



Making the link between vertebrate pests and One Health

Dr Joanne Walker. Wildlife Health Australia
NSW Vertebrate Pest Conference, 2025

Images: Feral pig (*Sus scrofa*) N. Zoglauer. Feral fox (*Vulpes vulpes*) by Nicolas Rakotopare. Feral deer Invasive Species Council.





Artist: Lani Balzan

**Wildlife Health Australia recognises the
Traditional Custodians of Country
throughout Australia.**

**We respectfully acknowledge
Aboriginal and Torres Strait Islander
peoples' continuing connection to land,
sea, wildlife and community.**

**We pay our respects to them and their
cultures, and to their Elders past and
present.**

I live and work on Brinja-Yuin Country

Introducing WHA & the One Health Approach

OUR 2050 VISION:
Healthy wildlife,
healthy planet

OUR PURPOSE:
To advance wildlife health
for a healthier future for all

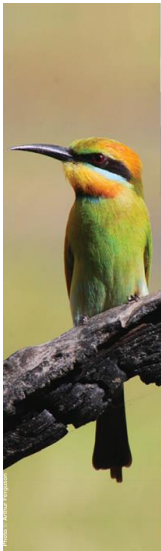


STRATEGIC FRAMEWORK 2025 - 2050

The Strategic Framework will be implemented through a series of time bound plans that drive the national agenda.

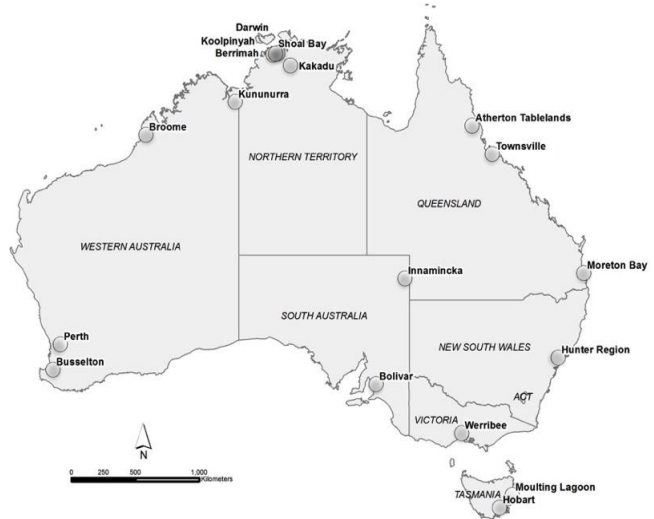


ENABLERS

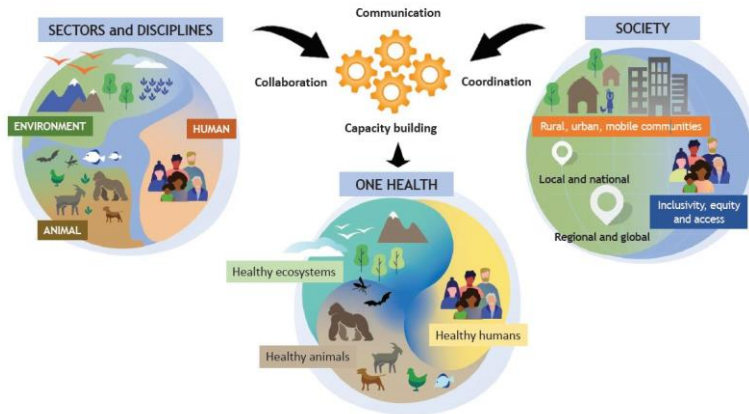


E-WHIS

- Notifiable Diseases
- Mass mortality events
- Public health and zoonotic d
- Biodiversity diseases
- Poisoning event
- Interesting or unusual
- New or emerging



Our approach – One Health



*One Health High Level Expert Panel
(OHHLEP)*



	Protozoa	Parasites	Bacteria	Viruses (Rabies JEV)	Fungal
	✓	✓	✓	✓	✓
	✓	✓	✓	✓	✓
	✓	✓	✓	✓	✓
	✓	✓	✓	✓	✓



