

RAINFALL TREND AND ITS VARIABILITY IN AURANGABAD DISTRICT, MAHARASHTRA, INDIA

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Abstract

Variation in rainfall has a great impact on agriculture, subsequently on economic and social life of human beings. Identification of spatial and temporal trend of hydrometrological variables is important for sustainable management and development of water resources in future. The present study is an attempt at evaluating the spatial and temporal rainfall variability in Aurangabad district, Maharashtra, India. The south-west monsoon of Indian Ocean dominates the climate and rainfall distribution in the study area and the district receives normal rainfall of 687.75 mm. The long-term annual rainfall data from 1901 to 2020 were considered. The daily rainfall during the monsoon months in the entire district was also analyzed for the last three years from 2018 to 2020. It was observed that spatial and temporal variability is high and furthermore the pre-monsoon (May) and post-monsoon (October) groundwater table fluctuation data in 141 observation wells were analyzed and interpreted to know the correlation between rainfall and groundwater levels.

Keywords: Rainfall, Rainy days, Moving average rainfall, Groundwater level, Aurangabad.