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Impact of water allocation strategies to manage groundwater resources in Western Australia: equity and efficiency considerations

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Abstract

In many parts of the world groundwater is being depleting at an alarming rate. Where groundwater extraction is licensed, regulators often respond to resource depletion by reducing all individual licences by a fixed proportion. This approach can be effective in achieving a reduction in the volume of water extracted, but the approach is not efficient. In water resource management the issue of the equity-efficiency trade-off has been explored in a number of contexts, but not in the context of allocation from a groundwater system. To contribute to this knowledge gap we conduct an empirical case study for Western Australia's most important groundwater system: the Gnangara Groundwater System (GGS). Resource depletion is a serious

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