

Strengthening Collective Action towards management of Groundwater as Commons through Simulation Games



Anantapur is a particularly water-distressed district in Andhra Pradesh, India. In 2010-12, while 76% of the total irrigated area was serviced by tube wells (an increase from 44% in 1998-2001), the area irrigated by dug wells declined from 27% to just 4% and irrigation by tanks fell from 22% to 15%. At present, the dependency on ground water is more than 80% for irrigation and more than 90% for household needs, including drinking water. The excessive extraction of groundwater by a handful of households which are able to afford bore wells has a bearing on access to groundwater amongst the larger rural communities. In this scenario, it becomes imperative to undertake interventions for treating groundwater as Commons and not one linked to land ownership.

Strengthening Collective Action towards management of Groundwater as Commons through Simulation Games is a research initiative undertaken by Foundation for Ecological Security in collaboration with Arizona State University and the International Food Policy Research Institute in order to understand how participation in simulation games can influence the knowledge, attitudes and behaviour of the participants and their communities with respect to the management of Commons; especially groundwater. These simulation games are conducted with farmers. The farmers are presented with a set of conditions within which they have to make a decision as to which crop out of the two in offering to choose that can earn them a certain amount of

money with a certain quantity of water usage, individually and collectively. In the end the players get to the total money earned and water consumed both individually and collectively. While the participants are aware that they are part of a game, they are placed in situations that somewhat resemble their lived reality; allowing to gain insights into the different factors that drive participants to make decisions in a particular way, when confronted with similar situations.

The simulation games proved to be effective tools in making community members articulate the relationship between agricultural practices and groundwater outcomes, in their own words. The games provided a vital starting point to open up the discussions with communities around various reasons for the depletion of groundwater and the steps to be taken to arrest this decline. These games helped to underscore the point that with some changes in agricultural practices it was possible to mitigate the groundwater crisis prevailing in their region to an extent. The games focusing on both access and over-exploitation issues; on one hand tried to bring effective governance of groundwater and on the other hand tried to ensure that small and marginal farmers too have reasonable access to groundwater resources. These games assisted in understanding the prevailing mental models of the rural communities in Anantapur vis-a-vis groundwater and provided insights into the factors that aid or hinder people in drilling bore wells and exploiting groundwater. An understanding of community's mental models also helped in identifying the potential leverage points which could be worked upon, in order to enable better governance of precious groundwater resources in the district.

Website URL for additional information

<https://www.ifpri.org/project/experimental-games-strengthening-collective-action>

<https://wle.cgiar.org/content/simulated-games-help-villagers-better-manage-water-resources>

<https://www.ifpri.org/blog/playing-games-save-water>

