

Assessing social acceptability of management options for harmonising irrigation with environmental concerns: A pilot study from the Murrumbidgee Valley, Australia[#]

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Abstract

The flows in regulated rivers are strongly dependent on water demand by downstream water users. In irrigated catchments the river flow regimes are deliberately distorted to cater for crop demand, with significant deleterious ecological impacts. A number of opportunities exist to manipulate irrigation demand and supply to provide more natural seasonality of flows and optimise the social, environmental and economic outcomes from water use in a catchment. Possible options to achieve this goal include improved cropping mix incentives, groundwater – surface water substitution, intra and inter-seasonal water trading and harmonisation of on- and off-farm storage, distribution, application and drainage infrastructure with environmental outcomes. Each of these options will impact in some way on irrigation and wider communities. In this paper ‘community’ involvement in setting irrigation research agendas and evaluating water management options in the Murrumbidgee Valley, Australia is explored. A brief assessment of social acceptability, combined with hydrological and economic models, was found to be an effective approach for scoping different irrigation demand management options to improve seasonality of flows. In this study the value of articulating assessment criteria when dealing with new and potentially disruptive options for the management of irrigation demand in a catchment context is demonstrated.

Keywords: social acceptability, system harmonisation, conjunctive management of surface and groundwater, seasonality of flows, environmental management