

Groundwater recharge through rooftop rainwater harvesting

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■ **ABSTRACT** : Artificial ground water recharge is an effective way to counter the adverse effects of declining water table of Punjab. Most of the rainfall was received during the months of July, August and September in Hoshiarpur district during 2011-2013. The average rainfall received for year 2011-2013 is 768.6 mm. The maximum rainfall of 236.6 mm (28.7%) was received in the month of August and the minimum rainfall of 3.1 mm (0.4%) was received in the month of November. Excessive rainfall in the district causes excessive runoff and sediment loss due to undulating terrains. Rooftop rainwater harvesting during rainy season holds good potential for recharging the depleting groundwater aquifers. A rooftop rainwater harvesting structure having siltation unit (1.5 m x 0.75m x 1.5m), filtration unit (1.5x 0.30m x 0.9m) and storage tank(1.5 m x0.45m x 0.9 m) was constructed and evaluated at Krishi Vigyan Kendra, Hoshiarpur. This structure contributed an average of 2.04 lakh litres groundwater recharge. The study revealed that there was a need to adopt this technique at mass level to get significant results. This would be possible only with the help of people participation.

■ **KEY WORDS** : Ground water, Rooftop, Rainwater harvesting, Groundwater recharge

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