Playing games to save water

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Abstract

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This paper reports on an ongoing project funded and coordinated by the International Food Policy Research Institute (IFPRI) in collaboration with the Center for the Study of Institutional Diversity (CSID) at Arizona State University (ASU), the Indian NGO Foundation for Ecological Security (FES), and the Universidad de los Andes (Colombia). The goal of the project is to test whether field experiments on common resource decisions lead to measurable behavioral changes in groundwater use.

Field experiments have been used in the past to test hypotheses on collective action and the commons. Anecdotal observations suggest that doing experiments in communities can lead to changes in practices. This may be because the villagers are able to experience a shared challenge in a safe setting and afterward discuss the experiment in a community-wide meeting. In the meeting, the challenge presented to the participants during the experiment is linked to the commons dilemmas the community faces in their day-to-day lives. In the past, these field experiments were used to test the theoretical framework of the late Elinor Ostrom and confirm the abilities of villages to overcome commons dilemmas through communication and development of trust relationships.

The key question being explored in this project is whether participating in games and community discussion meetings leads to improvements in how a community uses its groundwater supplies. By playing simple games involving sharing a limited groundwater supply and then discussing the significance of this exercise, will the community change how it manages its resources? This has the potential for both changing how the community members think about groundwater and how they work together to manage it.

If the anecdotal observations can be confirmed through a randomized experiment by using field experiments in villages, this may lead to new tools for practitioners and policy makers. In fact, field experiments on commons dilemmas could become intervention techniques that enable communities to improve their ability to self-govern their commons. In this presentation we will report on the experiments performed in Spring 2013 in Andhra Pradesh, India, and initial findings from the effect one year after the experiments one year after the intervention, compared to control villages where no intervention took place. Initial results from the ground water behavioral experiments show that the more villages are involved in market integration to quicker they deplete the ground water levels in the experiment.

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