



ORIGINAL ARTICLE

STATISTICAL ANALYSIS OF RAINFALL PATTERNS IN CHHATARPUR DISTRICT OF MADHYA PRADESH

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Abstract: The amount of rainfall and its pattern is very important factors that mostly affect agriculture system. Because of the scientific community's concern of global climate change over last century and today, statistical analysis of rainfall has been a major concern. The primary objective of this study is to provide detailed knowledge of the rainfall pattern in a smaller area such as district level is an essential prerequisite for agricultural planning and management. For this purpose, the monthly rainfall and rainy days for the last 25 years, *i.e.*, 1987-2011, in Chhatarpur district have been collected for trend analysis by the Dept. of Agro. Meteorology, JNKVV, Jabalpur, Madhya Pradesh. This study performed to detect the trend of rainfall and rainy days of Chhatarpur district of M.P. for the period 1987-2011. The change point analysis has been examined to see if there has been a shift in the data. The Mann-Kendall test, Sen's slope test, Spearman's rho test, regression and change point analysis were used to examine the trends in rainfall parameters. An important finding of this research is that the yearly rainfall from the monsoon season is declining significantly. During the month of May, Chhatarpur has seen an increase in rainfall. The number of wet days is not changing much in May, even though the rainfall has increased dramatically by 5%. The change point study found no significant change in rainfall or wet days between 1987 and 2011.

Key words: Mann-Kendall test, Pettitt change point analysis, Sen's slope, Spearman's rho test.

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