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and often short and incomplete records.

Australia.

2. Methods

- modelled across Australia.
- Time-series groundwater toolbox hydrograph.
- Climate-dominated sites are identified with the model Sutcliffe efficiency (NSE).
- to quantify the head and recharge sensitivity to precipitation (P) and potential evapotranspiration (PET).





Groundwater Sensitivity to Climate Variations in Australia

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Fig. 4 Distribution of groundwater level and recharge sensitivity in a variety of (a-d) climate types, (e-h) hydrogeology, and (i-l) land uses. The colour scale represents the *p*-value of the Mann-Whitney test used to assess the difference of the sensitivity distribution between two groups. Note, for the climate types, A-arid, B-tropical, C-temperate.

7. Conclusions

- 0.43 mm/mm.
- sensitive in tropical climates.
- higher recharge sensitivity.
- Land use change shows a modest influence.







National median head and recharge sensitivity to precipitation are 42 and

The head is the most sensitive in arid climates; the recharge is the most

Porous aquifers show a higher head sensitivity; fractured aquifers show a

This work is in-review with Water Resources Research.

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