RESIDENTIAL WATER CONSUMPTI ON PATTEREN IN HEMMATHAGAMA AREA

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ABSTRACT

Knowledge about water consumption is necessary for water resource planning and development. In Sri Lanka, as a result of development, the demand for water is increasing both in urban and rural areas. This may increase tensions and disputes over distributing of water resources. For water demand management, it is crucial to know the details of actual water use on a household level in rural and urban areas. In Hemmathagama area, there are no any studies have been undertaken on analyzing water consumption. Therefore, this research was conducted to find out the domestic water consumption patterns in Hemmathagama Area of Kegalle district in Sabaragamuwa province of Sri Lanka, to improve the understanding of how local communities in the region relate to water. Hence, this research is aimed towards understanding the water usage, awareness, attitudes and perception of water consumers in study area, and to find the relationship of socio-economic characteristics on domestic water consumption based on questionnaires and interview surveys of households. The study was conducted with hundred (N=100) households during May 2021 and July 2021. The study has examined the households daily and activity wise water consumption, sources, quality, duration of water supply, different water use appliance, irrigation and the level of awareness about water conservation etc. The data analysis techniques applied were descriptive analysis, correlation, linear regression and one-wayAnova using statistical analysis program SPSS version 26.0. Results of the study revealed that the daily average water consumption for the village was found to be 120.09 per person per capita per day. Living Standard, family size, age, numbers of taps, level of education and income have significant effect on water consumption among households. The overall domestic water use is negatively correlated ($p \leq 0.01$)

with the household head's age and positively associated with income level. Showering, cloth washing, and toilet usage were identified as the higher water consumption activities around the study area. The amounts of water consumption by each activity were, 35.8%, 25.6%, and 22.7% respectively, whereas 55 % of the households are using government water supplies with very safe water quality. However, 50% households are not satisfied with frequency of water supply and 39% do not have awareness about cost of water per cubic. Finally, it is hoped that these results help in establishing water handling policies and developing residential infrastructure design for efficient and sustainable use of water.

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