

Probability distribution functions of weekly reference crop evapotranspiration for Solapur district of Maharashtra

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■ **ABSTRACT** : The study was carried out to estimate a reference crop evapotranspiration (ET_r) at different probability level for Solapur (North latitude 17°10" to 18°32" and East longitude 74°42" to 76°15") at 483.5 msl in the semi-arid zone of Maharashtra. Weekly reference evapotranspiration (ET_r) values for the period (1977-2007) were computed by best method Penman-Monteith FAO-56. The probability distributions that were fitted to ET_r values are log normal, Gumbel and Weibulls probability distribution functions. Chi-square test was perform to know the probability distribution of best fit. ET_r values at 10 per cent to 90 per cent probability level for Penman-Monteith method using probability distribution of best fit.

■ **KEY WORDS** : Evapotranspiration, Probability distribution

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