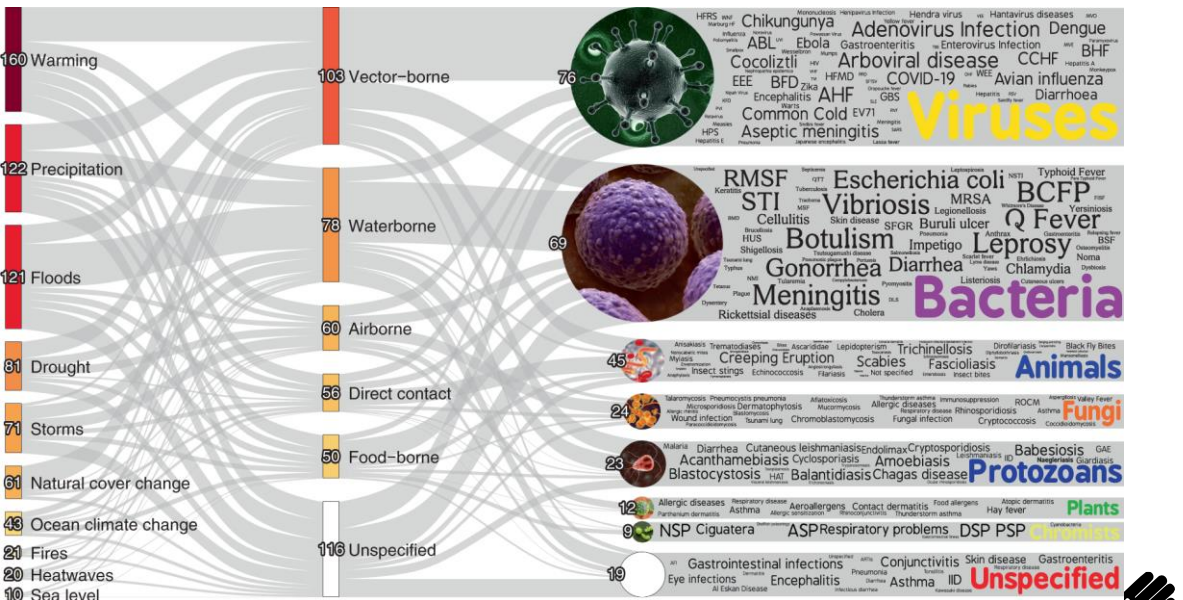
Types of Disease Surveillance



Zoonotic Disease	Animal
Japanese Encephalitis	Pigs, Horses
Q fever	Pigs
Leptospirosis	Pigs, deer
<i>Mycobacterium ulcerans</i>	Foxes
Brucellosis	Pigs, Dogs
Campylobacter	Deer
Toxoplasmosis	Deer, Cat
<i>Sarcoptes scabiei</i>	Foxes
Salmonella	Pigs
Avian influenza	Birds*

* = could include feral/ pest birds and animals

Other diseases (not zoonotic)	Animals
Pigeon Paramyxovirus (PPMV1)	Pigeons* (Vic)
Rabbit Hemorrhagic Disease, Lagoviruses, Calciviruses, Myxomatosis	Rabbits
reptile pathogens, chytrid fungus	reptiles*, frogs.
Ehrlichiosis (screening),	Dogs
Liver fluke, Bacterial endometritis	Deer
Aujeszkys, Surra, African Swine Fever, Classical Swine Fever	Pigs
Foot-and-Mouth Disease	Pigs, Cattle



Mora et al 2022 Over half of known human pathogenic diseases can be aggravated by climate change. Nature Climate Change 12, 869-875



