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Antimicrobial Resistance: a One Health issue

WOAH Pacific Wildlife Health Network Meeting

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What is antimicrobial resistance?

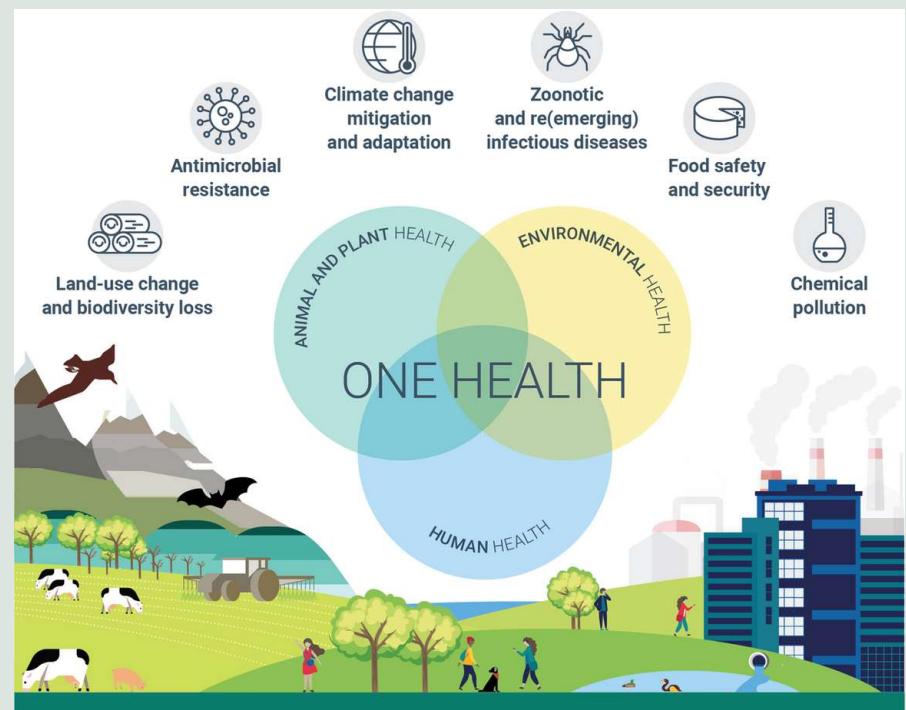
- One of the top global public health and development threats
- Estimated that AMR was directly responsible for 1.14 million global deaths in 2021 and contributed to nearly 4.71 million deaths
- Lack of access to new and existing vaccines, diagnostics and medicines is of significant concern



Source: WOAH

One Health and the wildlife sector

- One health is recognised as a key approach to all manner of health issues globally
- Global health threat from AMR continues to accelerate requiring a One Health approach across human, animal, plant and environmental sectors



Source: ECDC

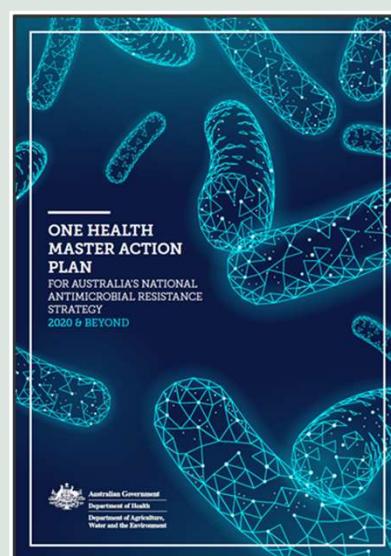
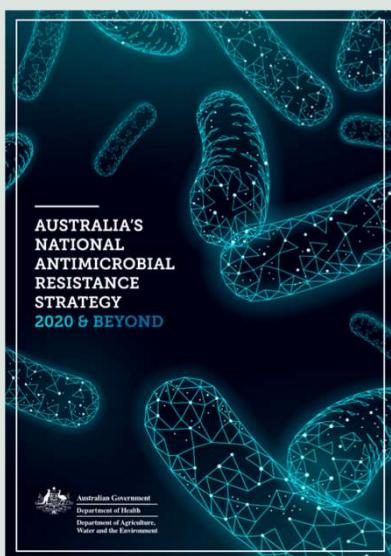
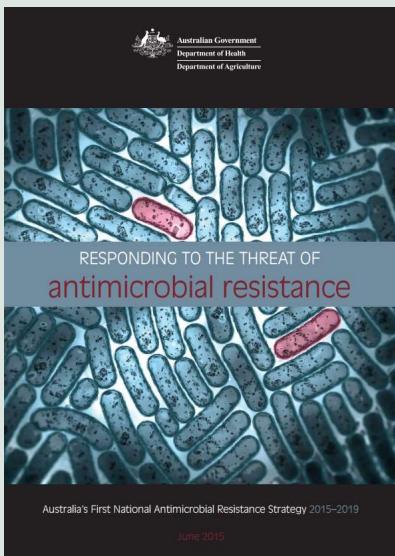
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Australia's AMR strategies

