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## Determination of the influence of socioeconomic activities on streamflow in South West Upper Tana Basin, Kenya

The study to determine the influence of socioeconomic activities on streamflow was undertaken in South West Upper Tana Basin, Kenya (SWUT), one of the basins in the larger Upper Tana Basin. Thika, Chania, Kiama and Kimakia are the main rivers that make up the basin. In this study, primary data was obtained through administering questionnaires while secondary data was obtained from Water Resources Authority (WRA). The questionnaires were administered in the period between April 2019 and June 2020. Logit regression was run to determine the influence of the different socioeconomic activities on streamflow. The results indicated that the main socio-economic activity influencing water abstraction in the study area was agriculture. Agricultural practices such as farm size, income from crop sales and fertilizer use significantly influenced water abstraction with P values (0.04, 0.01 and 0.02) < 0.05. The study also established household characteristics such as income of the household head, income level of household head positively influenced water abstraction. However, these factors did not have a significant influence on water abstraction with P values of 0.23, 0.78, 0.50, 0.60, 0.74, 0.52 for income level of household head, marital status, age, residence period and level of education, respectively, being > 0.05. The study recommends formulation of policies to ensure efficient water abstraction in the basin. Water Resources Authority should also ensure that all water abstractors are licensed to minimize over-abstraction.

Keywords: Streamflow, socio-economic activities, South West Upper Tana Basin, agricultural practices, house-hold characteristics.

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