One Health, Vertebrate Pests and Biodiversity

Habitat destruction biodiversity loss and
environmental contamination



Feral pig damage to wetlands, Kakadu National Park. Photo: Geoff Whalan

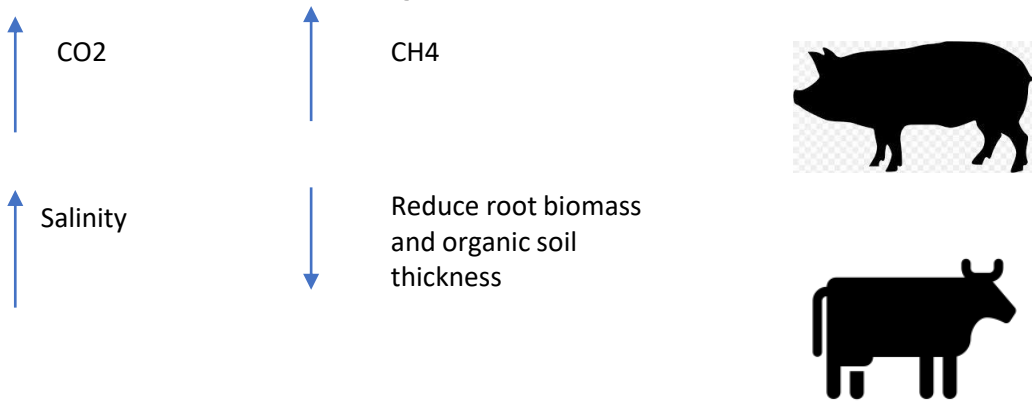


Feral cat Photo: Keith Gillett DPE

Predation on
native species
(animals, plants,
insects)



One Health, Vertebrate Pests & damage to carbon sinks and carbon cycles



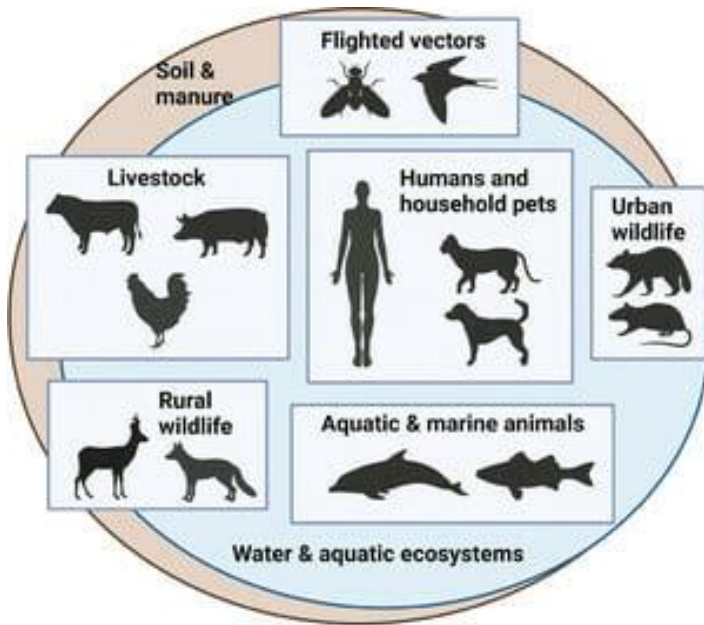
Cramer & Yirralka Rangers et al Feral ungulate impacts on carbon cycling in a coastal floodplain wetland in Tropical Northern Australia JGR Biogeosciences vol13 , 8 e2025JSG009056



One Health, Vertebrate Pests and Water

Water quality, pollution and soil erosion





One Health, Vertebrate Pest and Food security



\$69m



\$156



\$198m



\$18.5m

ABARES The cost of established pest animals. And weeds to Australian agricultural producers (2023)
Threatened Species Recovery Hub (2022)

Vertebrate Pests & One Health issues

Diseases-
Zoonotic
and vector
borne

Anti-
microbial
resistance
(AMR)

Habitat destruction
biodiversity loss and
environmental
contamination



Climate
change

Food security- impacts on
agriculture crops, soil, and
livestock and agricultural
assets (fences, dams etc)

Water security- damage to
water supply and
contamination



VPMG and an emerging One Health issue- H5N1 Avian Influenza



Photo by Anthony Rae on [Unsplash](#)

A National Feral Animal One Health Network

- 1) Gaps in knowledge BUT we do already know a lot.
- 2) Together can we build and maintain a national network of feral animal disease surveillance partners.
- 3) Integrated feral animal disease information into the national wildlife surveillance system.
- 4) Collect regular data on wildlife and feral animal disease events into the central web-enabled database of national wildlife health information (eWHIS).
- 5) Enable and facilitate communication and collaboration about feral animal disease events between government and non-government surveillance partners.



Communication
& Coordination



Governance &
regulatory frameworks



Access to tech,
research &
development



Workforce
skills and
knowledge
sharing



National Feral Animal One Health Network



Diagnostic
testing

Funding



Surveillance



Data



Interested in the National Feral Animal One Health Network? Pilot Project to test the idea?

Contact:

Jo Walker

jwalker@wildlifehealthaustralia.com.au



Thank You!

www.wildlifehealthaustralia.org.au



Wildlife Health
AUSTRALIA

