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Application of rain water harvesting scheme in Shimla region

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Rainwater harvesting is an innovative and a suitable alternative approach of water supply that can be used by anyone. Rainwater harvesting captures, diverts, and stores rainwater for later use. It is a well known fact that during summer season there is a huge scarcity of water in northern regions of India and as such implementing rainwater harvesting would be beneficial because it would reduce demand on existing water supply, reduces run-off, erosion, and also contamination of surface water. A rainwater harvesting system can range in size and complexity. All systems have basic components, which include a catchment surface, conveyance system, storage, distribution, and treatment. As such, we discuss in this paper about the prospects and possibilities of rainwater harvesting in Shimla region of Himachal Pradesh, which experience water shortages in summer periods. The result of our study shows that judicious storing of rain water all round the year and not only summer can be stored without incurring any significant losses. Further, the study shows that the sanitation water requirements for a family can be met for two months with storage of rainwater for one single month only. Further, the construction pattern of houses in Shimla (sloped roof structures) already provides an advantage in storing rainwater efficiently. The non-dimensional design parameters can be applied for any place which experiences a scarcity of water.

Biography

Rajiv Ganguly has completed his PhD from Trinity College Dublin, Ireland and Postdoctoral studies from School of Public Health, University of Michigan. He is presently working as an Associate Professor in the Department of Civil Engineering at Jaypee University of Information Technology, Himachal Pradesh. His previous work experience includes working as an Air Quality Specialist in Scott Wilson Ltd., UK and as a Senior Air Quality Scientist in Kings College London, UK. He has published a number of research papers in peer reviewed national and international journals and international conferences of repute.

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