2015

2020

2021



Environment sector: covers all terrestrial and aquatic ecosystems and the native and introduced species present in those ecosystems.

Animal sector: includes terrestrial and aquatic food- and fibre-producing animals, companion animals (including performance animals), zoological collections, laboratory animals and wildlife treated with antimicrobials.

Australia's AMR strategies



OBJECTIVE 2

PREVENTION AND CONTROL OF INFECTIONS AND THE SPREAD OF RESISTANCE



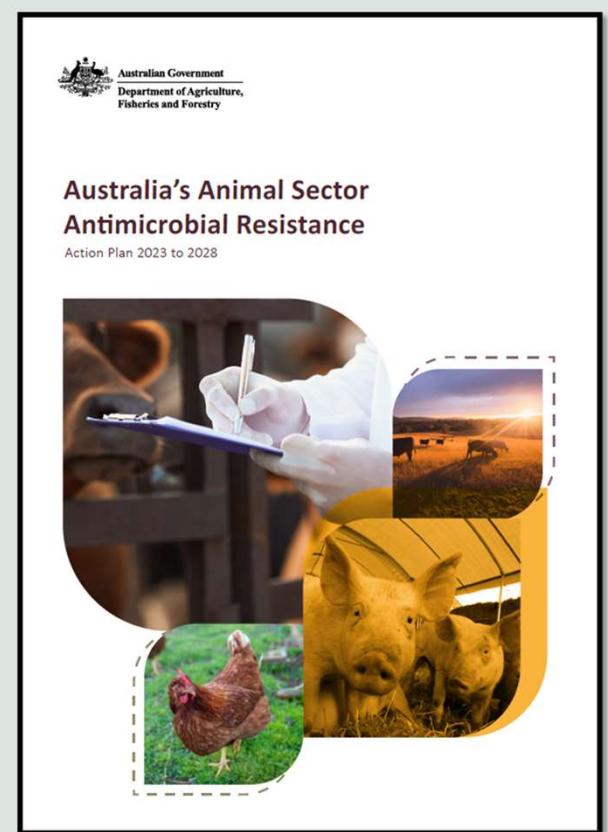
| One Health Sectors | | | | |
|----------------------------------|---|---------------|-------------|------|
| | Agriculture | Animal Health | Environment | Food |
| | Human Health | | | |
| PRIORITY AREAS 2.1 – 2.4 | | | | |
| FOCUS AREAS 2.1.1 – 2.4.1 | | | | |
| 2.1 | Adopt evidence-based and nationally consistent standards for infection prevention and control and biosecurity | | | |
| 2.1.1 | Develop, implement and/or update national biosecurity and waste management standards and support resources and education for different animal and agricultural settings. | ◆ | ◆ | ◆ |
| 2.1.2 | Work with key stakeholders in the major food- and fibre-producing animal industries to improve on-farm biosecurity measures so antimicrobial treatments are used appropriately. | ◆ | | |

Australia's Animal Sector AMR Action Plan

- Developed by the animal sector for the animal sector
- Only sector-specific action plan developed currently

