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EFFICIENCY ANALYSIS OF RAINWATER HARVESTING METHODS ON MEGA-SCALE: A REVIEW

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ABSTRACT

A novel rainwater harvesting (RWH) system dependability model is used to evaluate the reliability of collected rainwater for toilet flushing, irrigating gardens, and topping up air conditioners servicing residential apartment buildings in various cities. Rainwater collection is becoming a more important component of the toolbox for sustainable water management. Despite a multitude of studies modeling the feasibility of using rainwater harvesting (Rainwater management) systems in specific settings, there is still a substantial lack in information in terms of comprehensive empirical performance evaluations. Domestic systems have been discussed in the literature to a limited extent, notably in the United Kingdom, but there are few contemporary longitudinal studies of larger non-domestic systems. The findings of a longitudinal empirical performance evaluation of a domestic and non - domestic RWH system in a UK office complex are presented in this article. It also compares actual performance to predicted performance using two British Standards Institute-recommended methods: The Intermediate (basic computations) and Advanced (simulation-based) Strategies.

KEYWORDS: *Domestic systems, Demand Management, Harvesting, Rainwater Collection, Rainwater.*

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