

## **Games for groundwater governance: field experiments in Andhra Pradesh, India**

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Groundwater is a common pool resource, which is subject to depletion in many places around the world, as a result of increased use of irrigation and water-demanding cash crops. Where state capacity to control groundwater use is limited, collective action is important to increase recharge and restrict highly water-consumptive crops. We present results of field experiments in hard rock areas of Andhra Pradesh, India, to examine factors affecting groundwater use. Two NGOs ran the games in communities where they were working to improve watershed and water management. Results indicate that, when the links between crop choice and groundwater depletion is made explicit, farmers can act cooperatively to address this problem. Longer NGO involvement in the villages was associated with more cooperative outcomes in the games. Individuals with more education and higher perceived social capital played more cooperatively, but neither gender nor method of payment had a significant effect on individual behavior. When participants could repeat the game with communication, similar crop choice patterns were observed. The games provided an entry point for discussion on the understanding of communities of the interconnectedness of groundwater use and crop choice.