50 year rainfall data analysis and future trend in Saharanpur region

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ABSTRACT. The environmental implications of rainfall pattern in replenishment of ground water system of Saharanpur region, located in western Uttar Pradesh, have been discussed. The mathematical analysis of rainfall dissimilarity of Saharanpur region for a period of 50 year (1959 to 2008) display a quite good range from 497.70 to 4357.5 mm with an annual average rainfall value of 1209.8 mm. The positive trend of departure from the computer value of average annual rainfall exhibits appropriate periods for recharge of ground water reservoir. The recorded data of annual rainfall during the last 3 year reveal values below the calculated annual average rainfall, pointing out negative trend. The statistical analysis of rainfall data involves computations of various statistical parameters, which also support the negative trend of rainfall. The prediction of expected future rainfall trend for a period up to 2018 has been made, which indicates a negative trend. The proposal have been incorporated to implement a plan for augmentation of ground water resource and also to develop possibilities of rainwater harvesting.

Key words – Rainfall, Environmental impact, Rainwater harvesting, Precipitation.