

Evaluation of L-Moment and PPCC method to determine the best regional distribution of monthly rainfall data (Case study: Northwest of Iran)

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Abstract. The analysis and use of hydrological data for decision making in water resources planning and management can only be meaningful if the data possess the appropriate characteristics. Whereas, rainfall stations are relation together in the studying area, so that choosing a best regionally probability distribution is necessary. In this paper, probability plot correlation coefficient (PPCC) test statistics and L-moment ratio diagrams are used to determine the goodness of fit the regional distribution of monthly rainfall data in 11 stations that located in Northwest of Iran. Two methods provide Pearson III as a best regional distribution of monthly rainfall data in our study area. As regards, PPCC test has been known as a powerful single-site test among many goodness of fit, but L-Moment approach is easy and can compare the fit of several distributions to many samples of data using a single graphical instrument.

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