

Monitoring of Antimicrobials in Australia

Prioritisation and Analytical Approaches for Environments and Integrated Systems



Monitoring of antimicrobials and their transformation products presents a strategic opportunity for Australia to strengthen environmental stewardship and demonstrate global leadership in One Health implementation.

This report provides practical guidance on what to monitor, when to monitor, and how monitoring approaches can be tailored to different operational, regulatory and One Health contexts (Figure 1).

A consolidated, practical overview of chemical monitoring approaches relevant to antimicrobials across environmental and agribusiness systems is also provided (Figure 2).

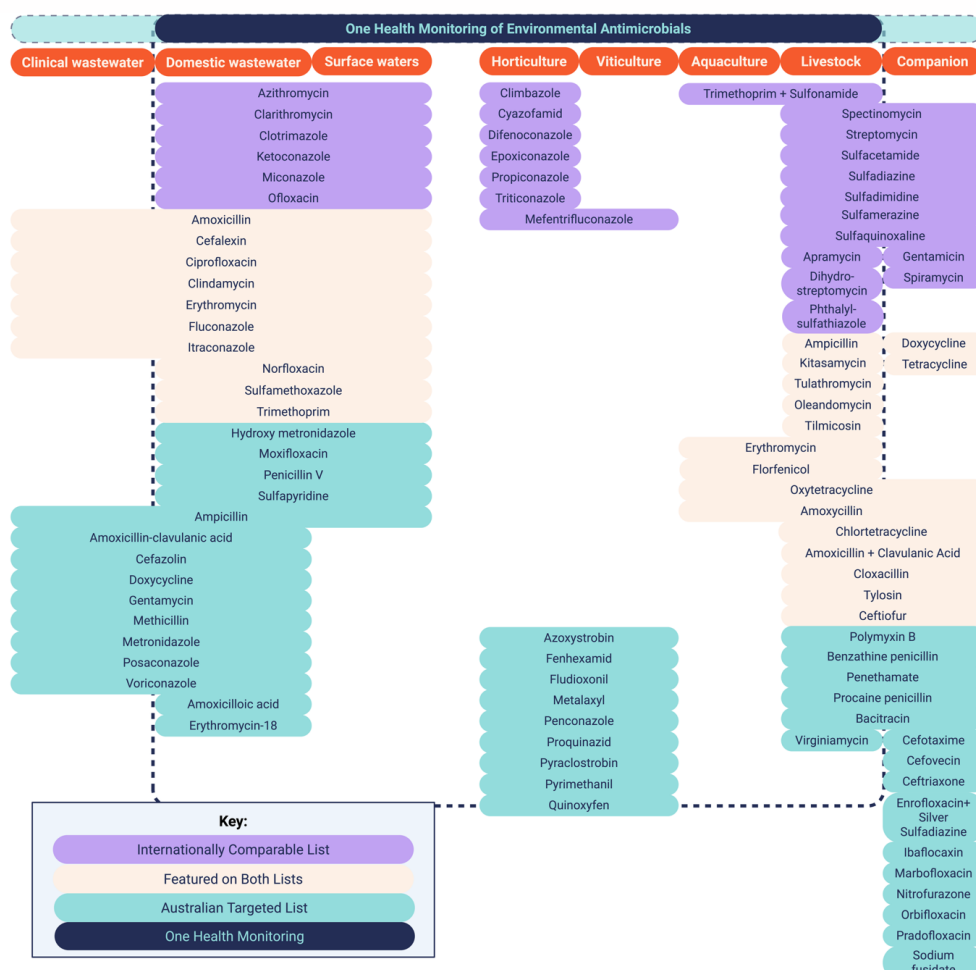


Figure 1. A One Health prioritisation framework for environmental antimicrobial monitoring

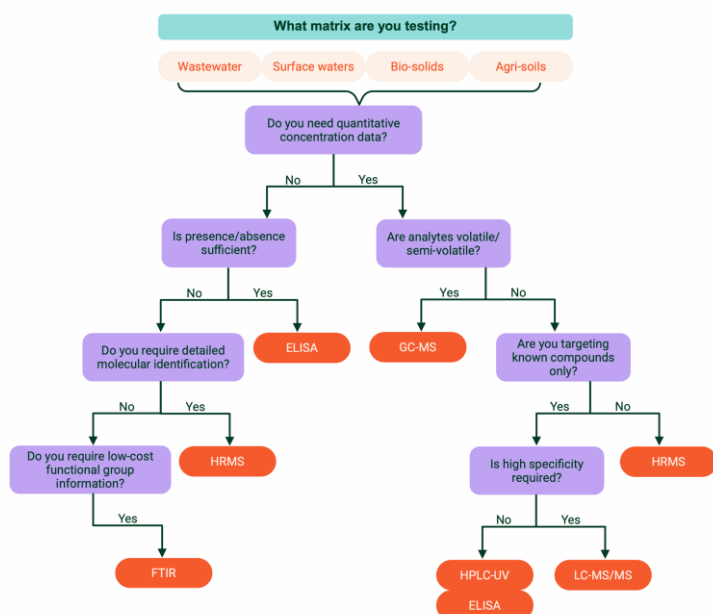


Figure 2. Decision-making framework for chemical residue testing.

Considerations for Future Development

- Refinement of priority analyte lists as new evidence emerges
- Improved harmonisation of analytical methods
- Inclusion of metabolites and transformation products
- Development of nationally comparable datasets
- Assessment of co-selective compounds
- Continued collaboration across One Health sectors