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Assessment of household water use based on personal values, social influence and daily routines of people at Jodhpur near Thar desert in India

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Abstract

In Jodhpur, the water usage and its related energy and cost at a household level have not been studied thoroughly till date. This article surveys the household water use, water based appliance use and energy consumption in Jodhpur. The dynamics of water use has been related to basic aspects of stress level, economic status, literacy level, type of appliances, type of fuel use, and size of family. The results discusses the responses of a socio-economic behavioral survey of 109 random individuals and also responses collected from a door to door personal interaction survey of 53 families of Jodhpur selected at random during the time between May to August in 2012. An inbuilt case study also explores influences of behavior, age and gender. 20-30% of the general public was found to be ignorant of their household expenses related to electricity and water. Toilets were found to be the location of maximum daily water consumption. People preferred cold water to bath and to wash clothes. Hand washing of clothes was more preferred than machine wash. Most of the respondents were ignorant about the technical differences and efficiencies of drum as well as vertical washing machines. About 70% of the water filtration market in Jodhpur is controlled by reverse osmosis and ultra violet filtration systems put together. Females exhibited comparatively more awareness towards water use and related energy consumption at home. The appliance aesthetics and respondents mindset overshadows their knowledge on effectiveness of the technology and efficiency features of the appliance used on or for water. This impairs the basic aim of water management and conservation in households. The implications of the results and feedback are important indicators and management tools to improve and optimize water use and related energy consumption at this semi-urban location. The shirking behavior of the respondent while answering the survey has not been considered as a major factor influencing the results since ample time and explanations were provided at the time of the personal interaction with the respondents.