7 objectives

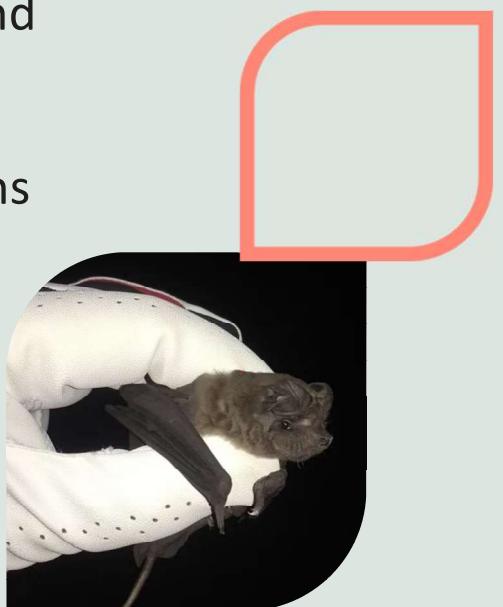
1. Clear governance for antimicrobial resistance initiatives
2. Prevention and control of infections and the spread of resistance
3. Greater engagement in the combat against resistance
4. Appropriate usage and stewardship practices
5. Integrated surveillance and response to resistance and usage
6. A strong collaborative research agenda across all sectors
7. Strengthened global collaboration and partnerships



AMR drivers in wildlife health

RI1

- Human behaviour and actions across the health, agriculture and environmental sectors
- Increased proximity to human and domestic animal populations
- Limited treatment options
- Lack of awareness & capacity to act
- Increased demand for antimicrobials in food production and health
- Environmental contamination



Source: Dave Waldien

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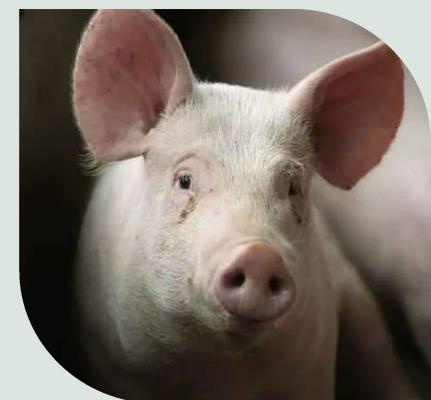
RI1 Is it worth noting that while there is some use of antimicrobials in wildlife (generally when they are in captivity), most wildlife would be exposed via the environment not via treatment.
Iglesias, Rachel, 2025-12-08T01:07:13.629

RI1 0 Also might be worth considering some more context around the points on governance (e.g. that is less of an issue in Australia compared to some other parts of the world)
Iglesias, Rachel, 2025-12-08T01:08:08.929

RI1 1 An interesting case study for Australia could be work on treating wombats for sarcoptic mange in the wild. E.g. see pg 15 of
<https://www.nespthreatenedspecies.edu.au/media/aayh54vj/1-4-4-guidelines-for-treatment-of-australian-wildlife>
Iglesias, Rachel, 2025-12-08T01:12:24.030

Why we conduct AMR surveillance

- Continued disease surveillance in wild animals is important RI1
- Increased risk of AMR can occur at the human-animal-environment interface as well as increased risk of disease emergence
- Passive surveillance in possums to determine extent of problem in wildlife (e.g. scoop a poop)
- Overall goal is to protect wildlife health worldwide to achieve One Health outcomes in combatting AMR



Source: Solomon Times

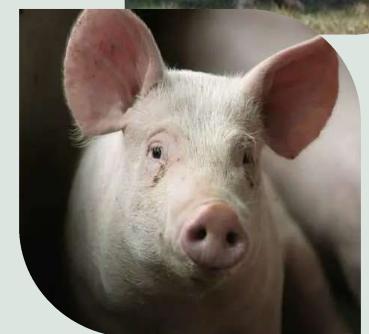
Slide 8

RI1 Are we only interested in disease caused by AMR infections, or potentially asymptomatic carriage? (i.e. scoop a
poop)

