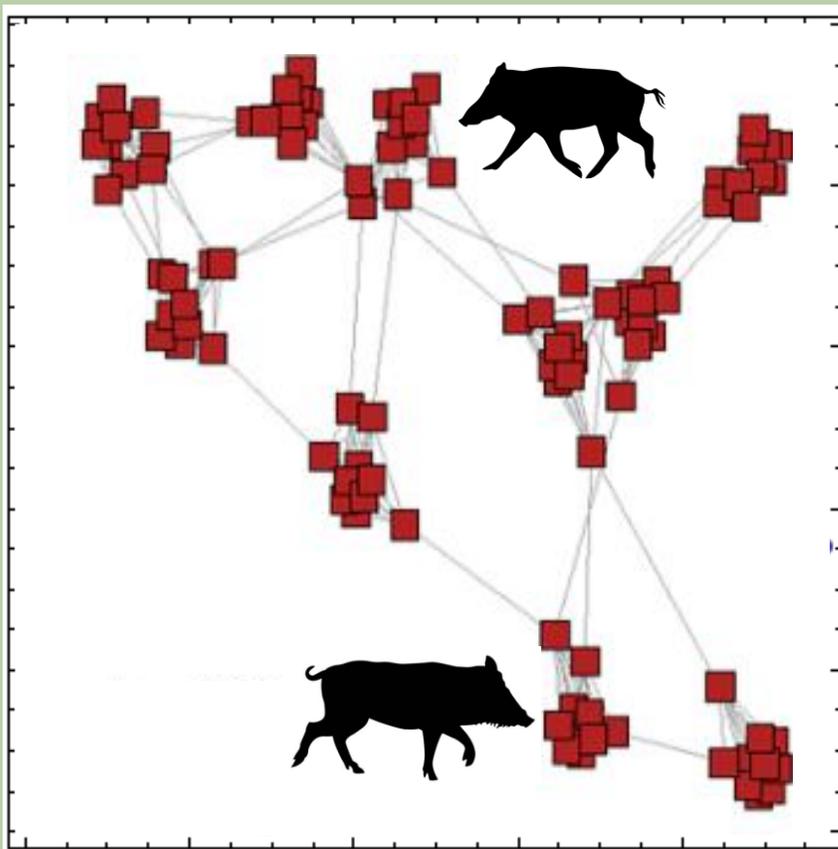
Response

- Behavioural response of deer and pigs to aerial shooting