

Surface water resources in Yatta division: accessibility, variations, utilization and conservation aspects

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Abstract:

The thesis highlights the problem of water scarcity in Yatta Division of Machakos District. The study intended to find out what the community does to conserve their limited surface water resources. Basically the study was designed to identify the main surface water sources, the amount of water used in domestic and livestock sectors, the various conservation techniques used, how the community participated and the constraint that hinder their full participation. In the study, several methods were used. First, a pilot study was conducted to test the research instruments. Data was then collected from both primary and secondary sources. A household survey was carried out, with the use of observation sheets, questionnaires and interview schedules. Systematic and random sampling techniques were used to sample the households. Data was analysed using averages, percentages, deviations ranking and trend analysis. The results were presented in form of tables, graphs, pictures, sketches and maps. The findings show that the main water sources in the division are rainwater, rivers and other seasonal streams, which are both annual and seasonal. The daily per capita consumption of water in the domestic sector is 6 litres while in the livestock sector cows consume 20 litres per head per day, goats and sheep consume 5 litres per head per day or less. The water conservation techniques practiced include terracing, roof and runoff harvesting. Afforestation is also practised although to a limited extent. The above techniques are however not widely practised mainly because of financial, religious, gender, labour, technical and institutional constraints. It was also observed that hardly any donor institution has effectively supported the community in their water conservation endeavours. There is therefore need for effective community involvement in water conservation activities in Yatta Division of Machakos District.