

UC ANR Water Webinar



“The Global Value of Water in Agriculture”
By: Professor Paolo D’Odorico, UC Berkeley
Friday October 16, 2020, 3 - 4 PM

Join Zoom Meeting:

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Speaker Bio: Paolo D’Odorico is a professor of ecohydrology in the Department of Environmental Science, Policy, & Management at UC Berkeley. His research focuses on the role of hydrological processes in the functioning of terrestrial ecosystems. He earned his Ph.D. in hydraulic engineering from the University of Padua, Padova.

Abstract: Major environmental functions and human needs critically depend on water. In regions of the world affected by water scarcity economic activities can be constrained by water availability, leading to competition both among sectors and between human uses and environmental needs. While the commodification of water remains a contentious political issue, the valuation of this natural resource is sometime viewed as a strategy to avoid water waste. Likewise, water markets have been invoked as a mechanism to allocate water to economically most efficient uses. The value of water, however, remains difficult to estimate because water markets and market prices exist only in few regions of the world. Despite numerous attempts at estimating the value of water in the absence of markets (i.e., the “shadow price”), a global spatially explicit assessment of the value of water in agriculture is still missing. Here we propose a data-parsimonious biophysical framework to determine the value generated by water in irrigated agriculture and highlight its global spatiotemporal patterns. We find that in much of the world the actual crop distribution does not maximize agricultural water value.