

Wetland Intervention Monitoring Program (WIMP)

Overview August 2020

WIMP is a long-term, state-wide program assessing how effective different management actions are in improving the health of wetlands



Improving grazing management

In the first stage of WIMP we are assessing the effectiveness of different methods of managing livestock in wetlands. While managing livestock access is a common strategy to protect wetlands on private land, we don't know how effective this strategy is. This program is studying how different grazing regimes affect the health of wetlands on private land across Victoria.

How does grazing affect wetland plants?

Although heavy grazing by livestock damages the condition of wetlands, we also know that in some situations grazing by livestock can be beneficial.

Where grazing is recommended for ecological reasons it is usually to: (i) control introduced species, (ii) prevent competitive species becoming dominant and excluding other species, or (iii) to reduce plant litter loads so that native plants can germinate (Figure 1).

In these cases, native species abundance and diversity may decline without some grazing. However, too much grazing can damage native wetland plants and also reduce diversity (Figure 2).

We are interested in seeing if there's a 'goldilocks' zone where the benefits of grazing can be maximised.

Currently we have a poor understanding of how much, how long, or how often grazing is needed in different types of wetland plant communities to protect and enhance their condition. The findings from this program will inform wetland management guidance in the future.

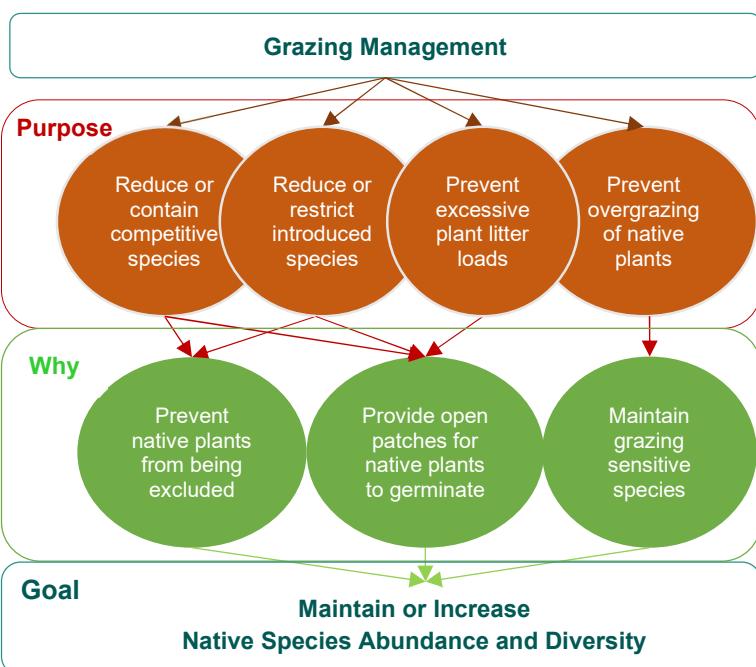


