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Rainwater Harvesting, an important measure to meet water requirement in arid areas of Pakistan.

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Abstract:
Pakistan is located in semi-arid region of the world where water scarcity is a major issue. In such areas, rainwater harvesting (RWH) is considered to be the best alternate source of water supply. Rainwater harvesting is being considered as an integral part of the sustainable water management in many parts of the world. Rainfall patterns in arid areas are typically highly variable, both spatially and temporally. Hence, there is always need to evaluate rainwater harvesting keeping in view the seasonal variations for a specific area. In Rainwater harvesting, a mechanism is designed to collect surface runoffs effectively during rainfall times. In this paper, it has also been analyzed that rainwater has a great potential to be taken as a source of water demands in residential colonies of major cities like Islamabad being our study area. Here, five marla housing pocket has been considered as a model site for which various water demands have been calculated depending upon residential needs and horticulture requirements of the study pocket. Rainwater from roads and walkways have also been collected and used to beautify the road-side horticulture water needs. Rainwater from rooftops has been used to reduce freshwater needs of the houses. As a result, residential water demands for fresh water have reduced by almost 30 to 80% for driest to wettest seasons, respectively.

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