



# Analysis and Interpretation of Rainfall Trend using Mann-Kendall's and Sen's Slope Method

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**Abstract:** This study aimed at comprehensive framework to investigate the variability and trends in the daily, seasonal and annual precipitation using parametric and non-parametric tests. The daily and seasonal trends of rainfall were analyzed from the IMD data of 1981-2016. The study displays daily, seasonal and annual trend patterns and magnitude of trend slope in precipitation data series for different regions of Andhra Pradesh. The procedures that are adopted to identify the presence of trend are Mann-Kendall and Sen's estimator of slope which are carried out at statistical significance at 95% level of confidence. The month to month precipitation information were utilized to process the yearly and regular time arrangement. The adjustment in extent for a period arrangement is resolved utilizing a nonparametric technique (Sen's estimator) and the factual noteworthiness is breaking down through Mann-Kendall (MK) test.

**Keywords:** Rainfall variability, Parametric, Non-parametric, Mann-Kendall, Sen's slope

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