Iglesias, Rachel, 2025-12-08T01:15:16.682

AMR surveillance in wild animals

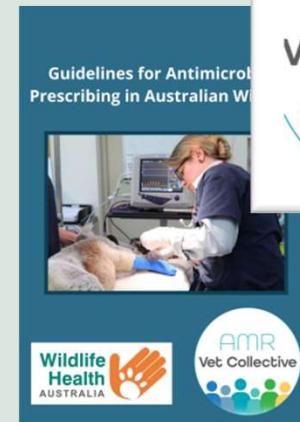
- Australia are measuring the levels of AMR in livestock, companion animal and wildlife species.
- Wildlife Health Australia (WHA) manages wildlife surveillance programs
- The National Wildlife Health Information System database (eWHIS) captures data on AMR in free-ranging wildlife
- AMR risk-based assessment underway to inform the design of a surveillance program for the surveillance of AMR in the animal sector



Source: Solomon Times

National Antimicrobial stewardship efforts

- Development of prescribing guidelines
 - Wildlife guidelines published Nov 25
- Animal Industry Antimicrobial Stewardship Research, Development and Extension Strategy (AIAS)
- Antimicrobial Stewardship framework provides a comprehensive scope of antimicrobial stewardship activities that identifies context-specific barriers and actions for improvement.
- AMR Vet collective develop science-based, meaningful and practical information for veterinarians about AMR and AMS, including an online AMS course



Australia's international contributions

International

- Global Action Plan on Antimicrobial Resistance 2025–2028 (GAP-AMR)
- Quadripartite AMR Multi-Stakeholder Partnership
- Advocating the one health response RI1the Pandemic treaty
- Annual reporting of antimicrobial use to WOAH



Source: WHO

RI1 Advocating for a One Health focus?

Noting that AMR is mentioned in the Pandemic Agreement but you disagreed that it should be in scope 

Iglesias, Rachel, 2025-12-08T01:23:54.633

Australia's international contributions

International

Political Declaration of the 2nd High-level Meeting on Antimicrobial Resistance (AMR)

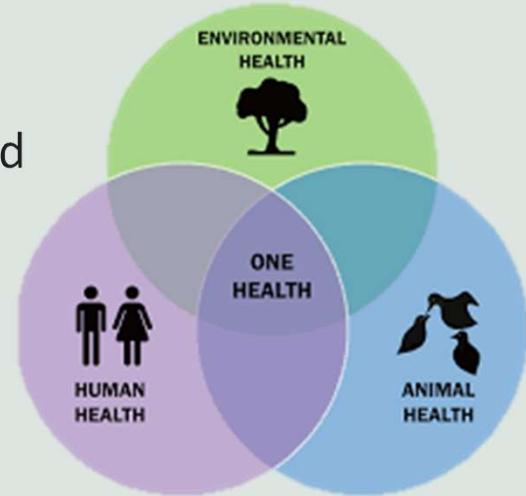
- signed during the United Nations General Session (UNGA) in New York on 26 September 2024.
- Globally agreed commitments to mitigate AMR from a one-health perspective
- Strive to meaningfully reduce the quantity of antimicrobials used globally in the agri-food system by 2030
- Commit to prudent and responsible use of antimicrobials in animals and agriculture
- Investment to support equitable access to essential veterinary services, improve animal health and appropriate management practices to prevent infections
- promote the timely supply of quality and affordable essential veterinary medicines, vaccines and diagnostics

RI1 Is it worth looking at some of the environment sector commitments?

Iglesias, Rachel, 2025-12-08T01:28:38.303

Next steps

- Education and collaboration with animal health, wildlife partners on Australia's context RI1
- Consistent messaging around **appropriate use** rather than RI2duced use
- Continue to promote and facilitate collaborative links in the investigation and management of wildlife health which will contribute to AMS efforts
- Continued involvement in a wildlife focal points network & WOAH Wildlife Health Network



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RI1 It's not clear what this really means (and we could equally want to educate and collaborate with Australian stakeholders)

Iglesias, Rachel, 2025-12-08T01:30:03.724

RI2 This is a great animal health sector message, not sure whether or not it is useful for a wildlife audience.

Iglesias, Rachel, 2025-12-08T01:30:49.209

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Thank you

