This manuscript presents a promising and methodologically innovative approach to drought modeling, particularly with its integration SG-CEEMDAN-ARIMA-LSTM. However, to meet the rigor expected by journal, the following revisions would strengthen its statistical grounding and reproducibility:

1- It is recommended incorporating the most recent literature (particularly studies published in 2024-2025) on hybrid drought forecasting methods to ensure the methodology reflects current advances in the field

2- The upper bound of the cumulative probability function *H(x)* in Equation 21 is incorrectly defined to include the value 1. This leads to an undefined expression:

$$\ln\left(\left(\frac{1}{1-H\left(x\right)}\right)^{2}\right)$$

when *H(x)=1*, which evaluates to ln(∞). This is mathematically invalid and computationally dangerous, as it can cause overflow or undefined behavior in implementation. The formula must be constrained to *H(x)∈(0,1)*, not *[0,1]*. This critical issue must be addressed and corrected in the manuscript before further consideration.

3- Even though MMK (Modified Mann-Kendall) is applied, the paper doesn't explain how the lag selection was determined for autocorrelation adjustments. Additionally, there are no ACF or PACF plots provided to support the chosen ARIMA model order.

4-Before using ARIMA, the study should have checked for stationarity using tests like ADF, but this step isn't mentioned. Also, it's unclear whether the data was normalized or scaled before being fed into the LSTM model or not.

5- While the baseline models (ARIMA, LSTM, and CEEMDAN-LSTM) provide useful predictions, the study lacks a formal statistical comparison such as ANOVA to objectively assess their accuracy differences.