Offstream watering points for cattle: protecting riparian ecosystems and improving water quality?

Julie-Ann Malan, Dr. Nicole Flint, Dr. Emma Jackson, A/Prof. Andrew Irving, Prof. Dave Swain (2018)

22nd International RIVER SYMPOSIUM
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20-24 October 2019, Brisbane Australia

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Why should we care about the beef grazing industry?

- **1.4 billion** head of cattle
- **22.6 million** in Australia
- **11.1 million** in Queensland
- **80%** increase in demand by 2030
- Consume large amount of resources
- Impacts on land and rivers

Grazing Cattle Impacts

- Altered streambank vegetation
- Change in soil structure
- Increased erosion
- Poorer instream water quality
- Impacts on marine environment

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Can we manage the impacts ?

Yes !

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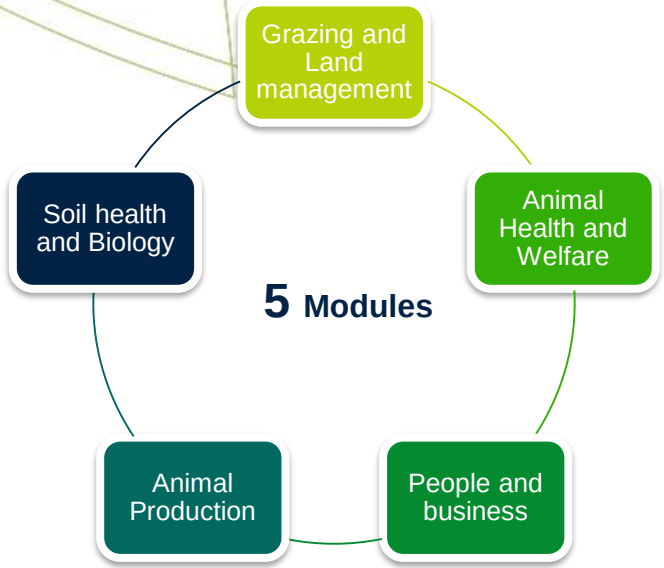
Best Management Practices



FENCING

- preferred
- expensive
- not always practical

OFFSTREAM WATERING POINT (OSWP)-(TROUGH)

- cost effective
- accumulative mitigation
- An powerful grazing distribution agent

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How effective are OSWP's in protecting riparian areas?

- Lack of consensus in literature
- Conducted systematic literature review
- Found to be effective but with 63% variability

