● RESOURCE

Determining the economic value of irrigation water in Kerio Valley Basin (Kenya) by residual value method

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Description / Abstract

This paper presents an application of the residual value technique to determine the disaggregated economic value of irrigation water used across crops at the basin level for the Kerio valley basin Kenya. A multistage sampling method was used to select a representative sample of 216 smallholder irrigation farmers. Data was collected using a structured questionnaire administered to the small holder farmers, additional data on irrigation water requirements was obtained from FAO, CROPWAT 8.0 and CLIMWAT 2.0 (2013) database. The average residual value in the basin is Ksh 6.17 per M3 . Results for the economic values of irrigation water are Ksh/ M3 20.85, 14.87, 4.3, 11.28, 1.25, 0.3 for field food crops; green grams, maize, millet, sorghum, cassava and cowpeas are respectively. Similarly for the fruit trees bananas, mangoes and lemons, the economic value of irrigation water are Ksh/M3 1.36, 0.90, 0.45 respectively Green grams and maize had the highest values for the ratios of apparent productivity and residual value and cowpeas and lemons the lowest. The results shows that at crop level water values estimated for field crops are generally higher compared to fruit trees. This means that there is greater potential in field crops than fruit trees in the basin.

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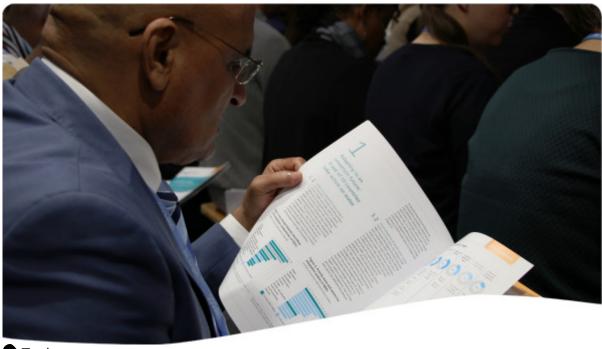## Keywords
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⬤ Tool

<u>Economic Value of Water</u>

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