

Water prices in agriculture: impacts on efficiency and equity

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Access to irrigation has been shown to increase crop yields by 100% - 400% around the world. Irrigation policy is therefore central to agricultural productivity, food security, and smallholder livelihoods in developing countries. It is conventional wisdom, however, that water use in irrigation is inefficient and wasteful. This is especially so when the water is delivered by flooding and furrow systems, as opposed to more advanced pressurized or drip systems. It is also well known that irrigation water is heavily subsidized for farmers, in the developed as well as the developing worlds. One of the tools advanced by economists to reduce irrigation inefficiencies is rational pricing. In the context of current subsidies, this means raising water prices either to cover the cost of its delivery or to reflect its scarcity value. It is also argued that higher water prices, by lowering agricultural demand, will free up water for urban regions or for the environment.

This presentation discusses the role of water prices in irrigation policy, with emphasis on surface water systems. We can distinguish between the impacts of "rational pricing" for cost recovery versus for irrigation efficiency. I examine the assumptions, often implicit, behind the claim that higher water prices will reduce water use, and therefore increase the water productivity of agriculture. These assumptions are often not justified in largely rural developing countries. I also examine the consequences of higher water prices on equity for the farmers who depend on the irrigation systems. Based on case studies from India, Sri Lanka, Turkey, Iran, Egypt and Morocco, I show that while irrigation efficiencies are often (but not always) suboptimal, and though water prices are often too low to reflect its opportunity cost, higher water prices are no guarantee of efficiency and may have negative consequences for equity and for local food security. Institutional reforms – which are not without their own challenges – may be more effective in sending scarcity signals and in protecting small and downstream farmers.