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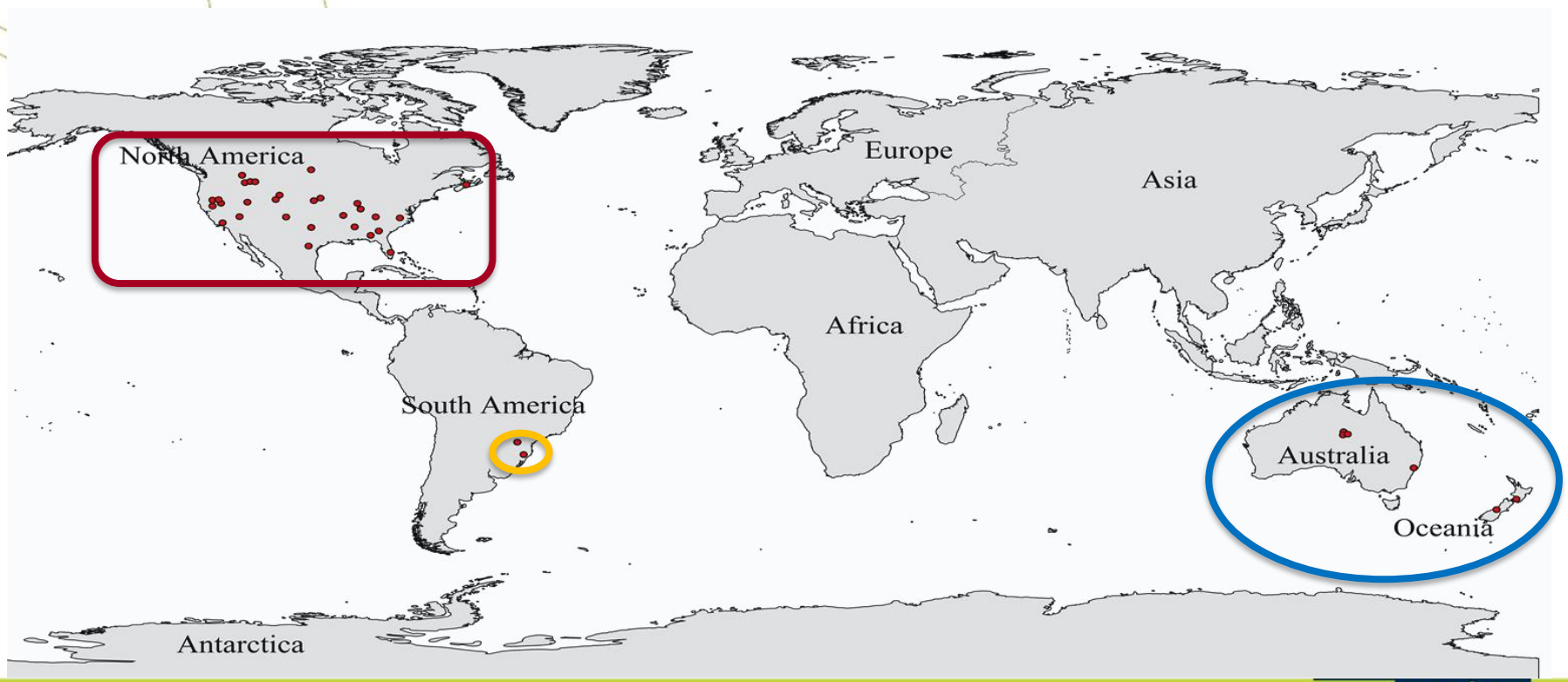
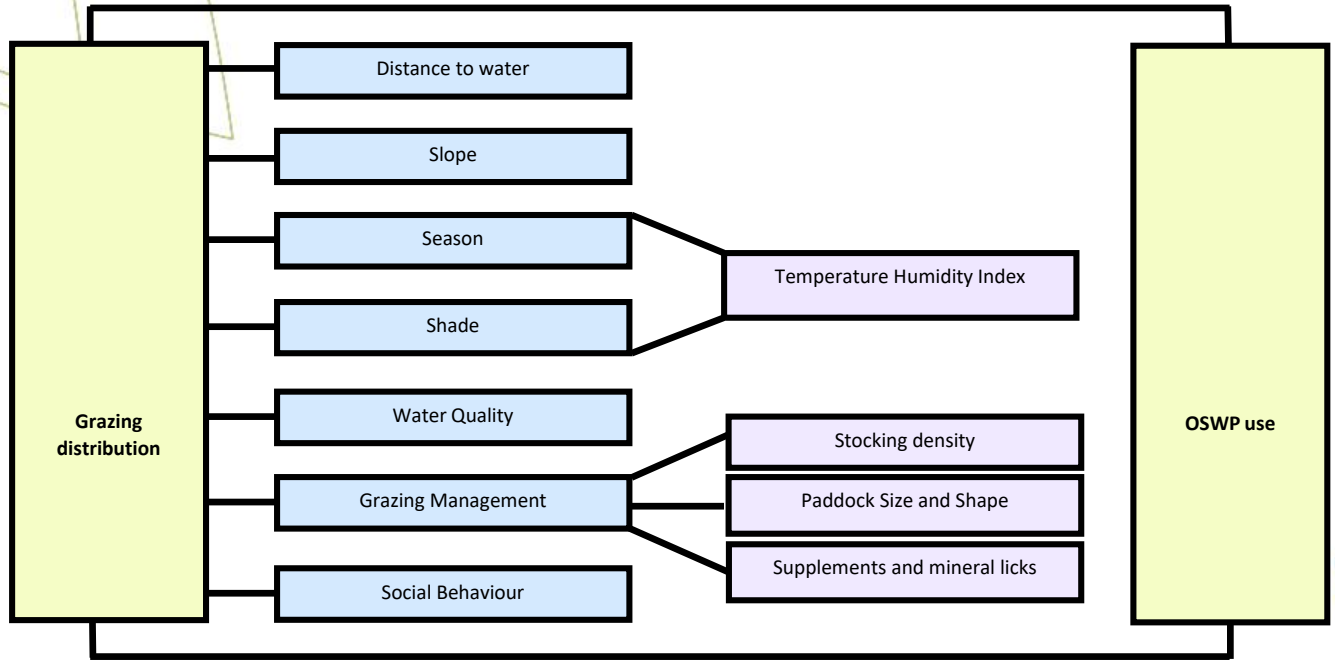
Location of studies examining OSWP.



Factors Affecting OSWP Use.



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Social interactions

Review conclusions

- Paddock slope <10%
- Distance 100m or 1100m from stream
- Paddocks <140ha
- Good grazing management
- Tropical and subtropical climates
- Research gaps
- Next step?

RESEARCH

Water palatability study

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Summary

- Cattle grazing impact riparian ecosystem services
- OSWP can mitigating impacts
- 7 main and 5 sub-environmental factors
- Further research in progress

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Questions?

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