

## A COMPARISON OF THE RELIABILITY OF SIX EVAPOTRANSPIRATION COMPUTING MODELS FOR FOUR TOWNS IN SOUTH WESTERN NIGERIA.

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### ABSTRACT

The Penman modified, Priestly Taylor, Blaney Morin Nigeria, Jensen-Haise, Hargreaves-Samani and Thornthwaite methods were used to estimate Reference Evapotranspiration (RET) at four sites in Southwestern Nigeria namely: Abeokuta, Akure, Ibadan, and Ikeja. The Penman modified method was selected as the standard of comparison for evaluating the other five methods. Good correlation was found between the RET values estimated by each of the five radiation and temperature based methods and the Penman modified method, although there were some differences. The methods that performed best in estimating Penman modified RET values at each station were recommended based on the statistical analysis. The reliability of the radiation methods was evaluated when data from Ijebu-Ode station was used to evaluate RET for Abeokuta Station. The Penman modified estimates were used to develop correction factors for their potential use in the temperature-based Thornthwaite and Hargreaves methods at each station.

**Keywords:** Comparison, reliability, evapotranspiration, computing models, southwestern Nigeria.