



# UC Center Sacramento

## “Managed Aquifer Recharge as a Strategy for Mitigating Drought Impacts on Irrigated Agriculture in California”

Wednesday, April 6th  
12:00 - 1:00pm

In light of the community concerns regarding COVID-19, this talk will be given as a webinar. The link will be provided on April 5th to those that have registered by 5:00 pm on Monday, April 4th at [uccs.ucdavis.edu](https://uccs.ucdavis.edu).

*Managed aquifer recharge (or intentional recharge) is a purposeful human intervention designed to supplement natural enrichment processes of groundwater aquifers by various methods. It holds the potential to mitigate the impact of climate uncertainty on irrigated agriculture by replenishing storage levels in depleted groundwater sources, the economic value of which increases during droughts. We use a high-resolution dynamic regional hydro-economic framework that endogenizes farming decisions in response to water quantity-quality changes, as well as complex hydrogeological principles to analyze several policy and climate scenarios applied to the Kings Groundwater Basin in California. Our analysis demonstrates that intentional recharge is of benefit to the region, increasing in value under sustainable groundwater management derived from recent legislation in California. We also find that recharge strategy as well as the impact of climate uncertainty on regional welfare are sensitive to the prevailing institutional arrangements. Regional cooperation is essential, and its importance depends on climate conditions and existing policies.*



**Dr. Ariel Dinar** is a Distinguished Professor of Environmental Economics and Policy at the School of Public Policy, University of California, Riverside (UCR). His work addresses various aspects of economic and strategic behavior associated with management of water, land and the environment. Dr Dinar received his PhD from the Hebrew University of Jerusalem. Since then he spent 15 years in the World Bank working on water and climate change economics and policy. In 2008, he assumed a professorship at UCR. Dr Dinar founded the Water Science and Policy Center, which he directed until 2014. Dr Dinar is an International Fellow of the Center for Agricultural Economic Research of the Hebrew University of Jerusalem, Israel since November 2010; a Fulbright Senior Specialist since 2003; and was named a 2015 Fellow of the Agricultural and Applied Economics Association. He authored and coauthored nearly 250 publications in peer reviewed journals, policy outlets and book chapters. He co-authored and edited 31 books and textbooks. He founded two technical journals (Strategic Behavior and the Environment, and Water Economics and Policy) for the latter one he serves at present as an Editor-in-Chief. Dr Dinar founded and serves as the Editor-in-Chief of the book series Global Issues in Water Policy.

For questions contact Brooke Miller-Jacobs at (916) 445-5161 or [uccs-talks@ucdavis.edu](mailto:uccs-talks@ucdavis.edu)

The views and opinions expressed during this lecture are those of the speaker and do not necessarily represent the views of UCCS.