

# Factors influencing adoption of water pricing policy in irrigated agriculture in Kenya: the case of irrigated farming in Kikuyu District

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## Abstract:

Many countries in the developing world, Kenya not being an exception, are adopting waterpricing mechanisms as their primary means to regulate irrigation water consumption. 'Getting prices right', charging and collecting fees is seen as a desirable way to allocate water efficiently, but how to accomplish this remains a debatable and challenging issue. Volumetric pricing mechanism was gazette and introduced in Kenya in 2007 by the Water Resources Management Authority that is mandated in the Water Act 2002 to monitor water use across all sectors. In this pricing mechanism, water is charged according to directly measured volumes of consumed water. These charges are stipulated in the Water Resources Management Rules, 2007, page 1688 (Legal notice No. 171). Irrigation farmers are bound to adopt water pricing policy as required by law, by making payments for all waters abstracted for irrigation. The adoption level of water pricing policy has raised serious concerns as to whether the objectives of this pricing policy are being met. Irrigation farmers countrywide have barely accepted and implemented this policy and the current trends show minimal improvement. This study investigates the influence of a number of factors on adoption of water pricing policy in Kenya, targeting a case in Kikuyu District. These factors include; practicality of technical preconditions, irrigation technology , irrigation farmers' attitude, net crop income and selected incentives. A sample size of 200 irrigation farmers was used. Data was collected by interviewing the respondents using administered questionnaires. Descriptive statistics and correlation analysis was used to analyze data. Water Resources Management Authority officials who are mandated to implement and enforce water pricing policy were also interviewed through an open ended questionnaire. The findings of this study reveal that the adoption rate of water pricing policy is as low as 10% and this is attributed to the absence of necessary pre-conditions for volumetric charging such as water abstraction permits, meters for measuring abstracted water, and lack of an efficient billing, monitoring and enforcement mechanism. Lack of reliability on available water sources which negatively impacts on water productivity is an issue that requires immediate attention for water pricing policy to be accepted. The need to modernize irrigation systems and improve management for optimal water use efficiency, poor attitudes towards payments for water, absence of support services to enhance net incomes and lack of dialogue with irrigators to appreciate necessary steps that would be taken to improve responses to payments of water charges are necessary pre-requisites to willingness to pay for water consumed for irrigation. It is recommended that there is need to design a more appropriate water pricing mechanism that is sensitive to the local characteristics and conditions and one that is acceptable by all stakeholders. The complexity of a charging mechanism requires sufficient planning and appreciation of the varied resource needs required for an efficient and effective system.