

ESTIMATION OF RAINFALL-RUNOFF RELATIONSHIP IN EAST SINGHBHUM DISTRICT, JHARKHAND, INDIA

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ABSTRACTS

The relationship between climatic parameters of the East Singhbhum district was analyzed by compilation of rainfall data from 2001 to 2013 annually to extract the runoff data and along with this the data of temperature from 1991 to 2002 was taken to correlate the relationship between temperature and runoff of the study area. The long-term trend of the hydrological time series including temperature, rainfall and runoff were studied using correlation analysis. Rainfall and runoff patterns affect man's activities in so many ways so these two form an important climatic parameters storm water management. This paper has used some of the statistical analysis method to study the relationship between climatic elements (rainfall, infiltration rate and temperature) with runoff. The study was found that the relation between runoff and infiltration, between rainfall and runoff was correlated strongly. Whereas the correlation between temperature and runoff was found weak. Therefore, the role of climatic elements such as temperature, rainfall and runoff in the study area is quite concrete.

KEYWORDS: Climatic Parameters, Environment, Correlation, Rainfall, Runoff