

PERFORMANCE EVALUATION OF EVAPOTRANSPIRATION ESTIMATION METHODS FOR SEMI ARID KARIMNAGAR REGION, TELANGANA

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ABSTRACT

One of the major significant features of water stability was evapotranspiration (ET) unluckily this was also one of the major tough parameters to estimate in the area. Hence a large amount of study was managed to evaluate a type of citation evapotranspiration from meteorological details as well as to transform this to the real evapotranspiration. The FAO 56 Penman-Monteith technique had been effectively suggested by FAO to compute ET_0 below various circumstances and showed higher accuracy than the other methods. The primary problem to use this equation has needed many weather variables. In diverse fields the weather statistics is lacking. To find a suitable alternative to the FAO-56 PMF and for calculating ET_0 , 5 temperature, 2 radiation, 9 mass transfer based methods have been chosen by utilizing 21 years daily meteorological data of the semi-arid Karimnagar region. Among these, ET_0 estimated using Hargreaves-M4 and Penman methods are in good agreement with ET_0 estimated using standard FAO 56 PMF method in the semi-arid Karimnagar region. It is also noticed that Hargreaves-M3, Hargreaves-M2, Hargreaves-M1 are suitable methods for this region. The rest other methods are not suitable for this region.

KEYWORDS: *Evapotranspiration, Reference evapotranspiration, FAO-56 PMF & Empirical equations*

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