Advanced EVT Analysis – Tmax

- Recommended distribution: POT (Threshold Exceedances, Rolling POT).
- GEV fitted to annual maxima indicates Weibull-type (bounded upper tail) distribution.
- Optimal POT threshold q=0.95 (u=29.60) with bootstrap uncertainty 57.5%.
- Rolling POT shows non-stationary trend in $\xi(t)$ (slope=0.0002), classified as weak. Regression: $\xi(t) = 0.0002*Year + -0.5837$.
- Mann-Kendall p=0.872, Pettitt p=1.329.
- Return Levels for 10 periods calculated using non-stationary parameters.
- QQ/PP plots show goodness-of-fit for both GEV and POT.

Annual Maxima

Series & POT Threshold

POT σ Stability

GEV Histogram

GEV QQ Plot

GEV PP Plot

POT QQ Plot

POT PP Plot

Return Levels (POT (Threshold Exceedances, Rolling POT))