Figure 1. Using grazing for biodiversity benefits

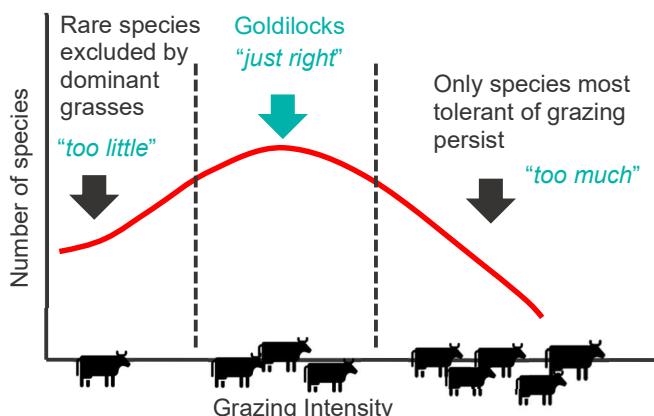


Figure 2. How grazing intensity might influence diversity

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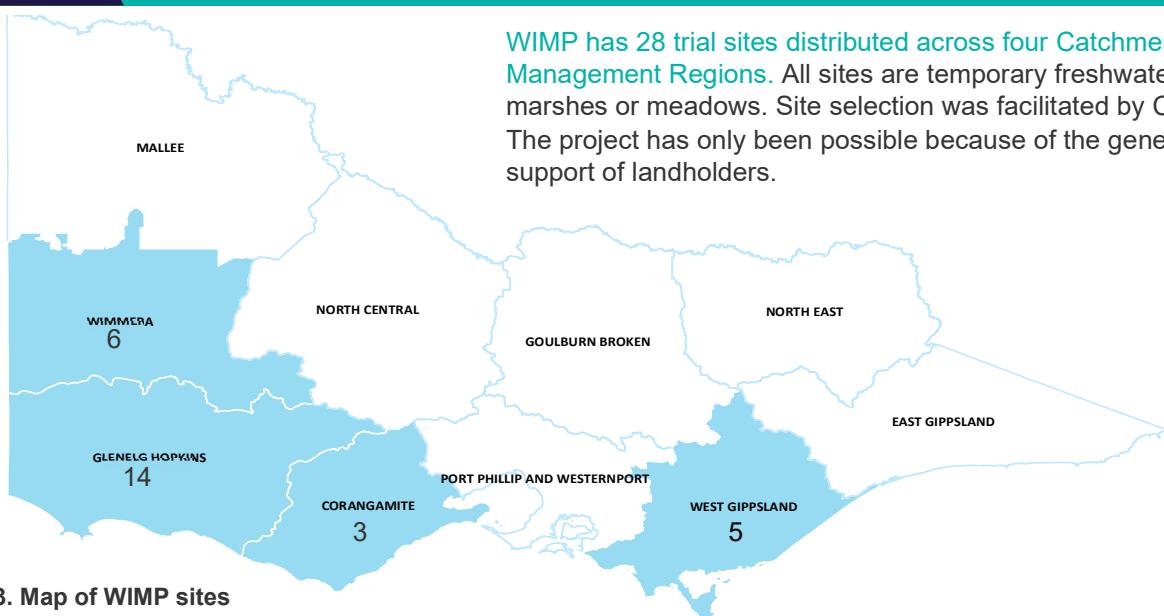


Figure 3. Map of WIMP sites

How we monitor - In each wetland, we are assessing how vegetation changes over time inside two trial plots. Each trial plot is about 0.25 ha in size. One plot is open to the grazing management being applied in the wetland and the other plot is fenced to exclude livestock (sheep and cattle). Monitoring is done when the wetland is drying out but still wet as this is the when most wetland plants are present. Monitoring is done along transects and quadrats in each plot before fencing, and then every year after fencing for 3-5 years.

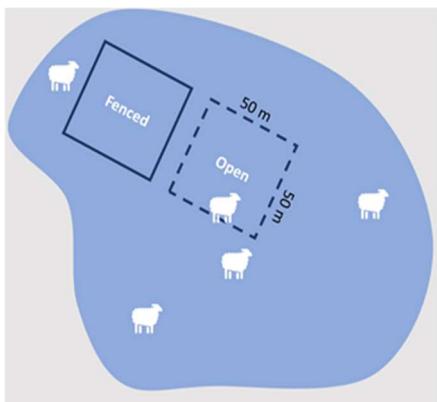


Figure 4. Survey design

WIMP has 28 trial sites distributed across four Catchment Management Regions. All sites are temporary freshwater marshes or meadows. Site selection was facilitated by CMAs. The project has only been possible because of the generous support of landholders.

What we measure

- Abundance of all plant species
- Number of native and introduced species
- Depth of the plant litter layer
- Plant height

What it will tell us - Monitoring will tell us how close the current grazing regime is to the “Goldilocks” zone where native species abundance and diversity are optimal, weed species are contained and grazing sensitive species are maintained. Long-term monitor is needed as livestock exclusion could be beneficial in the short-term, but benefits may be lost in the long-term.

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